YAMAHA

DME Designer
Version 1.2

OWNER'S MANUAL

Getting Started with DME Designer

Thank you for purchasing the DME64N/24N.
Your DME64N/24N mixing engine, together the DME Designer software, lets you build a custom audio system installation that can support an incredible variety of conditions. You can build an entire system from input to output with the DME Designer software, then send the data from that system to the DME64N/24N, which becomes an independent processor.
An amazing variety of applications are possible, including audio installations, sub-mixing, speaker system control, matrix/routing, and multi-effect processing.
In this manual the abbreviation "DME" refers to the DME64N/24N.

NOTE

Here the abbreviation "DME" does not include the "DME32."

NOTE

This manual is based on the English version of the software. Illustrations, command names, window names, and similar information are from that version. Some items may differ from what you see on the computer screen, depending on which operating system you are using.

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About DME Designer

DME Designer is software that provides an integrated environment where you can build and control systems that use DME.

Audio systems with DME are built on the computer screen in block diagram format using the DME Designer software. Information about the inputs/outputs along with the arrangement of components and their connections is called the "**configuration**."

The software sends DME settings, along with configuration and parameter data, to the DME unit through a USB or Ethernet connection. Once the data is transferred, the DME unit can be disconnected from the computer and used as an independent processor. The DME can also be kept connected to the computer and controlled in realtime from DME Designer software.
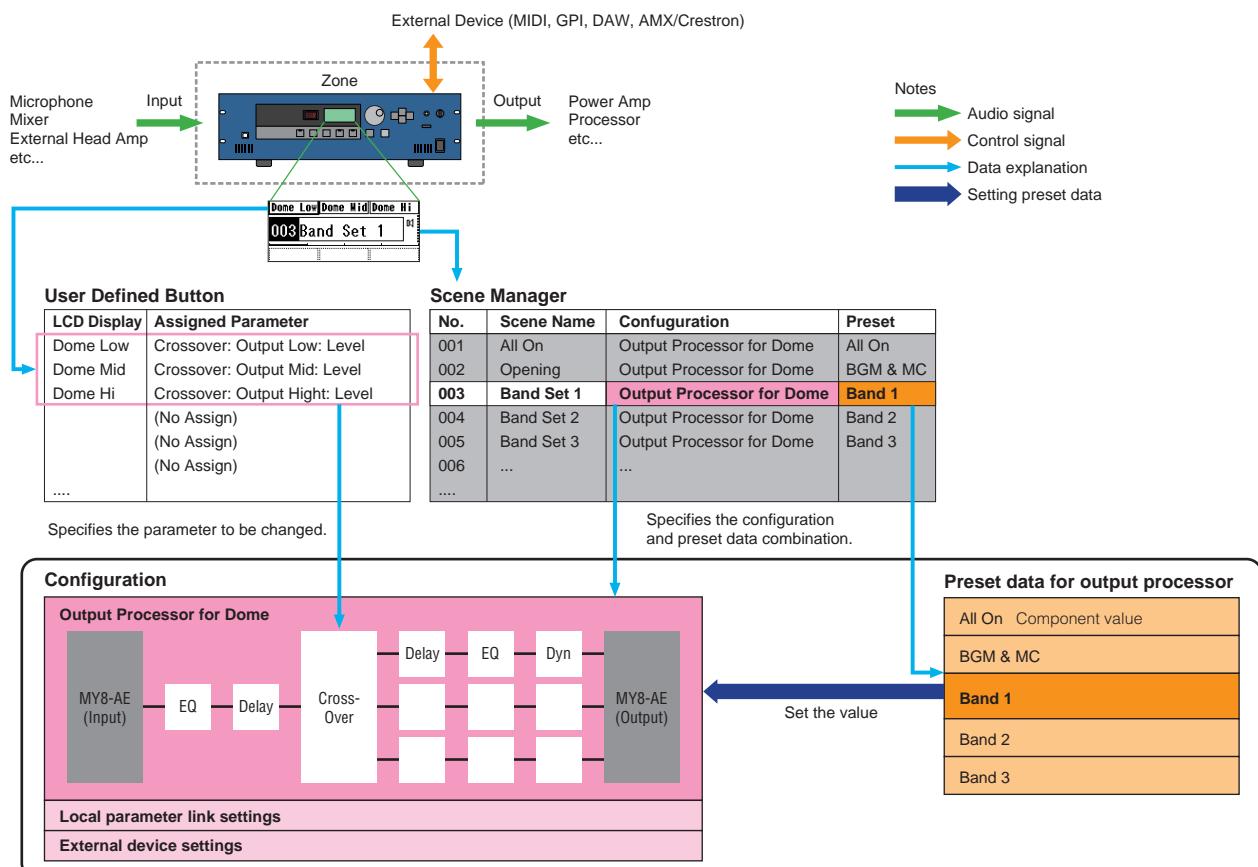
If multiple DME units are connected to the computer, you can use the DME Designer software to build a configuration that includes those multiple units.

Area	This means the entire site, and is therefore the uppermost level for a system built using DME Designer. At least one zone must be located within the area.
Zone	Specifies a space that has individual sound effects within the area, and creates DME connection conditions. You can create and switch between multiple configurations.
Configuration	Information related to the layout and connection of components in a zone.
Scene	Information related to configuration assigned to a zone and the settings of the components included in the configuration.
Component	An object that is arranged within the Configuration window.

For a DME overview and glossary, see the "DME64N/24N Owner's Manual."
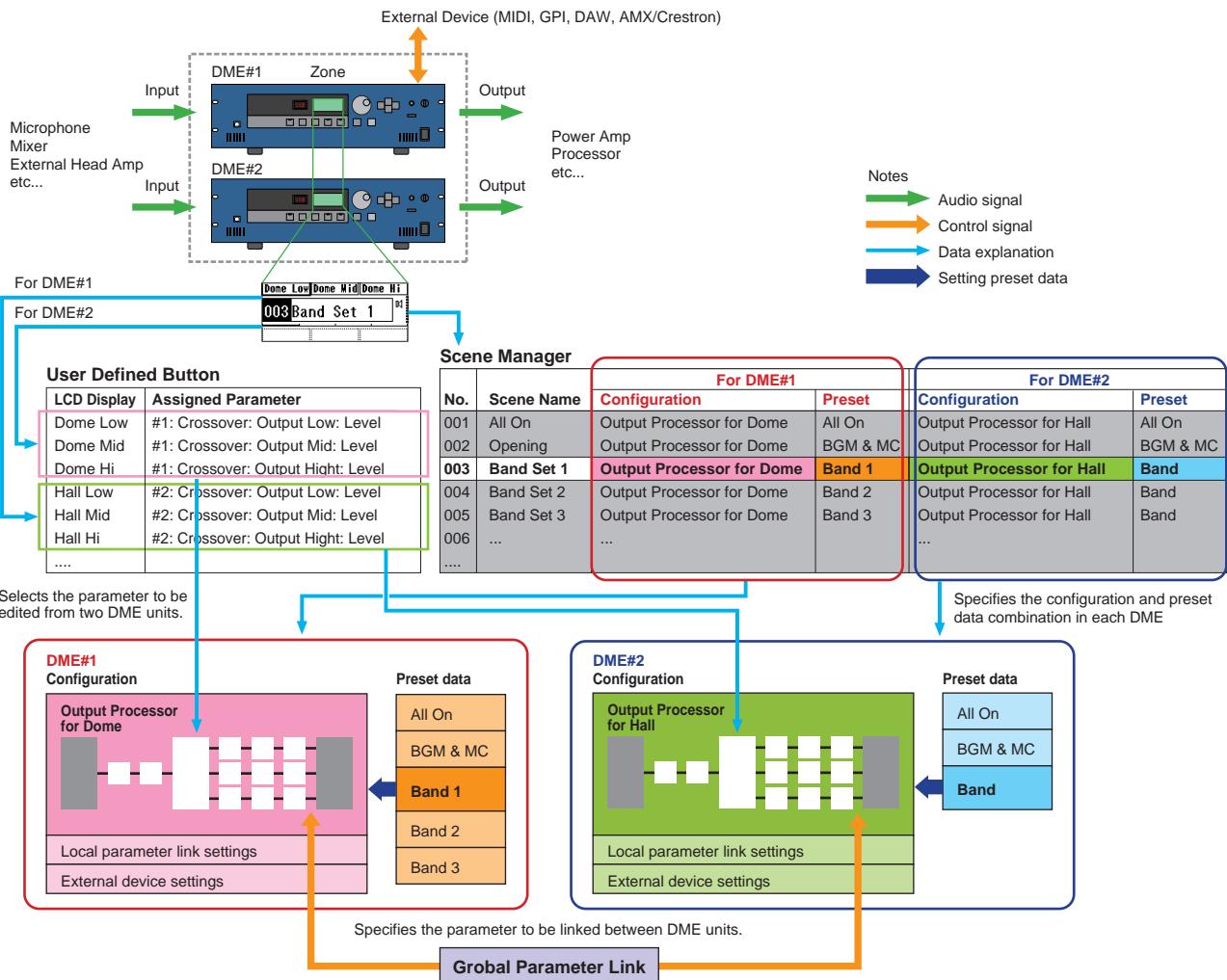
Systems built with DME Designer can have multiple zones within an area and multiple configurations and scenes within a zone. However, only one area, zone, or configuration can be made active and edited at a time. When active these are called the "**Current Zone**," "**Current Scene**," and "**Current Configuration**."

■ One DME unit/Zone

■ Two DME units/Zone

When one DME unit doesn't provide sufficient processing power, up to 16 DME units can be used

External Device (MIDI, GPI, DAW, AMX/Crestron)

DME#1   Zone

Input   Output

Microphone
Mixer
External Head Amp
etc...   Power Amp
                         Processor
DME#2   etc...

Input   Output

Notes
- Audio signal
- Control signal
- Data explanation
- Setting preset data

For DME#1
For DME#2

Dome Low Dome Mid Dome Hi
003 Band Set 1

User Defined Button

LCD Display	Assigned Parameter
Dome Low	#1: Crossover: Output Low: Level
Dome Mid	#1: Crossover: Output Mid: Level
Dome Hi	#1: Crossover: Output Hight: Level
Hall Low	#2: Crossover: Output Low: Level
Hall Mid	#2: Crossover: Output Mid: Level
Hall Hi	#2: Crossover: Output Hight: Level
....	

Selects the parameter to be edited from two DME units.

Scene Manager

No.	Scene Name	For DME#1 Configuration	For DME#1 Preset	For DME#2 Configuration	For DME#2 Preset
001	All On	Output Processor for Dome	All On	Output Processor for Hall	All On
002	Opening	Output Processor for Dome	BGM & MC	Output Processor for Hall	BGM & MC
003	Band Set 1	Output Processor for Dome	Band 1	Output Processor for Hall	Band
004	Band Set 2	Output Processor for Dome	Band 2	Output Processor for Hall	Band
005	Band Set 3	Output Processor for Dome	Band 3	Output Processor for Hall	Band
006	...	...		...	
....					

Specifies the configuration and preset data combination in each DME

DME#1
Configuration

Output Processor for Dome

Local parameter link settings
External device settings

Preset data
- All On
- BGM & MC
- Band 1
- Band 2
- Band 3

DME#2
Configuration

Output Processor for Hall

Local parameter link settings
External device settings

Preset data
- All On
- BGM & MC
- Band

Specifies the parameter to be linked between DME units.

Grobal Parameter Link

Common data for DME units in the same zone	
Scene Manager	A "scene" is information that is used to change the audio processing content. A combination of a configuration and preset data is specified for each scene. A Scene Manager is function used to memorize and manage scenes. Up to 999 scenes can be memorized, and each scene is managed by number.
MIDI Program Change settings	This setting is necessary to switch scenes using MIDI messages.
User Defined Button setting	This information is necessary to control component parameters from the unit's panel. Up to 24 parameters can be memorized.
Global parameter link settings	This information is necessary to allow operation of similar parameters to be linked between multiple DME units.
Separate data for individual DME units	
Configuration	This information defines the configuration of audio processing, audio input/ output, and external device components and the connections between components required to achieve the desired audio processing.
Local parameter link settings	This information is necessary to allow linked operation between similar parameters within a single DME unit.
External device settings	This information is necessary to allow control of component parameters from external devices. Independent settings are required for each external device. The following external devices can be used: • MIDI controller(MIDI Control Change, Paramter Change) • GPI controller • DAW controller • AMX, Crestron, and similar remote controllers.
Preset data	These are the parameter values for the components included in a configuration. Audio processing details can be changed by changing the preset data. The following component types include preset data: • GEQ, Matrix Mixer, and other audio processing components. • Internal AD/DA (DME24N), Cascade (DME64N), and MY Card I/O components. • External device components for external head amps (AD8HR, AD824).

System Requirement

Operating System	Windows® XP Professional/XP Home Edition/2000 Professional
CPU	1 GHz or better Intel® Pentium®/Celeron® family processor
Memory	At least 256 MB
Hard Disk Capacity	At least 300 MB
Display	1,280 x 1,024 pixels or better/High Color 16 bit or better
Other	Mouse, CD-ROM drive, 100Base-TX/10Base-T Ethernet or USB connection environment.

Main Changes from V1.0 to V1.1

■ Main Panel Window

- Instead of the former Parameter Link function, there are now two functions: a Global Link function that links parameters within all DMEs in a zone and a Local Link function that links parameters within a single DME unit. (→ page 73)

- The Synchronization function can now not only send data from DME Designer to the DME unit, but can also synchronize by reading data from the DME unit. (→ page 75)

- Scene Increment/Decrement and Time Adjustment can now be assigned in the GPI input function. (→ page 80)

- DME unit events can now be recorded by the Event Logger function and displayed in the Event Logger window. (→ page 111)

- The time for executing an event can now be set by using the Event Scheduler function. (→ page 116)

- Parameters in the current configuration can now be listed on the display and printed out by using the Parameter List function. (→ page 124)

- The Wav File Manager can manage Wave files played by the Wav File Player. (→ page 128)

- Settings can be made by the DAW Control function that are used for controlling DMEs from a DAW controller. (→ page 132)

- DME unit data can now be saved as a backup file by using the Backup function. (→ page 135)

■ Designer Window

- The port name display can now be switched between long name display and short name display. (→ page 148)

- DME64N cascade connections can now be set. (→ page 165)

- Priority items can now be set when compiling configurations by using the [Compile Priority] function in the "Preferences" dialog box. (→ page 209)

- Delay time can now be displayed for each component by using the Show Signal Delay function. (→ page 246)

- Monitoring points can now be edited by using the "Monitoring Point List" dialog box. (→ page 247)

- The status of connections in a configuration can now be analyzed in advance by using the Analyze function, without connecting the DME unit. (→ page 249)

- You can now set the action that occurs when you double-click a user module object. You can also turn user module security ON or OFF, and set a password. (→ page 254)

- Libraries with component parameters saved in them can now be recalled from the context menu for a component object. (→ page 277)

- A new rule for wiring prohibits connections to terminals that would short the terminator.

■ Component Editor/Component

- A status bar has been added to the component editor. It displays the component name, component ID, and parameter IDs for parameters that are being edited. (→ page 265)

- A Snap function has been added that records parameters in the editor temporarily. Parameter sets can then be switched by using the Snap buttons. (→ page 273)

- The meter's peak hold function can now be turned ON or OFF. (→ page 291)

- A Wav File Player component has been added for playing Wave files. (→ page 359)

- An effect component called SPX has been added that supports many different effect applications, such as reverb, delay, and modulation effects, along with complex combinations of multiple effects. (→ page 397)

- A Slot Out component editor has been added. (→ page 409)

- An Undo/Redo function is now available when using the design mode. It can undo the most recent operation (control movement/resize/deletion).

Changes from V1.1 to V1.2

■ Main Panel Window

- The synchronization algorithm has been refined for faster synchronization.

- Synchronization now can be executed from DME to DME Designer without any break in the sound.

- In the following cases, synchronization can be executed from DME Designer to DME without any break in the sound:

  The second or later synchronization after starting DME Designer* and when differences in data between the DME and DME Designer are limited to parameters within components, AD824/ AD8HR/DME24N AD/DA setting data, or MY card setting parameters.

  * If the file was saved when DME Designer was closed, there will be no break in sound even in the first synchronization after saving.

- Compile speed has been increased.
  Up to three times faster when AutoDelayCompensation is turned On.
  Up to two times faster when AutoDelayCompensation is turned Off.

- Synchronization is possible when no MY card or a different MY card is installed in the DME unit (a confirmation dialog will appear).

- An option to automatically close the dialog after synchronization has been added. (→ page 37)

- A progress bar has been added to the Synchronization dialog. (→ page 36)

- A message appears to warn when synchronization will cause muting.

- The following operations can be performed while on line:
  - Scene storage.
  - Scene name changes.
  - Fade ON/OFF and Fade Mode changes.
  - Fade time changes.
  - Parameter link setting changes.

- When a scene store is executed, that scene becomes the current scene.

- Wave files can be saved as DME data files, and are included in import/export operations. (→ page 32)

- Wave files can be saved in the Wav file library.

- Event Log events can be output via GPI. (→ page 115)

- The on-line indicator appears as a button which can be used to switch between on-line and off-line. (→ page 43)

- Scene edits cause the EDIT indicator to appear. (→ page 42)

- An auto file save function (Auto Save, post synchronization) has been added. (→ page 53)

- Different zones can be specified for use by different users. (→ page 56)

- Scene parameters related to User Defined Button, Program Change, GPI In and GPI Out can be set via the Scene Manager. (→ page 63)

- [Select All] and [Clear All] buttons have been added to the Scene Manager Recall Safe dialog. (→ page 67)

- User Control can be created for individual users as well as security levels. (→ page 70)

- A Remote Control Setup List has been added. (→ page 123)

  This list can be used to make detailed settings for a new software protocol that allow the DME to be controlled from AMX, Crestron, and similar devices.

  Refer to the "DME-N Remote Control Protocol Specifications" document for details about the communication protocol. Information about the "DME-N Remote Control Protocol Specifications" document can be found at the Yamaha pro Audio website (URL below).

  http://www.yamahaproaudio.com/

- It is possible to specify whether listed events will be executed by the Event Scheduler. (→ page 116)

- The order of same-time events can be changed in the Event Scheduler. (→ page 116)
- Exceptions can be specified for Event Scheduler execution day/time. (→ page 122)
- Event Scheduler execution times can be specified in 1-second increments. (→ page 121)
- Head amp gain and MY-Card can be set via GPI, MIDI, User defined Button, DAW Control.
- Parameter values, scene recall, GPI output, Wave file playback, and head amp gain can be set via the User Defined Buttons. (→ page 98)
- The Component Lock function dialog is separate from the Parameter List dialog. (→ page 127)
- Shortcuts can be freely set as required. (→ page 134)
- Files can be saved in the DME unit. (→ page 52)
- A [Close All Editor Windows] button has been added to the Window menu. (→ page 51)
- External head amp parameters will be recognized by the DME unit when either the DME or the external head amp (AD824, AD8HR) are turned on. Execute a scene recall to send DME settings an external head amp.
- This manual is now separate from the DME Designer installer, and can not be accessed from the DME Designer menus.
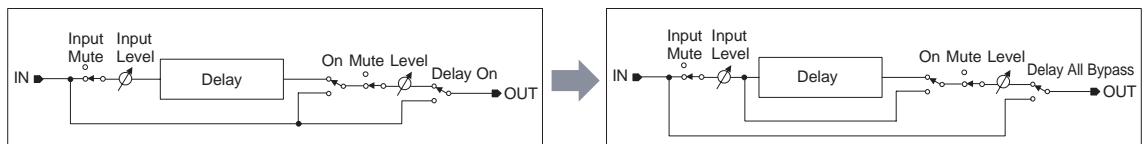
■ Designer Window

- The following operations can be carried out via the shortcut keys.
  - Navigator
  - Activate Navigator
  - Activate Toolkit
  - Activate Design Window
  - Select Left Port and Start Wiring
  - Select Right Port and Start Wiring
  - Wire Auto Single to Right
  - Wire Auto Multi to Right
  - Wire Auto Single to Left
  - Wire Auto Multi to Left
  - Delete Wire
- It is now possible to simultaneously edit multiple objects of the same type.
  Example: Change the thickness or color of multiple wires at once.
- Files related to user modules (user module files, library files, user module editor files) can be combined and exported/imported as a single file.
- Port colors can be independently specified for each port type. (→ page 156)
- Default wire thicknesses and types can be independently specified for each port type.
- An automatic hot-spot connection function has been added. (→ page 225)
- Port display has been added to External Device, Picture, DME, and ICP1 objects.
- When drawing wires the keyboard cursor keys can be used to move the mouse cursor, and the <Enter> key can be used to create nodes.
- When drawing wires <Shift> key plus <→> key and <Shift> key plus <←> key combinations can be used to automatically connect horizontally-aligned hot spots.
- DME object ports can be freely specified.
- Compilation of configurations with loop connections is possible when Auto Delay Compensation is On.
- The name has been changed from "Foot Monitor" external device to "Floor Monitor."
- Addition External Device types have been provided.
- External Devices can be double-clicked to open a file saved by other applications. (→ page 172)
- Picture objects can be double-clicked to open a specified editor. (→ page 187)
- Text objects can be double-clicked to open a specified editor. (→ page 190)

- User module port labels can be edited. (→ page 183)
- Graphics can be placed to represent user modules. (→ page 183)
- The Legend field automatically resizes to accommodate project names and titles of different lengths.
- A Generic "MY-Others" setting has been provided to accommodate third-party MY cards.

■ Component Editor Window

- Undo and Redo are now shortcut compatible.
- A scroll bar appears when the size of the component editor window is reduced.
- The size and position of the component editor window are memorized.
- An option to allow mouse-over zooming of the edit box has been added. (→ page 266)
- A [Back] button that allows switching between related parent and child windows has been added. (→ page 265)
- A [Close All Editor Windows] button has been added to the contextual menu.
- Source Selector, Speaker Processor, Limiter, Slot In, Cascade In, and Cascade Out components have been added.
- The Delay algorithm has been revised. (→ page 332)
  - LEVEL and MUTE are effective when Delay is Off for each channel.
  - The name of the overall Delay [On] parameter has been changed to [All Bypass].

- The bus send level range for Delay, Matrix, and Matrix Mixer components has been changed to -∞ through 0.0 dB.
- Snap copy is possible. (→ page 274)
- Snap can be retained until the application is quit or another file is opened.
- Security status is displayed in the user module editor status bar.
- Multiple controllers can be selected by clicking while holding the <Ctrl> key when the editor is in the design mode. (→ page 286)
- [Picture], [Text], [Box], [Ellipse], and [Frame] have been added to the tool palette of the user module editor and user control editor design mode. (→ page 279)
- Controller properties can be accessed by double-clicking controllers in the user module editor or user control editor design mode. (→ page 303)
- Picture and Text objects can be clicked to open a specified editor in the user module editor or user control editor.
- The User Module Editor and User Control Editor offer a greater range of customization options for color, size. etc., of the placed controls.

■ MIDI Setup

- A MIDI Setup minimize function has been added.

■ V1.2 Precautions

- When using project files (*.daf) created by version 1.1.5 or earlier, synchronize from the DME Designer to the DME unit for the first synchronization.
- Project files (*.daf) created using version 1.2 will not open properly on version 1.1.

Contents

Installing DME Designer

To use DME Designer, you must first install the software on the computer. Before you can connect the DME Designer software to the DME unit, send and receive configurations, or perform control, you must first install the USB MIDI Driver or the DME-N Network Driver, according to how you will be connecting, and then make the appropriate settings.

For instructions about how to install DME Designer and about the installation and setup method for the MIDI driver and DME-N Network Driver, see the "DME Designer Installation Guide."

Starting DME Designer

The DME Designer software is started from the [Start] menu. DME Designer is used with one user logged on. The user logs on when the software is started.

■ DME Designer Start Up and Logon (When Auto-Logon Is Not Set)

1 Click [Start] → [All Programs] → [YAMAHA OPT Tools] → [DME Designer] → [DME Designer].

> **NOTE**
>
> In Windows2000, click [Start] → [Programs] → [YAMAHA OPT Tools] → [DME Designer] → [DME Designer].

The "Log On" dialog box will be displayed.

> **NOTE**
>
> Automatic log-on is the default setting. If the automatic logon feature is enabled, the "Log On" dialog box will not be displayed when the application is started. Instead, the auto-logon user will be logged on automatically. See page 21 for information about auto-logon.

2 Click the [▼] at the right of the [User] box, and select the user.
If no user has been created, only [Administrator] will appear in the list. When starting DME Designer for the first time after installing, select [Administrator].
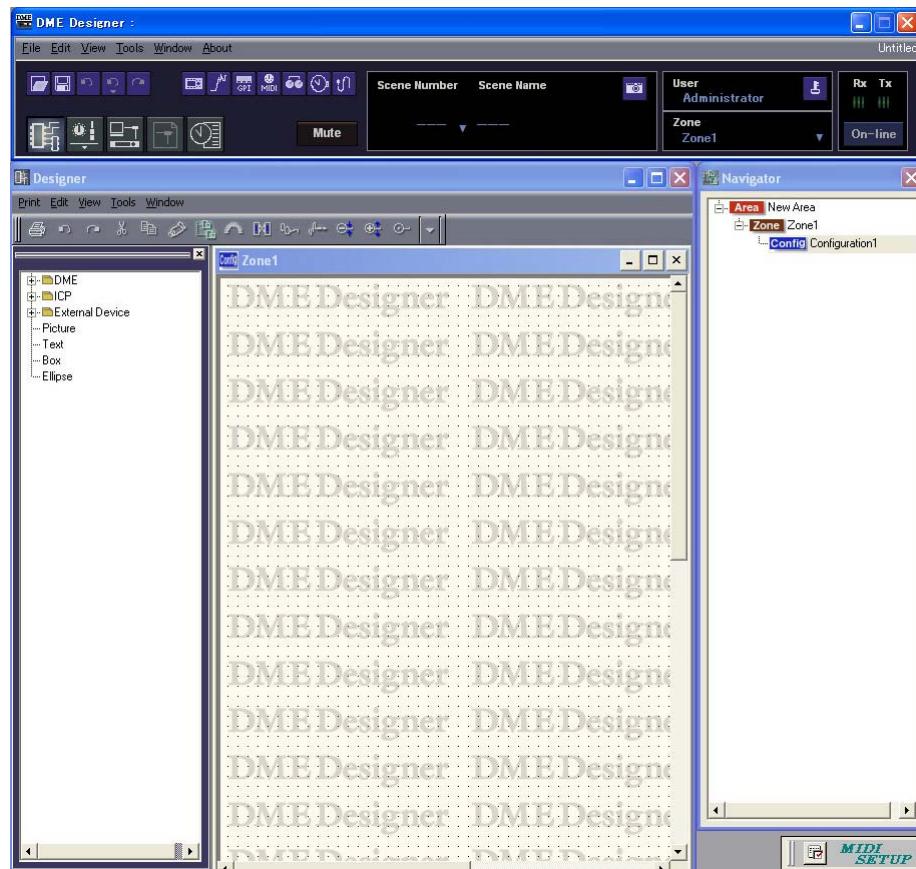
3 Enter the password into the [Password] box.

Enter the password set for the user.
If no password has been set, leave the password box blank when you log on.

4 Click the [OK] button.

DME Designer starts up.

■ **When Automatic Logon Has Been Set (page 21)**

If automatic logon has been set, the "Log On" dialog box will not be displayed. The user set for automatic logon will be logged on.
With automatic log on, even if a password is set for a user, it will not be requested during log on. This is useful when logging on a specific user.

■ **Starting by Opening a Project File**

DME Designer starts when a project file with a saved configuration is opened. When the project file is opened, DME Designer is started with the window configuration that was in place when the file was last saved.

Closing DME Designer
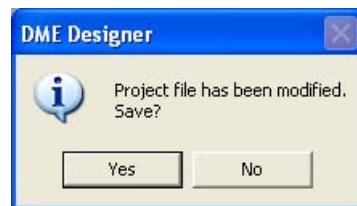
To close DME Designer, click [Exit] on the [File] menu of the Main Panel window. It can also be closed by clicking the [Close] button on the Main Panel window.

1 Click [Exit] on the Main Panel window [File] menu.

When you try to close DME Designer, "Project File has been modified. Save?" will be displayed in a dialog box.

NOTE

Sometimes the "Project File has been modified. Save?" dialog box will not be displayed.
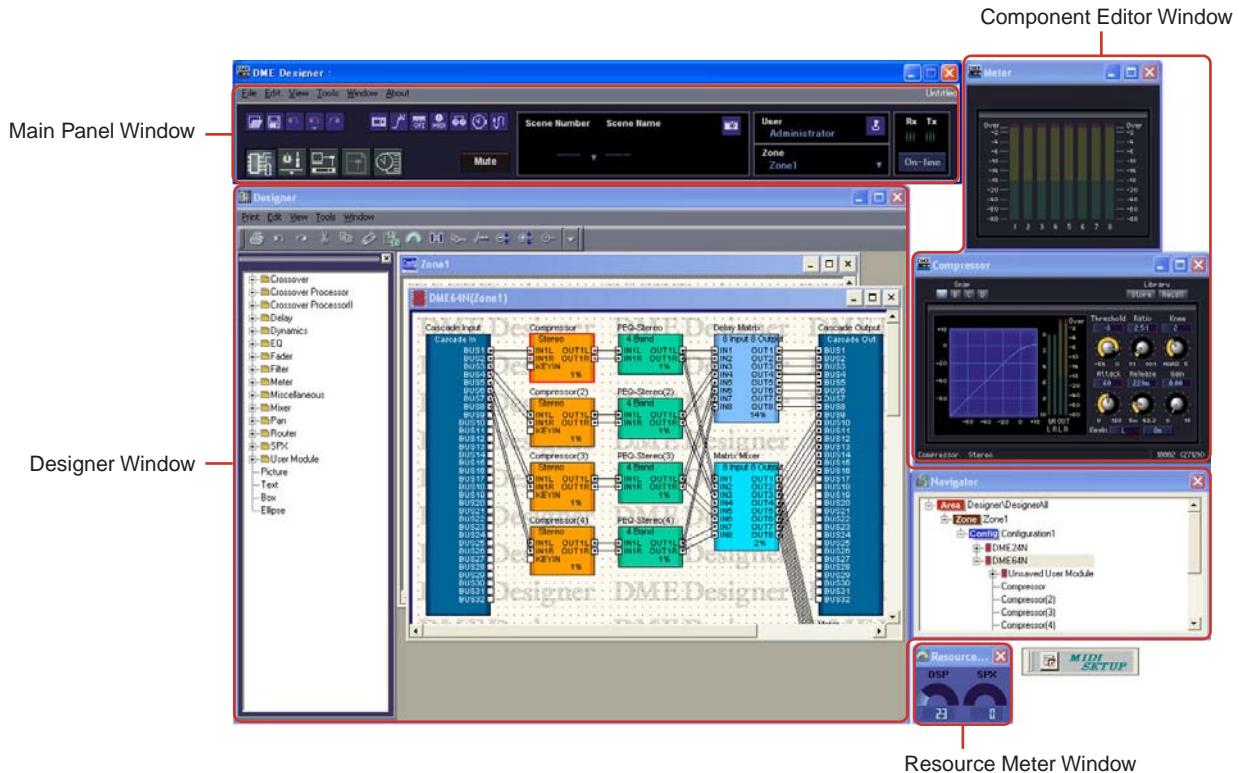
2 To save the file, click [Yes]. To close without saving, click [No].

If you click [Yes], the file currently saved with the same name will be overwritten. If the file has not been saved, the File Save dialog box will always be displayed.

Names and Functions of the Windows

The DME Designer software has several windows, including the Main Panel window, Designer window, Component Editor window, Resource Meter window, and others.

Component Editor Window

Main Panel Window

Designer Window

Resource Meter Window
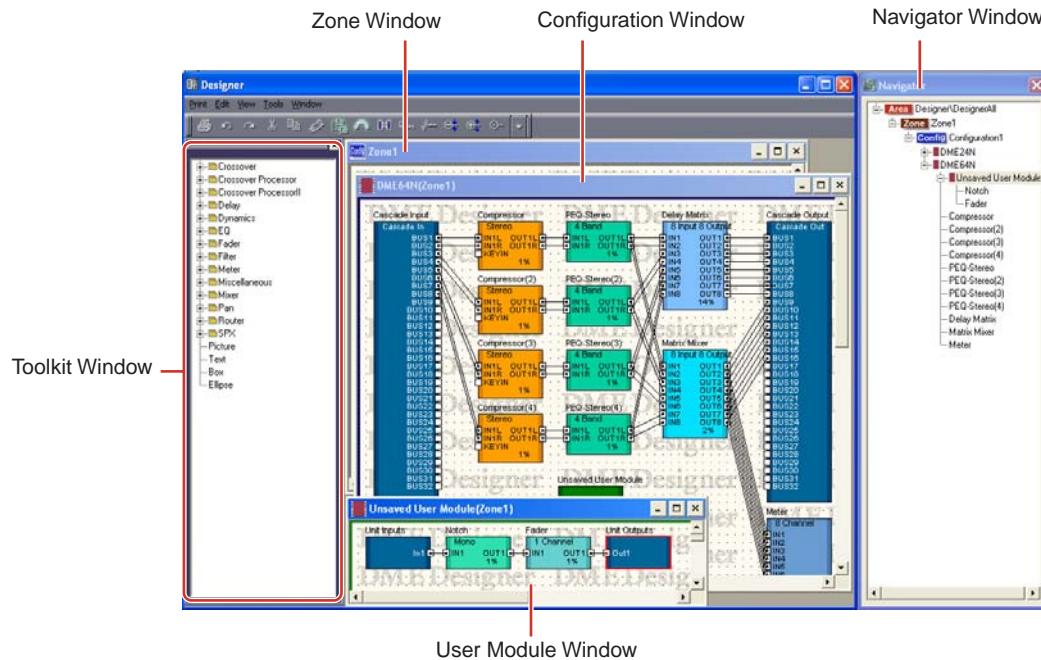
Main Panel Window

Menus and buttons are available in the Main Panel window. The current DME Designer environment, including the active scene and zone, the currently logged on user name, and the connection status to the DME unit are displayed on the right side of the Main Panel window.
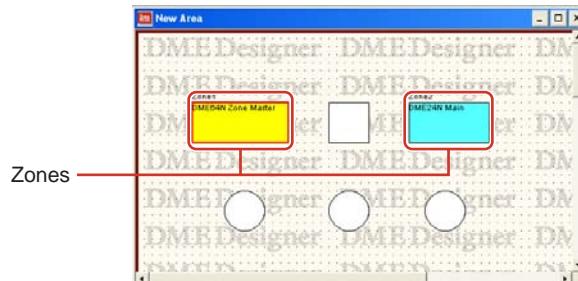
Designer Window

The Designer window displays several different windows. First among them is the Area window, where you can manage the entire system. The Area window includes one or more Zone windows, which in turn include one or more DME units that are used to build a zones within the area. Next is the Configuration window, where you create the internal configuration of each DME unit. Within the Configuration window are the User Module windows, where you can assemble often-used components into presets; the Toolkit window, which displays objects used in the other windows as the basic building blocks for sound designs; and the Navigator window, which lets you grasp the overall status of the system at a glance.

Zone Window   Configuration Window   Navigator Window

Toolkit Window

User Module Window
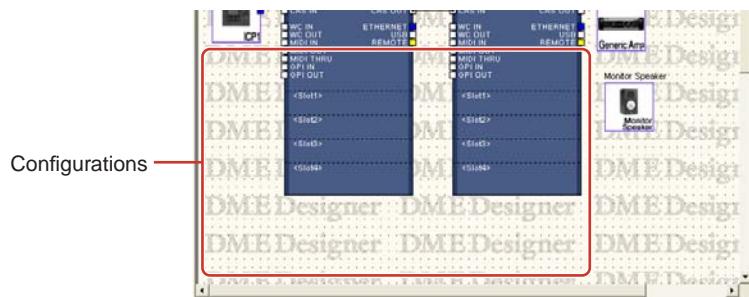
■ Area Window

The Area window is used for designing areas, which manage the entire system. While at least one zone is included within an area, multiple zones can be arranged there.

Zones
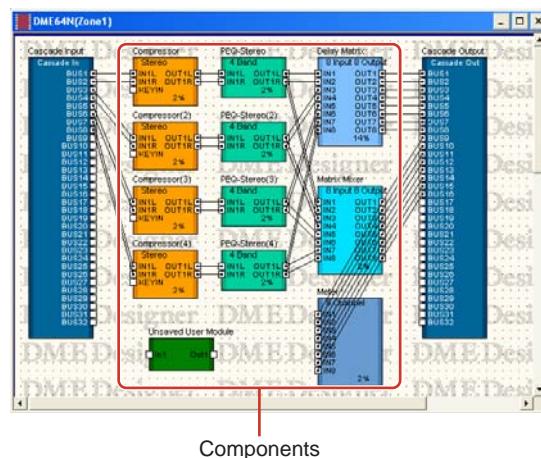
■ **Zone Window**

The Zone window is used to design zones within the area. A zone is a more concrete blueprint that includes at least one DME. It shows the DME's connections with other devices and the wiring between them. You can create multiple zones.
The DME units and connected devices are arranged in each Zone window, creating configurations.
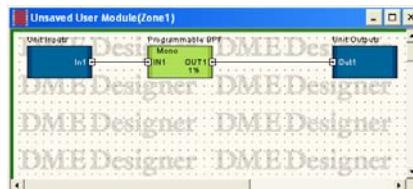
Configurations

■ **Configuration Window**

The Configuration window is used to design the internal configuration of each DME unit contained in the Zone window. By arranging and connecting components (audio processors like mixers, compressors, effects, and crossovers, along with parts like faders and meters) in the Configuration window, you can create things like complex processors or matrix mixers, that determine the actual internal structure that operates each DME unit.

Components

■ **User Module Window**

The User Module window is used for designing user modules that can be arranged in the Configuration window. You can create original modules by combining multiple examples of often-used components. When you save these modules as presets, you can recall them easily whenever you want.

■ **Toolkit Window**

The Toolkit window displays the objects that you can use in each window that can be displayed in the Designer window. Those windows are the Area, Zone, Configuration, and User Module windows. The Toolkit displays different objects, according to the currently active window. To place an object in a window, double-click it in the Toolkit window where it is displayed or drag it to the currently active window.

■ **Navigator Window**

The Navigator window displays the area, zones, configurations, and components in a hierarchal fashion that lets you check their status as a whole. When editing offline, you can click an area name, zone name, or configuration name to make that window active. Clicking a component name will open the component editor window for that component.
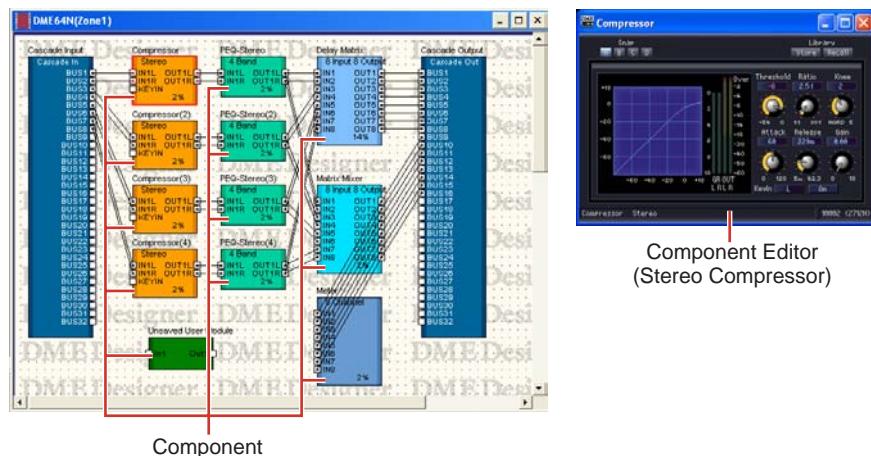
■ **Objects and Components**

"**Object**" is the name for the parts that are arranged in the various design windows, such as the Area, Zone, Configuration, and User Module windows. Objects are always laid out in the Toolkit window. Only the appropriate objects for each window are displayed. The blocks displayed at the higher level of the Toolkit window in particular are called "**components**." This refers to each type of processor that operates the DME. "Object" normally refers to Picture, Text, Ellipse and other items that are used after connecting them by wire to the various components.

Component Editor

The blocks that are arranged in the configuration window are called "**components**." Audio processors like mixers, compressors, effects, and crossovers, along with parts like faders and meters, are used for this purpose in the Configuration window.
When you double-click on a component block arranged in the Configuration window, the Component Editor window will open. There you can edit the parameters for that component. The types of parameters displayed will differ, depending on the component.

Component

Component Editor
(Stereo Compressor)

Resource Meter

This window provides an indication of the usage of the components in the configuration window. The usage percentage increases as the number of components increases, and is shown in graph form in this window.
This window is shown at the same time as the designer window, and provides a guide when creating configurations.
The usage percentage also depends on the sampling frequency at which the DME unit is set to operate. Make sure that the usage percentage is kept below 100%.

Window Operations

Operations in all windows are the same as for normal Windows applications. The windows are controlled with the [Minimize], [Maximize/Restore], and [Close] buttons at the upper right of the title bar. DME Designer is closed by clicking the [Close] button on the Main Panel window.

Users and Security

You can create multiple users in DME Designer and set the functions that are available to each user. Although users who will design and put together installations must be able to use all the functions of DME Designer, users who will only operate the system can be restricted to functions that will not allow them to accidentally change the settings.

DME Designer is used with one user at a time logged on. To change the user, click the [File] menu → [Log Off] command on the Main Panel window.

About Users

To use DME Designer, you must logon when you start the software. Except for the first time the software is started or when separate settings are made for the first time, you can logon by specifying the name and password for a user that has been set as the administrator. The administrator can build the system as a whole, or apply function limitations that let other people edit. Administrators or other people that can use DME Designer are called "**users**." The user name for the currently logged on user appears below [User] on the Main Panel window.

Currently Logged On User Name

The default user, named [Administrator], is set to use all of the functions. Immediately after DME Designer is installed, [Administrator] is the only user, and there is no password set.

Multiple users can be created. When the system administrator creates multiple users, restrictions can be applied separately for each one of them. A user with restrictions applied can edit using only the functions the administrator enables for him.

The place to create, setup, and delete users is the "Security" dialog box. See "Security (Creating Users and Making User Settings)" on page 55.

Logging On

The "Log On" dialog box is displayed whenever the application is started or a user is logged off. Whenever one user is already logged on, another user cannot be logged on. To log on as another user, first log off the currently logged on user.

■ The "Log On" dialog box

❶ [User]

From the list, select the user you want to log on as.

❷ [Password] Box

Enter the password.

❸ [OK] Button

Log on as the selected user.

❹ [Exit] Button

When the application is started, and the "Log On" dialog box is displayed, there is an [Exit] button. This closes the application without logging on a user.

❺ [Cancel] Button

When the "Log On" dialog box is displayed after a user is logged off, there is a [Cancel] button instead of an [Exit] button. This cancels the logoff. The original user will continue to be logged on.

■ Logon Procedure

1 Click [▼] at the right of the [User].

A drop-down list of user names will be displayed.

2 Click the user you want to log on.

3 Enter the password into the [Password] box.
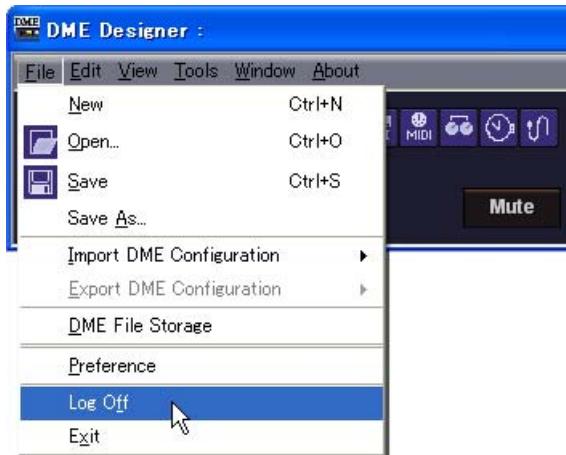
When you type in the password box, the characters you enter will display as asterisks (*).

4 Click the [OK] button.

Logging Off

Logoff is used when changing users. When you log off, the document currently being edited is closed, and the "Log On" dialog box is displayed so you can log on the next user. Log off with the [Log Off] command on the [File] menu in the Main Panel window.

1 Click the [File] menu → [Log Off] command on the Main Panel window.

Log on the next user in the "Log On" dialog box.

Automatic Logging On

With the auto-logon function, you can have a specified user automatically logged on when the application is started. If you enable the auto-logon feature, the specified user will be logged on when the application is started, without displaying the "Log On" dialog box.
Auto-logon is set from the "Security" dialog box. See "Security (Creating Users and Making User Settings)" on page 55.

Project Files

Project Files

Systems built with DME Designer are saved as project files. Project files have ".daf" as the extension for their filenames.
These files include settings for the area, zones, configurations, and each parameter.

project03.daf

Since only one project file can be open at a time, before you can open a second file, the first one must be closed.
The commands for opening project files, creating new ones, and saving them, are found in the [File] menu of the Main Panel window.
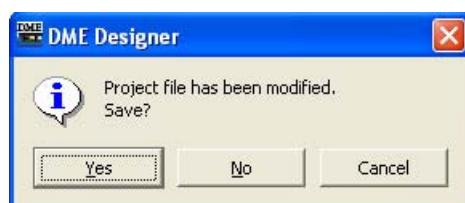
Creating New Project Files

Project files are created using the [File] menu → [New] command in the Main Panel window.

1 Click [File] menu → [New] in the Main Panel window.
Since the currently open project file must be closed before a new one can be created, a "Project file has been modified. Save?" dialog box will be displayed.

2 To save the file, click [Yes]. To close without saving, click [No].
If you click [Yes], the file currently saved with the same name will be overwritten. If the file has not been saved, the File Save dialog box will be displayed.
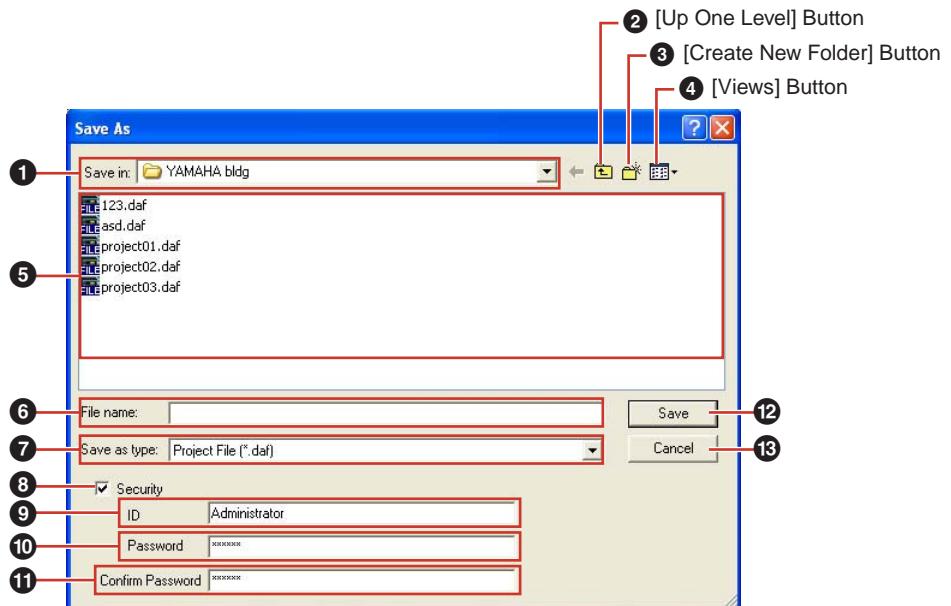
A new project file will be created.

Saving Project Files

Project files are saved using the [File] menu → [Save] and [Save As] commands in the Main Panel window. The [Save] command overwrites the previously saved version of the file. The [Save As] command lets you give a new name to the file before saving it. When you save the file with a new name, you can protect it with a password.

■ The "Save As" Dialog Box

When you click the [File] menu → [Save As] command in the Main Panel window, the "Save As" dialog box is displayed. Except for some [Security] options, this dialog box is the same as the normal Windows dialog box for saving files.

❶ [Save In]

Specify the folder for saving the file. The folder name is displayed in this box. Click the [▼] on the right to move to another folder.
The large box below displays the contents of the folder in this box.

❷ [Up One Level] Button

Moves to the folder one level higher in the hierarchy.

❸ [Create New Folder] Button

Creates a new folder in the folder currently being displayed.

❹ [Views] Button

Changes the way the folder content list is displayed. If you click this button, a menu appears that lets you change the arrangement and display format of the files in the list.

❺ List

This box displays the contents of the folder shown in the [Save In] box. Only files belonging to the type selected in the [Save As Type] box will be displayed.

❻ [File Name] Box

Enter the filename. If the currently open file has already been saved, its name will be already entered in this box. To save using a different filename, change the name here.

❼ [Save as type]

Selects the format for the file you are saving. When saving project files including Wave files set for Wav File Player, select "Project File with wave (*.daf)". Otherwise, select "Project File (*.daf)".

❽ [Security]

Protects files with a password. If you check here, you will be able to enter settings in the [ID], [Password], and [Confirm Password] boxes.

❾ [ID] Box

Enter the ID that has been set for the file. The currently logged on user name will be pre-entered, but you can change it. This need not be the same as a user name.

❿ [Password] Box

Enter the password that has been set for the file. You can enter up to 256 alphanumeric characters. The characters you enter will be displayed as asterisks (*) in the [Password] box.

⓫ [Confirm Password] Box

Enter the password once again to confirm it. Enter the same password as was entered into the [Password] box. The characters you enter will be displayed as asterisks (*), the same as in the [Password] box.

> **NOTE**
>
> When someone attempts to open a password-protected project file, the application will request an ID and password. If they are not entered correctly, the file cannot be opened. Be careful to avoid mistakes when entering the ID and password. The password cannot be reissued and the ID and password cannot be changed. Be careful not to forget them.

⓬ [Save] Button
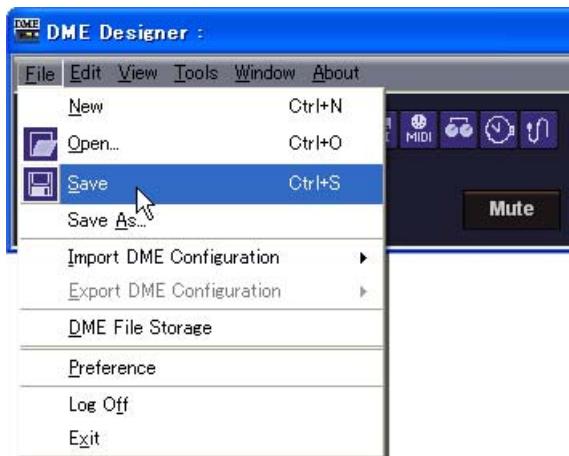
Saves the project file.
If the characters entered into the [Password] and [Confirm Password] boxes were not the same, a "Password is different" dialog box will be displayed. Click the [OK] button and reenter the correct password in the [Password] and [Confirm Password] boxes.

⓭ [Cancel] Button

Cancel the file save process.

■ **Saving Project Files**

**1** Click [File] menu → [Save] in the Main Panel window.

If there is a file already saved with the same name, it will be overwritten.
When saving a project file for the first time, you must name the file before saving it. The "Save As" dialog box will open, the same as when clicking the [File] menu [Save As] command. Enter a filename and specify the folder where the file will be saved.
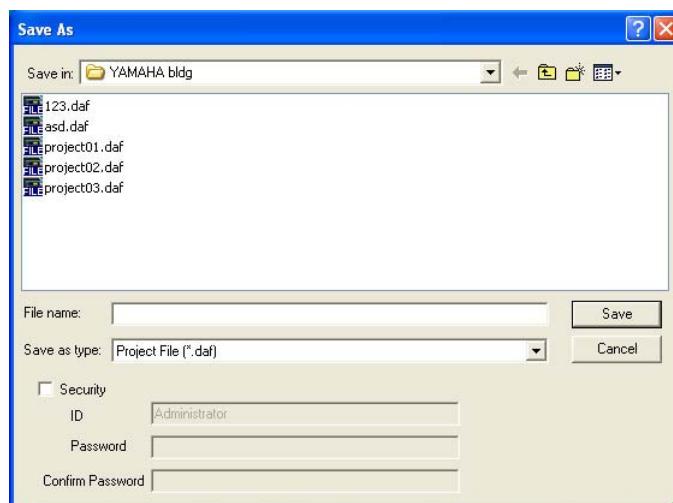
■ **Saving a File with a New Name**

With the [File] menu [Save As] command in the Main Panel window, you can save the currently open file with a new filename. When saving for the first time, this creates a new file. A file that has already been saved with a name will be saved as a separate file.

1 Click [File] menu → [Save As] in the Main Panel window.
The "Save As" dialog box will be displayed.

2 Enter a filename into the [File name] box.

3 Specify the folder where the file will be saved.

4 Click the [Save] button.

■ Protecting a Project File with a Password

When you save a project file with a new name, you can set a password and protect the file. If a password is set, an ID and password will be requested when the file is opened.
The security settings for a file cannot be changed by resaving the file with the same name. They can only be changed when saving the file with a new name using the [Save As] command. Once set, the ID and password cannot be changed. To change the ID and password for password-protected project files, use the [Save As] command to save the file as a new one with a different name.

1 Click [File] menu → [Save As] in the Main Panel window.
The "Save As" dialog box will be displayed.

2 Place a checkmark for [Security] in the file save dialog box.

3 Enter an ID into the [ID] box.
The name of the currently logged on user will be automatically entered into the [ID] box. To change it, enter another ID into the box.
When using [Save As] to save a password-protected file, the dialog box will be displayed with the ID and password boxes automatically filled in with the ID and password that were assigned to the original file. To change the ID and password, enter new ones into the boxes.
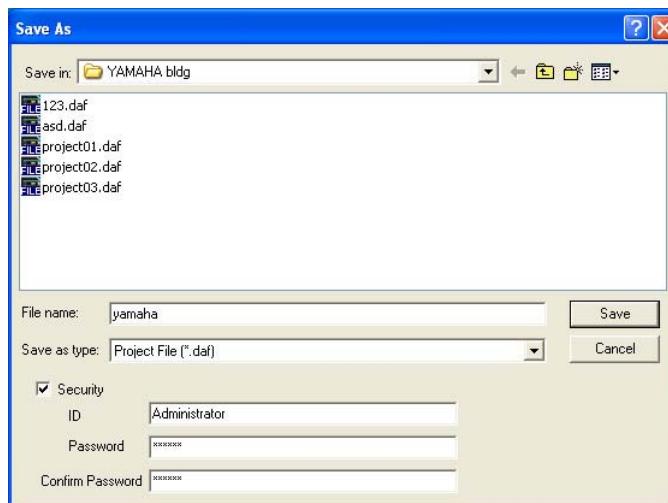
4 Enter the desired password into the [Password] box.
You can enter up to 256 alphanumeric characters for the password. The characters you enter will be displayed as asterisks (*) in the [Password] box.

5 Enter the same characters into the [Confirm Password] box as were entered into the [Password] box.
The characters you enter will be displayed as asterisks (*) in the [Password] box.

6 Click the [Save] button.

When saving a password-protected file without changing the name, the same ID and password will be set (the ID and password cannot be changed).
Using the [Save] command, you cannot password protect an already saved project file that was not already password protected. To set a password for a file that is not already password protected, save it as a separate file using the [Save As] command.

Opening Project Files
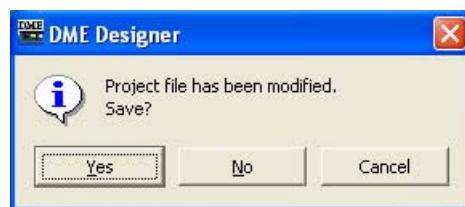
Project files are opened using the [File] menu → [Open] command in the Main Panel window. Since the currently opened project file must be closed before another one can be opened, a "Project file has been modified. Save?" dialog box may be displayed.

■ [Open] Command

Project files are opened using the [File] menu → [Open] command in the Main Panel window.

1 Click [File] menu → [Open] in the Main Panel window.

A "Project file has been modified. Save?" dialog box may be displayed.

2 Click the [Yes] or [No] button.

The "Open" dialog box will be displayed.

3 Selects the file to be opened.

4 Click the [Open] button.

■ **Opening a Project File That Has Security Set**

If security is set for a project, the "Enter ID & Password" dialog box will be displayed when you click the [Open] button in the "Open" dialog box.

Enter the ID and password for the file into the [ID] and [Password] boxes, and click the [OK] button.
If you enter an incorrect ID or password and click the [OK] button on the "Enter ID & Password" dialog box, the "Wrong ID or password!" dialog box will be displayed.
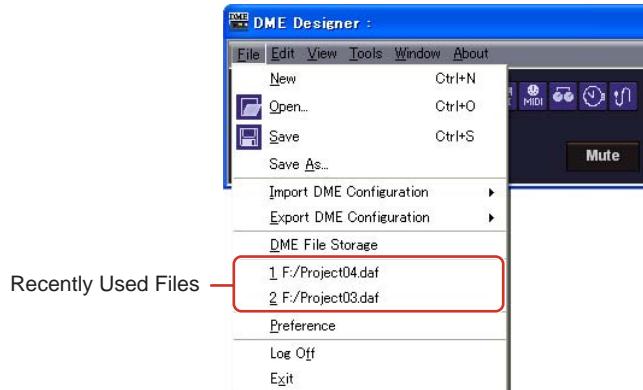
Click the [OK] button and enter the correct ID and password the "Enter ID & Password" dialog box.

■ **Opening a Project File from the "Recently Used Files" List**

Recently used project files are displayed on the [File] menu in the Main Panel window. If you click one of the filenames, you can open that project file.

Recently Used Files

If security is set for a project file, the "Enter ID & Password" dialog box will be displayed if that file is selected from the recently used files list. Enter the ID and password to open the file.
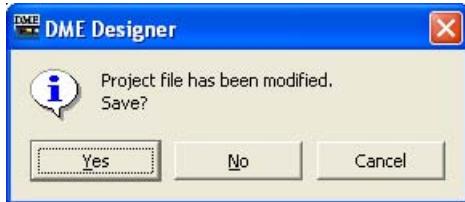
■ **Double-Click the Icon for the Project File**

When you double-click the icon for the project file, the file will open. If DME Designer is not started, it will start. After logon, the project file will open.

Just as when you use the [Open] command, if DME Designer is already started, the currently open project file must be closed before another one can be opened. Therefore, a "Project file has been modified. Save?" dialog box will be displayed.

NOTE

Sometimes the "Project file has been modified. Save?" dialog box will not be displayed.

If security is set for the project file, the "Enter ID & Password" dialog box will be displayed. Enter the ID and password to open the file.

Closing Project Files

You cannot have multiple project files open simultaneously in DME Designer. To close the currently open project file, you can create a new project file or open another project file.

DME Data File

You can import or export parameters for a DME that is arranged in a configuration file. Parameters for a single DME unit in the current configuration (the one being edited) are saved as a file. Saved parameters can be imported into another project file.
Files with parameters saved in them are called "**DME Data Files**." These files have ".ddf" as the extension for their filenames.
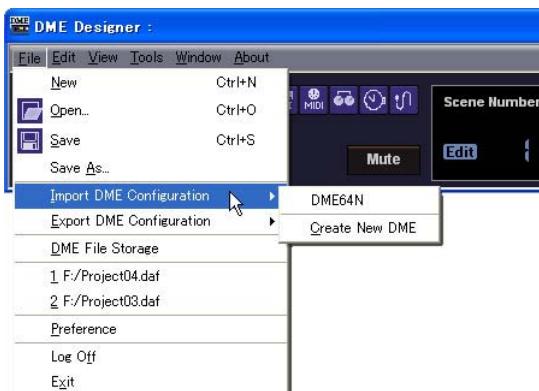
DME Data Import

This imports DME data file settings into a DME included in the current configuration.

1 Make active the configuration that arranged the DME into which you are going to import.
If there are multiple configurations, display the window in front for the configuration that arranged the DME to which you are going to import.

2 Click the [File] menu in the Main Panel window, and move the mouse cursor over [Import DME Configuration].
A submenu will be displayed. The DMEs included in the current configuration will be displayed on a submenu.

3 On the submenu, click on the DME into which you will import settings.

The "Open" dialog box will be displayed.

4 Select the DME data file and click the [Open] button.

■ **[Import DME Configuration] Submenu**

The DMEs included in the current configuration will be displayed on the [Import DME Configuration] submenu.

[Create New DME] creates a new DME and imports settings.

NOTE

Only users for whom the [Operation Security] → [Edit] checkbox in the "Security" dialog box has been checked can import DME data. For information about user security levels, see "Security (Creating Users and Making User Settings)" on page 55.
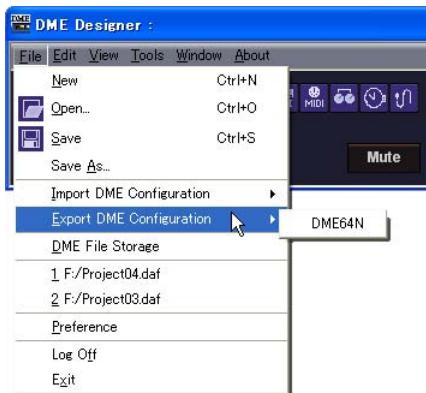
NOTE

If DME data file import was not possible, a "DME file import failed." message will be displayed.
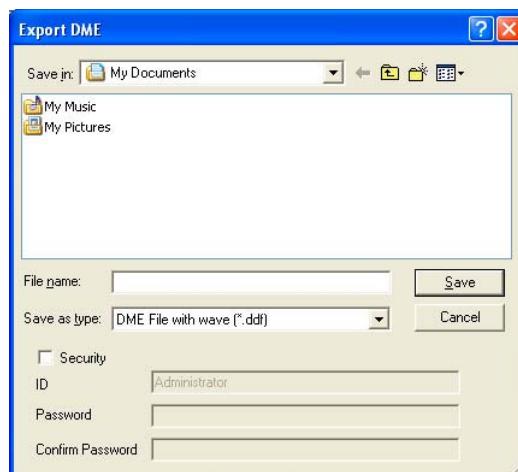
DME Export

This exports parameters from a DME included in the current configuration and saves them as a file.

1 Make active the configuration that includes the DME from which you will export.
If there are multiple configurations, display the window in front for the configuration that arranged the DME from which you are going to export.

2 Click the [File] menu in the Main Panel window, and move the mouse cursor over [Export DME Configuration].
A submenu will be displayed.
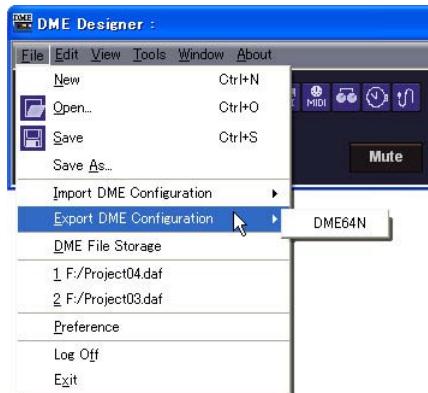
3 On the submenu, click on the DME from which you will export settings.
The "Save As" dialog box will be displayed.

4 Enter the filename.
Determines whether a selected file type will be exported along with a wave file.

5 Specify the folder where the file will be saved, then click the [Save] button.

■ **[Export DME Configuration] Submenu**

The DMEs included in the current configuration will be displayed on the [Export DME Configuration] submenu.

Configuration Creation Procedure

The configuration is a design diagram that determines the DME configuration. Transferring this data causes the DME to operate. Follow the procedure below to create a DME Designer configuration.

> **NOTE**
>
> Configurations can be created only when the DME unit is offline. To transfer the data, you must first go into online status. The procedure for going online is given later in this document.

1 Creating a New Project.

When you start DME Designer, a new project is created. If another project file is already open, use the [File] menu → [New] command in the Main Panel window to create a new file.
"Main Panel Window Menu" → [File] menu → [New] (page 44)

2 Zone Settings.

Zone names are set, and zones are added and deleted using the "Zone" dialog box.
See "Adding, Deleting, and Renaming a Zone" on page 231.

3 Configuration Settings.

Zone names are set, and zones are added and deleted using the "Zone" dialog box.
See "Adding, Deleting, and Renaming a Configuration" on page 233.

4 DME, ICP, External Device Layout.

Arrange DMEs, ICPs, and external devices in the Zone window.
See "Zone Window" on page 237,
"Objects" on page 156,
"Design Window Shared Settings and Operations" on page 207.

5 Placing Components.

Place components and user modules in the Configuration window.
See "Configuration Window" on page 242,
"User Module" on page 250,
"Types of Components" on page 259.

6 Component Logical Connections.

Use wires to connect the components and user modules you placed in the Configuration window.
See "Drawing and Editing Wires" on page 219.

7 Setting Parameters.

Edit the component parameters in the component editor.
See "Component Editor Window" on page 264.

8 Setting User Defined Parameters.

Parameters can be assigned to function keys F1 through F6 in the DME unit.
See "User Defined Button (User Defined Parameters)" on page 98.

9 Storing Scenes.

Store the scene using the [Tools] menu → [Scene Manager] command in the Main Panel window.
See "Scene Manager" on page 63.

Online

You can connect the DME unit to your computer and transfer configurations, scenes and parameters created in DME Designer into the DME unit. You can also read data from the DME unit into DME Designer, synchronizing it with the status of the DME unit.

Because Synchronization presupposes that the DME unit can communicate with the computer where DME Designer is installed, the necessary drivers (USB-MIDI or DME-N Network Driver) must be installed, and appropriate settings must be made for each driver and for DME Designer MIDI port.

NOTE

Because there are no scene settings when the DME unit is purchased, the configuration and scene information created in DME Designer must first be transferred.

1 DME Unit and Computer Connection.
Connect the DME unit and computer using a USB cable or an Ethernet cable.
See separate "DME64N/24N Owner's Manual" for details.

2 MIDI Driver Installation.
Install the USB-MIDI driver or DME-N Network driver in the computer.
See separate "DME Designer Installation Guide" for details.
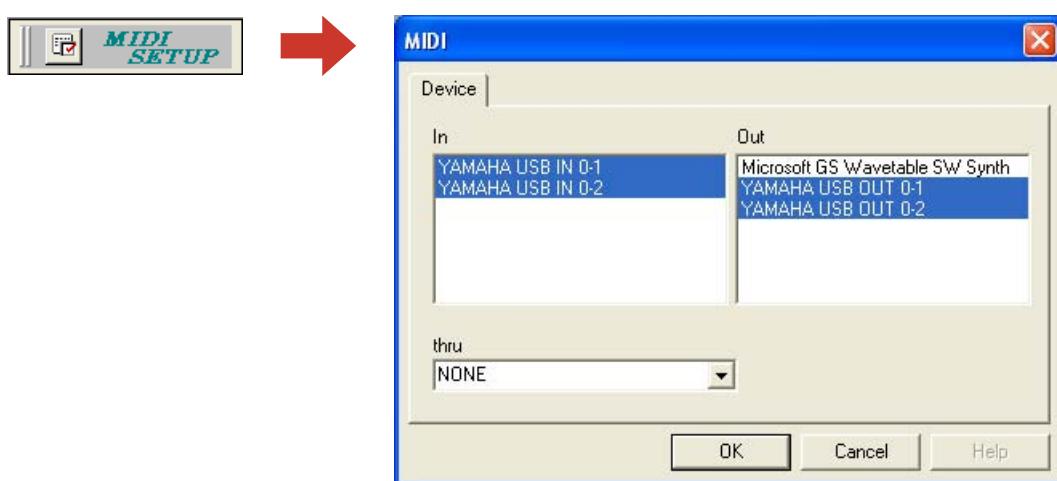
3 MIDI Driver Setup.
Make the necessary settings for the MIDI driver installed in the computer. If the driver is set up already, check the settings before going online.
See separate "DME Designer Installation Guide" for details.

4 MIDI Driver Port Setup.
The MIDI Setup dialog will be displayed if you press the MIDI Setup button on the MIDI Setup toolbar that is displayed when you start DME Designer Set up the In/Out/Thru ports connected to the DME.

5 Making MIDI IN/OUT Settings in DME Designer.
On the [Port] tab of the "MIDI" dialog box, select the MIDI driver used for sending and receiving MIDI messages. If the driver is set up already, check the settings before going online.
"MIDI" → [Port] tab (page 97)

6 Storing and Checking Scenes.

When moving online, the lowest scene must be stored. You can check if a scene is stored using the "Scene Manager" dialog box.

7 Recalling Scenes.

When going online, the scene will be recalled. Its scene number must be displayed in [Scene Number], and its scene name will be displayed in Scene Name. If [--------] is displayed of [Scene Name], the scene will be recalled.
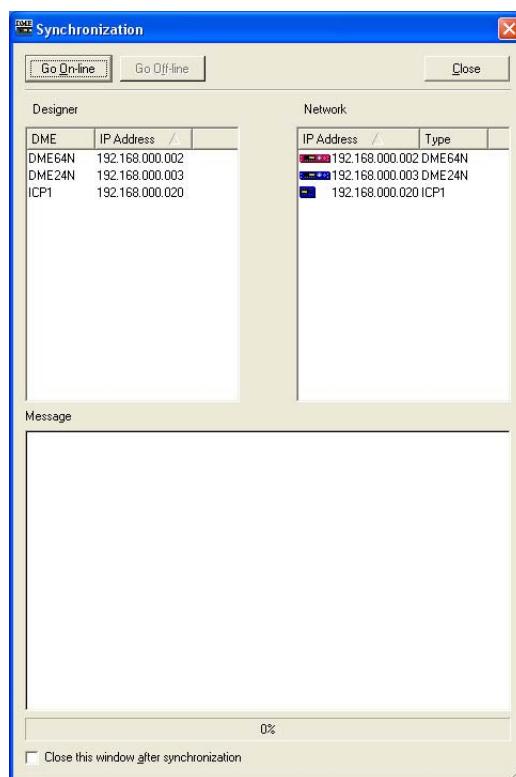
8 Display the "Synchronization" dialog box.

Click [Synchronization] in the [Tools] menu or the large [Synchronization] button on the toolbar. When the dialog box opens, a list of connected DME units will be obtained.
DMEs connected to the computer are displayed in the [Network] list.

| NOTE |
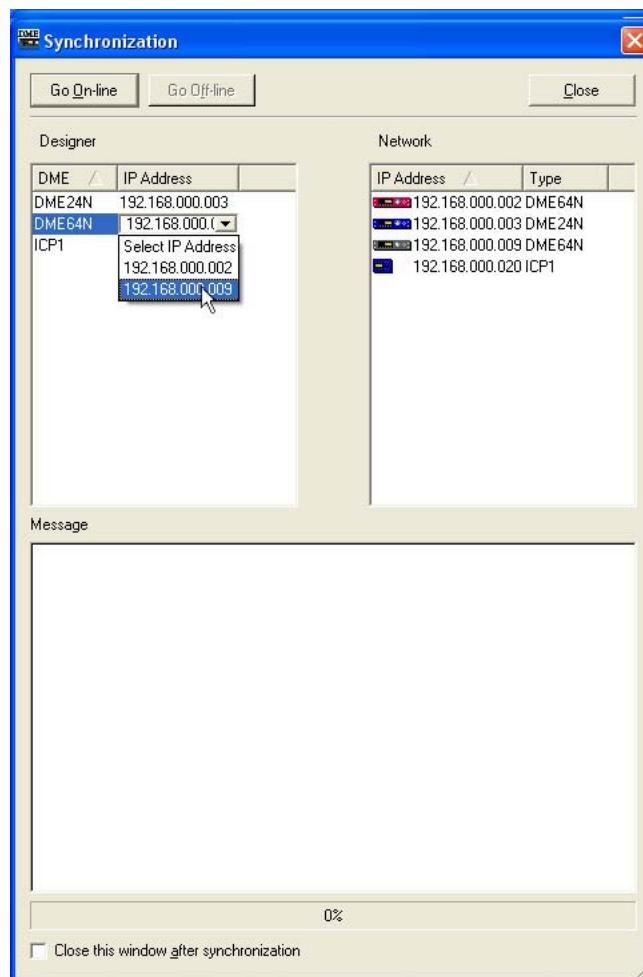
When requesting the "Synchronization" dialog box, a one-time alert will be displayed if no scene has been recalled, or the MIDI Port settings have not been made. After clicking the [OK] button on the alert, each dialog will open. At this time, you can make the needed settings in the displayed dialog box, and then again display the "Synchronization" dialog box.

9 IP Address Selection

The DMEs included in the current zone are displayed in the [Designer] list in the "Synchronization" dialog box. Click the [IP Address] box, then select the DME unit IP address that matches the DME currently in the DME Designer.
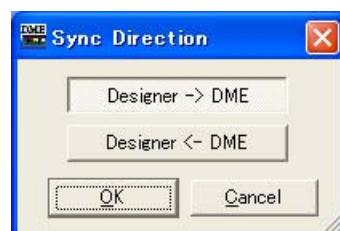
NOTE

IP addresses are displayed for devices of the same type in the area.

10 Going Online.

Clicking the [Go On-Line] button displays a dialog box where you can decide the synchronization method.
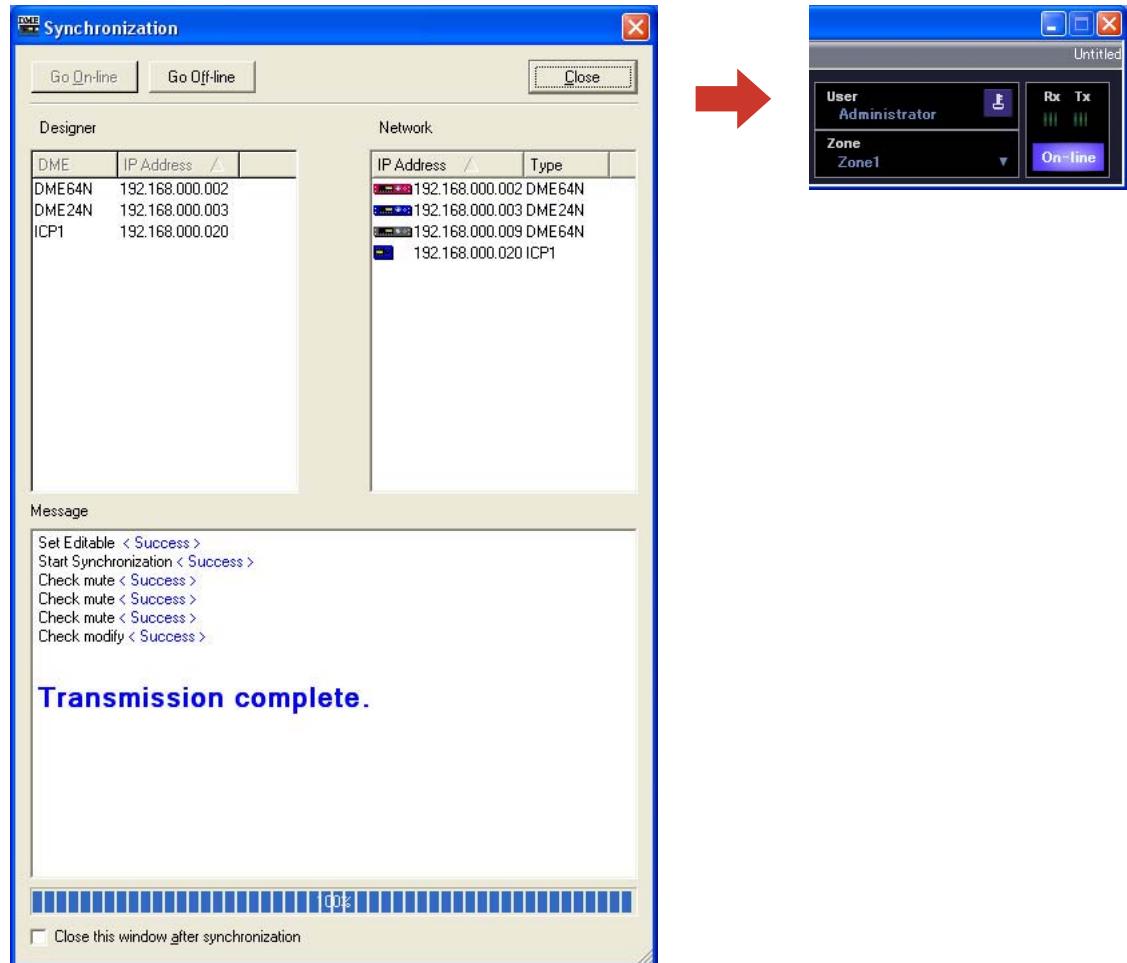
Click the [Designer→DME] direction button.
Transfer of the configuration will begin, and DME Designer will be synchronized with the unit.
If there are many zones, this process may take time.

When going online is finished, the [Go On-line] button will be grayed out, and the Main Panel window [On-Line] button will light up. The dialog box will close automatically if [Close this window after synchronization] is checked.

NOTE

It may not be possible to go online if a scene has not been stored when [Recall Safe] is selected.
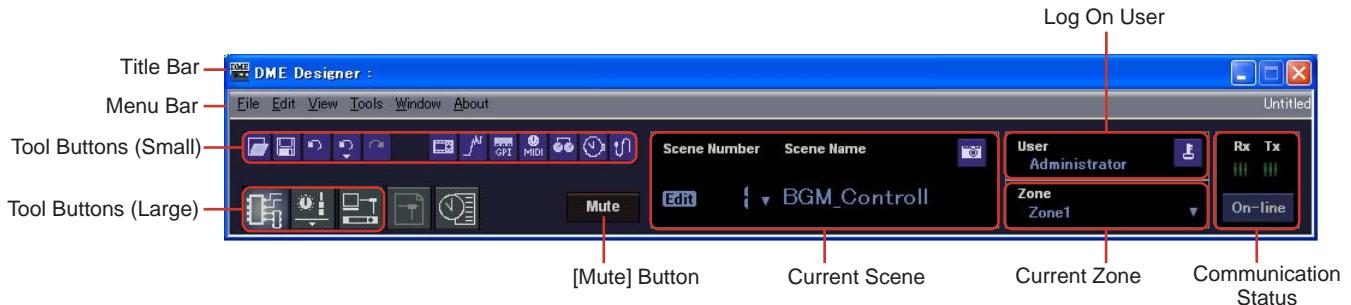
To go off line, click either the [ON-Line] button in the main panel window, or the [Go Off-line] button in the "Synchronization" dialog box.

Main Panel Window

The Main Panel window is the main window of DME Designer.

Log On User

Title Bar
Menu Bar
Tool Buttons (Small)
Tool Buttons (Large)

[Mute] Button   Current Scene   Current Zone   Communication Status
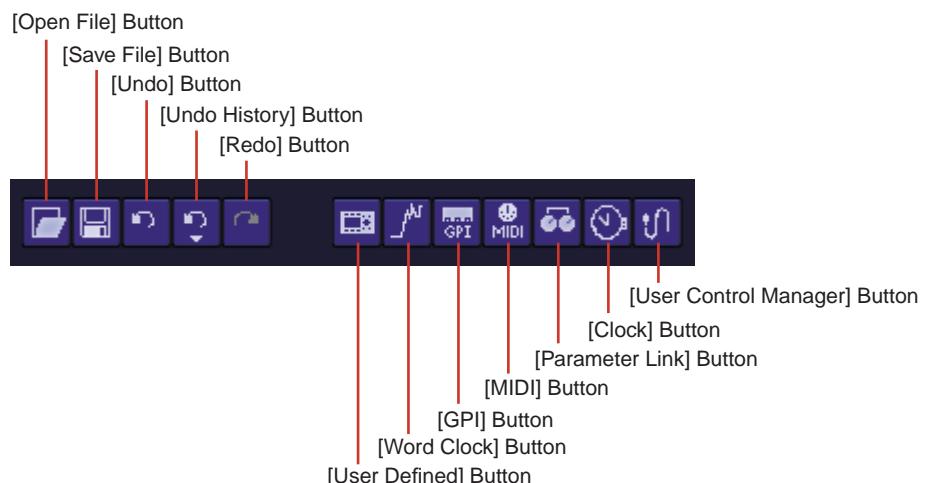
Title Bar

"DME Designer" is displayed on the title bar.

Menu Bar

Commands that can be executed in the application are collected into categories on the menu bar. When you click one of the categories, a list of commands is displayed.
Also, the name of the currently open project file is displayed at the right. When a new project file has been opened, or has not yet been saved, "Untitled" will be displayed for the file name.

Tool Buttons (Small)

Frequently used commands are arranged here as buttons. When a command cannot be used, its button will be grayed out.

[Open File] Button
[Save File] Button
[Undo] Button
[Undo History] Button
[Redo] Button

[User Control Manager] Button
[Clock] Button
[Parameter Link] Button
[MIDI] Button
[GPI] Button
[Word Clock] Button
[User Defined] Button

■ **[Open File] Button**

Opens project files.
→ [Open] on the [File] menu (page 45)

■ **[Save File] Button**

Saves the project file currently being edited.
→ [Save] on the [File] menu (page 45)

■ **[Undo] Button**

Undoes the most recent edit operation.
→ [Undo] on the [Edit] menu (page 47)

■ **[Undo History] Button**

Opens the "Undo History" dialog box. Undoes multiple operations.
→ [Undo History] on the [Edit] menu (page 47)

■ **[Redo] Button**

Restores operations undone with the [Undo] button back to their original condition.
→ [Redo] on the [Edit] menu (page 47)

■ **[User Defined] Button**

Opens the "User Defined Button" dialog box.
→ See "[User Defined Button]" on page 49.

■ **[Word Clock] Button**

Opens the "Word Clock" dialog box.
→ See "[Word Clock]" on page 49.

■ **[GPI] Button**

Opens the "GPI" dialog box.
→ See "[GPI]" on page 49.

■ **[MIDI] Button**

Opens the "MIDI" dialog box.
→ See "[MIDI]" on page 49.

■ **[Parameter Link] Button**

Opens the "Parameter Link" dialog box.
→ See "[Parameter Link]" on page 49.

■ **[Clock] Button**
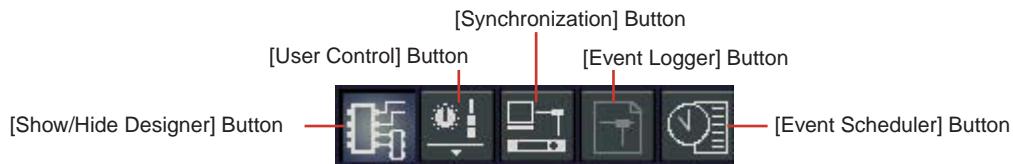
Opens the "Clock" dialog box.
→ See "[Clock]" on page 50.

■ **[User Control Manager] Button**

Opens the "User Control Manager" dialog box.
→ See "[User Control]" on page 48.

Tool Button (Large)

[Synchronization] Button

[User Control] Button   [Event Logger] Button

[Show/Hide Designer] Button ———   ——— [Event Scheduler] Button

■ [Show/Hide Designer] Button

Displays or hides the Designer window.

■ [User Control] Button

Works the same as the [User Control] command on the [View] menu. Clicking this button displays a menu.

User Control will be displayed on the menu. If you click there, the user control window will be displayed.
If you click [New User Control], the "New User Control" dialog box opens.

■ [Synchronization] Button

Opens the "Synchronization" dialog box.
→ See "Synchronization" Dialog Box on .

■ [Event Logger] Button

Opens the Event Logger window.
→ See "Event Logger" Window on .

■ [Event Scheduler] Button

Opens the "Event Scheduler" dialog box.
→ See "Event Scheduler" Dialog Box on .

[Mute] Button

Mute OFF   Mute ON

Turns ON and OFF the DME mute button for the current zone.
To turn it ON, press the <Shift> key while clicking. If you click the button while it is OFF without pressing the <Shift> key, the following message will be displayed: "Click the Mute Button with the Shift Key."
To turn it OFF, click on the button. There is no need to press the <Shift> key.
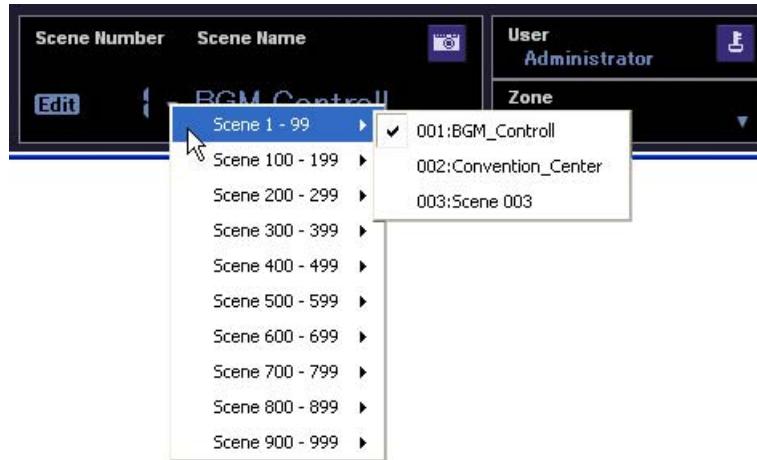
Current Scene

Displays the number and name of the current scene. You can switch between scenes.

[Scene Number]   [Scene Name]   [Scene Manager] Button

■ [Scene Number]

Displays the number of the current scene. A list where you can select a scene is displayed when you press the [▼]. The EDIT indicator will light when a parameter has been edited after recalling or storing a scene.

NOTE

Press <Ctrl> key and <+> key simultaneously recall the next scene and press <Ctrl> key and <-> key simultaneously recall the previous scene. These settings can be changed via the Shortcut keys dialog box (page 134).
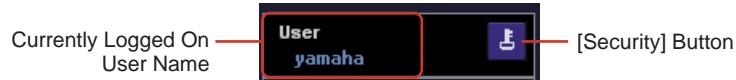
■ [Scene Name]

Displays the name of the current scene.

■ [Scene Manager] Button

Opens the "Scene Manager" dialog box.

[User] (Logged On User)

Currently Logged On
User Name ⎯⎯⎯⎯⎯⎯ [User yamaha] ⎯⎯⎯⎯⎯⎯ [Security] Button

■ **Currently Logged On User Name**

Displays the currently logged on user name.

■ **[Security] Button**

Opens the "Security" dialog box.

Current Zone

Displays the name of the active zone. A list where you can select a zone is displayed when you press the [▼].

Communication Status

Displays the communication status between the DME unit and the computer.

ON-line Button ⎯⎯⎯⎯⎯ Message Transmit/Receive Indicator

■ **[On-line] Button**

When the DME unit is connected to a computer, clicking this button alternately switches the unit's on-line/off-line status. The indicator will light when the DME unit is on-line.

■ **Message Transmit/Receive Indicators**

[Rx]
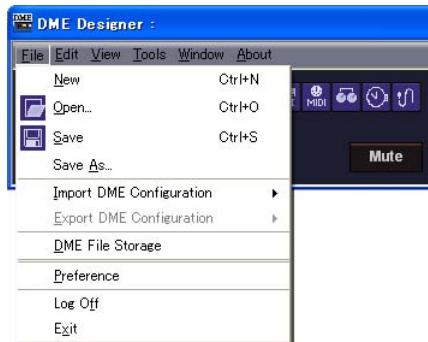
Lights when MIDI messages from the DME unit are received by DME Designer.

[Tx]

Lights when MIDI messages are transmitted from DME Designer to the DME unit.

Main Panel Window Menu

[File] Menu

■ [New]

Creates a new project. When a new project is created, the current project will be closed.
A confirmation message asking "Project file has been modified. Save?" will be displayed.

[Yes] Button

Saves the currently open project.
If the currently open file was already given a name and saved, that saved file will be overwritten.
The "Save As" dialog box will be displayed for files that have not yet been saved. In this dialog box,
you can name the file when you save it.

[No] Button

Closes the project without saving it. If the file has already been given a name and saved, the most
recently saved version will remain as is. If the project has not been given a name and saved, it will
be lost.

[Cancel] Button

Cancels creation of a new project.

■ **[Open]**

Opens saved project files. Because the currently open project will be closed, a confirmation dialog box asking "Project file has been modified. Save?" will be displayed.

When you select this command, the "Open" dialog box will be displayed. Select the project file you want to open and click the [Open] button.

If security is enabled for the project file, the "Enter ID & Password" dialog box will be displayed. Enter the ID and password to open the file and click the [OK] button. The project file will open.

■ **[Save]**

Overwrites an already saved project file with the current changes. If the file is being saved for the first time, the "Save As" dialog box will be displayed.
→ See "Project Files" on page 22.

■ **[Save as]**

Saves the current project file as another file with a new name or in a new location. When you select this command, the "Save as" dialog box will be displayed.
→ See "Project Files" on page 22.

■ **[Import DME Configuration]**

Imports parameters for a DME that is arranged in a configuration file.
→ See "DME Data File" on page 30.

■ **[Export DME Configuration]**

Exports parameters of a DME that is arranged in a configuration file.
→ See "DME Data File" on page 30.

■ **DME File Storage**

Opens the "DME File Storage" dialog box.
→ See "DME File Storage" on page 52.

■ **Recently Used Files**

Displays recently saved files. If you click one of the file names, you can open that file.

■ **[Preference]**

Opens the "Preference" dialog box.
→ See "Preferences" on page 53.
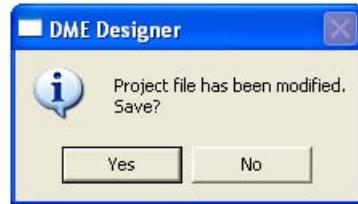
■ **[Log Off]**

Logs off the currently logged on user. Because the currently logged on user must be logged off before a new one can be logged on, the "Log On" dialog box will be displayed so you can log on the next user.
→ See "Users and Security" on page 19.

■ **[Exit]**

Closes "DME Designer." A confirmation dialog box asking "Project file has been modified. Save?" will be displayed. To save, click [Yes]. To close without saving, click [No.]

[Edit] Menu

■ [Undo]
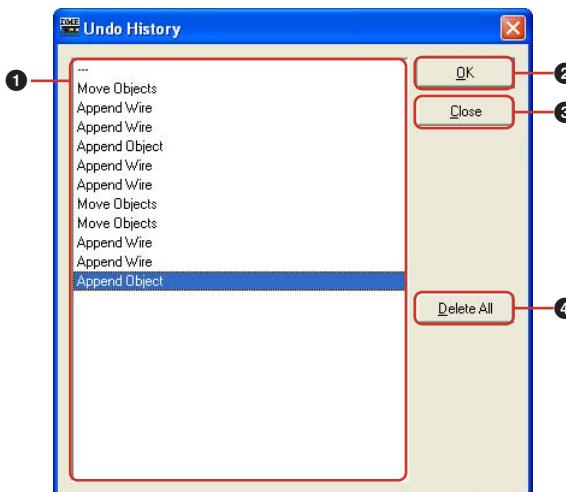
Undoes a single operation. The name of the operation that will be undone by [Undo] is displayed in the command name. You can also select the commands that come after that.
When [Undo] is not possible, the command will be grayed out.

■ [Redo]

Returns to the status before the [Undo] command was executed. The name of the operation that will be restored by [Redo] is displayed. You can [Redo] only as many operations as were undone with the [Undo] command. When [Redo] is not possible, the command will be grayed out.

■ [Undo History]

Opens the "Undo History" dialog box. Undoes multiple operations. Also deletes the history of operations.

❶ List

Displays all operations performed so far, in order starting with the oldest. You can select an operation by clicking on it.

❷ [OK] Button

Undoes all operations below the one selected on the list. The operation selected on the list does not get undone.

❸ [Close] Button

Closes the dialog box.

❹ [Delete All] Button

Deletes the entire history of operations displayed on the list. When an operation is deleted from the list, it cannot be undone.

Operations undone from the [Undo History] can be re-executed one-by-one using [Redo].

[View] Menu

■ [Designer]

Displays or hides the Designer window.

■ [Event Logger]

Displays the network event log.
Not displayed if selected while the network event log is showing.
→ See "Event Logger" on page 111.

■ [User Control]

This opens User Control.
The user controls that can be opened by the currently logged on user are displayed on a submenu.
If you click [New User Control] on the submenu, the "New User Control" dialog box opens.
→ See "User Control/User Module Editor" on page 279.
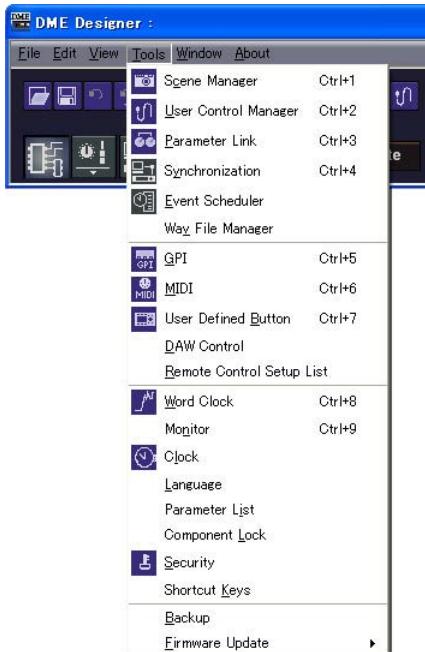
NOTE

Controls that are not available to the currently logged-on user are not shown in the menu.

[Tools] Menu

■ [Scene Manager]

Opens the "Scene Manager" dialog box.
→ See "Scene Manager" on page 63.

■ [User Control Manager]

Opens the "User Control Manager" dialog box.
→ See "User Control" on page 70, page 279

■ [Parameter Link]

Opens the "Parameter Link" dialog box.
→ See "Parameter Link" on page 73.

■ [Synchronization]

Opens the "Synchronization" dialog box.
→ See "Synchronization (DME Designer and DME Unit Synchronization)" on page 75.

■ [Event Scheduler]

Opens the "Event Scheduler" dialog box.
→ See "Event Scheduler" on page 116.

■ [Wav File Manager]

Opens the "Wav File Manager" dialog box.
→ See "Wav File Manager" on page 128.

■ [GPI]

Opens the "GPI" dialog box.
→ See "GPI" on page 79.

■ [MIDI]

Opens the "MIDI" dialog box.
→ See "MIDI" on page 90.

■ [User Defined Button]

Opens the "User Defined Button" dialog box.
→ See "User Defined Button (User Defined Parameters)" on page 98.

■ [DAW Control]

Opens the "DAW Control" dialog box.
→ See "DAW Control" on page 132.

■ [Remote Control Setup List]

Opens the "Remote Control Setup List" Dialog box.
→ See "Remote Control Setup List" on page 123.

■ [Word Clock]

Opens the "Word Clock" dialog box.
→ See "Word Clock" on page 102.

■ [Monitor]

Opens the "Monitor Out" dialog box.
→ See "Monitor" on page 104.

■ [Clock]

Opens the "Clock" dialog box.
→ See "Clock" on page 105.

■ [Language]

Opens the "Language" dialog box.
→ See "Language Settings" on page 106.

■ [Parameter List]

Opens the "Parameter List" dialog box.
→ See "Parameter List" on page 124.

■ [Component Lock]

Opens the "Component Lock" dialog box.
→ See "Component Lock" on page 127.

■ [Security]

Opens the "Security" dialog box.
→ See "Security (Creating Users and Making User Settings)" on page 55.

■ [Shortcut Keys]

Opens the "Shortcut Keys" dialog box.
→ See "Shortcut Keys" on page 134.

■ [Backup]

Opens the "Backup" dialog box.
→ See "Backup" on page 135.

■ [Firmware Update]

Updates the DME unit firmware.
→ See "DME Firmware Update" on page 107.

[Window] Menu

Displays the open windows. Click a window name to bring that window to the front.

■ [Close All Editor Windows]

Closes all editor windows.

> **NOTE**
>
> Each design windows within the Designer window can be switched using the [Window] menu in the Designer window.

[About] Menu
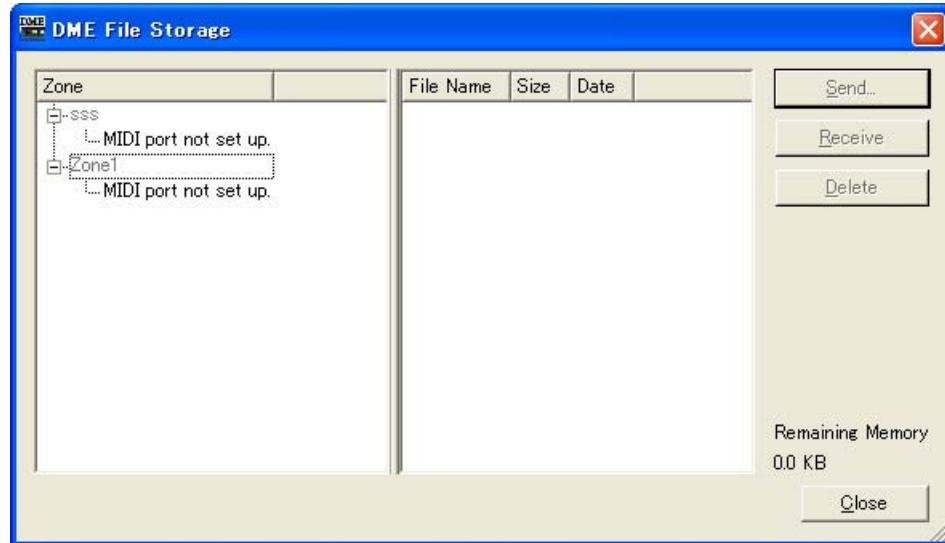
■ [About DME Designer]

Displays information about this application.

DME File Storage

Allows management of DME files. Project files can be managed on the DME, eliminating the need to manage them on the computer.
Click [DME File Storage] in the [File] menu to display the "DME File Storage" dialog.

■ **Zone List**

Select the desired zone and DME from the list.

■ **File List**

A list of the files stored on the selected DME.

[Send] Button

Transfers selected files from the computer to the DME.

[Receive] Button

Transfers selected files from the DME to the computer.

[Delete] Button

Deletes selected files from the DME.

NOTE
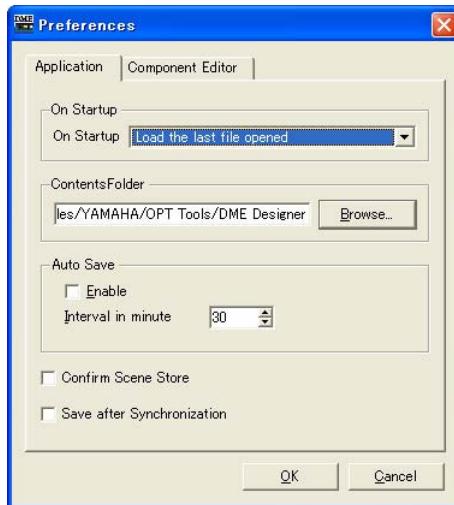
Synchronization may become impossible if the [Remaining Memory] value (the amount of remaining DME memory) becomes too small. If this occurs, delete unwanted files to increase the amount of available memory.

Preferences

When you click the [Preference] command on the [File] menu in the Main Panel window, the "Preferences" dialog box is displayed. Here you can make environmental settings for using DME Designer.

■ [Application] Tab

Here you can set the general usage environment.

On Startup
Selects the action when the application starts up.

- **[Load the last file opened]**
  Opens the last opened file. If the file cannot be found because it was moved, deleted, or its name was changed, a new project will be opened.

- **[Create an empty file]**
  Opens a new project.

- **[Load File & Synchronization]**
  Opens the last opened file and synchronizes with the DME unit.

Contents Folder
Specifies the folder where the images used by the Design windows and user controls are stored. Click the [Browse] button and specify the folder.

Auto Save
Set up the automatic file save feature.

- **[Enable]**
  Auto save of project files being worked on will occur when checked. The file will be overwritten, but the Undo history will not be cleared. This setting has no effect when the file being worked on has not previously been saved, or the computer is online.

- **[Interval in minutes]**
  Specifies the auto-save interval in minutes.

[Confirm Scene Store]

Place a checkmark here to have a confirmation dialog box displayed when storing a scene.

[Save after synchronization]
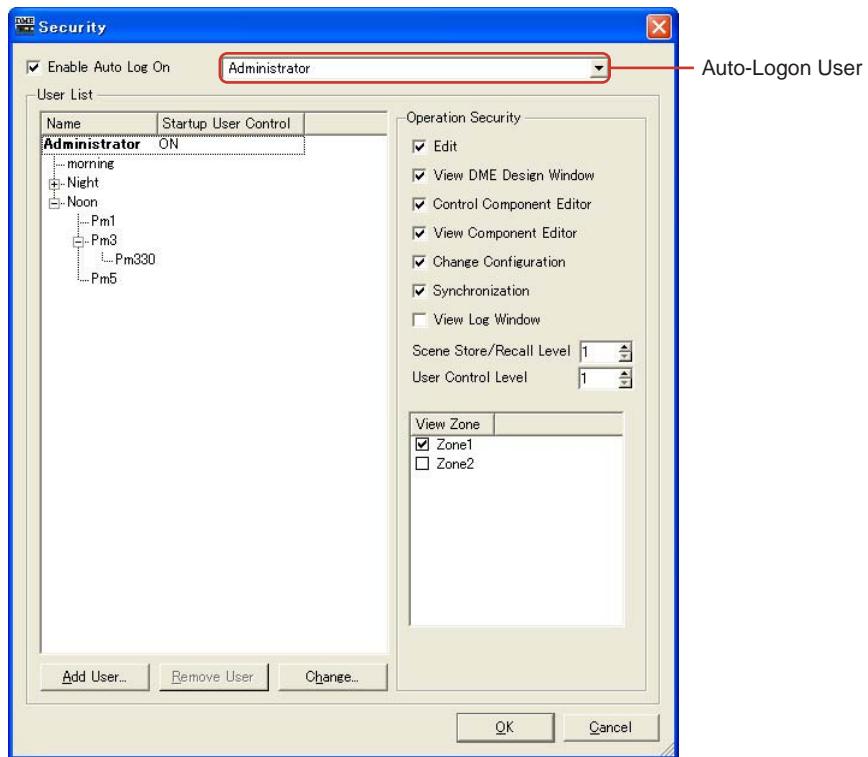
If a save is performed after the DME Designer is synchronized to the DME unit, the next synchronization will be significantly faster because one the difference needs to be synchronized. Check this checkbox to specify auto-save after the DME Designer is synchronized to the DME unit.

■ [Component Editor] Tab

Sets up operation of the Component Editor knobs, sliders, and edit boxes. Refer to "Changing Parameters" on page 266.

Security (Creating Users and Making User Settings)

When you click the [Security] command on the [Tools] menu, the "Security" dialog box is displayed. Here you can create and delete users. You can also set the security level for each user. Users are saved as DME Designer settings. You don't need to create users for each file.

Auto-Logon User

■ User Setting Restrictions

Various restrictions apply, depending on the security level of the user that is currently logged on.
• The currently logged on user can edit only users at a security level lower than his or her own.
• The currently logged on user cannot raise his or her own security level.
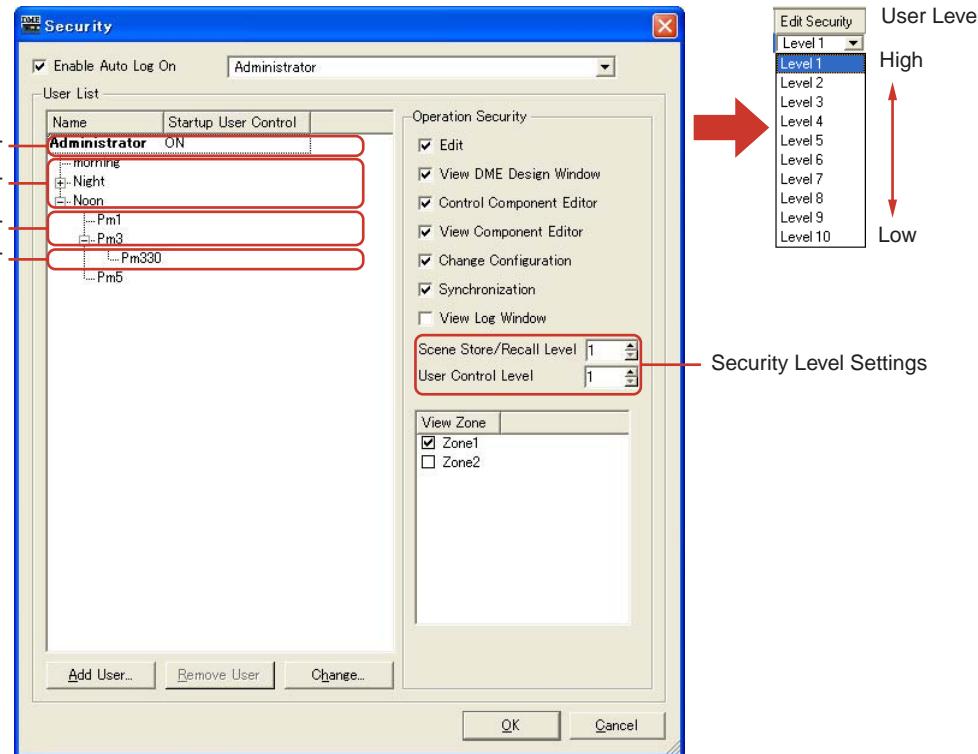
■ [Administrator] User

The [Administrator] user is registered by default, and can use all functions. Immediately after DME Designer is installed, there is no password set for the [Administrator] user.

■ Security Level

User security levels are set with the [Operation Security] item at the right of the "Security" dialog box.

You can allow or disallow editing and the ability to open windows or set controls.

Ten levels, 1 through 10, are set for scene storage/recall and user controls. Level 1 is the highest level and 10 is the lowest. By default, level 1 is set for the [Administrator] user. Level 1 can be set for the [Administrator] only. Users created by the [Administrator] directly below itself can be set at levels 2 through 10. New users created subordinate to users at level 2 can be set at levels 3 through 10. New users can be created no higher than one level below the user that created them.

Scene sets the level for storing and recalling scenes. The logged on user can store or recall scenes at levels equal to or lower than his or her own level. For example, a user at level 3 can recall scenes set for scene recall at levels 3 through 10.

Levels are also set for user control. The logged on user can display or edit user controls at levels equal to or lower than his or her own level.

The log-on user can use zones that are checked in the [View Zone] field.

[Enable Auto-Log On]

Enables auto-logon. If this checkbox is selected, the user displayed in the box to the right will be logged on automatically when DME Designer is started. Auto-logon logs on the user without any password entry.
Click the [▼] at the right of the box, and select the user for auto-logon from the displayed user list.
If auto-logon is turned OFF, the "Log On" dialog box will be displayed whenever the DME Designer is started. Each time a user must be selected and a password entered in order to log on.
If auto-logon is changed from ON to OFF when a password is set for the currently logged on user, a "Confirmation of Current User" dialog box will be displayed.
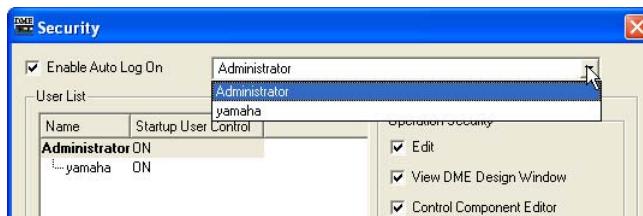
Enter the user's password into the [Password] box, and click the [OK] button.
If you click the [Cancel] button, auto-logon will remain ON.

■ Auto-Logon User

Selects the user for auto-logon when [Enable Auto Log On] is checked.
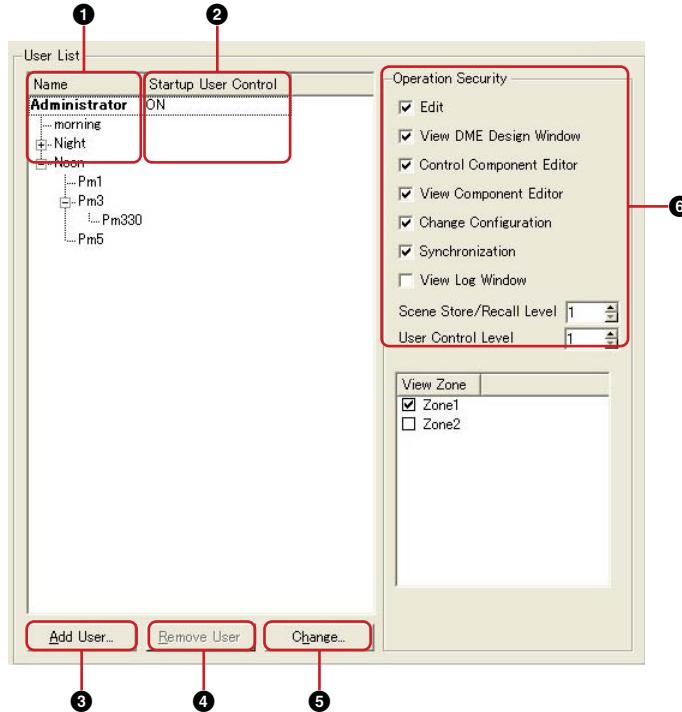

The currently logged on user can set this command for users at a security level equal to or lower than his or her own. If a user at a higher level is selected, a message that warns "Cannot access higher user level." will be displayed. Click the [OK] button.

To set auto-logon for a user at a security level higher than the currently logged on user, first log off as the current user, then logon as a user at a higher security level.

User List

The registered users are displayed here. The currently logged on user is displayed in bold text. Click the name of the user whose settings you want to edit.

The [Administrator] is the user set by default, and it is used for administering the system. The [Administrator] user has the highest level and can use all functions.
All new users are created at a level lower that the [Administrator] user, and are displayed below the [Administrator].
If a user at level 2 and below has other users subordinate to him or her, a [+] or [-] button will be displayed to the left of higher level user's name on the list. Clicking the [+] or [-] buttons displays or hides the users subordinate to that higher user.
The currently logged on user can create multiple users at lower levels.

❶ Name

Displays the user names. The currently logged on user is displayed in bold text.

❷ Startup User Control

Displays "ON" to automatically open the user control and make settings when the user is logged on.

❸ [Add User] Button

Adds a user subordinate to the user selected on the list. Clicking here displays the "Add User" dialog box. Select the user that will be superior to the new user, then click this button.
If a user higher than the currently logged on user is selected, the button will be grayed out and no user can be added.

❹ [Remove User] Button

Deletes the user selected on the list. Only users at levels lower than the currently logged on user can be deleted.
Furthermore, the currently logged on user cannot delete himself.

❺ [Change] Button

Changes settings for the user selected on the list. Opens the "Change User Information" dialog box. The contents of the dialog box are the same as the "Add User" dialog box.

❻ Operation Security

Sets the functions that can be used by the user selected on the [User List] to the left. Selecting a checkbox enables use of the corresponding function.

- **[Edit]**
  You can change the following settings: editing in the Designer window, user control edit, user defined parameter edit, word clock, scene edit, GPI and MIDI.

- **[View DME Design Window]**
  Allows display of the Designer configuration window.

- **[Control Component Editor]**
  Allows parameter editing in the component editor.

- **[View Component Editor]**
  Allows display of the component editor.

- **[Change Configuration]**
  Allows switching between configurations.

- **[Synchronization]**
  Allows synchronizing with the DME unit.

- **[View Log Window]**
  Displays the Event Logger window.

- **[Scene Store/Recall Level]**
  Sets the level at which scenes can be stored and recalled. Click the [▲] and [▼] buttons or enter a number into the box to set the level. While levels 1 through 10 are available, the range of levels that can be actually set varies according to the level of the user doing the setting. When a user is created, automatically this is set to "One level lower than the user above." The initially set level is the highest level that can be set for that user.
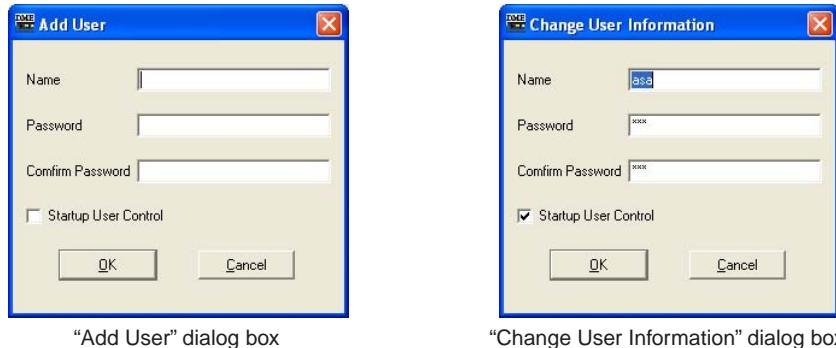
- **[User Control Level]**
  Sets the user control level. Click the [▲] and [▼] buttons or enter a number into the box to set a level from 1 through 10. While levels 1 through 10 are available, the range of levels that can be actually set varies according to the level of the user doing the setting. When a user is created, automatically this is set to "One level lower than the user above." The initially set level is the highest level that can be set for that user.

"Add User" Dialog Box/"Change User Information" Dialog Box

When you click the [Add User] button in the "Security" dialog box, the "Add User" dialog box is displayed. If you click the [Change] button in the "Security" dialog box, the "Change User Information" dialog box is displayed.

The "Add User" dialog box is for setting a user name and password when adding a new user. You can change user settings in the "Change User Information" dialog box. The contents of the dialog boxes are the same.

"Add User" dialog box   "Change User Information" dialog box

■ **[Name] Box**

Enter the user name. Enter a name different than other existing user names.

■ **[Password] Box**

Enter the password. When you type in the password box, asterisks (*) will be displayed instead of the characters you enter. If you do not want to set a password the user, leave the box blank.

■ **[Confirm Password] Box**

Enter the password once again to confirm it. When you type in the password box, asterisks (*) will be displayed instead of the characters you enter. If you do not want to set a password the user, leave the box blank.

■ **[Startup User Control]**

When a user logs on, user controls and settings which are specified or below that user's security level are automatically opened.

In the "Security" dialog box [User List], [User Control] will be "ON" for users for whom this option has been turned on.

■ **[OK] Button**

In the "Add User" dialog box, this creates new users according to the settings made there. In the "Change User Information" dialog box, this applies the dialog box settings and changes the user settings.

■ **[Cancel] Button**

Cancels user creation or setting changes, and closes the dialog box.

Creating Users

Users are created as follows:

1 Click [Security] on the Main Panel window [Tools] menu.
The "Security" dialog box will be displayed.
You can open the "Security" dialog box by clicking the [Security] button in the Main Panel window.
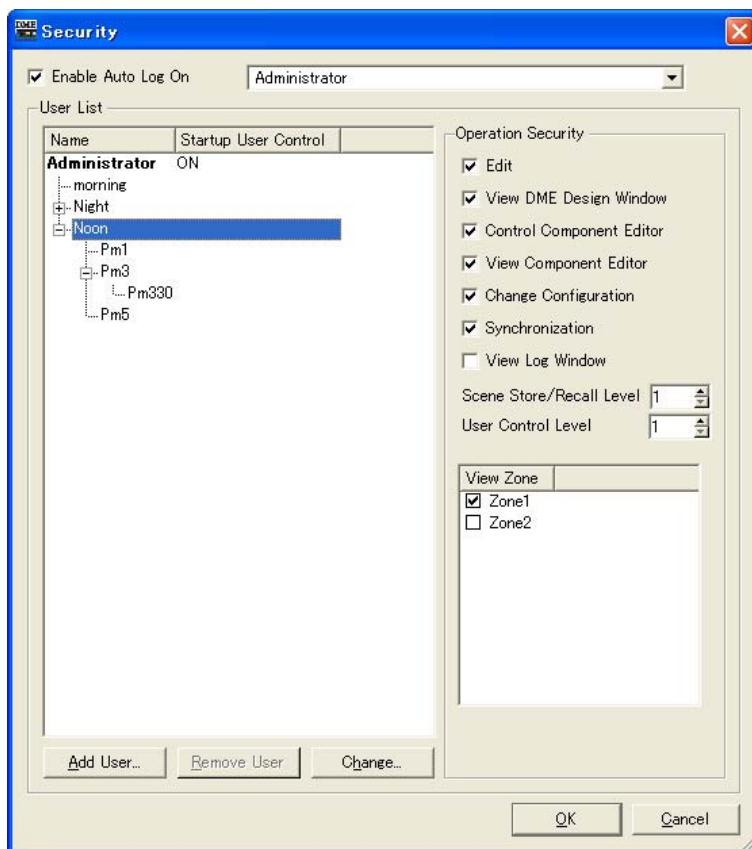
2 Select a user from the [User List] in the "Security" dialog box.
A user will be created subordinate to the selected user. [Administrator] can be selected only if the logged on user is the [Administrator]. If there are multiple users, select the user that will be above the new user.
Multiple users can be created subordinate to a single user.

3 Click the [Add User] button.
The "Add User" dialog box will be displayed.

4 Enter the user name into the [Name] box.

5 Enter the password into the [Password] box.
You can also create users with no password. If you do not want to set a password for the user, leave the [Password] box blank.

6 Enter the password into the [Confirm Password] box also.
If you do not want to set a password for the user, leave the [Confirm Password] box blank also.

7 Set the [Startup User Control].
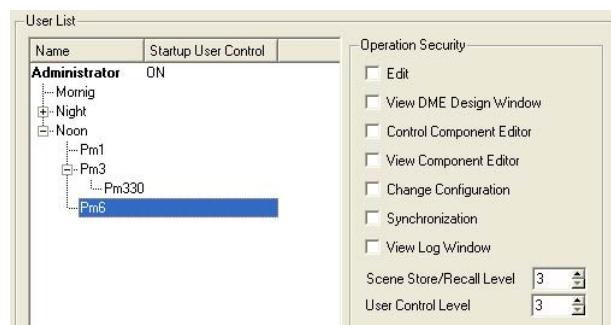
If the text entered into the [Password] and [Confirm Password] boxes is not the same, a "Different password!" message will be displayed. Click the [OK] button and reenter the correct password in the [Password] and [Confirm Password] boxes in the "Add User" dialog box.

8 Click the [OK] button.
This closes the "Add User" dialog box. The new user will be added to the "Security" dialog box list.

9 Set the security level for the user, using [Operation Security] in the "Security" dialog box.
When creating a new user, all the checkboxes in [Operation Security] will be turned OFF. Click and turn ON the functions you want to permit the new user to use. [Scene Store/Recall Level] and [User Control Level] will be set to one level lower than the user above the newly created user. The initially set level will automatically be the highest level that can be set for that user. To lower the level, enter a larger number in the box.

Click the [OK] button and the dialog will close. You can continue creating new users without closing the dialog box.

Scene Manager

Scenes

Configuration contents can be given a name and saved as "**Scenes**." Saving scenes is called "**Scene Store**." Parameter settings in the configuration for each site used can be stored multiple times and recalled and used when needed. There are 999 scene memories available. When a scene is stored, DME parameters are saved as "**preset parameters**." Presets are automatically created when a scene is stored.
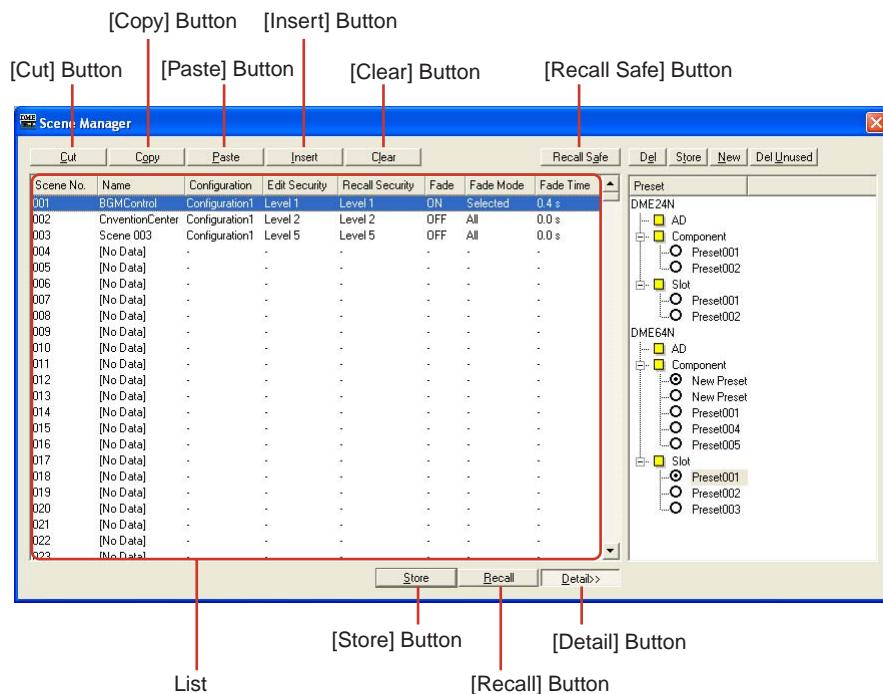
Bringing back a scene (making a scene the current scene) is called "**scene recall**." Scenes are recalled using the [▼] button next to the current scene on the Main Panel window or by using the "Scene Manager" dialog box.

■ Security for the Logged On User

The currently logged on user can store, recall, or edit scenes that have a security level equal to or lower than his or her own. User security levels are set with the [Edit] → [Store/Recall/Edit] item in the "Security" dialog box.

"Scene Manager" Dialog Box

When you click [Scene Manager] in the [Tools] menu, the "Scene Manager" dialog box is displayed.

■ **List**

Displays the contents of the scene.

Scene No.

Displays the scene number. There are 999 scene memories available. Click here to select a scene.

Name

Displays the name of the scene. Click the [Name] box to enter a scene name. Up to 18 characters can be entered.
If the scene has not been stored, "[No Data]" will be displayed. A name can be entered when a scene is stored. The default names are "Scene001," "Scene002," etc. The three-digit number is the same as the scene number (displayed in [Scene Number]) for the stored scene.

Configuration

Displays the configuration name. If the scene has not been stored, a hyphen (-) will be displayed.

Edit Security

Displays the scene edit security levels. Clicking here will display a list where you can change these security levels. Only levels at or below the security level of the currently logged on user are displayed in the list. When a user is created, these settings are the same as the new user's security level, but scene store and edit settings can be set lower.

Recall Security

Displays the scene recall security level. Clicking here will display a list where you can change the security level. Only levels at or below the security level of the currently logged on user are displayed in the list. When a user is created, these settings are the same as the new user's security level, but the scene recall setting can be set lower.

Fade

Fade is used when Fader components are used in a configuration. It sets whether fade is applied (ON) or not (OFF) when a scene is recalled.

> **NOTE**
>
> The fade function cannot be simulated in DME Designer.

Fade Mode

Sets the fade mode. You can select "All" or "Selected."
If you select "All," all channels using Fader components in their configuration will be affected. Even when multiple components are used, all channels are targeted. If you select "Selected," the only channels affected will be those for which the Fade switch in the component editor has been set to ON.

> **NOTE**
>
> The Fade switch for each channel is set to OFF by default. The fade effect will not be applied, even if Fade=ON and Fade Mode=Selected is selected. To apply the effect, you must set the Fade switch to ON for the channels where you need it.

Fade Time

Sets the fade time: i.e. the time it will take fader and pan parameters to reach their new settings when a scene is recalled. The changes are smooth and continuous. If only the presets in the recalled scene are set when that scene is recalled, the volume will be adjusted while the sound from the previous scene is playing, until the new level is reached If the configuration also changes, the volume will rise from silence until it reaches the new value. This can be set from zero to 60 seconds, in 0.1 second increments.

> **NOTE**
>
> Right-click in the list and use the contextual menu that appears to set User Defined Button, Program Change, GPI In, or GPI Out for the scene.

■ [Cut] Button

Cuts the scene selected on the list.

■ [Copy] Button
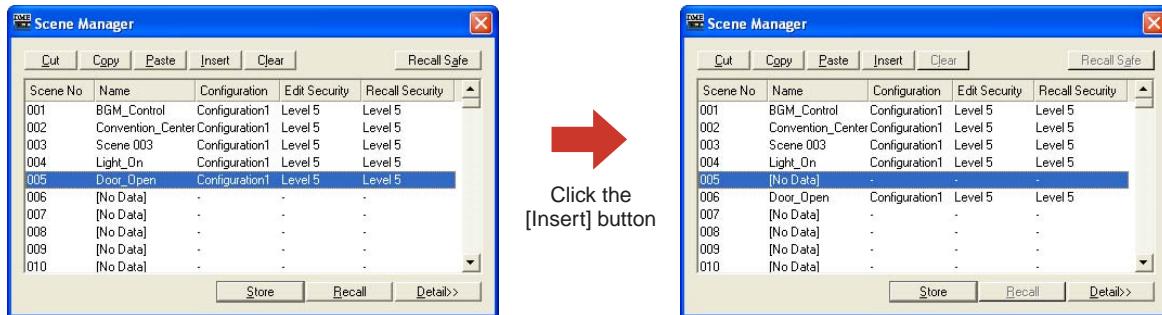
Copies the scene selected on the list.

■ [Paste] Button

Pastes the contents of the cut or copied scene into the scene selected on the list. The selected scene will be overwritten. If no scene has been cut or copied, the button will be grayed out and cannot be used.

■ **[Insert] Button**

Inserts the contents of the cut or copied scene into the location of the scene selected on the list. The selected scene and those below are moved down by one. For example, if "Door_Open" was stored as scene number "005," and selected when the [Insert] button was clicked, the inserted scene would become scene number "005," and "Door_Open" would be moved to scene number "006."

Click the [Insert] button

If no scene has been cut or copied, the button will be grayed out and cannot be used.
If a scene is stored in the lowest scene on the scene memory list (with the scene number [999]), the button will be grayed out and the insert function will not be available. Delete the contents of scene number 999 before attempting to use the insert function.

NOTE

Move the scene data to a different scene memory when you don't want to erase the contents of Scene No. 999.

■ **[Clear] Button**

Deletes the contents of the scene selected on the list.
If the presets included in a scene are not used in another scene, a "Delete preset?" message will be displayed.

If the presets are not needed, click the [OK] button. If you click the [Cancel] button, the presets will not be deleted. Whichever you click, the scene itself will be deleted.
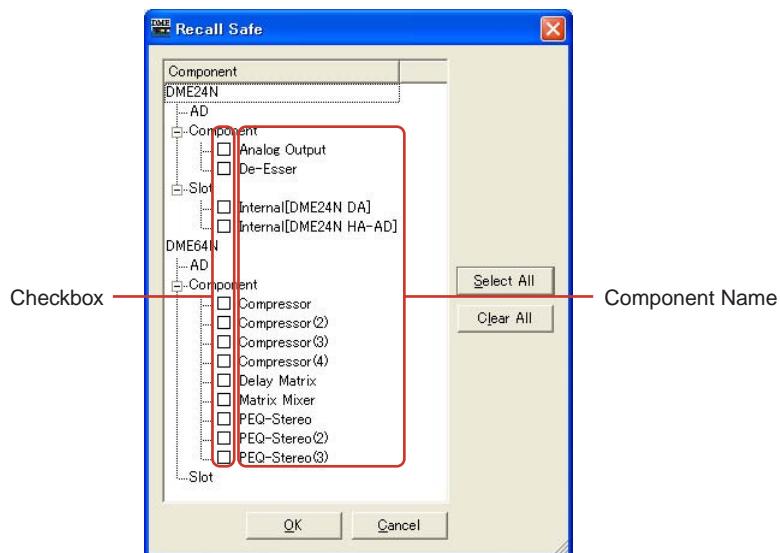
NOTE

The [Cancel] button on the "Delete Preset?" message does not cancel the [Clear] for the scene. It merely cancels deletion of the presets.

■ [Recall Safe] Button

Before performing a recall, you can check the contents of the scene selected on the list, and set components that will not be read. This is used when there are components you do not want changed by the scene recall.
When you click this button, the "Recall Safe" dialog box will be displayed.

All components included in the scene will be displayed. There is a checkbox to the left of each component. Place a check next to the components you do not wish to have read by scene recall (those you do not wish changed from their current status).
Press the [Select All] button to check all components, or the [Clear All] button to clear the checks from all components.
Click the [OK] button. The dialog box will close and when the scene is recalled, all components, except those checked, will be read.

NOTE

The components checked in the "Recall Safe" dialog box are the components that will not be read (that will be ignored). If you want to read all components, there is no need to make settings in the "Recall Safe" dialog box.
"Recall Safe" is used when you want to keep some components with their current settings, while there are other components you want to change according to the scene.

■ [Store] Button

Stores the contents of the current configuration into the scene selected in the list. If an empty scene is selected and the contents stored there, a new scene is created. If a scene is already stored in the selected scene number, it will be overwritten. If [Confirm Scene Store] is checked on the [Application] tab of the "Preferences" dialog box, a confirmation dialog box will be displayed before the scene is stored.

NOTE

The currently logged on user can store scenes at a security level equal to or lower than his or her own only.

NOTE

When the computer and DME unit are online, a scene stored in the DME Designer will also be stored on the DME unit, regardless of the DME settings.
The DME utility display Misc. page [Scene Store] setting only affects store operation from the DME panel controls.

When a scene is stored, the configuration parameters at that time are saved as "preset parameters." Presets are created automatically.

■ **[Recall] Button**
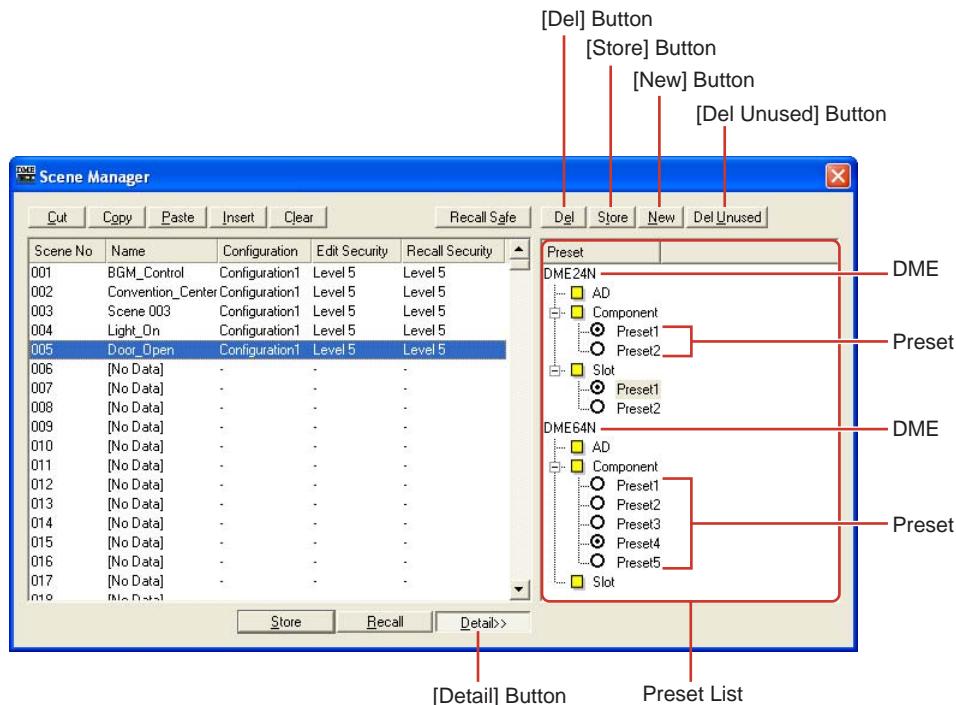
Recalls the scene selected in the list and makes it the current scene.

NOTE

The currently logged on user can recall scenes at a security level equal to or lower than his or her own only.

■ **[Detail] Button**

Expands the dialog box and displays a preset list. If you click the preset list while it is displayed, the preset list will be hidden. When the dialog box is opened, its status will be the same as the last time it was closed.

[Del] Button
[Store] Button
[New] Button
[Del Unused] Button

[Detail] Button   Preset List

■ **Preset List**

Displays the presets for each DME unit in the scene selected in the list. When another scene is selected on the list, the contents of the preset list will be changed.
You can change the presets used in the scene by clicking the radio buttons to the left of the preset names. You can also create, delete, and store presets or change their names.

DME

Displays the DME. Below the DME are [Slot], [Component], and [AD]. If there are presets below them, a [+] button will be displayed. When you click the [+] it becomes a [-] and the presets are displayed.

Preset

Displays DME presets.
If you click the preset name, selecting the text that is there, you can change the preset name. When presets are automatically created when a scene is stored, they are named "Preset001," "Preset002," and so on. Presets created with the [New] button are named "New Preset."
You can select the presets used in a scene by clicking the radio buttons to the left of the preset names.

■ **[Del] Button**

Deletes the preset selected on the preset list.

> **NOTE**
>
> Presets used in a scene cannot be deleted.

■ **[Store] Button**

Stores the current parameter status in the preset selected in the preset list. The contents of the selected preset will be overwritten.

■ **[New] Button**

Stores the current status and creates a new preset. The newly created preset is named "New Preset."

■ **[Del Unused] Button**

Deletes presets that are not used by DMEs included in the current zone.

> **NOTE**
>
> There is no [OK] button or [Cancel] button in the "Scene Manager" dialog box. To close the dialog box, click the [Close] button at the upper-right of the dialog box.
> Changes from storing/recalling scenes or editing, such as changing names or contents, will be applied immediately. With the dialog box open, you can make the Designer window active and add components or change parameters.

User Control

User Controls

You can create an original control by arranging knobs and sliders in the component editor. Controls you create are called "**user controls.**"
Those created user controls are displayed in the [View] → [User Control] submenu in the Main Panel window

■ Security for the Logged On User

The currently logged-on user can create and edit the user controls of all users at lower security levels as well as the controls specified for that user. Available user controls are displayed in the User Control manager dialog box that can be accessed through the [User Control] sub-menu of the main panel window [View] menu.
The user control security level for each user is set with [Operation Security] → [User Control Level] in the "Security" dialog box. For information about user security, see "Security (Creating Users and Making User Settings)" on page 55.

"User Control Manager" Dialog Box

When you click [User Control Manager] on the [Tools] menu, the "User Control Manager" dialog box is displayed. This dialog box displays a list of user controls included in the configuration of the current zone. There they can be created or deleted. You can also edit the name and security level of user controls here.

NOTE

Only controls available to the currently logged on user are shown in the list.

■ **User Control**

Displays the names of the user controls. Clicking here will select the characters in the name, allowing you to change it.

■ **Security Level**

Displays the security level set for each user control.
Clicking here will display a list where you can change the security level.

■ **User**

Displays the name of the user specified in User Control.
Clicking here will display a list of the available users.

NOTE

Levels at or below the security level of the currently logged on user are displayed in the list.

■ **[New] Button**

Creates new user controls. Clicking here displays the "New User Control" dialog box.

Enter the User Control name in the [Name] box.

■ **[User Level]/[User Name]**

Use the radio buttons to the left to select security-level or user dependent control.

[User Level]
Select a security level from the drop-down list.

[User Name]
Check a checkbox.
Click [OK] to create the specified User Control setup.

■ **[Delete] Button**

Deletes the user control selected on the list.

■ **[OK] Button**

Accepts the changed settings and closes the dialog box.

■ **[Cancel] Button**

Closes the dialog box without changing the settings.

Parameter Link

About Parameter Links

You can group parameters of the same type and link them. These groups are called "Parameter Links." When one parameter in a group is changed, all parameters in the group will change in the same way.
There are two parameter link types: global links and local links. Global links link parameters for DMEs within a zone. Local links link parameters that are included for a single DME.

NOTE
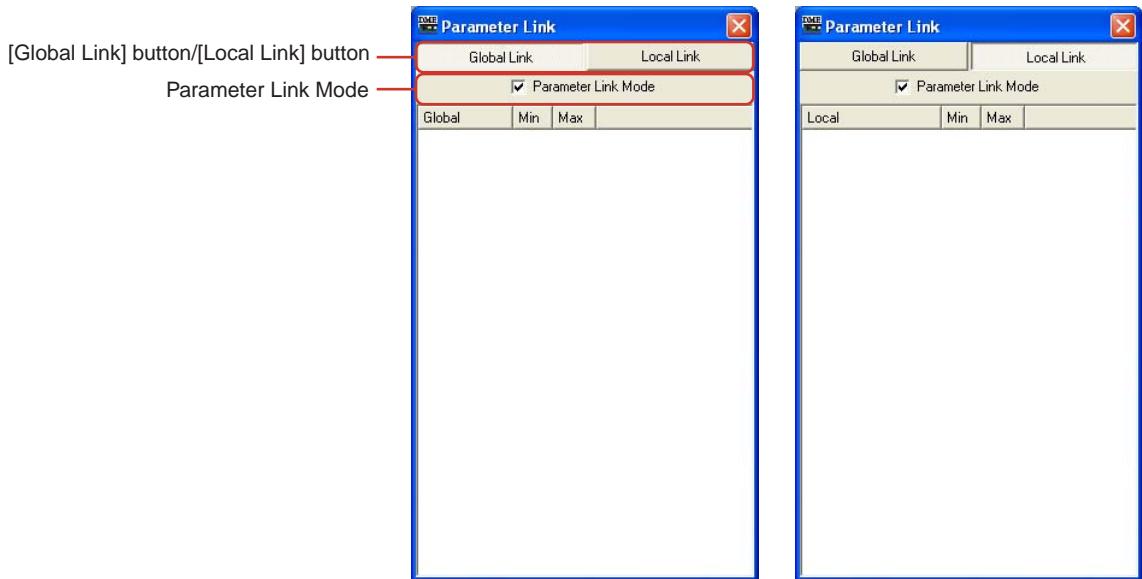
Parameters can not apply to multiple groups.

Groups can be created and parameters added to groups in the user control/user module control editor and component editor. For information about creating parameter links, see "Creating Parameter Links" on page 314.
You can check the status of parameter links and edit them in the Parameter Link window.

Parameter Link Window

When you click [Parameter Link] in the [Tools] menu, the "Parameter Link" window is displayed. You can also display the window by selecting [Open Parameter Link] from the context menu displayed in the user control/user module editor and component editor.

[Global Link] button/[Local Link] button ——

Parameter Link Mode ——

❶ [Global Link] button/[Local Link] button

　Switches the window display.

　• Global Link

　　Links to the parameters of multiple DME units in the zone.

　• Local Link

　　Links to the parameters of one DME unit.

NOTE

Because there is a large load on the network, the maximum number of Global Links will be limited to eight.

➋ Parameter Link Mode

Parameter linking is active when checked. Uncheck to temporarily disable parameter linking. Uncheck when you want to adjust the parameters individually.

You can also turn parameter link mode ON or OFF using the context menu in the user control/ user module editor or component editor.

- Group List

  Displays a hierarchical list of groups and the parameters that belong to them.

  When a group name is selected, the controls that belong to that group are selected.

- Keep Offset (Group icon)

  Turns ON or OFF whether the offset value set for each parameter is retained as it is. When ON is set for a group, the Keep Offset icon is displayed in orange. When OFF is set for a group, it is displayed in green.

  When Keep Offset is set to ON and any parameter within the group goes to the minimum or maximum value, the parameters cannot be further changed.

  Keep Offset can be set to ON or OFF using the "Keep Offset" item on the context menu that is displayed when you right click the name of a group.

- Group Name

  You can select a group name by clicking on it. Clicking the selected group name again will select the characters in the name, allowing you to change it.

  Clicking the plus (+) or minus (-) sign to the left of the group name displays or hides items that belong to that group.

  You can delete a group by selecting it and pressing the <Delete> key. You can also delete a group by right-clicking on the group name and selecting [Delete] in the context menu that is displayed.

- DME Icon

  Displays the DME that includes the parameters that belong to a group. The components can be displayed or hidden by clicking the plus (+) or minus (-) signs for the DME icon. The parameters, Min, and Max can be displayed or hidden by clicking the plus (+) or minus (-) signs for the component.

- Parameter

  Displays the parameters that belong to a group. You can display or hide minimum and maximum values for a parameter by clicking the plus (+) or minus (-) signs.

  You can delete a parameter from a group by selecting the parameter name and pressing the <Delete> key.

Synchronization
(DME Designer and DME Unit Synchronization)

The DME unit and DME Designer are synchronized by Synchronization. The DME operates according to the configuration and scene information transferred during this process.
This Synchronization is used when transferring the configuration in DME Designer and when controlling the DME unit in real time.

> **NOTE**
>
> Because Synchronization presupposes that the DME unit can communicate with the computer where DME Designer is installed, the necessary drivers (USB-MIDI or DME-N Network Driver) must be installed, and appropriate settings must be made for the driver and for DME Designer MIDI IN/OUT (page 90).
> For information about driver installation and settings, see the installation guide. For DME Designer communications settings, see "Online" (page 35).

> **NOTE**
>
> Because there are no scene settings when the DME unit is purchased, the configuration and scene information in DME Designer must first be transferred.

> **NOTE**
>
> For information about the online procedure, see "Online" (page 35).

Online and Offline

When a DME unit is connected to the computer and synchronized with DME Designer, its status is called "**Online**." When a DME unit is not physically connected to the computer or is not synchronized even when it is connected, its status is called "**Offline**." You can check the online/offline status and message transmission in [Communication Status] in the Main Panel window.

■ Online

Sends configurations created in DME Designer to the DME unit and reads data from the DME unit, so that the DME unit configuration is reflected in the DME Designer configuration. You can also control the DME in real time from DME Designer. Operations performed in the DME Designer control editor are reflected in the DME unit, and operations on the DME side are reflected in DME Designer.
You can not perform configuration editing using the Designer while online.

■ Offline

The communication status becomes offline when editing configurations.

■ Switching Between Online and Offline
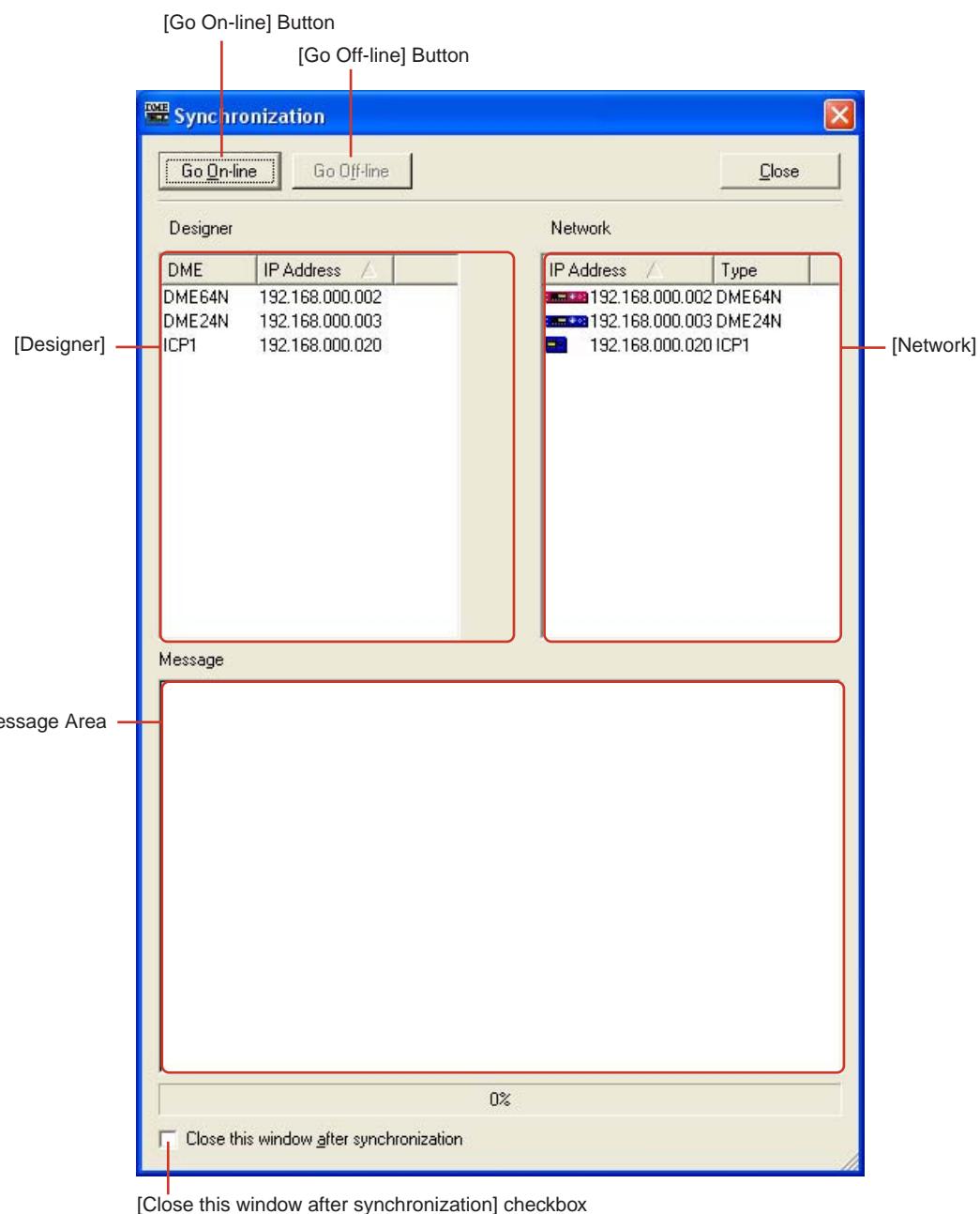
You can switch between online and offline in the "Synchronization" dialog box.

> **NOTE**
>
> For information about the online procedure, see "Online" (page 35).

"Synchronization" Dialog Box
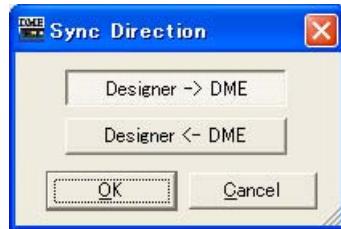
When you click the [Synchronization] command on the [Tools] menu, the "Synchronization" dialog box is displayed. The data from the current zone in the Designer is synchronized with the DME unit.
Here you can make settings for synchronizing the unit in DME Designer one-on-one with the DME that actually exists on the network.

[Go On-line] Button

[Go Off-line] Button

[Designer]

[Network]

Message Area

[Close this window after synchronization] checkbox

■ [Go On-line] Button

This button will be grayed out when the software is online.
Clicking the button displays a dialog box where you can decide the synchronization method.

[Designer→DME] button

A consistency check is performed between the data in the current zone and the DME data, then the communication status changes to online. Transmits data from the DME Designer to the DME unit and synchronizes the two.

[Designer←DME] button

Data from the DME unit is read into DME Designer. Current data stored in the DME unit, such as scenes, are read into DME Designer. This assumes that the configurations in the DME unit and the DME Designer agree.

■ [Go Off-line] Button
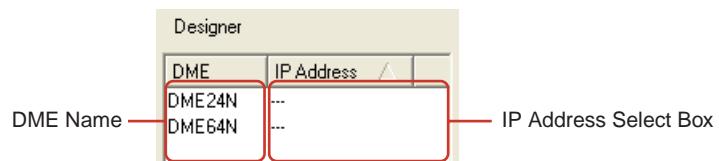
Clicking this button changes from online to offline. While offline, this button will be grayed out.

■ [Close this window after synchronization] Checkbox

When this checkbox is checked the dialog window will close automatically after synchronization.

■ Designer

The Designer list displays DME units arranged in the currently valid zone in the DME Designer. The unit in the DME Designer is matched with a recognized IP address, and they are compared one-to-one.

DME Name

Displays the names of DME units included in the project.
When multiple DMEs of the same type are arranged in a zone window, it is a good idea to change the name of each one.

IP Address Select Box

Matches the units in the Designer with recognized IP addresses. Click the [▼] to display the IP addresses of same type of devices in the area. If the unit is a DME24N, IP addresses for all DME24N devices in the area will be displayed on the list.
If you click the title bar with "IP Address" written on it (pale ▲ mark appears), you can line them up vertically.

■ Network

The devices currently connected to the network are displayed in the Network list. To keep consistency with the Designer list on the left side, the status of DMEs on the network is displayed.

DME Icon ——

IP Address

- **DME Icon**
  Displays DME and ICP1 devices connected to the network. The zone master DME icon is red. Icons for slave DMEs are blue. DMEs and ICP1 devices with no relation to DMEs in Designer have gray icons.

- **IP Address**
  Displays the DME IP address.

■ Message Area

Displays a message that synchronization is in progress.

Reading from the DME Unit

When you are offline in a condition where it is possible to go online, you can read data.
Before this can be done, configurations, such as cards inserted in the slots and any connected serial devices, must agree for the DME unit and DME Designer.

Preset data overwritten in the DME unit is read, along with every type of parameter setting managed in DME Designer.

NOTE

The event log is read in the Event Logger.

GPI

About GPI

GPI is an abbreviation for General Purpose Interface. Using GPI input and output, DMEs can be remotely controlled from custom-made controllers or external equipment. For both input and output, the DME64N provides 16 GPI channels and the DME24N provides eight. Sets GPI input/output for each DME.
Using GPI input data, you can switch DME scenes and change component change component parameters.
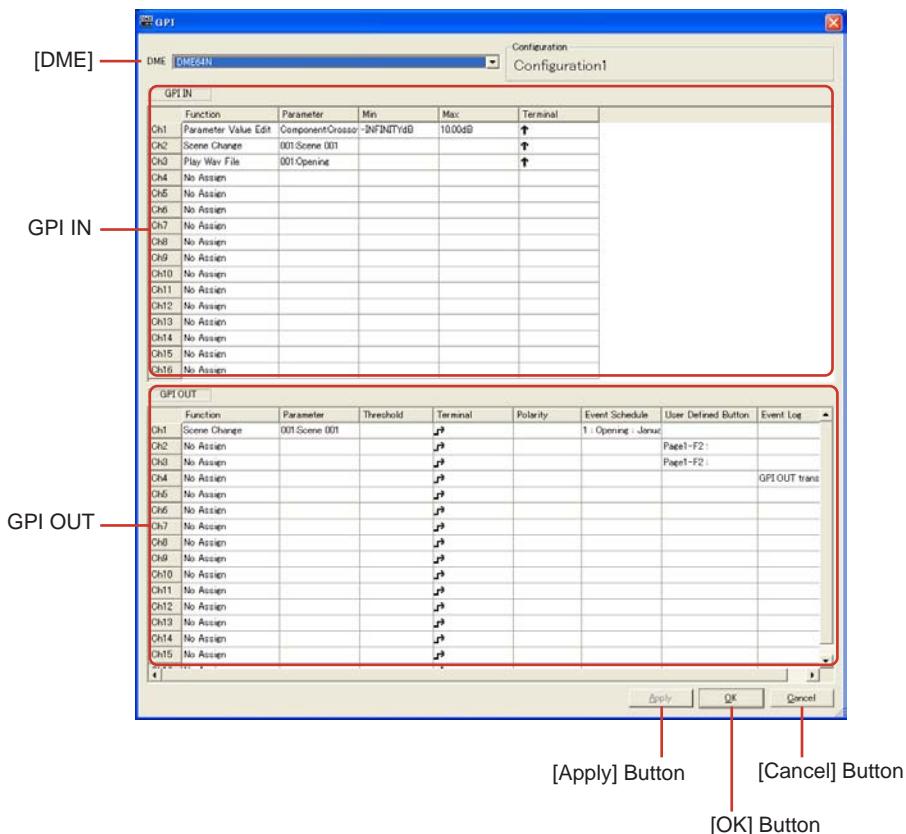
For hardware-related information such as the connection method for GPI, see the "DME64N/24N Owner's Manual."

NOTE

Only users for whom the [Operation Security] → [Edit] checkbox has been checked can make GPI settings.

"GPI" Dialog Box

When you click the [GPI] command on the [Tools] menu, the "GPI" dialog box is displayed. Sets GPI input/output for the DME.

■ [DME]

From the list, select the DME where you will be making settings.

■ Configuration

The current configuration name will be displayed.

■ GPI IN

The DME64N has 16 GPI IN channels, and the DME24N has 8 GPI IN channels.
These settings determine which DME parameters will be controlled by input received at each individual GPI IN channel. The channel numbers are shown in the leftmost column.
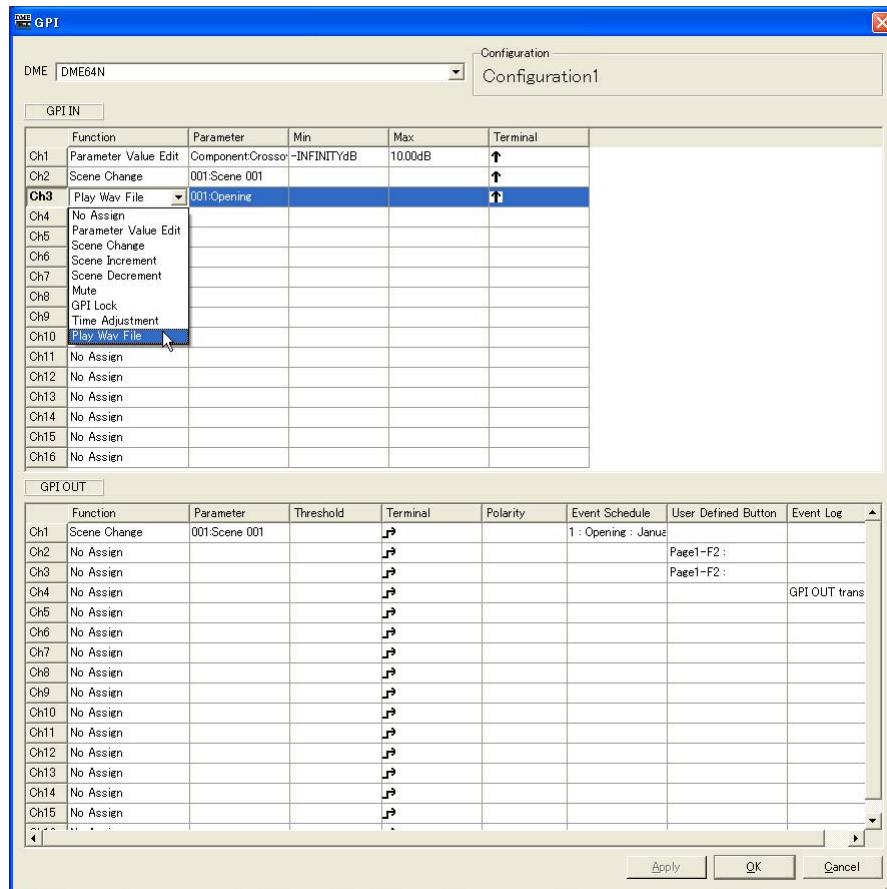
[Function]

Specifies the function to be controlled by GPI input. Click to see a list from which you can choose the function to be assigned to the corresponding GPI IN channel.
The nine available functions are: [No Assign], [Parameter Value Edit], [Scene Change], [Scene Increment], [Scene Decrement], [Mute], [GPI Lock], [Time Adjustment], [Play Wav File].
The [Parameter], [Min], [Max], and [Terminal] items will change according to the selected function.

- [No Assign]
   No function assigned. This is the default setting.
   Select [No Assign] to clear an assigned function.
   The [Parameter], [Min], [Max], and [Terminal] items are not available.

• [Parameter Value Edit]

Allows component parameters to be changed via GPI input.

In this case [Parameter] is used to select the parameter to be controlled.

[Min] and [Max] specify the range over which the parameter can be changed.

[Terminal] determines how the GPI input voltage will affect the specified parameter.

↑ and ↓ specify continuous control of continuously-variable parameters from an external fader, knob, or similar device.
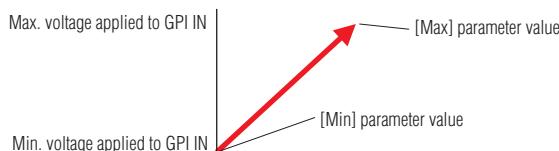
⌐ and ⌐ specify on/off control of 2-state parameters via an external switching device.

↑

The parameter value changes in proportion to the voltage applied to the GPI input.

The minimum voltage applied to GPI IN will produce the specified [Min] parameter value, and the maximum voltage applied to GPI IN will produce the specified [Max] parameter value, with intermediate voltages produced the corresponding intermediate parameter values.
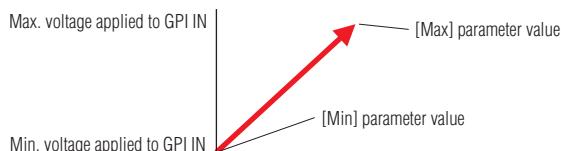
Example: Relationship between the voltage applied to GPI IN and the Fader Level when [Fader Level] is set in the [Parameter] box.

↓

The parameter value changes in inverse proportion to the voltage applied to the GPI input.

The minimum voltage applied to GPI IN will produce the specified [Max] parameter value, and the maximum voltage applied to GPI IN will produce the specified [Min] parameter value, with intermediate voltages produced the corresponding intermediate parameter values.

Example: Relationship between the voltage applied to GPI IN and the Fader Level when [Fader Level] is set in the [Parameter] box.


⌐

The specified [Min] and [Max] parameter values are alternately selected each time the voltage applied to GPI IN rises from below to above the median voltage.*

Example: Relationship between the voltage applied to GPI IN and the Fader Level when [Fader Level] is set in the [Parameter] box.

⌐

The specified [Min] and [Max] parameter values are alternately selected each time the voltage applied to GPI IN drops from above to below the median voltage.*

Example: Relationship between the voltage applied to GPI IN and the Fader Level when [Fader Level] is set in the [Parameter] box.

- [Scene Change]

 GPI input can be used to recall a specified scene.
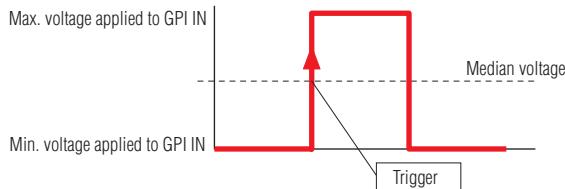
  [Parameter] specifies the number of the scene to be recalled.

  [Min] and [Max] are not available.
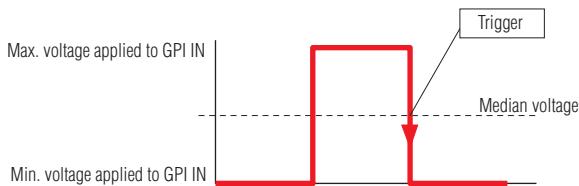
  [Terminal] determines how the GPI input voltage will affect the specified parameter.

  ⬆

  The scene specified by [Parameter] will be recalled each time the voltage applied to GPI IN rises from below to above the median voltage.*

  ⬇

  The scene specified by [Parameter] will be recalled each time the voltage applied to GPI IN drops from above to below the median voltage.*

  ⬐

  Same as ⬆.

  ⬎

 Same as ⬇.

- [Scene Increment]
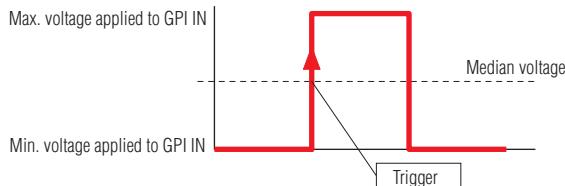
  GPI input can be used to increment the scene number.

  [Parameter], [Min], and [Max] are not available.

  [Terminal] determines how the GPI input voltage will affect the specified parameter.

  ⬆

  The scene number will be incremented each time the voltage applied to GPI IN rises from below to above the median voltage.*

  ⬇

  The scene number will be incremented each time the voltage applied to GPI IN drops from above to below the median voltage.*


  ⬐

  Same as ⬆.

  ⬎

  Same as ⬇.
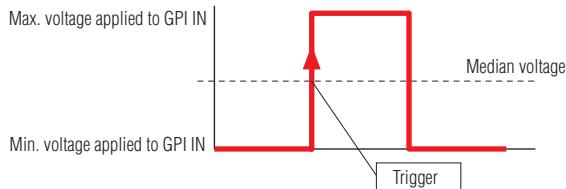
• [Scene Decrement]
    GPI input can be used to decrement the scene number.
    [Parameter], [Min], and [Max] are not available.
    [Terminal] determines how the GPI input voltage will affect the specified parameter.

   ⬆
   The scene number will be decremented each time the voltage applied to GPI IN rises from below to above the median voltage.*

   Max. voltage applied to GPI IN
   Median voltage
   Min. voltage applied to GPI IN
   Trigger

   ⬇
   The scene number will be decremented each time the voltage applied to GPI IN drops from above to below the median voltage.*

   Trigger
   Max. voltage applied to GPI IN
   Median voltage
   Min. voltage applied to GPI IN

   ⤵
   Same as ⬆.

   ⤷
   Same as ⬇.

- **[Mute]**
  GPI input can be used to engage or disengage the DME mute function.
  [Parameter], [Min], and [Max] are not available.
 [Terminal] determines how the GPI input voltage will affect the specified parameter.
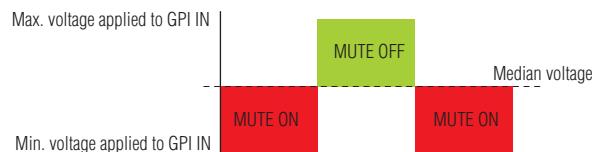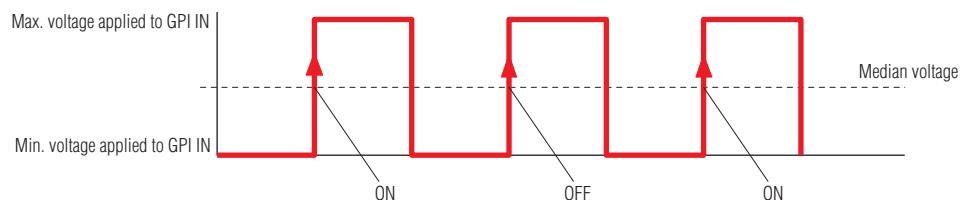
  ⬆
  Mute will be ON when the voltage applied to GPI IN is above the median voltage*, and OFF when the voltage is below the median.
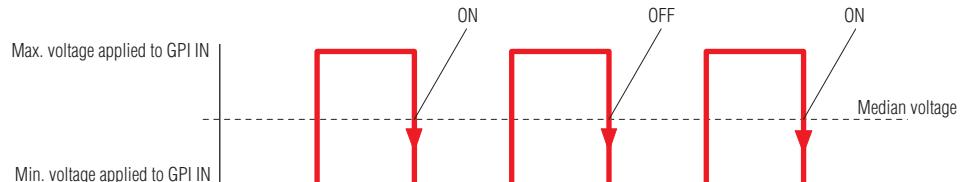

  ⬇
  Mute will be OFF when the voltage applied to GPI IN is above the median voltage*, and ON when the voltage is below the median.

  ⌐→
  Mute will be alternately turned ON and OFF each time the voltage applied to GPI IN drops from below to above the median voltage.*

  ⌐↳
  Mute will be alternately turned ON and OFF each time the voltage applied to GPI IN rises from above to below the median voltage.*
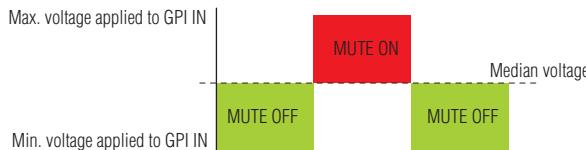
- **[GPI Lock]**

  GPI Lock can be turned on or off via GPI input. When GPI Lock is ON, all GPI inputs other than the one being used for GPI Lock control are locked and input will be ignored.

 [Parameter], [Min], and [Max] are not available.

  [Terminal] determines how the GPI input voltage will affect the specified parameter.

  ⬆
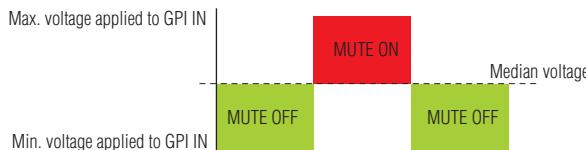
  GPI lock will be ON when the voltage applied to GPI IN is above the median voltage*, and OFF when the voltage is below the median.

  ⬇

  GPI Lock will be OFF when the voltage applied to GPI IN is above the median voltage*, and ON when the voltage is below the median.

  ⤴

  GPI Lock will be alternately turned ON and OFF each time the voltage applied to GPI IN drops from below to above the median voltage.*

  ⤵

  GPI Lock will be alternately turned ON and OFF each time the voltage applied to GPI IN rises from above to below the median voltage.*

- [Time Adjustment]
  GPI input can be used to adjust the DME internal clock as follows:

Internal clock time	Time after adjustment
0~14 seconds	Returned to 0 seconds
15~29 seconds	Advanced to 30 seconds
30~44 seconds	Returned to 30 seconds
45~59 seconds	Advanced to 0 seconds

[Parameter], [Min], and [Max] are not available.
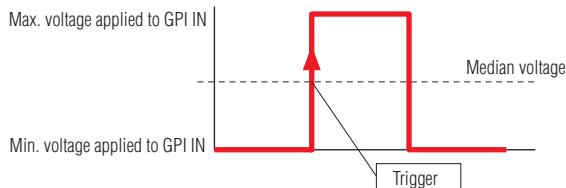
[Terminal] determines how the GPI input voltage will affect the specified parameter.

↑ and ↓ specify continuous control of continuously-variable parameters from an external fader, knob, or similar device.
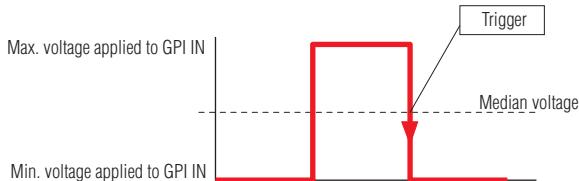
⌐ and ⌐ specify on/off control of 2-state parameters via an external switching device.

↑
The internal clock time will be adjusted each time the voltage applied to GPI IN rises from below to above the median voltage.*

↓
The internal clock time will be adjusted each time the voltage applied to GPI IN drops from above to below the median voltage.*

⌐
Same as ↑.

⌐
Same as ↓.

• [Play Wav File]

GPI input can be used to initiate playback of the specified Wave file.

[Parameter] specifies the Wave file to be played. Files specified by the Wav File Manager can be selected. Wave files can only be selected if a Wav Player is included in the DME configuration.

[Min], and [Max] are not available.
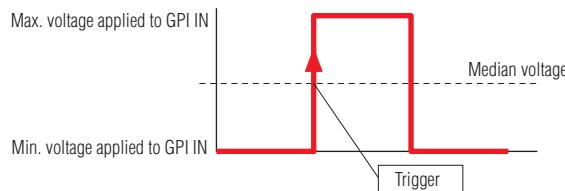
[Terminal] determines how the GPI input voltage will affect the specified parameter.

↑ and ↓ specify continuous control of continuously-variable parameters from an external fader, knob, or similar device.
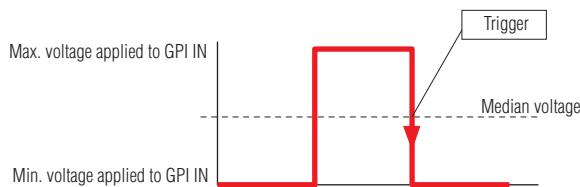
↱ and ↳ specify on/off control of 2-state parameters via an external switching device.

↑

The specified Wave file will be played each time the voltage applied to GPI IN rises from below to above the median voltage.*

Max. voltage applied to GPI IN
Median voltage
Min. voltage applied to GPI IN
Trigger

↓

The specified Wave file will be played each time the voltage applied to GPI IN drops from above to below the median voltage.*

Trigger
Max. voltage applied to GPI IN
Median voltage
Min. voltage applied to GPI IN

↱

Same as ↑.

↳

Same as ↓.

* "Median voltage" refers to the voltage halfway between the maximum and minimum voltages detectable by the GPI input terminals. Refer to the "GPI Page" section of the "Utility Screens" chapter of the DME64N/24N Owner's manual for details on GPI voltages.

■ GPI OUT

The DME64N has 16 GPI OUT channels, and the DME24N has 8 GPI OUT channels.
These settings determine which DME parameter values will be output via each individual GPI IN channel. The channel numbers are shown in the leftmost column.

[Function]

Specifies the function to be transmitted via a GPI output.
The four available functions are: [No Assign], [Parameter Value Edit], [Scene Change], and [GPI Lock].
The [Parameter], [Threshold], [Terminal], and [Polarity] items will change according to the selected function.

- **[No Assign]**
  No function assigned, and no GPI output will occur. This is the default setting.
  Select [No Assign] to clear an assigned function.
  The [Parameter], [Threshold], [Terminal], and [Polarity] items are not available.

- **[Parameter Value Edit]**
  Allows component parameter values to be output via GPI.
  In this case [Parameter] is used to select the parameter to be output.
  [Threshold] specifies the parameter threshold value.
  [Terminal] and [Polarity] determine how the GPI voltage will be output in response to parameter changes.

Terminal	Polarity	GPI Output
↑	Ignored	When value of the specified parameter is above the threshold level the output will be high, and when below the threshold level the output will be low.
↓	Ignored	When value of the specified parameter is below the threshold level the output will be high, and when above the threshold level the output will be low.
⊓	↑	A pulse[*1] will be output when the value of the parameter changes from below to above the threshold.
	↓	A pulse[*1] will be output when the value of the parameter changes from above to below the threshold.
⊓	↑	A pulse[*2] will be output when the value of the parameter changes from below to above the threshold.
	↓	A pulse[*2] will be output when the value of the parameter changes from above to below the threshold.

- **[Scene Change]**

  The recall status of the specified scene is transmitted via GPI output.

  [Parameter] specifies the scene for which the recall status is to be output.

  [Threshold] and [Polarity] are not available.

  [Terminal] determines how the GPI voltage will be output in response to parameter changes.

| Terminal	GPI Output
⬆	When the current scene is the same as the scene specified by [Parameter] the output will be high, and when different the output will be low.
⬇	When the current scene is the same as the scene specified by [Parameter] the output will be low, and when different the output will be high.
⎍	A pulse[1] will be output when the current scene is the same as the scene specified by [Parameter].
⎍	A pulse[2] will be output when the current scene is the same as the scene specified by [Parameter].

- **[GPI Lock]**
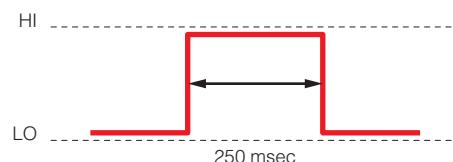
  The GPI Lock status is transmitted via GPI output.

 [Parameter], [Threshold], and [Polarity] are not available.
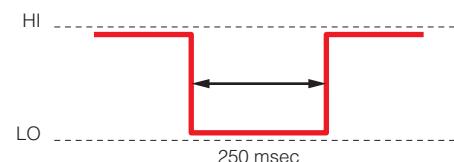
  [Terminal] determines how the GPI voltage will be output in response to parameter changes.

Terminal	GPI Output
⬆	When GPI Lock is ON the output will be high, and when OFF the output will be low.
⬇	When GPI Lock is ON the output will be high, and when OFF the output will be low.

*1 Pulse waveform 1
HI
LO
250 msec

*2 Pulse waveform 2
HI
LO
250 msec

Event Schedule

Event Schedule is shown when [GPI OUT] is set in "Event Scheduler."

User Defined Button

User Defined Button is shown when [GPI OUT] is set in "User Defined Button."

Event Log

Event Log is shown when [GPI OUT] is set in "Event Logger."
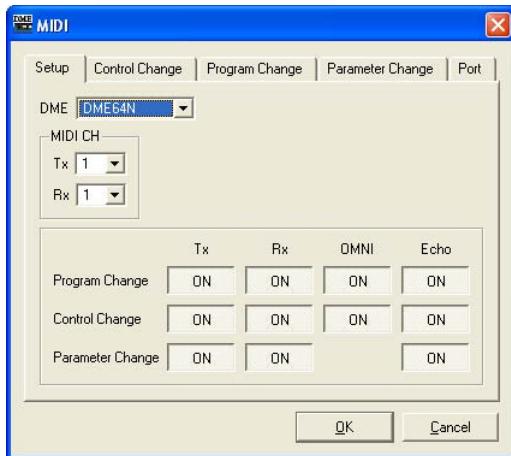
MIDI

When you click the [MIDI] command on the [Tools] menu, the "MIDI" dialog box is displayed. Here you can make MIDI input/output port, remote control, and other settings.

[Setup] Tab

Sets the DME MIDI channels along with program change, control change, and parameter change.

■ **[DME]**

From the list, select the DME where you will be making settings.

■ **MIDI CH**

Sets the MIDI channel. This number is also used as the Parameter Change Device ID.

[Tx]
Select the MIDI transmit channel from the list.

[Rx]
Select the MIDI receive channel from the list.

■ **Program Change/Control Change/Parameter Change**

Sets transmit (Tx), receive (Rx), OMNI, and Echo for program change/control change/parameter change. When ON, clicking turns this OFF. When OFF, clicking turns this ON. When OMNI is [ON] channel messages are received regardless of the receive channel setting. When ECHO is [ON] the input data is "echoed" (re-transmitted) via the output port that corresponds to the input port via which it was received.
Detailed settings for program change, control change, and parameter change are made on the [Program Change] tab, the [Control Change] tab, and the [Parameter Change] tab.
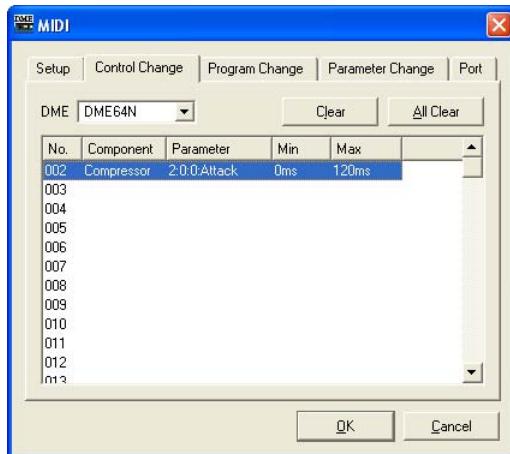
[Control Change] Tab

Assigns components to control change for each DME. You can change DME parameters by sending control change messages from external equipment.
You can assign to control change numbers 1-31, 33-95, and 102-119.

NOTE

Because control change numbers 0 and 32 are used for bank select MSB, numbers 96-101 are RPN/NRPN related, and 120-127 are used for mode messages, they cannot be used for component assignment.

■ [DME]

From the list, select the DME where you will be making settings.

■ Control Change List
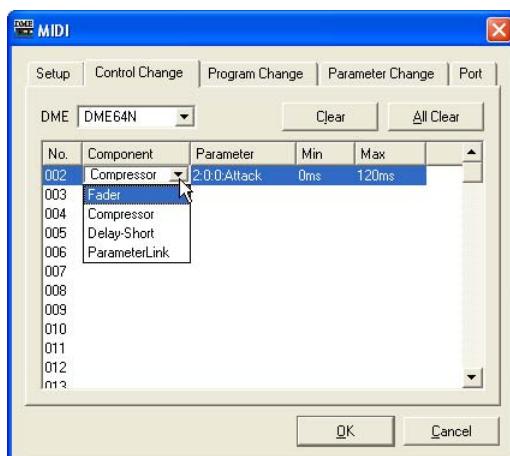
The control change numbers and current settings are displayed in the list in the center.

No.

Displays the control change numbers.

Component
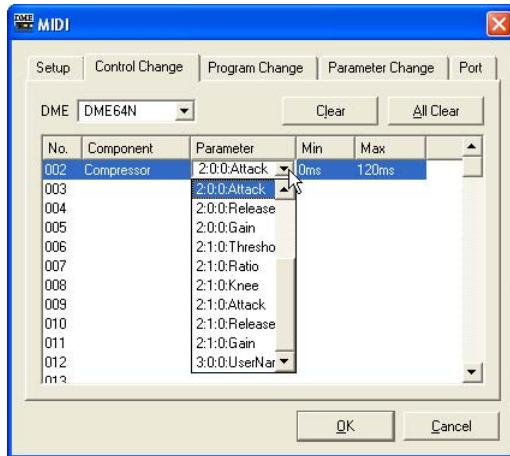
Displays the assigned components. Control changes that have no component assigned to them are blank. If you click here, a list will be displayed. Usable components are on the list. Click the component name to select it.

Parameter

Set the assigned component link parameter.
When you click here, a list of parameters included in the component is displayed. Select the parameter you want to assign.
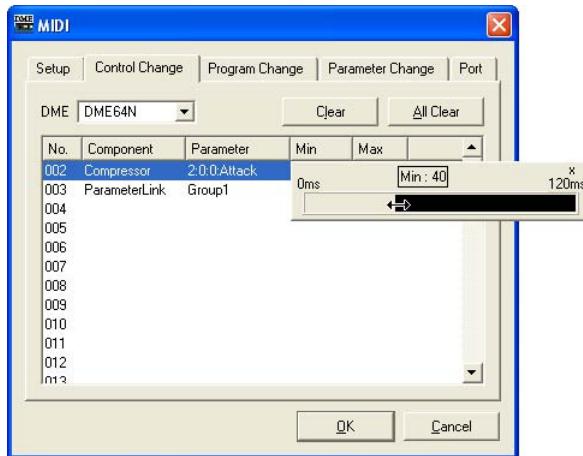

Min/Max

Sets the range of operation for the parameter. The current values for the [Min] (lower limit) and [Max] (upper limit) are displayed. If you click here, a slider will be displayed. The range and parameter units that can be set will vary, depending on the parameter selected in the [Parameter] box.
You can change the parameter by dragging the slider. To make a finer setting, press the <Shift> key while dragging the slider. The value for the parameter will be shown while you are dragging the slider. When you finish dragging and release the mouse button, the slider will disappear.
The same slider is displayed whether you click the [Min] box or the [Max] box. The black part is the parameter range. If you drag the left edge of the black part, the [Min] value will change. If you drag the right edge, the [Max] will change.
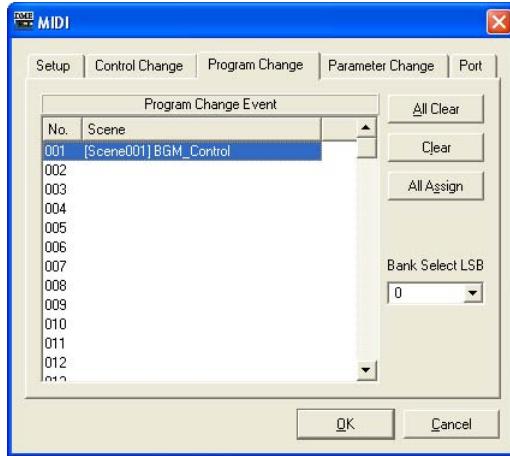

■ [Clear] Button

Clears assignments for the selected control change numbers.

■ [All Clear] Button

Clears assignments for all control change numbers.

[Program Change] Tab

Assigns scenes to program control change numbers 1 through 128. Switches scenes when program changes are received. These settings are shared by all DMEs in the zone. Up to 999 assignments can be made. Scenes above number 128 are assigned by changing banks.

■ **Program Change Event**

Program numbers and the scenes assigned to them are displayed in a list.
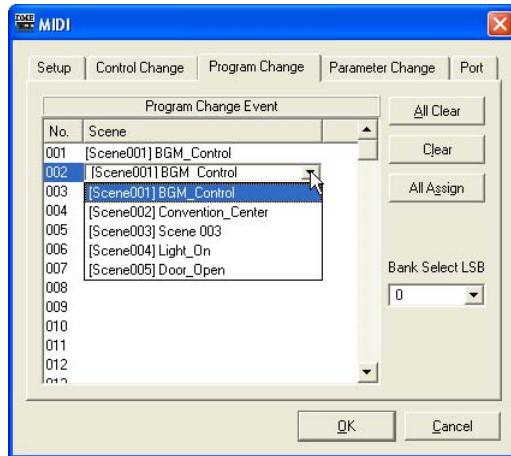
No.

This displays program numbers from 1 to 128.

Scene

Displays the scene number and name of the assigned scene. Program changes that have no scene assigned to them are blank.
When you click here, a list of scenes is displayed. Select the scene you want to assign.

■ **[All Clear] Button**

Clears all scene assignments.

■ **[Clear] Button**
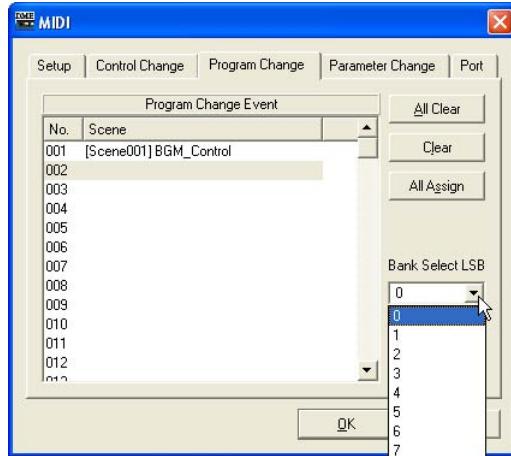
Clears the scene assignment for the program number selected in the list, so that no scene is assigned to that number.

■ **[All Assign] Button**

Assigns all scenes in order starting from program number 1.
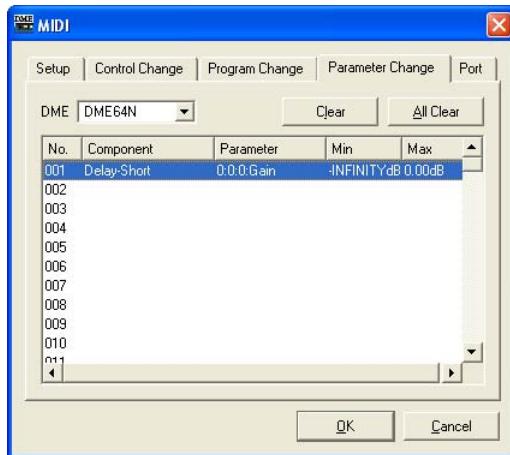
■ **Bank Select LSB**

The bank is changed when assigning scenes numbered 129 and higher. Eight banks can be used, numbered from zero to seven. Click the [▼] and select the bank where you will make settings.

[Parameter Change] Tab

Specifies the parameter to be controlled by parameter change commands for each address. Up to 128 can be set.

■ **[DME]**

From the list, select the DME where you will be making settings.

■ **Parameter Change List**
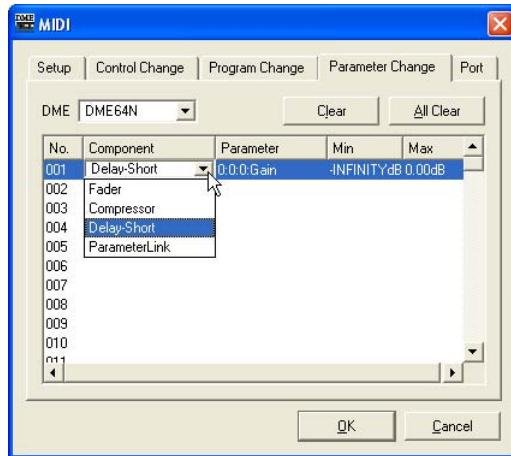
The current settings are displayed in the list in the center.

No.

This displays the parameter change numbers.

Component

Assigns components. If you click here, a list will be displayed. Assignable components are on the list. Click the component name to select it.
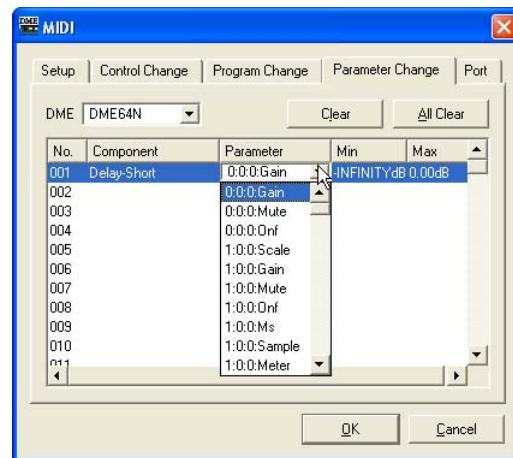
Parameter

Set the assigned component link parameter.
When you click here, a list is displayed of parameters included in the component selected in the [Component] box.
Select the parameter you want to assign.
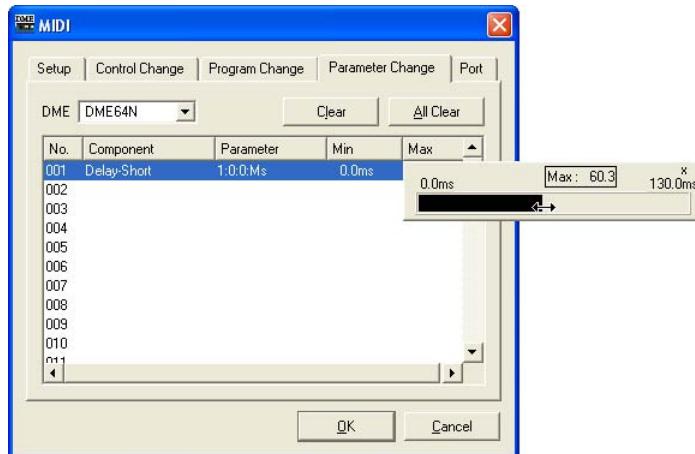
Min/Max

This sets the parameter range. The current values for the [Min] (lower limit) and [Max] (upper limit) are displayed. The range and units that can be set will vary, depending on the parameter selected. If you click here, a slider will be displayed.

You can change the parameter by dragging the slider. To make a finer setting, press the <Shift> key while dragging the slider. The value for the parameter will be shown while you are dragging the slider. When you finish dragging and release the mouse button, the slider will disappear.

The same slider is displayed whether you click the [Min] box or the [Max] box. The black part is the parameter range. If you drag the left edge of the black part, the [Min] value will change. If you drag the right edge, the [Max] will change.
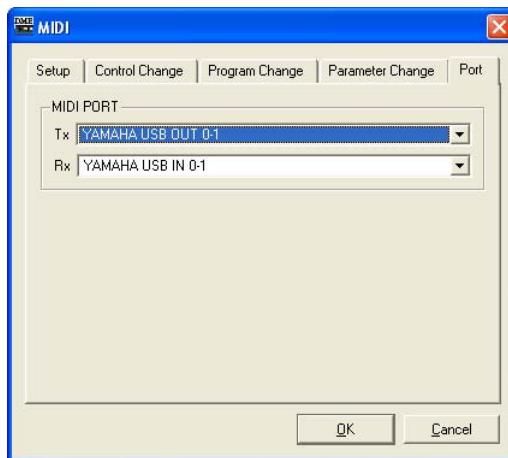
■ [Clear] Button

Clears the assignment for the parameter change selected in the list, so that nothing will be assigned to it.

■ [All Clear] Button

Clears all parameter change assignments.

[Port] Tab

Sets the MIDI port for the current zone used by DME Designer.

■ MIDI PORT

Selects the MIDI driver used for transmitting and receiving MIDI messages.

[Tx]

Selects, from a list, the MIDI driver used for transmitting MIDI messages.

[Rx]

Selects, from a list, the MIDI driver used for receiving MIDI messages.

User Defined Button (User Defined Parameters)

User Defined Parameters
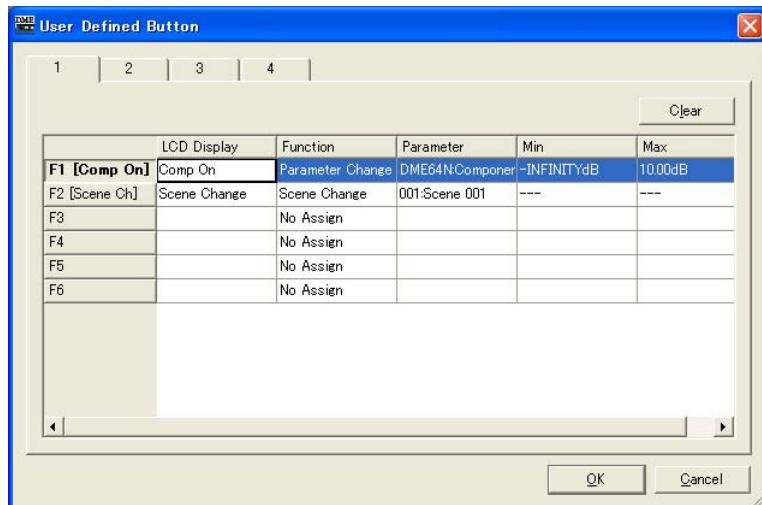
Parameters that the user can operate using function keys <F1> through <F6> in the DME unit or ICP1 are called "**User Defined Parameters**." Frequently changed parameters can be assigned in advance to any of 24 (four pages times six) presets, and operated on the DME unit or ICP1 even if DME Designer is not being used.

This function sets parameters in DME Designer that can be called by these function keys <F1> through <F6>.
In DME Designer, user defined parameter settings are made using the "User Defined Button" dialog box. The user defined parameter settings are shared between zone configurations.

"User Defined Button" Dialog Box

When you click [User Defined Button] in the [Tools] menu, the "User Defined Button" dialog box is displayed.

■ [1]/[2]/[3]/[4] Tabs
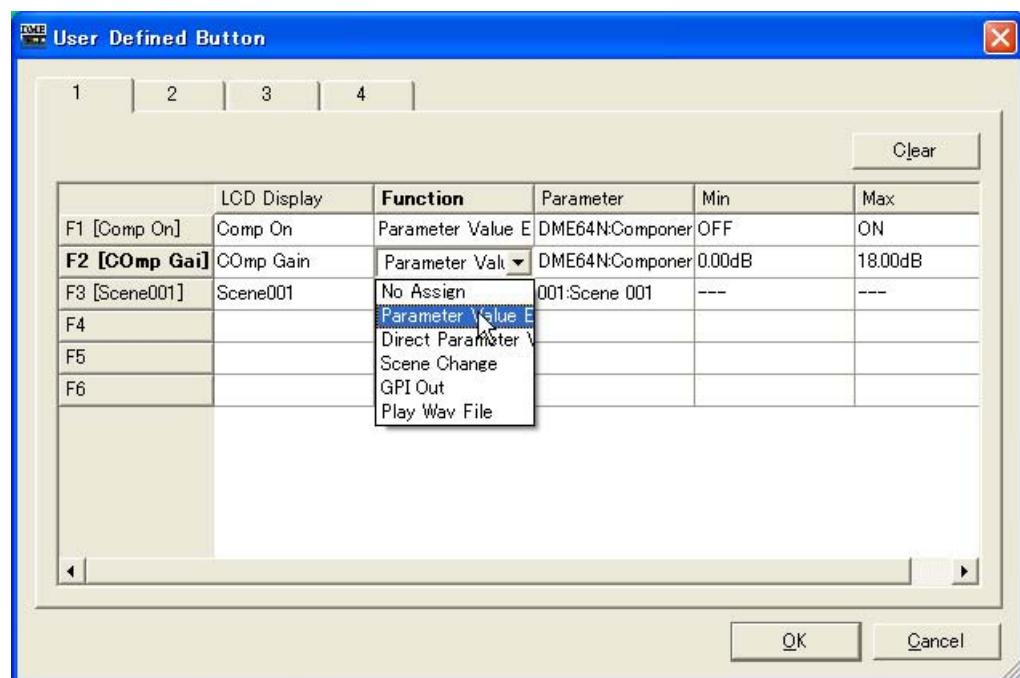
Switches the set to which settings will apply. You can set up to six function keys in each set. The user defined parameters set on a single tab are displayed on one page in the DME unit main screen.

Function Keys

The function keys are displayed in the leftmost column of the table. When you enter text for [LCD Display], a short name with up to eight characters will be created and displayed to the right of the function key.

Function

Specifies the function to be assigned to the function keys.

- **[No Assign]**
  No assignment. Select this option to clear an assigned function.

- **[Parameter Value Edit]**
  Allows the parameter specified in the [Parameter] field to be changed.

- **[Direct Parameter Value]**
  Allows the value of a parameter to be set directly. The target parameter is specified in the [Parameter] field, and the value to be set is specified in the [Max] field.

- **[Scene Change]**
  Allows scene recall. The scene to be recalled is specified in the [Parameter] field.
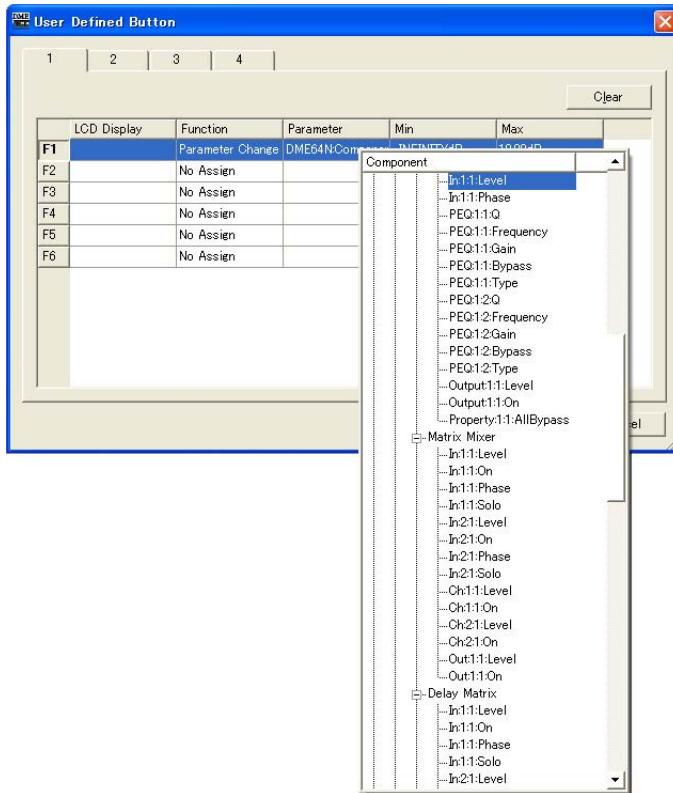
- **[GPI OUT]**
  Allows GPI output. The GPI setting is made in the [Parameter] field.

- **[Play Wav File]**
  Allows initiation of Wave file playback. The Wave file setting is made in the [Parameter] field. Wave files set by the Wav File manager can be specified. Files can not be selected unless a Wav Player is included in the DME configuration.

Parameter

Sets the parameter assigned to each function key. If you click here, a list will be displayed. This list displays the parameters that are included in the current configuration. Select the parameter you want called by the function key.

LCD Display

Sets the text displayed on the DME unit. Click the [LCD Display] box and enter text. Up to 23 characters can be entered into the [LCD Display] box.
After you confirm the name by pressing the <Enter> key, a short name will be created and displayed in the function key area as follows: "F1 [shortnam]." The short name will also be displayed in the DME unit main display. A short name is automatically created with up to eight characters for display as the user defined parameter name on the DME unit main screen

Min, Max

Sets the lower and upper limits for a parameter.

■ [Clear] Button

Clears assignments for the selected function keys. This is the same as "No Assign."

■ [OK] Button

Accepts the changed settings and closes the dialog box.
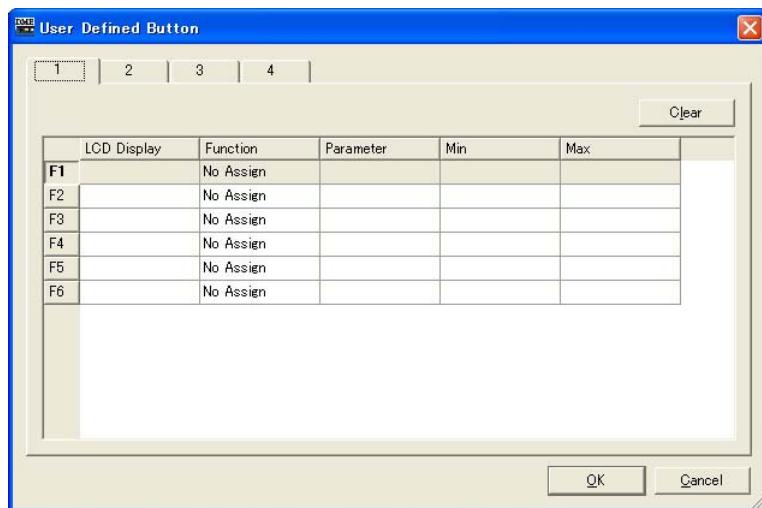
■ [Cancel] Button

Closes the dialog box without changing the settings.

Setting User Defined Parameters

After creating a parameter link group to assign, set the user defined parameter.

1 Create a configuration.

2 Click [User Defined Button] in the [Tools] menu.
The "User Defined Button" dialog box will be displayed.

3 Click one of the tabs numbered [1] through [4] to select the set of user defined parameters you will assign your parameters to.
The four tabs correspond to the pages on the DME unit main screen.

4 Click the [Parameter] box for the function key to which you will assign the parameter.
A list of parameters included in the current configuration will be displayed.

5 Select the parameter to assign to the function key.

6 Click the [LCD Display] box and enter text for the user defined parameter name.
The [LCD Display] box can accept up to 23 characters, but only eight characters can be displayed in the DME unit main screen. When making a user defined parameter name, the first eight characters should be understandable.
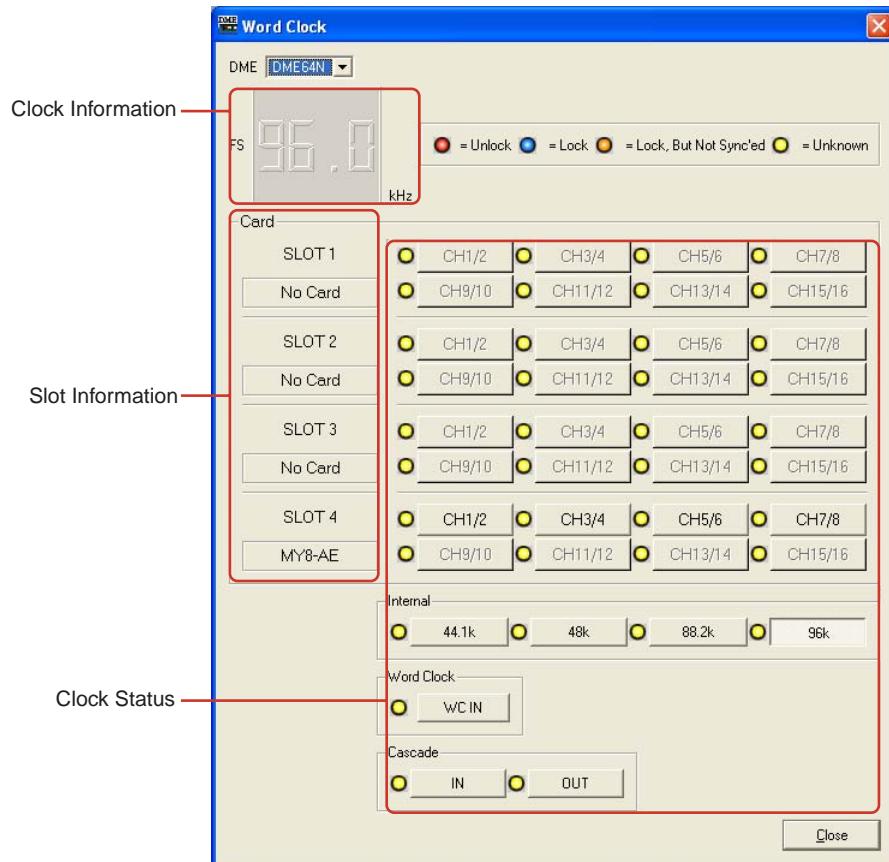
> **Note**
>
> When making multiple registrations, you can save time by first setting just the [Parameter] box for all keys, then setting the [LCD Display] box names. When you enter a user defined parameter name into an [LCD Display] box and press the <Enter> key to confirm it, the next [LCD Display] box down will be selected, and you can enter text there immediately.

Word Clock

The signal that synchronizes all devices connected to the DME is called the "Word Clock." It uses the same frequency as the sampling frequency. The word clock is set for each DME in the "Word Clock" dialog box.

When you click [Word Clock] on the [Tools] menu, the "Work Clock" dialog box is displayed.

• The DME24N has only one SLOT, and [Cascade] is not available.
• The number of channels varies according to the card inserted into the slot.

■ DME

From the list, select the DME where you will be making settings.

■ Clock Information

Displays the word clock frequency for the DME selected in [DME].

■ **Card (Slot Information)**

Displays the name of the card inserted into the slot.

Slot Number —— SLOT 1

Card Name —— No Card

SLOT 2
No Card

SLOT 3
No Card

SLOT 4
No Card

■ **Clock Status**

The clock status is displayed using a color code:

Status	Meaning
● = UNLock	Indicates that there is no input signal.
● = Lock	Indicates there is an input signal and sync is possible with the current word clock.
● = Lock, But Not Sync'ed	Indicates there is an input signal but cannot sync with word clock (clocks are different).
● = Unknown	Indicates that there is no DME unit information.

■ **Internal/Word Clock/Cascade**

You can select one of the following for the word clock: [Slot] (64N: 1-4, 24N: 1 only), [Internal] (44.1kHz/48kHz/88.2kHz/96kHz), [Word Clock] (WCK IN), [Cascade] (IN/OUT, 64N only). Clock buttons that are grayed out cannot be selected.

■ **[Close] Button**
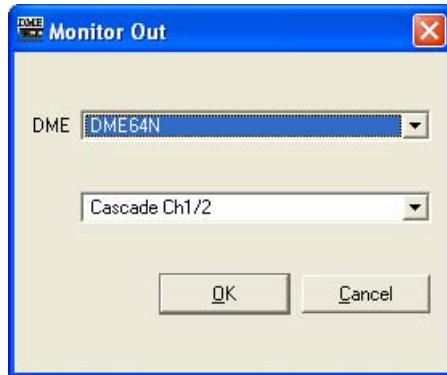
Closes the dialog box.

NOTE

You can close the dialog box using the Close button, or by pressing <Esc> or <Alt>+<F4>.

Monitor

When you click the [Monitor] command on the [Tools] menu, the "Monitor" dialog box is displayed.
Sets the monitor output destination.

■ [DME]

From the list, select the DME where you will be making settings.

■ Drop down list

From the list, select the card that will be the destination for the monitor output.

■ [OK] Button

Accepts the changed settings and closes the dialog box.
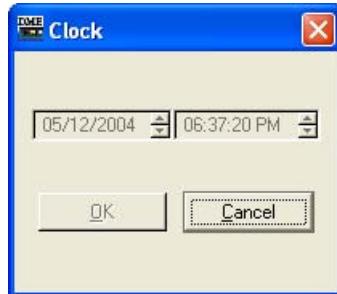
■ [Cancel] Button

Closes the dialog box without changing the settings.

Clock

When you click the [Clock] command on the [Tools] menu, the "Clock" dialog box is displayed. Here you can set the DME internal clock. This can be set only when online. The default is the computer date and time.
Set the date in the left box and the time in the right box. You can change the numbers using the [▲] and [▼] at the right of the boxes.

NOTE

You can close the dialog box using the Close button, or by pressing <Esc> or <Alt>+<F4>.

Language Settings

When you click the [Language] command on the [Tools] menu, the "Language" dialog box is displayed. This sets the DME unit language.

■ [Language]

Select the language. [English/German/French/Spanish] and [Japanese] are in the list.

■ [OK] Button

Accepts the changed settings and closes the dialog box.

■ [Cancel] Button
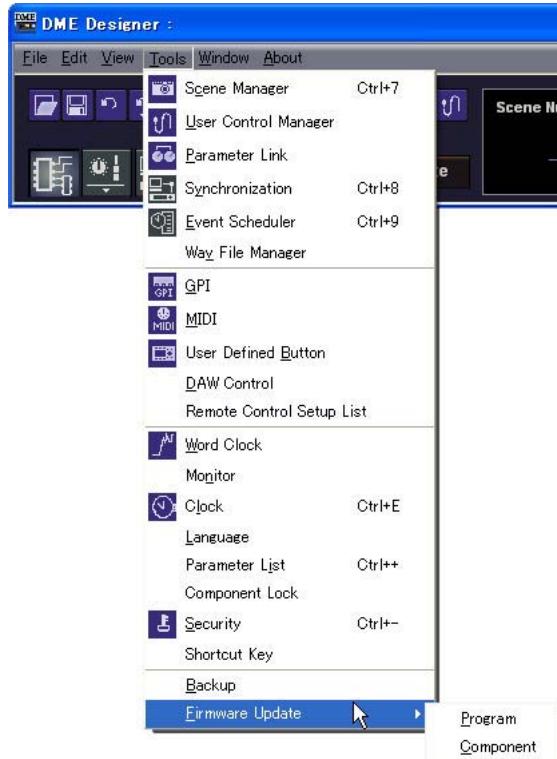
Closes the dialog box without changing the settings.

NOTE

You can close the dialog box using the Close button, or by pressing <Esc> or <Alt>+<F4>.

DME Firmware Update

You can update the DME unit firmware using the [Firmware Update] command on the [Tools] menu. When you move the mouse cursor over the [Firmware] command on the [Tools] menu, a submenu is displayed.

When you select [Program] or [Component] on the submenu, the "Open" dialog box will be displayed. You can perform a firmware update by specifying a firmware update file.

When performing a firmware update, connect the DME unit and the computer.

When the DME update is finished, the DME unit will be automatically restarted. You also need to restart DME Designer.

NOTE

If the firmware has been updated from V1.07 or lower to V1.10 or upper, perform the update twice. Because the text display data in the DME unit is changed, text display for Japanese is not possible with one update only.

■ **[Program]**

Updates the DME/CP1 unit program area firmware. Opens update files with the extension ".DPB".
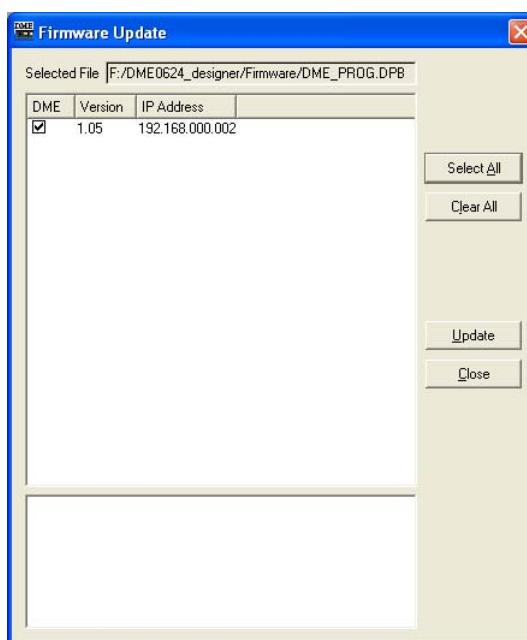
1 Select [Firmware Update] → [Program] in the [Tools] menu.

The "Open" dialog box will be displayed.

2 Select an update program with the extension ".DPB" and click the [Open] button.

The "Firm Update" dialog box will be displayed. The DMEs in the current zone will be displayed in a list.

3 Check the DME you wish to update.

You can click on a checkmark to turn it ON/OFF. The [Select All] button places a checkmark next to all the DMEs. The [Clear All] button turns OFF all the DME checkmarks.

4 Check the DME you wish to update, then click the [Update] button.

The firmware update will begin.

> **NOTE**
>
> While updating, be very careful not to disconnect the USB or Ethernet cable or turn off the power to the DME. The DME Designer MIDI setting information will be lost.

When the DME update is finished, the DME unit will be automatically restarted. You also need to restart DME Designer.

■ [Component]

Updates the DME unit component firmware. When you select this command, the "Open" dialog box will be displayed. Opens update files with the extension ".DCB" (for DME) or ".CCB" (for ICP1). You can select multiple update files for components.
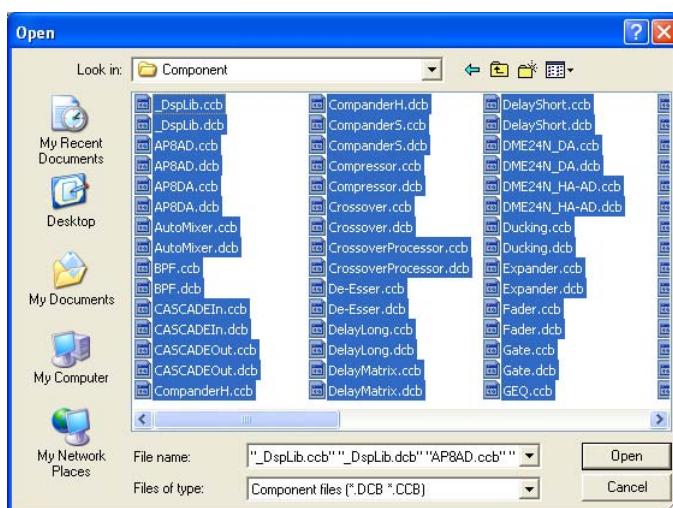
■ DME Unit

When performing the firmware update, connect the DME unit and the computer by USB or Ethernet. The USB-MIDI or DME-N Network Driver must be installed in the computer.

■ ICP1
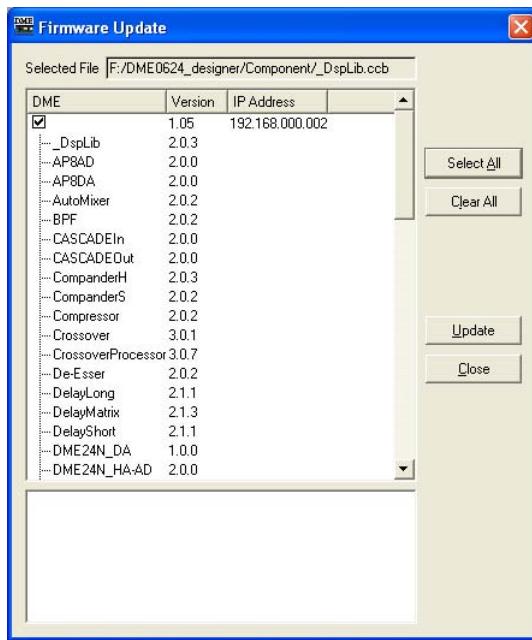
To perform the firmware update, the ICP1 and the zone master DME unit must be connected by Ethernet. In addition, the zone master DME unit must be connected to the computer as described above.

1 Select [Firmware Update] → [Component] in the [Tools] menu.

The "Open" dialog box will be displayed.

2 Select an update program with the extension ".DCB" (for DME) or ".CCB" (for ICP1) and click the [Open] button.

The "Firmware Update" dialog box will be displayed. The DMEs or ICPs in the current zone will be displayed in a list. The component names and versions will be displayed hierarchically for each DME.

3 Check the component you wish to update.

You can click on the checkmark to turn it ON/OFF. The [Select All] button places a checkmark next to all the DMEs. The [Clear All] button turns OFF all the DME checkmarks.

4 Check the component you wish to update, then click the [Update] button.

The component update will begin.

> **NOTE**
>
> While updating, be very careful not to disconnect the USB or Ethernet cable or turn off the power to the DME.
> The DME Designer MIDI setting information will be lost.

When the DME update is finished, the DME unit will be automatically restarted. You also need to restart DME Designer.

Event Logger

When you click [Event Logger] in the [View] menu while online, the "Event Logger" window is displayed. This records and displays DME unit events.
When the dialog box is opened while online, the event log is automatically obtained and displayed as a list in the Event Logger window.
Events are displayed in realtime as long as the dialog box stays open while online. The information is also simultaneously recorded in a file if the log function is enabled.
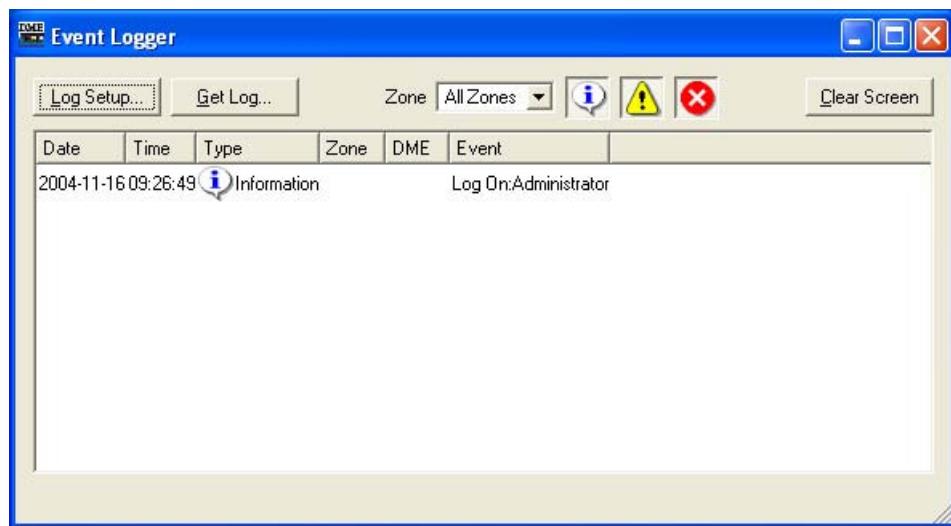
> **NOTE**
>
> Only users for whom the [View Log Window] checkbox in the "Security" dialog box has been turned ON can display the Event Logger window. The default setting for this parameter is OFF.

> **NOTE**
>
> The events you wish to display in the Event Logger window must be set in advance in the "Event Log List" dialog box.

■ DME List

- [Date]
  Displays the date the event occurred. (Example Display: 2004-08-24)

- [Time]
  Displays the time the event occurred.

- [Type]
  Displays the event type and icon.
  There are three event types:
  ⚠ (Warning): Warning event
  ❌ (Error): Error event
  ⓘ (Information): Other events

- [Zone]
  Displays the name of the zone in which the event occurred.

- [DME]
  Displays the name of the DME in which the event occurred.

- [Event]
  Displays the content of the event.

[Log Setup] Button

Displays the "Log Setup" dialog box. Here you can make Event Log settings.

[Get Log] Button

When you are offline, this selects the DME from which the log will be taken. During online status, this button is grayed out and cannot be used.
Clicking here displays the "Get Log" dialog box.

[Zone]

Selects the zone for which events will be displayed. Only events from the selected zone will be displayed in the window. If [All Zones] is selected, events will be displayed for all DMEs arranged in the zone.

Display button (Information/Warning/Error)

- [Display Information] Button
  Switches between displaying and hiding Information events.
  When turned ON, Information events are displayed in the Event Logger window.

- [Display Warning] Button
  Switches between displaying and hiding Warning events.
  When turned ON, Warning events are displayed in the Event Logger window.

- [Display Error] Button
  Switches between displaying and hiding Error events.
  When turned ON, Error events are displayed in the Event Logger window.
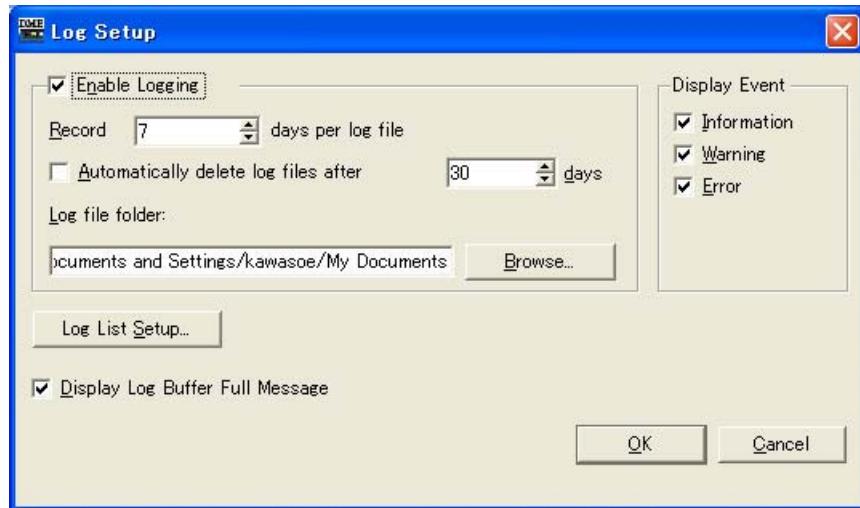
[Clear Screen] Button

Clears (erases) events.

"Log Setup" dialog box

Click the [Log Setup] button in the Event Logger window to display the "Log Setup" dialog box. Here you can make Event Log settings. These settings apply to the system as a whole.

■ [Enable Logging]

Turns ON or OFF the function that writes the obtained event log data to a file. When a check is placed here, the event log is written to a file.
When checked, it is set in the [Enable Logging] frame.

Record __ days per log file

Sets the number of days recorded into a single log file. When the specified number of days is exceeded, a new log file is created, and future log events are recorded there.
When "1" is set for the number of days at 10:00 AM, information will be recorded in the same file until the next day at 9:59 AM. The number of days counted are cleared when the "Log Setup" dialog box is closed by clicking the [OK] button, or when the system goes online.

Automatically delete log files after __ days

When a check is placed here, log files exceeding the specified number of days are automatically deleted. Specifies the number of days after which log files are automatically deleted.

Log file folder

Specify the folder for saving log files. Clicking the [Browse] button opens the standard operating system dialog box for specifying folders. Here you can select a folder.
Log files are saved with the following file name: "LOG + Start_Date.txt".
If there is a file with the same name already in the specified folder, a number will be affixed to the end of the file name, and it will be saved as a separate file. (Example: LOG20040824-2.txt)

■ [Display Event]

Displays events with checks next to them. This operates together with the [Display Information], [Display Warning], and [Display Error] buttons in the Event Logger window. You can place checks next to multiple events.

■ [Display Log Buffer Full Message]
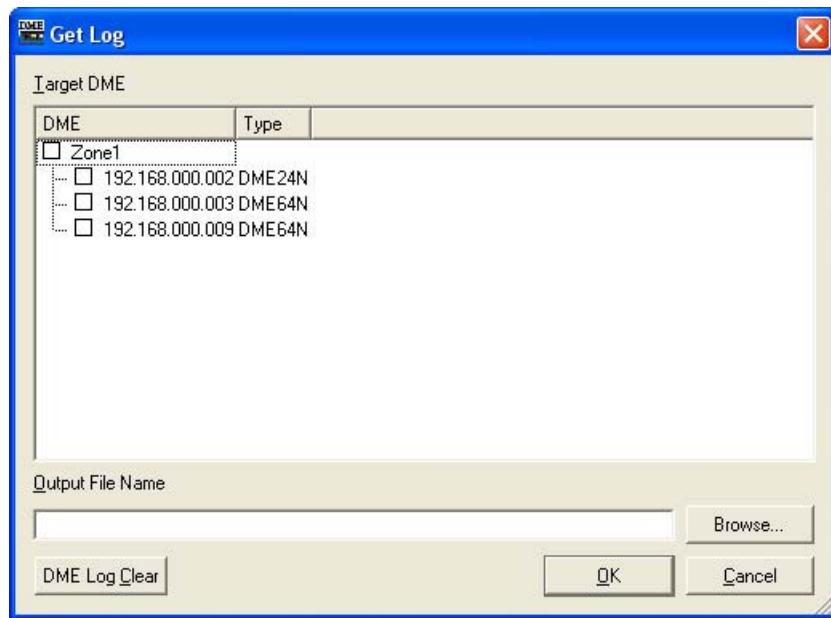
When a check is placed here, "Log Buffer Full" messages will be displayed on the displays of all DME units in the zone.

■ [Log List Setup] Button

Sets events sent from the DME units. Clicking here displays the "Event Log List" dialog box.

"Get Log" dialog box

Click the [Get Log] button in the Event Logger window to display the "Get Log" dialog box.

■ DME List

Displays the IP addresses and types of DME units included in the zone. Click the DME from which to obtain events by placing a check next to it.

■ [Output File Name]
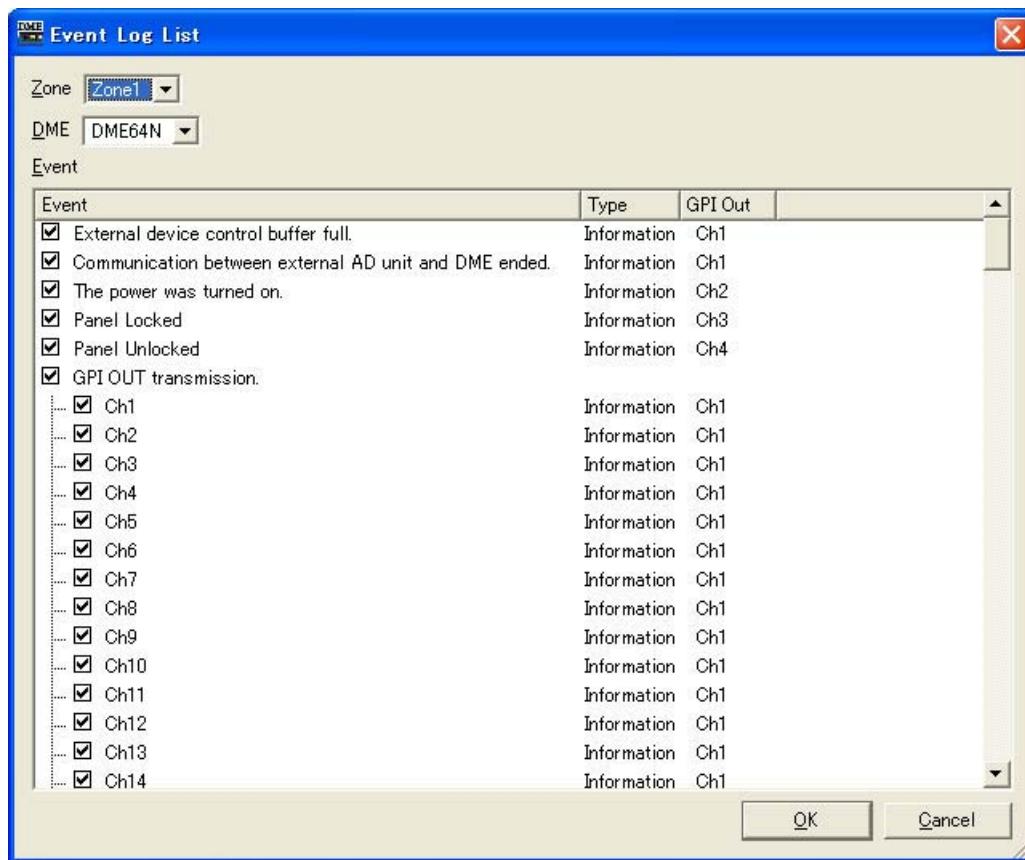
Sets the file name and save location for the log file. Clicking the [Browse] button opens the file select dialog box, where you can select a file.

■ [DME Log Clear]

Clears (erases) logs in the DME checked. When you click this button, a confirmation dialog is displayed.

"Event Log List" Dialog Box

Sets events sent from the DME units. Sends events with checks next to them.

■ **[Zone]**

If you click here, a list will be displayed. Specifies a zone.

■ **[DME]**

If you click here, a list will be displayed. Specifies DMEs.

■ **[Event]**

You can turn sending of logs for each event ON or OFF.

■ **[Type]**

If you click here, a list will be displayed. Select type of event.
[Information], [Warning], and [Error] are displayed in a list.

■ **[GPI OUT]**

Sends GPI output for each event.

Event Scheduler
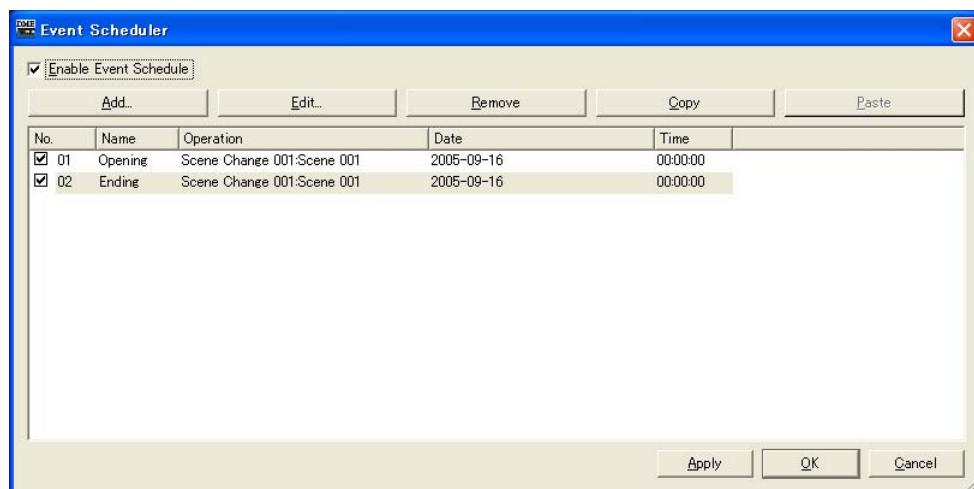
"Event Scheduler" Dialog Box

When you click [Event Scheduler] in the [Tools] menu, the "Event Scheduler" dialog box is displayed. This sets the scheduling for events. You can schedule events by specifying the date, time, and the action to execute. You can set up schedules for events to be executed at a specified time, and events that are to be repeated periodically. Periodic events are those that repeat each year, month, week, or day. Up to 50 events can be scheduled. Scheduling can be set separately for each zone. Settings and changes are sent to the DME unit during online status.
Scene changes, parameter changes, and GPI output can all be scheduled.

> **NOTE**
>
> Only users for whom the [Edit] checkbox in the "Security" dialog box has been turned ON can edit scheduling settings.

■ **Event View**

Displays registered scheduling events. When periodic events (cyclical events) are first displayed together, they are displayed in order of date.
The order of same-time events can be changed by dragging and dropping.
Click to select an event.

■ **[No.]**

Displays the event number. Numbers are added from the top in order.
This function will not be executed if the checkbox is not checked.

■ **[Name]**

Displays the event names. Clicking an event will select it, allowing you to change its name. There is no limit to the number of characters.

■ **[Operation]**

Displays the function that will be executed when the event starts.

■ [Date]

Displays the event start date.
Periodic events are displayed as shown below, with an icon and text that indicate a periodic event.

- [January 1 every year]
  Each New Year's Day

- [First Monday of January every year]
  First Monday in January each year

- [Day 1 every month]
  First day of each month

- [Second Monday of every month]
  The second Monday of each month.

- [Monday every week]
  Each week on Monday

- [Every day]
  Every day

■ [Time]

Displays the time for starting the event.

■ [Enable Event Schedule]

Enables the scheduled events.

■ [Add] Button

Adds an event. Clicking here displays the "Add Event" dialog box. If the maximum of 50 events has already been registered, this button is grayed out.

■ [Remove] Button

Deletes the event selected on the list. This button is grayed out when no event is selected.

■ [Edit] Button

Lets you edit the selected event. Displays the "Edit Event" dialog box. This button is grayed out when no event is selected.

■ [Copy] Button
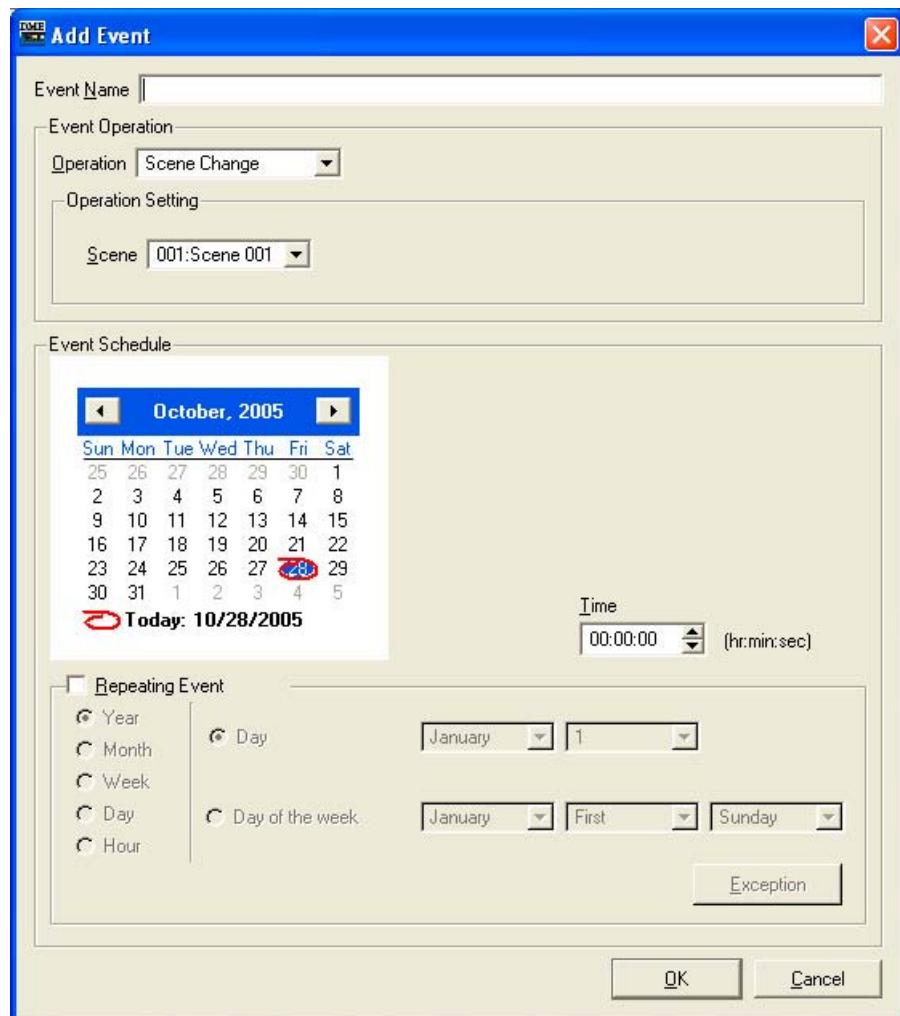
Copies the selected event. This button is grayed out when no event is selected.

■ [Paste] Button

Pastes the copied event. The event is added. This button is grayed out when no event has been copied.

[Add Event (Edit Event)] Dialog Box

The dialog box is displayed when you click on the [Add] or [Edit] button in the "Event Scheduler" dialog box. Here you can add or edit a scheduling event.

■ **[Event Name] Box**

Enter the event name. There is no limit to the number of characters.

■ **[Event Operation]**

Set the operation that is executed when the event starts.

[Operation]

When you click this button, a list of events is displayed. Specify the operation that is executed when the event starts.
The following three items are on the list:
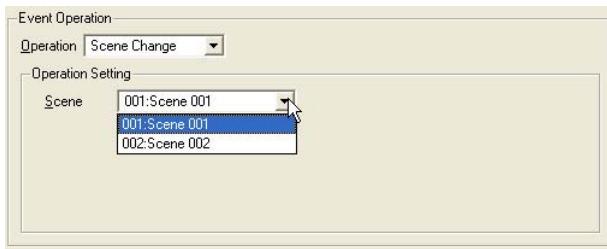
- [Scene Change]
  Changes the scene.

- [Parameter Value Edit]
  Changes a parameter.

- [GPI Out]
  Sends GPI output.

- [Play Wav File]
  Allows initiation of Wave file playback.

[Operation Setting]
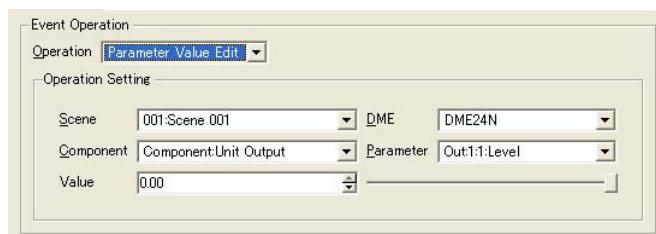
The content changes according to the event selected for [Operation].

- When [Scene Change] is selected:

Select the scene to be recalled from the [Scene] list. Stored scenes are displayed in the list.

- When [Parameter Value Edit] is selected:

[Scene]

Select a scene from the list.
If the DME unit's current scene differs from the scene specified in event scheduling, the scheduled scene will be recalled. If the DME unit's current scene is the same as the scene specified in event scheduling, the scheduled scene will not be recalled.

[DME Unit]

From the list, select the DME unit to which this scheduled event will apply. The DMEs included in the zone are displayed in the list.

[Component]

Select the component that has the parameter to be changed. The list displays the components arranged for the DME that is selected in the [DME Unit] box.
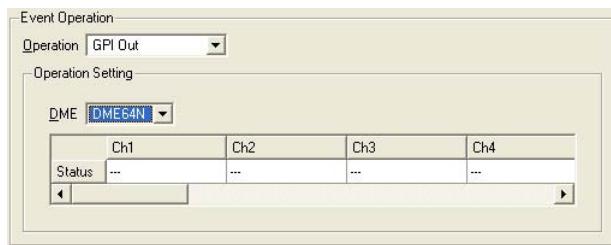
[Parameter]

Select the parameter that will change. Parameters for the component that is selected in the [Component] box are displayed in a list.

[Value]

Set a value for the parameter. Change the parameter using the spin buttons or the slider on the right.

• When [GPI Out] is selected:

[DME]
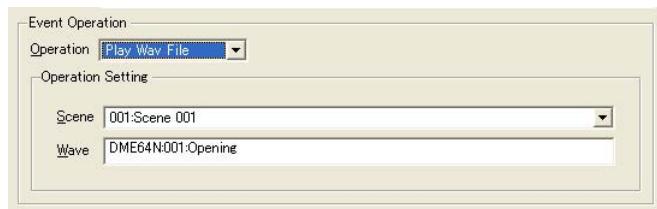
From the list, select the DME that will produce the GPI output.

[Ch1]/[Ch2]/[Ch3] ...

Set [ON], [OFF], or [---] for each channel. If it is set to [OFF], the [LOW→HIGH] channel outputs [HIGH→LOW] signal, the [HIGH→LOW] channel outputs [LOW→HIGH] signal.

• When [Play Wav File] is selected:

[Scene]

Select a scene from the list.
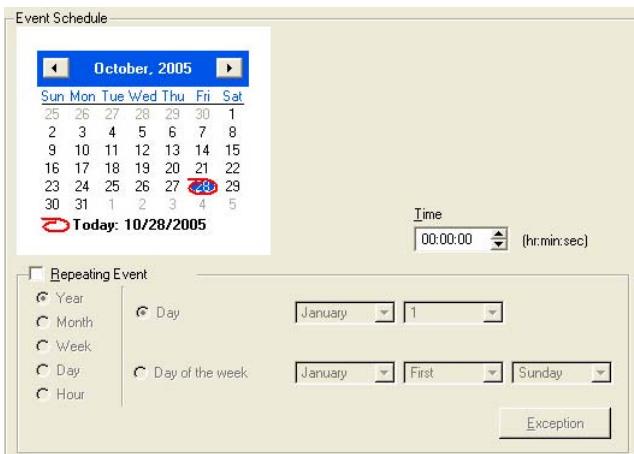
[Wave]

Select a Wave file from the list.
Wave files set by the Wav File manager can be specified. Files can not be selected unless a Wav Player is included in the DME configuration.

■ [Event Schedule]

Set the year/month/date to start the event.

Calendar

Sets the date the event will start.
Change the year and month using the [<] and [>] buttons. Click on a day to set that date. February 29 can be set on the calendar, where it appears every four years (each leap year).

[Time]

Sets the time the event will start.
Click the hour and minute, then set numerical values using the spin boxes.
Only the time is set for periodic events.

[Repeating Event]

When a check is placed here, the event becomes a periodic event, and the calendar is ignored.

- **[Year]/[Month]/[Week]/[Day]/[Hour]**

  Set the period for the event, using the radio buttons to the left.

- **[Day]/[Day of the week]**

  Set the conditions on the right side. Select [Day]/[Day of the week], and set the date and other information. The items that can be set vary according to the selected period.

  #### When the event period is [Year]

  All settings can be made.

  #### When the event period is [Month]

  If [Day] is selected, only the date can be set.
  If [Day Of The Week] is selected, the week of the month and day of the week is set.

  #### When the event period is [Week]

  Only [Day Of The Week] can be selected. Set the day of the week.

  #### When the event period is [Day]/[Hour]

  Condition settings on the area on the right are not needed.

[Exception] Button

Opens the "Event Exceptions" dialog.

■ [Event Exceptions]

Specifies "exception" year/month/day and time settings at which events will not be executed.
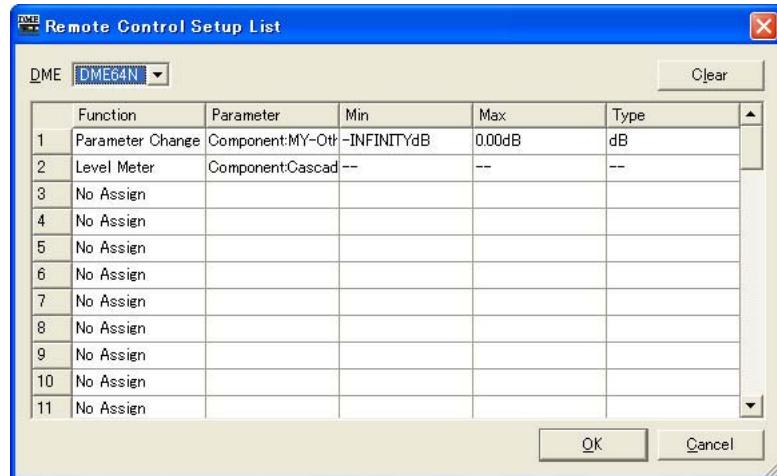
The available settings will depend on the event cycle.

- When the event cycle is [Year]
  Only the [Year] setting is available.

- When the event cycle is [Month]
  Only the [Month] and [Week] setting is available.

- When the event cycle is [Week]
  Only the [Month], [Week] and [Day] settings are available.

- When the event cycle is [Day]
  Only the [Month], [Week], [Day], and [Day of the week] settings are available.

- When the event cycle is [Hour]
  Only the [Month], [Week], [Day], [Day of the week], and [Hour] settings are available.

Remote Control Setup List

Registers the parameters to be controlled from an external controller. Refer to the "DME-N Remote Control Protocol Specifications" document for details about the communication protocol. Information about the "DME-N Remote Control Protocol Specifications" document can be found at the Yamaha pro Audio website (URL below).
http://www.yamahaproaudio.com/

[DME]
Click to see a list and select a DME.

[Function]
Select [No Assign], [Parameter Value Edit] or [Level Meter].

[Parameter]
Specifies the parameter to be controlled. A list of parameters will be displayed according to the selection of [Function].

[Min]/[Max]
Displays the minimum and maximum values for the parameter.
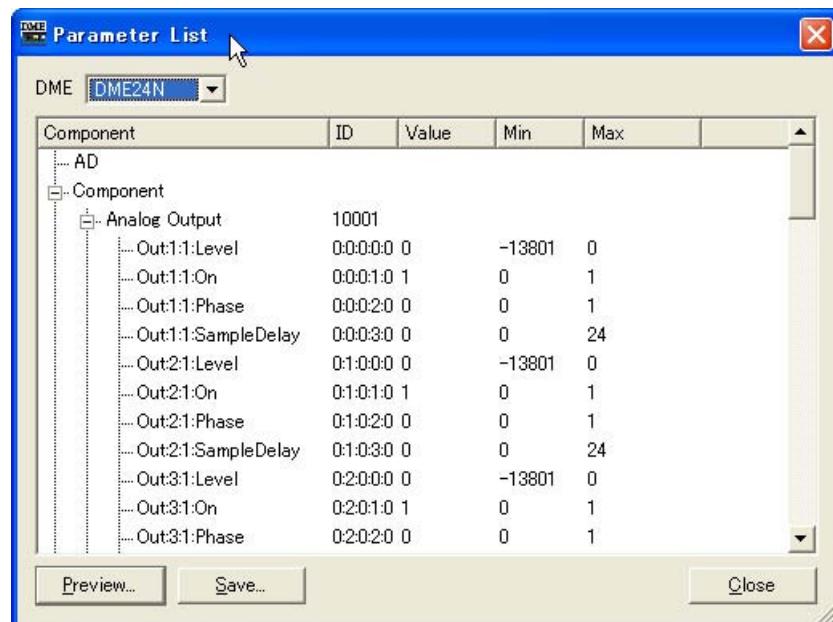
[Type]
Selects a fader curve when level, etc., is select for [Parameter].
Select [dB] to directly control the level in dB, or [Curve Table] to use one of the DME fader curves for level adjustment.

Parameter List

When you click [Parameter List] in the [Tools] menu, the "Parameter List" dialog box is displayed. A list of parameters in the current configuration of the current zone are displayed. Here you can check things like the parameter IDs. You can also print the list of parameters.
When the dialog box is opened or when a DME is selected from the [DME] list, the parameter values are displayed.

■ [DME]

From the list, select the DME that will have its parameters displayed. The DMEs included in the current configuration are displayed in the list. Components in the selected DME are displayed in the component list.

Component List

The components and user modules included in the DME, their IDs, and the component parameters are displayed in hierarchal list. The AD and slot are also displayed.

> **NOTE**
>
> Components for user modules are also listed in a hierarchal display, but if user module security is enabled, the components are not displayed. However, parameters displayed in the user module editor are displayed here.

[ID]

Displays the component or parameter ID.
The following is displayed for the parameter ID: "Element No. : X : Y : Parameter No. : Index No."

[Value]

Displays the value for the parameter.

[Min]/[Max]

Displays the minimum and maximum values for the parameter.

NOTE

The displayed parameter values are those that were in effect when the dialog box was opened or when the displayed DME was selected from the [DME] list. They cannot be changed here.

■ **[Preview] Button**

Prints a list of parameters. When you click this button a preview screen is displayed.

■ **[Save] Button**

Saves the parameter list as a CSV file. When you click this button, the standard operating system save dialog box is displayed.

NOTE

The CSV format is a comma delimited text file that can be read by many types of software, such as word processor, spreadsheet, or database programs.
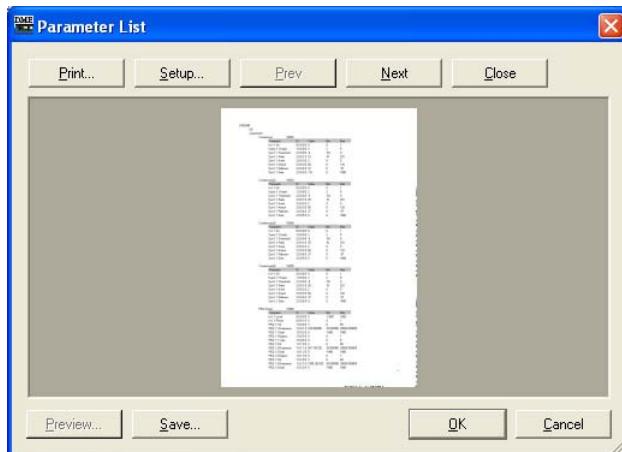
■ **[Cancel] Button**

Closes the dialog box without changing the settings.

Printing a List of Parameters

Prints all parameters for the component selected in the list, all parameters for the selected DME, or all parameters for all DMEs.
When you click the [Preview] button, the dialog box display will change, and the print preview will be displayed in the center. Buttons will be added to the upper part of the dialog box.

■ **[Print] Button**
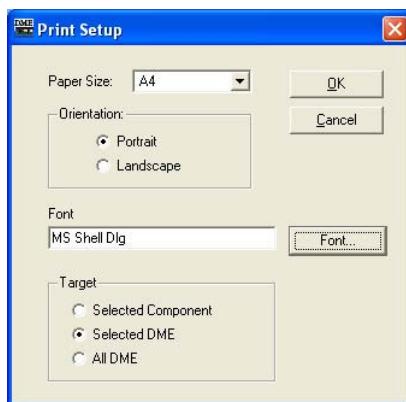
Prints a list of parameters. Clicking here displays the "Print" dialog box. When you click the [Print] button, printing begins.

NOTE

The displayed [Print] dialog box will vary according to the connected printer.

■ [Setup] Button

Clicking here displays the "Print Setup" dialog box.
Here you can set the paper size, paper orientation, and font.

[Paper Size]

Select the paper size from the list.

[Orientation]

Set the orientation of the paper by clicking one of the radio buttons.

- **[Portrait]**
  Prints on the paper with it oriented vertically.

- **[Landscape]**
  Prints on the paper with it orientated horizontally.

[Font]

Displays the set font. Clicking the [Font] button displays the "Font" dialog box, where you can change the font.

[Target]

Set the parameters to be printed by clicking one of the radio buttons.

- **[Selected Component]**
  Prints all parameters for the component selected in the list.

- **[Selected DME]**
  Prints all parameters for the selected DME.

- **[All DME]**
  Prints all parameters for all DMEs.

[Close] Button
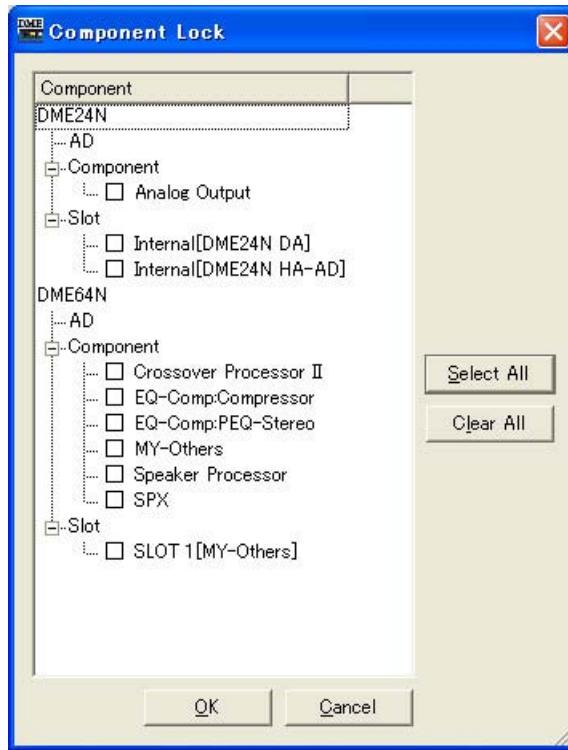
Ends the preview and returns the screen to the original dialog box.

[Prev] Button/[Next] Button

Switches the page being previewed when there are multiple pages. The [Prev] button goes to the previous page. The [Next] button goes to the next page.

Component Lock

Click [Component Lock] in the [Tools] menu to display the Component Lock dialog.

The component/user module names included in the DME will be displayed. AD and Slot will also be displayed.
Components can be locked so that parameter changes cannot be made from an external device by checking the checkbox to the left of the component name. The lock settings will be transferred to the DME when the unit is placed on-line. The settings can only be changed while off-line.

NOTE

The hierarchy of user components in user modules will be displayed, but if user module security is enabled the components will not be displayed. Components displayed by the User Module Editor will be displayed.

NOTE

Only users who's [Edit] box is checked can edit the lock status.

■ [Select All] Button

Checks all component checkboxes.

■ [Clear All] Button

Clears all component checkboxes.

■ [OK] Button

Enters the settings and closes the dialog box.

■ [Cancel] Button

Closes the dialog box without entering the settings.

Wav File Manager

When you click [Wav File Manager] on the [Tools] menu, the "Wav File Manager" dialog box is displayed. Here you can manage playback settings for Wave files played in the Wav File Player. This is set for each DME. The setting can be made only when in offline status. Up to 100 Wave files can be managed.

Up to a maximum of 12 megabytes of Wave files can be registered for each DME unit. If a Wave file is added that will exceed this amount, a warning message will be displayed.
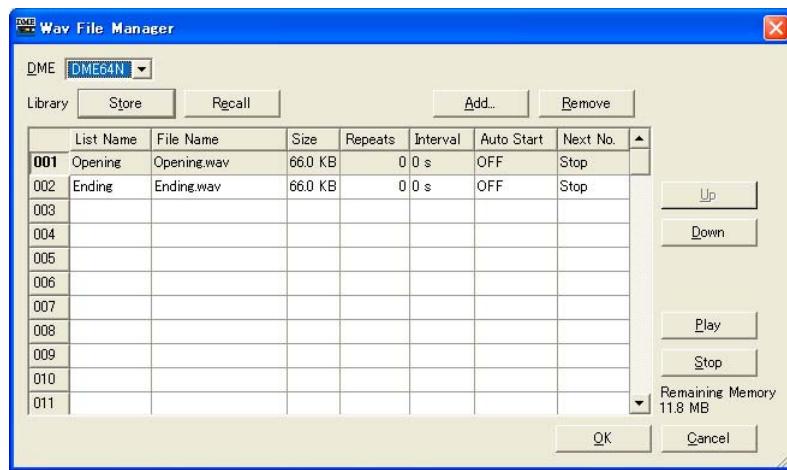
> **NOTE**
>
> These settings can be edited only by users for whom the [Edit] checkbox in the "Security" dialog box has been turned ON.

> **NOTE**
>
> Only Wave files with file names of 31 characters or less, (including the extension) can be registered. Check the Wave file name beforehand. Change the name if it has 32 or more characters, including the extension.

> **NOTE**
>
> When saving project files including Wave files, select "Project File with wave (*.daf)" in the file save dialog box.

■ [DME]

From the list, select the DME you want to set. The DMEs included in the current zone are displayed in the list.

■ [Wave File]

Displays the Wave file information. Settings can be made here as well.

[No.]

The Wave file number is displayed in the leftmost column. Numbers are added from the top in order.

[List Name]

You can set up to 27 characters as a label separate from the Wave file name. The Wave file name is displayed here by default.

[File Name]

Up to 31 characters are displayed as the wave file name. If you double-click the name, the file selection dialog is displayed, where you can select a file.

[Size]

Displays Wave file size information. The units vary, depending on the file size. The size is displayed to the first decimal.

Size	Display
Up to 1023 bytes	0.X KB
1024 bytes to 1023.9 kilobytes	XXX.X KB
1024 kilobytes or more	X.X MB

[Repeats]

Sets the number of repeats for playback.
Clicking here will display a list where you can select the number of times.
Select [0] to [98] or [INFINITY].
Since external input cannot be edited, [---] is displayed.

[Interval]

Sets the time until the next playback when [Repeats] is one or more. If you click here, a list will be displayed. You can set [0] to [99].
Since external input cannot be edited, [---] is displayed.

[Auto Start]

Turns automatic playback ON or OFF. If ON is set, playback happens automatically when the file is selected.
If you click here, a list will be displayed. Select [ON] or [OFF].

[Next No.]

Specifies the number for the Wave file to be played next.
If you click here, a list will be displayed. Select the number for the Wave file to be played next.

- [Stop]
  This stops playback after this Wave file is finished playing, without specifying the next wave file.
  Since external input cannot be edited, [---] is displayed.

■ **[Store] Button**

Saves the current settings in the "Wav File Manager" dialog box in a file, as a library. Clicking here displays the file save dialog box.

■ **[Recall] Button**

Reads a saved library.
Clicking this button displays a menu. A menu displays library files saved in the folder that has been set as the Contents Folder. Click the library to be read.

[Open File Dialog]

Displays the file select dialog box. You can select a library file that is saved in the folder set as the Contents Folder, and read it.

■ **[Add] Button**

When you click here, External Input and the file select list is displayed.

[Wave File]

The file selection dialog box is displayed, where you can select a Wave file.
If the selected table already has data, an overwrite confirmation dialog box is displayed.

[External Input]

Sets [External Input].

You can select multiple Wave files. If multiple files are specified, they are added after the selected table. If a Wave file is registered to the number being added, it will be overwritten.
The following Wave file formats are supported: 48, 44.1, 24, 22.05 kHz, 16bit/8bit, Mono/Stereo. If a file is selected with a format different than these, a message is displayed that says the file cannot be used.

There is an upper limit to size beyond which a file cannot be used. This limit varies according to the format. If the size of the selected file is beyond the limit, a message is displayed that says the file cannot be used.

22.05 K Mono 8 bit	1.37 MB	44.1 K Mono 8 bit	2.75 MB
22.05 K Stereo 8 bit	2.75 MB	44.1 K Stereo 8 bit	5.5 MB
22.05 K Mono 16 bit	2.75 MB	44.1 K Mono 16 bit	5.5 MB
22.05 K Stereo 16 bit	5.5 MB	44.1 K Stereo 16 bit	5.9 MB
24.05 K Mono 8 bit	1.5 MB	48 K Mono 8 bit	3 MB
24 K Stereo 8 bit	3 MB	48 K Stereo 8 bit	5.9 MB
24 K Mono 16 bit	3 MB	48 K Mono 16 bit	5.9 MB
24 K Stereo 16 bit	5.9 MB	48 K Stereo 16 bit	5.9 MB

■ **[Remove] Button**

Deletes settings from the selected line. This button is grayed out when no Wave file is selected in the list.

■ **[Up] Button**

Moves the selected line up one. It is switched with the line immediately above.
The button will be grayed out if nothing is selected in the list, or if [No. 1] is selected in the list.

■ **[Down] Button**

Moves the selected line down one. It is switched with the line immediately below.
The button will be grayed out if nothing is selected in the list, or if [No. 100] is selected in the list.

■ **[Play] Button**

Plays the selected Wave file on the computer. Allows monitoring and checking of the Wave file.

■ **[Stop] Button**

Stops playback of the Wave file.

■ **[Remaining Memory]**

Displays the remaining size that can be added.

■ **[OK] Button**

Updates the settings and closes the dialog box.

■ **[Cancel] Button**

Closes the dialog box without changing the settings.

Adding Wave Files
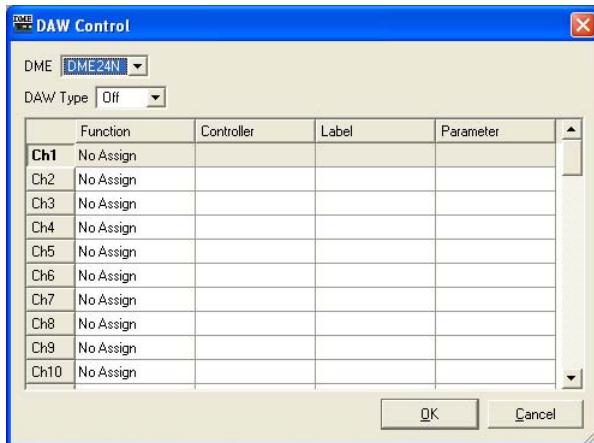
To add a Wave file, select the line where you want to add the file, then click the [Add] button. You can also add a Wave file by dragging and dropping it from the desktop to the "Wav File Manager" dialog box list.

DAW Control

When you click [DAW Control] on the [Tools] menu, the "DAW Control" dialog box is displayed. Here you can make settings for when the DME is controlled from a DAW controller. This is set for each zone configuration. The setting can be made only when in offline status.

NOTE

DAW control editing can be performed only by users for whom the [Edit] security checkbox has been checked.

■ [DME]

From the list, select the DME you want to set. The DMEs included in the current zone are displayed in the list.

■ [DAW Type]
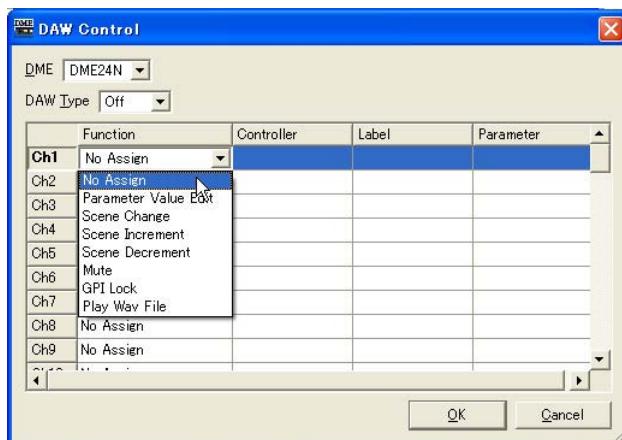
Select the DAW type. The following choices are in the list: [Off], [Type1], and [Type2].

■ DAW Control Table

The following can be set for each channel from 1 to 64: [Function], [Controller], [Label], [Parameter].

[Function]
Selects the function that will be changed by the DAW controller. If you click here, a list will be displayed.

- **[No Assign]**

  Makes no assignments. Select this when you are erasing an already set assignment.

- **[Parameter Value Edit]**

  Allows the parameter of the component specified in the [Parameter] field to be changed.

- **[Scene Change]**

  Recalls a scene. The scene is recalled even if the current scene, and the one changed by the DAW controller, are the same.
  When a selection has been made, [SCENE] is displayed in the [Label] field. The last scene is set in the [Parameter] field.

- **[Scene Increment]**

  Sets the scene increment. Recalls the next valid scene after the current scene.
  When a selection has been made, [SINC] is displayed in the [Label] field.

- **[Scene Decrement]**

  Selects the scene decrement. Recalls the next valid scene before the current scene.
  When a selection has been made, [SDEC] is displayed in the [Label] field.

- **[Mute]**

  Sets all mute. Mute is set ON and OFF by the DAW controller.
  When a selection has been made, [MUTE] is displayed in the [Label] field.

- **[Component]**

  Changes the component parameters. Selectable component names that are arranged in the configuration are displayed in a list.
  When selected, the first parameter included in the component is set in the [Parameter] field.

- **[GPI Lock]**

  Assigns GPI Lock. GPI Lock is set ON and OFF by the DAW controller.
  When a selection has been made, [LOCK] is displayed in the [Label] field.

- **[Play Wav File]**

  Allows initiation of Wave file playback. The Wave file setting is made in the [Parameter] field. Wave files set by the Wav File manager can be specified. Files can not be selected unless a Wav Player is included in the DME configuration.

[Controller]

Selects a controller from the list when [Parameter Value Edit] is set in [Function]. [Switch], [Fader], or [Knob] can be selected.

[Label]

Enter a label. Double-click to enter the text. You can enter up to 16 characters of text. Set the value with the <Enter> key, or cancel it with the <ESC> key.

NOTE

If [Scene Change], [Scene Increment], [Scene Decrement], [Mute], or [GPI Lock] is selected for [Function], the label name is fixed.

[Parameter]
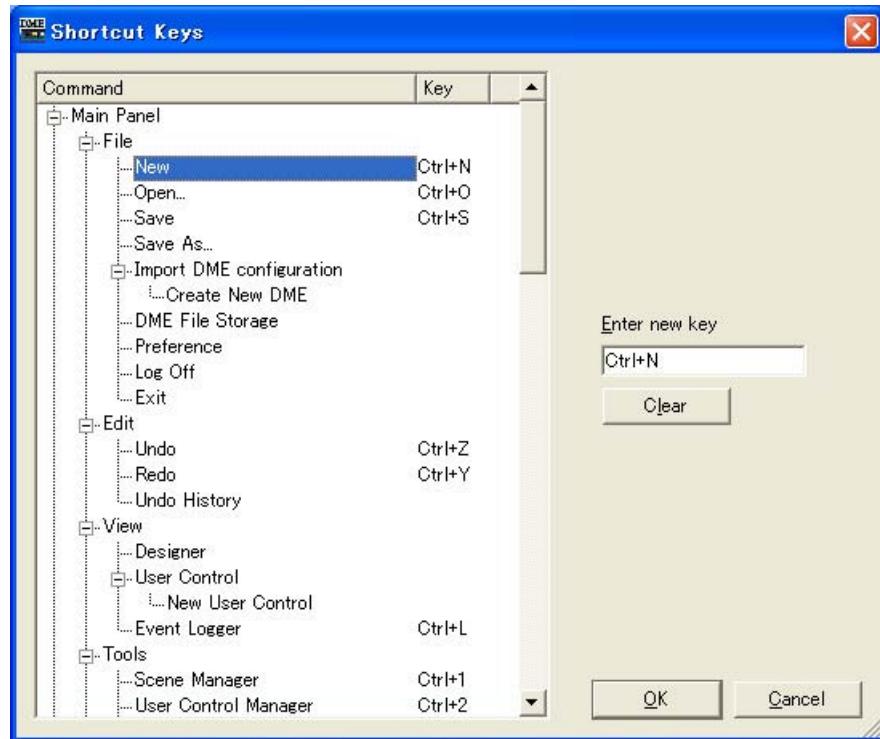
If [Scene Change] , [Parameter Value Edit] or [Play Wav File], is set in [Function], set the parameters.
If you click here, a list will be displayed.

- **When [Scene Change] is set in [Function]**

  Displays scenes that can be selected.

- **When [Parameter Value Edit] is set in [Function]**

  Selectable parameters are displayed.

- **When [Play Wav File] is set in [Function]**

  Selectable Wave files are displayed.

Shortcut Keys

Click [Shortcut Keys] in the [Tools] menu to display the "Shortcut Keys" dialog.

Click to select the desired shortcut item.

■ [Enter New Key]

If assigned, the current shortcut will be displayed.
A shortcut entered via the computer keyboard will be displayed.

■ [OK] Button

Enters the settings and closes the dialog box.

■ [Cancel] Button
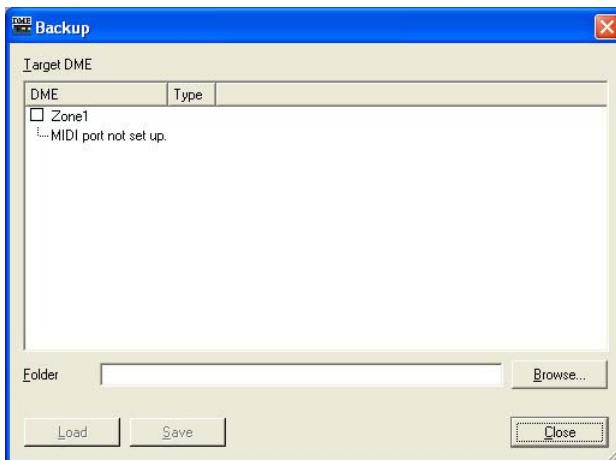
Closes the dialog box without entering the settings.

Backup

When you click the [Backup] command on the [Tools] menu, the "Backup" dialog box is displayed. Data in the DME is gathered in the computer and saved as a file. Backup files are created for each DME. You can also send the information saved in a file to a DME. Backup can be performed only when in offline status.

NOTE

Backup operations can be performed only by users for whom the [Edit] security checkbox has been checked.

■ **[Target DME]**

Displays DME, IP addresses, and DME types for each zone. Check the DME from which you want to obtain data. You can place checks next to multiple DMEs.

■ **[Folder] Box**

Specifies the folder that will be the destination for saving and reading operations. Clicking the [Browse] button opens the folder select dialog box, where you can specify a folder.
The backup file name will be the DME's IP address. If the folder is specified when sending DME data, the file sent to the DME will be the file in the folder whose file name that matches the DME's IP address.

■ **[Load] Button**

Sends the backed up file to the specified DME.

■ **[Save] Button**

Obtains data from the specified DME, and saves it as a backup file.

■ **[Close] Button**

Closes the dialog box.

Editing Configurations

Configurations

Information about inputs/outputs, along with the arrangement of components and how they are connected, is called a "**configuration**." Configurations are created in the Designer window and sent to the DME unit.

In the Designer window, configurations are designed using various design windows, such as the Area, Zone, Configuration, and User Module windows. In each window a sheet is displayed, on which objects can be arranged.

New Configurations

You can create multiple zones within an area, and multiple configurations within a zone.

Zones are added using the "Zone" dialog box, while configurations are added using the "Configuration" dialog box. For information about the "Zone" dialog box, see "Adding, Deleting, and Renaming a Zone" on page 231. For information about the "Configuration" dialog box, see "Adding, Deleting, and Renaming a Configuration" on page 233.

Security

Editing in the Designer window can be restricted based on the user security settings. Only users for whom the [Operation Security] → [Edit] checkbox in the "Security" dialog box has been checked can display the Designer window and edit configurations.

For information about the "Security" dialog box, see "Security (Creating Users and Making User Settings)" on page 55.

Edit Mode

There is an "Edit Mode" in the Designer window. When the Edit Mode is ON, configurations can be edited. When it is turned OFF, the DME is controlled by DME Designer.

■ Edit Mode=ON

When Edit Mode is ON, you can do configuration editing tasks such as arranging objects, making connections, and changing properties.

■ Edit Mode=OFF

When Edit Mode is OFF, you cannot arrange objects, make selections, or display "Properties" dialog boxes for objects. You can display the component editor.

■ Edit Mode ON/OFF
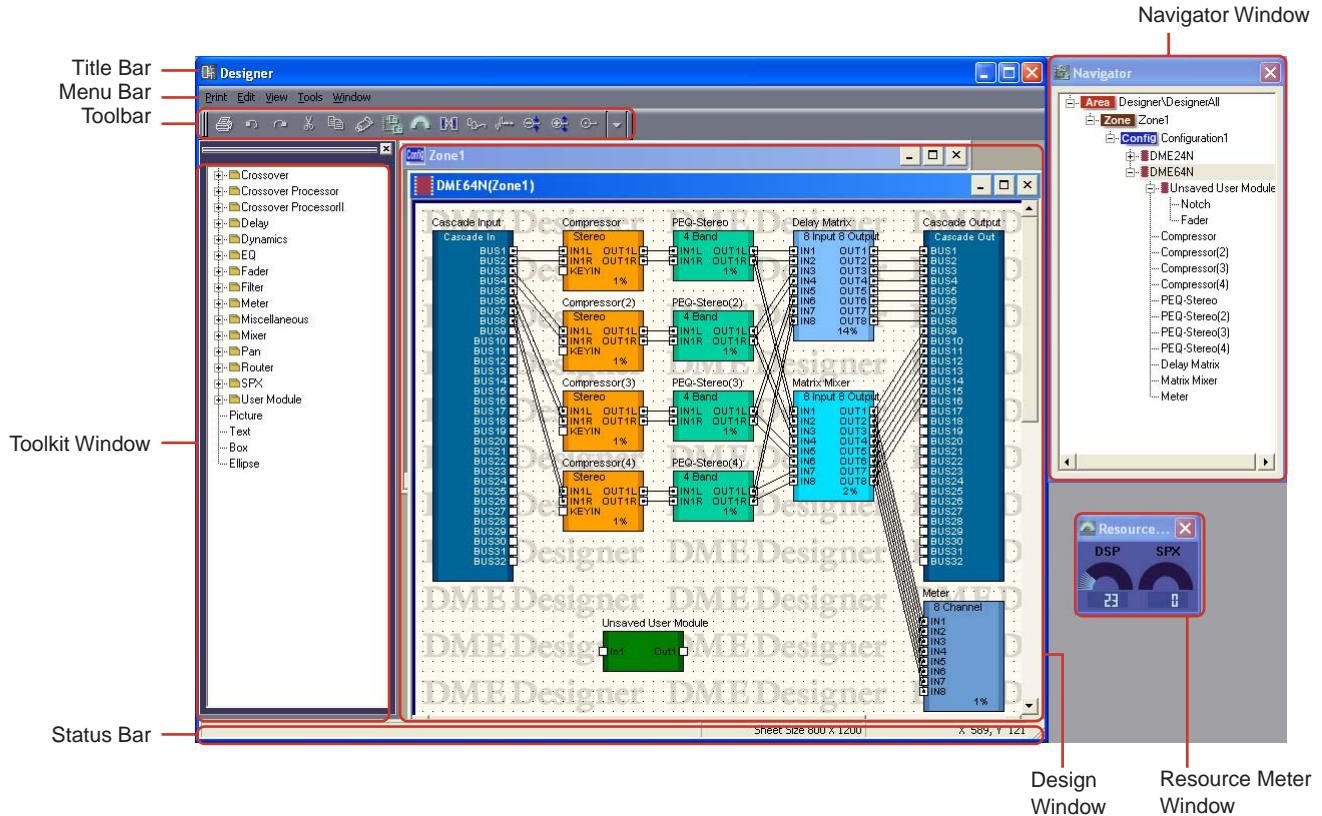
The edit mode can be turned on or off via the [Edit Mode] command in the [Tools] menu or in the contextual menu that appears when you right-click the sheet. To turn Edit Mode ON click the command, placing a checkmark to the left of the command name. When there is a checkmark next to the command (when Edit Mode is ON), clicking the command again removes the checkmark and turns OFF the Edit Mode.

> **NOTE**
>
> Only users for whom the [Operation Security] → [Edit] checkbox in the "Security" dialog box has been checked can turn the Edit Mode ON.

Designer Window

You can display or hide the Designer window using the [Designer] command on the [View] menu in the Main Panel window.

Title Bar
Menu Bar
Toolbar

Navigator Window

Toolkit Window

Status Bar

Design Window

Resource Meter Window
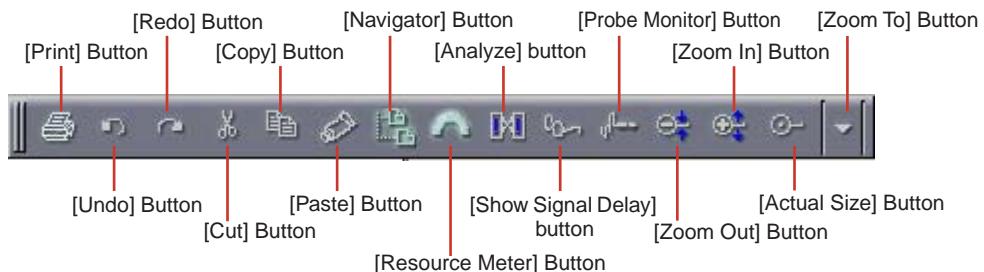
Title Bar

"Designer" is displayed on the title bar. You can move the window by dragging the title bar. There are [Minimize], [Maximize]/[Restore], and [Close] buttons at the right edge of the title bar.

Menu Bar

Commands that can be executed in the application are collected into categories on the menu bar. When you click one of the categories, a list of commands is displayed.

Toolbar

Frequently used commands are arranged here as buttons.

[Print] Button [Redo] Button [Copy] Button [Navigator] Button [Analyze] button [Probe Monitor] Button [Zoom In] Button [Zoom To] Button

[Undo] Button [Cut] Button [Paste] Button [Resource Meter] Button [Show Signal Delay] button [Zoom Out] Button [Actual Size] Button

■ **[Print] Button**

Prints the active design window.
→ "Printing Each Design Window" in "Design Window Shared Settings and Operations" (page 214)

■ **[Undo] Button (page 145)**

Undoes the most recent edit operation.

■ **[Redo] Button (page 145)**

Restores operations undone with the [Undo] button back to their original condition.

■ **[Cut] Button (page 145)**

Cuts the selected object from the screen and moves it to the clipboard.

■ **[Copy] Button (page 145)**

Copies the selected object to the clipboard.

■ **[Paste] Button (page 145)**

Pastes data from the clipboard.

■ **[Navigator] Button (page 140)**

Displays or hides the Navigator window.

■ **[Resource Meter] Button (page 139)**

Displays or hides the Resource Meter window.

■ **[Analyze] Button**

Displays the "Analyze" dialog box, and analyzes the configuration.
→ "Analyze (Configuration Analysis)" in "Configuration Window" (page 249)

■ **[Show Signal Delay] Button**

The digital signal delay value is displayed in the Configuration window.
→ "Show Signal Delay (Delay Display Value)" in "Configuration Window" (page 246)

## ■ **[Probe Monitor] Button**
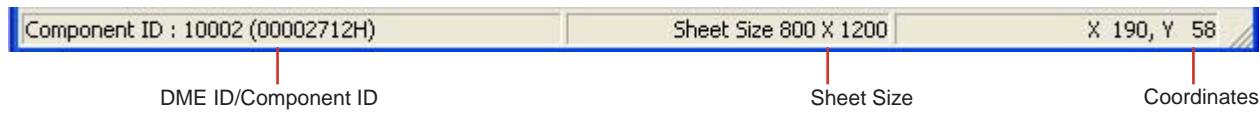
Turns the probe monitor ON or OFF.
→ "Probe Monitor" in "Configuration Window" (page 244)

■ [Zoom Out]/[Zoom In]/[Actual Size]/[Zoom To] Buttons

These buttons correspond to the commands on the [View] menu with the same names. Changes the magnification of the display on the screen.
→ "[View] Menu" in "Designer Window Menus" (page 147)

Status Bar

Component ID : 10002 (00002712H)	Sheet Size 800 X 1200	X 190, Y 58

DME ID/Component ID   Sheet Size   Coordinates

■ DME ID/Component ID

When the mouse pointer is moved over a DME device in the Zone window, the ID for that DME device is displayed. When the mouse pointer is moved over a component in the Configuration window, the ID for the component is displayed.

■ Sheet size

Displays the size of the sheet in the active design window.

■ Coordinates

Displays the coordinates of the mouse pointer any time it is within the design window. When dragging an object, the coordinates displayed here refer to the upper left corner of the object being dragged.

Resource Meter Window

The Resource Meter window is displayed only when the Configuration window and User Module window are active. Meters for the DSP memory usage percentage and the SPX resource usage percentage are in the Resource Meter window.

■ DSP Memory Usage Percentage

When you are designing in the Configuration window, it gives you a yardstick for judging the total usage percentage for DSP memory in the DME unit. You cannot create a design that exceeds 100 percent usage in a single configuration window. In addition, the usage percentage varies depending on the sampling frequency, even for the same component.
When the configuration is synchronized with the DME unit during online status, checks of connections and component information begin automatically (this is called compiling). The actual total usage percentage is calculated after this compiling operation. The usage percentage will vary according to the number of connections and components. The Resource Meter window gives you a precompile guideline for use while designing your configuration. An error may occur even when the meter shows less than 100 percent, based on conditions such as the number of connections, and type and number of components used.

NOTE

If a configuration is compiled at fs=44.1kHz or 48kHz, and the sampling frequency is then changed to 88.2kHz or 96kHz, it is necessary to recompile at 88.2kHz or 96kHz. If this is not done some configurations may produce no sound. In such cases a "DSP Power Shortage" message will be displayed on the DME unit.

■ **SPX Resource Usage Ratio**

Displays the resource usage ratio for SPX components arranged in the configuration.

> **NOTE**
>
> If the [Matrix Mixer 64 input 64 output] or the [Matrix Mixer 64 input 32 output] components are placed in the DME64N configuration window, you will not be able to use other components, even though the window does not reach 100 percent. The [Matrix Mixer 64 input 64 output] or [Matrix Mixer 64 input 32 output] components cannot be used in the DME24N.
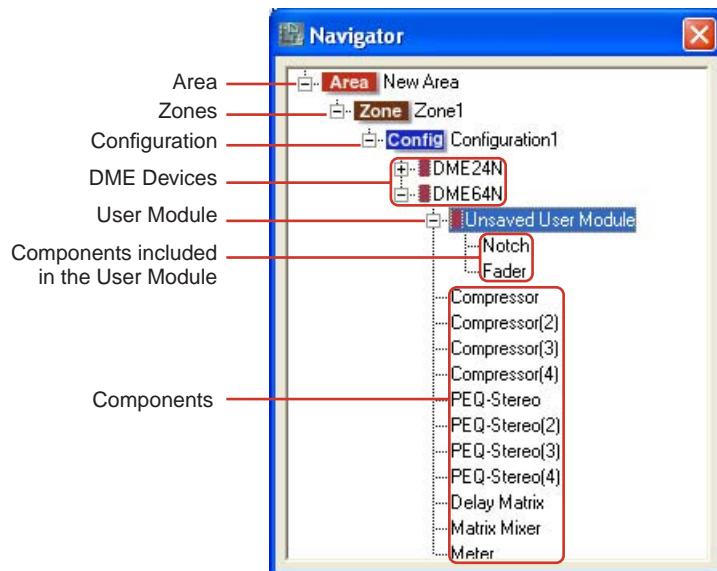
Navigator Window

Gives a hierarchical display of the area, zones, and configurations, along with the DME devices, user modules and components arranged within the configurations. This allows you to check the overall status of your setup.
When doing offline editing, you can click the icon or name for an area, zone, configuration, DME device, user module, or component to make each design window active.

> **NOTE**
>
> For user modules with security enabled, a password is requested when displaying the hierarchical display shown below.

■ **[+]/[-]**

The subordinate items are displayed or hidden using the [+]/[-] buttons to the left of the area, zones, configurations, user modules, or DME devices. When the subordinate items are displayed, the button changes to [-]. If you click this button, the subordinate items will be hidden. When the subordinate items are hidden, the button changes to [+]. If you click this button, the subordinate items will be displayed.
Subordinate items are also displayed and the button changes to [-] when you click on an area, zone, configuration, user module, or DME device.

■ Area

If you click the area while doing offline editing, the Area window becomes active.

■ Zone

If you click a zone while doing offline editing, the Zone window becomes active. If another Zone window is open, it will be closed.

> **NOTE**
>
> When there are multiple configurations in a zone, click a configuration to switch configurations, not the zone.

■ Configuration

If you click a configuration while doing offline editing, the Zone window for the clicked configuration becomes active. If another Zone window is open, it will be closed.

■ DME Device

If you click a DME, a Configuration window will be opened for that unit. If that window is already open, it will be displayed on top of any other windows.

■ Component

Click a component and the component editor will open.

■ User Module

The window specified by "User Module Properties [Double Click Action]" will open when clicked.
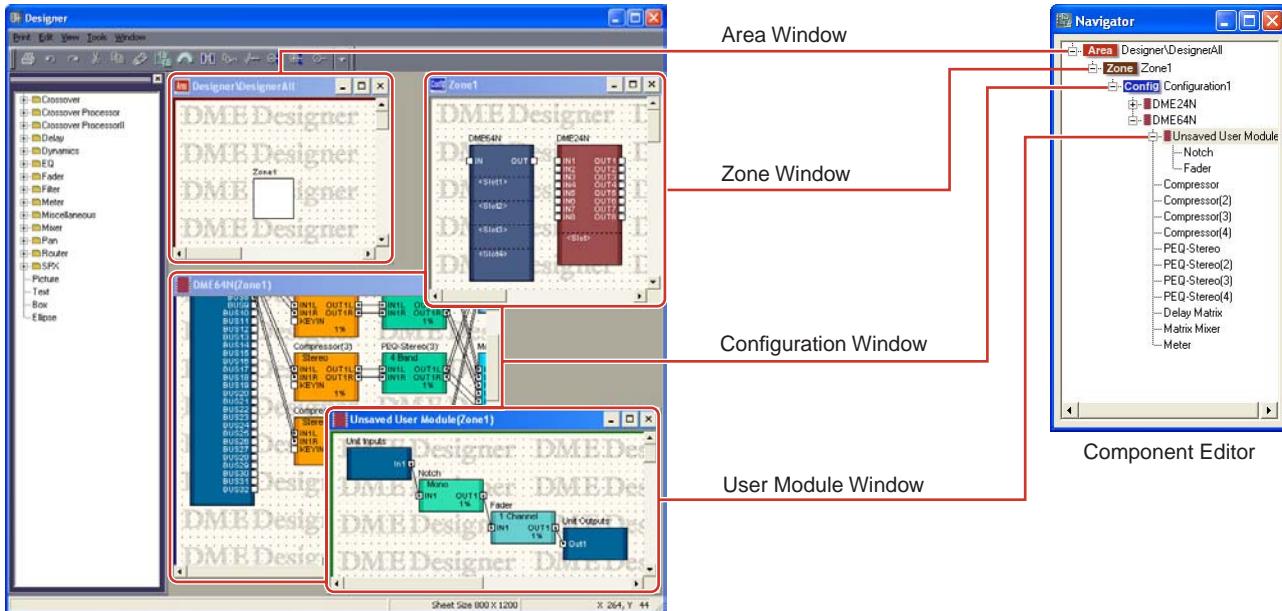
■ Components Included in the User Module

Click a component in the user module and the component editor will be displayed.

Four Design Windows

The following design windows are available: the Area window, Zone window, Configuration window, and User Module window. In each window there is a single sheet on which objects can be arranged. Within the Designer window, you can simultaneously open and edit in the Area window, Zone Window, Configuration window, and User Module window.

Configuration Structure and Four Design Windows

■ **Area Window**

Used to design areas.
→ See "Area Window" on page 235.

■ **Zone Window**

Used to design zone configurations.
→ See "Zone Window" on page 237.

■ **Configuration Window**

Used to design configurations for DME units arranged in a zone.
→ See "Configuration Window" on page 242.

■ **User Module Window**
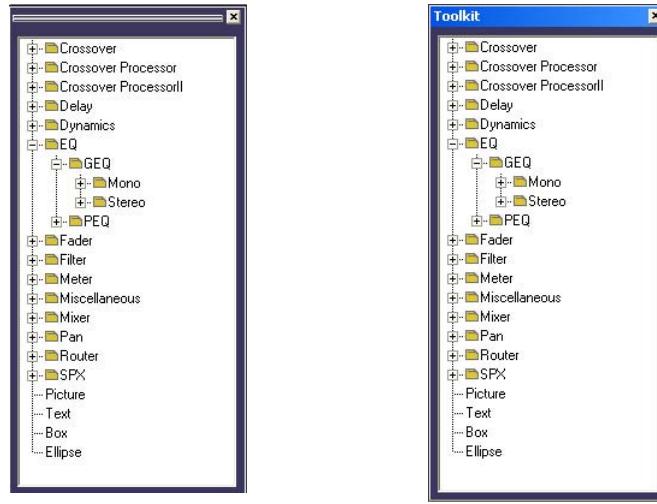
Used to design user modules configurations. A module that combines a number of other components, yet is treated as a single component, is called a "**user module**." It is arranged in the Configuration window.
→ See "User Module Window" on page 257.

Toolkit Window

The Toolkit displays objects that can be arranged in each design window. The displayed contents vary according to which window is active.
→ See "Toolkit Window" on page 152.

Displayed in the designer
window

Floating-style

Designer Window Menu

[Print] Menu

This menu provides commands for exporting configurations and printing windows.

■ [Export DXF]

Exports the information in the active window and saves it as a DXF file, which is compatible with CAD software sold by other companies.
→ "Exporting the Design Window" in "Design Window Shared Settings and Operations" (page 211)

■ [Print Setup]

When you select this command, the "Print Setup" dialog box will be displayed. Sets the paper size and orientation.
→ "Printing Each Design Window" in "Design Window Shared Settings and Operations" (page 214)

■ [Print Preview]

Displays a print preview of the active design window.
→ "Printing Each Design Window" in "Design Window Shared Settings and Operations" (page 214)

■ [Print]

Prints the active window. When you select this command, the "Print" dialog box will be displayed.
→ "Printing Each Design Window" in "Design Window Shared Settings and Operations" (page 214)
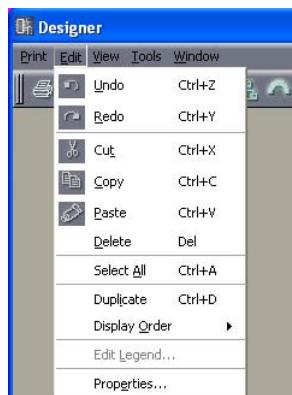
■ [Preferences]

Displays the "Preferences" dialog box. Sets the line thickness and the design window edit operations.
→ "Preferences" in "Design Window Shared Settings and Operations" (page 207)

[Edit] Menu

This menu provides edit commands.

■ **[Undo]**

Undoes the most recent edit operation. Repeatedly clicking this button will delete multiple operations. When [Undo] is not possible, the command will be grayed out.

■ **[Redo]**

Returns to the status before the [Undo] command was executed. If you repeatedly click this button, it will redo multiple operations. If redo is not possible, the command will be grayed out.

■ **[Cut]**

Cuts the selected object. Moves the selected object to the clipboard.

■ **[Copy]**

Copies the selected object to the clipboard. The selected object remains as is.

■ **[Paste]**

This command pastes the object on the clipboard into the active window. If there is no data on the clipboard or if the object on the clipboard is not a type that can be pasted into the active window, this command cannot be used.

■ **[Delete]**

Deletes the selected object. The data on the clipboard does not change.

NOTE

There are some objects that cannot be deleted with the [Delete] command.

■ **[Select All]**

Selects all objects in the active design window.

■ **[Duplicate]**

Duplicates the selected object. The data on the clipboard does not change.

■ **[Display Order]**

Changes the display order (in front or behind) of the selected objects.
→ "Changing the Order" in "Design Window Shared Settings and Operations" (page 218)

■ **[Edit Legend]**

This command can be selected when an Area window, Zone window, or Configuration window is active. It lets you edit the descriptive text (legend) displayed on the sheet in the Area window, Zone window, or Configuration window. When this command is selected, the "Edit Legend" dialog box will be displayed.
→ "Legend (Descriptive Fields)" in "Objects" (page 198)
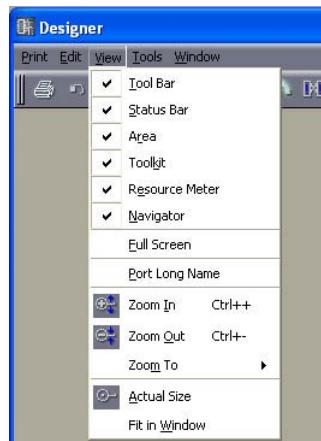
■ **[Properties]**

Opens the "Properties" dialog box for the selected objects.
→ See "Object Types" on page 156.

[View] Menu

Displays or hides the windows.

■ [Toolbar]

Displays or hides the toolbar. A checkmark appears beside this menu item when the toolbar is displayed.

■ [Status Bar]

Displays or hides the status bar. A checkmark appears beside this menu item when the status bar is displayed.
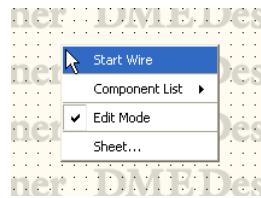
■ [Area]/[Toolkit]/[Resource Meter]/[Navigator]

Displays or hides the Area window, Toolkit, Resource Meter, or Navigator window. A checkmark appears to the left of the command name when a window is displayed.
The Resource Meter window is displayed only when the Configuration window and User Module window are active.

■ [Full Screen]

Displays in full-screen mode. Displays the active design window (Area, Zone, Configuration, or User Module window) exclusively, with it covering the entire screen.
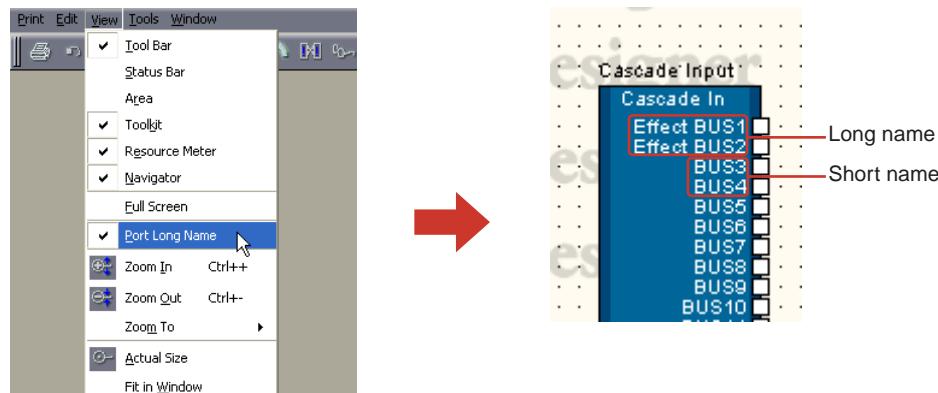

A context menu appears wherever you right-click on the screen, containing the commands that are needed at that location.
To return from the full-screen mode to the original display status, press the <Esc> key.

■ **[Port Long Name]**

Switches the port name display. When you select this command, a checkmark appears next to it and long names are displayed. If you select this command when a checkmark is next to it, the checkmark disappears and short names are displayed.

■ **[Zoom In]**
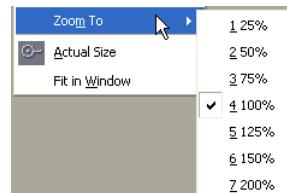
Gives a closer view of an area displayed on the screen.

■ **[Zoom Out]**

Widens the area displayed on the screen.

■ **[Zoom To]**

Selects the display magnification from a submenu.
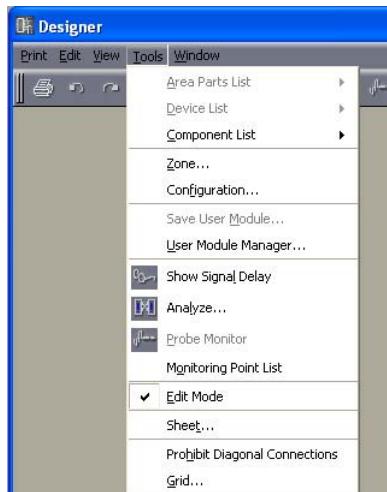
■ **[Actual Size]**

Returns the display to normal dimensions.

■ **[Fit in Window]**

Increases or decreases the display magnification so that the sheet exactly fits the current window. The entire sheet will be visible.

[Tools] Menu

■ [Area Parts List]

This command can be used only when the Area window is active. A submenu displays the same objects that are in the Toolkit window displayed while the Area window is active. Clicking an object on the submenu, then clicking the Area window, places that object in the Area window.
→ [Area Parts List] in "Toolkit Window" (page 153)

■ [Device List]

This command can be used only when the Zone window is active. A submenu here displays the same objects as the Toolkit window. Clicking an object on the submenu, then clicking the Zone window, places that object in the Zone window.
→ [Zone Device List] in "Toolkit Window" (page 154)

■ [Component List]

This command can be used only when a Configuration window or User Module window is active. A submenu here displays the same objects as the Toolkit window. Clicking an object on the submenu, then clicking the Configuration/User Module window, places the object in that window.
→ "Component List (Configuration Window)" in "Toolkit Window" (page 154), "Component List (User Module Window)" in "Toolkit Window" (page 155)

■ [Zone]

Displays the "Zone" dialog box. Here you can add, delete, or rename a zone.
→ See "Adding, Deleting, and Renaming a Zone" on page 231.

■ [Configuration]

Displays the "Configuration" dialog box. Here you can add, delete, or rename a configuration.
→ See "Adding, Deleting, and Renaming a Configuration" on page 233.

■ [Save User Module]

This command can be used only when a User Module is selected in the Configuration window. Saves the selected user module.
→ "User Module Manager" Dialog Box in "User Modules" (page 255)

■ **[User Module Manager]**

Displays the "User Module Manager" dialog box. Here you rename or delete user modules.
→ "User Module Manager" Dialog Box in "User Modules" (page 250)

■ **[Show Signal Delay]**

The digital signal delay value is displayed in the configuration window with sample units.
→ "Show Signal Delay (Delay Display Value)" in "Configuration Window" (page 246)

■ **[Analyze]**

Displays the "Analyze" dialog box, and analyzes the configuration.
→ "Analyze (Configuration Analysis)" in "Configuration Window" (page 249)

■ **[Probe Monitor]**

Turns the probe monitor ON or OFF. This command can be selected only when a Configuration window or User Module window is active while in online status.
→ "Probe Monitor" in "Configuration Window" (page 244)

■ **[Monitoring Point List]**

Opens the "Monitoring Point List" dialog box. Registers points for monitoring with headphones.
→ "Monitoring Point List" in "Configuration Window" (page 247)

■ **[Edit Mode]**

Turns the edit mode ON or OFF.
→ "Edit Mode" in "Editing Configurations" (page 136)

> **NOTE**
>
> Only users for whom the [Operation Security] → [Edit] checkbox in the "Security" dialog box has been checked can select this command.

■ **[Sheet]**

Opens the "Sheet" dialog box. Sets the sheet size and background.
→ "Sheet" in "Objects" (page 200)

■ **[Prohibit Diagonal Connections]**
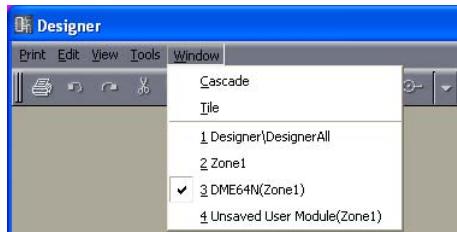
Allows you to draw horizontal and vertical wires only. Diagonal wires cannot be drawn.
→ "Drawing Settings" in "Drawing and Editing Wires" (page 223)

■ **[Grid]**

Opens the "Grid" dialog box. Displays or hides the grid and sets the grid spacing.
→ "Grid" in "Design Window Shared Settings and Operations" (page 210)

[Window] Menu

Arranges multiple windows. The lower part of the menu displays the names of currently open windows. A checkmark appears next to the active window. When you click the name of a window, that window becomes active.

■ [Cascade]

Displays the windows overlapping one another.

■ [Tile]
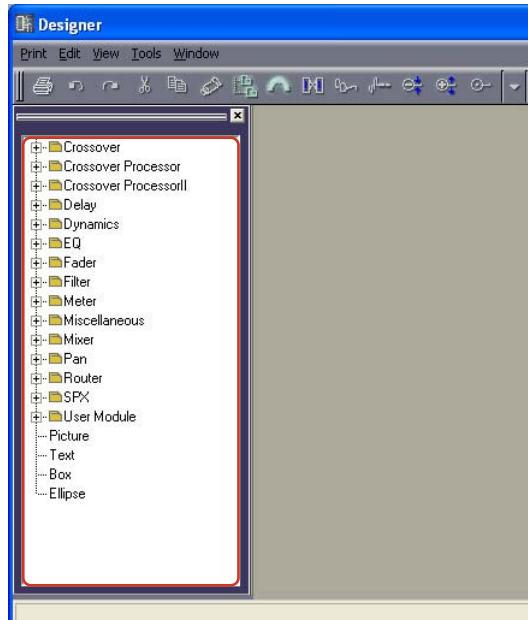
Displays the windows arranged side-by-side.

Toolkit Window

Displaying the Toolkit Window
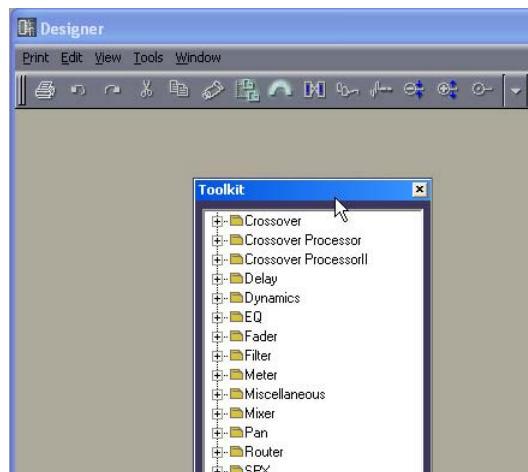
You can display or hide the Toolkit window using the [Toolkit] command on the [View] menu. The Toolkit displays objects that can be arranged in each design window. You can arrange objects in each design window by dragging them from the Toolkit window or by double-clicking them in the Toolkit window.

The objects are categorized by type and displayed here in a hierarchy. You can use the [+]/[-] buttons to display or hide items below a particular level in the window. Click the [+] button to display the items on the next level down, and the [-] button to hide them.

Moving the Toolkit Window

You can move the Toolkit window by dragging it. If you drag the window to right or left side, it will remain fixed. If you drag it to other locations, it will float independently. When DME Designer is started, the Toolkit window is displayed at the left side of the Designer window.

Toolkit Window Types

The contents of the Toolkit window will vary, depending on which window is active.
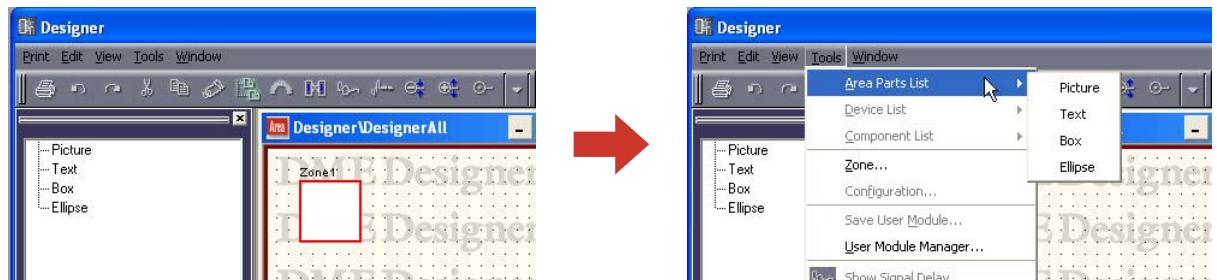
Active Design Window	Toolkit Window
Area Window	Area Parts List
Zone Window	Device List
Configuration Window	Component List
User Module Window	Component List

The following objects are displayed in each window:

	Area Parts List	Device List	Component List (Configuration Window)	Component List (User Module Window)
DME		✔		
ICP		✔		
External Device	✔	✔		
Component			✔	✔
SPX Component			✔	✔
User Module			✔	
Pictures	✔	✔	✔	✔
Text	✔	✔	✔	✔
Boxes	✔	✔	✔	✔
Ellipses	✔	✔	✔	✔

[Area Parts List]

The [Area Parts List] displays objects that can be arranged in the Area window. The same objects are displayed in the [Area Parts List] submenu on the [Tools] menu or on the context menu that appears when you right-click on the sheet.
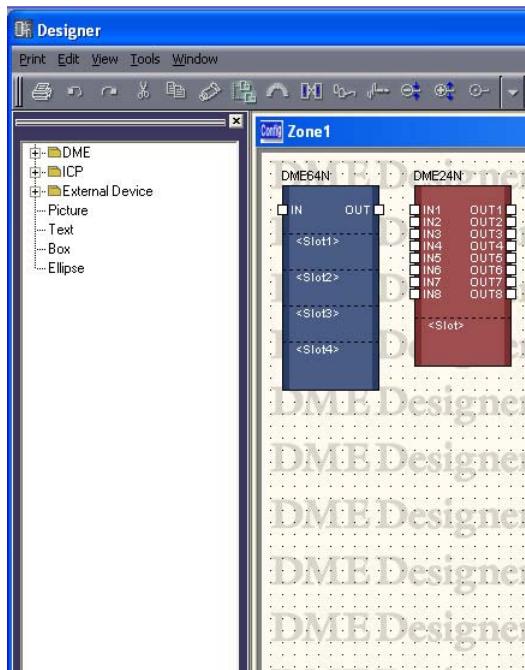
NOTE
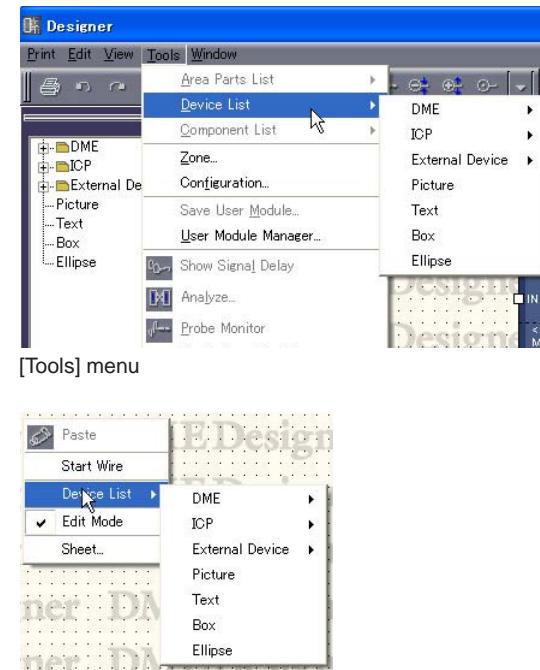
You can create multiple zones in an area. They are added using the menu bar [Tool] menu → "Zone" dialog box.

[Device List]

The Device list displays objects that can be arranged in a Zone window (configuration). The same objects are displayed in the [Device List] submenu on the [Tools] menu or on the context menu that appears when you right-click on the sheet.

Toolkit window
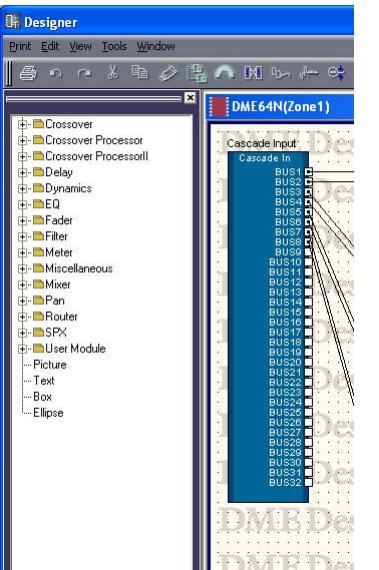
[Tools] menu

[Device List] submenu on the [Tools] menu or on the context menu

NOTE
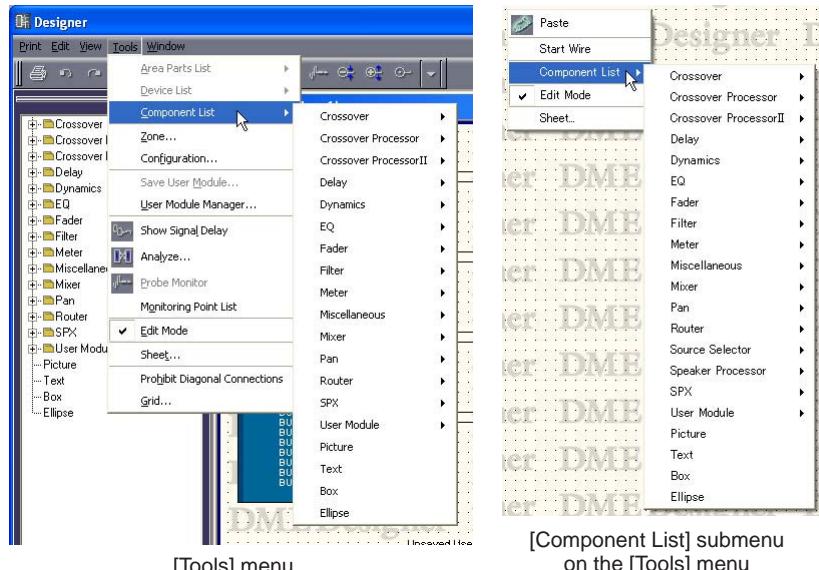
Configurations are added using the menu bar [Tool] menu → "Configuration" dialog box.

[Component List] (Configuration Window)

The Component List displays objects that can be arranged in Configuration windows. The same objects are displayed in the [Component List] submenu on the [Tools] menu or on the context menu that appears when you right-click on the sheet.

Toolkit window
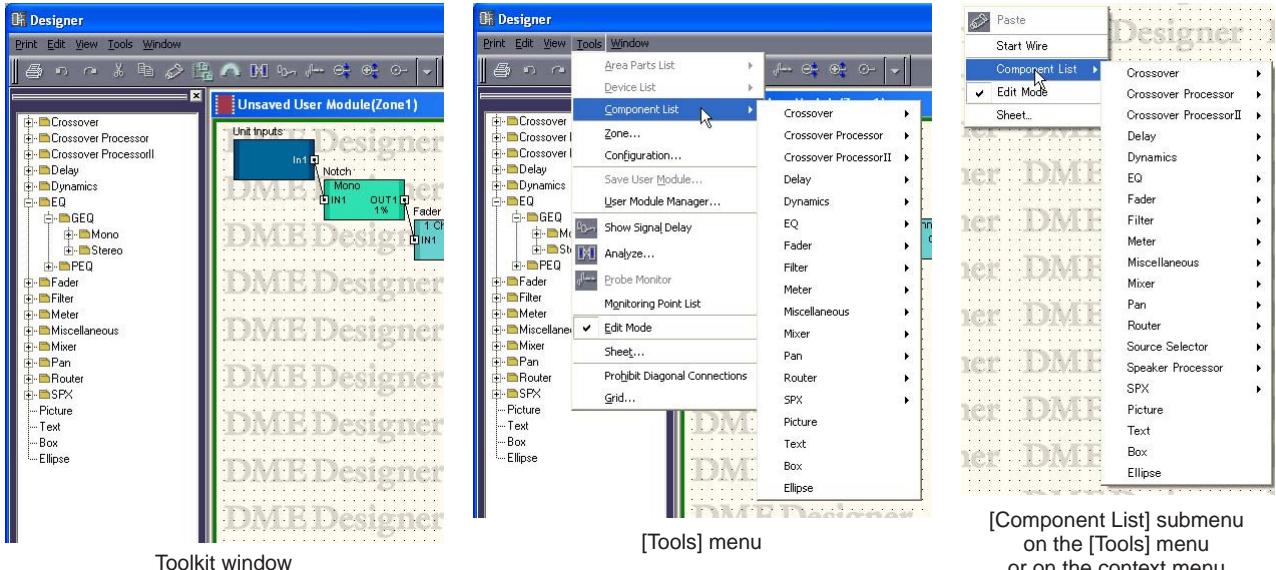
[Tools] menu

[Component List] submenu on the [Tools] menu or on the context menu

[Component List] (User Module Window)

The Component List displays objects that can be arranged in the User Module window. The same objects are displayed in the [Component List] submenu on the [Tools] menu or on the context menu that appears when you right-click on the sheet.


Toolkit window

[Tools] menu

[Component List] submenu
on the [Tools] menu
or on the context menu

Objects

Object Types

The devices, shapes, and wires that can be arranged in each design window are called "Objects." The following objects are available:

Name	Window Where It can be Placed/Displayed	Explanation
Zone	Area	Zones
DME	Zones	DME and any cards inserted into its slots
ICP	Zones	User defined parameter control
External Device	Zones	External Device
Component	Configuration User Module	User Module, Audio processor, Control parts
SPX Component	Configuration User Module	SPX components
User Module	Configuration	Combination of components
Slot Component	Configuration	Cards inserted into DME slot
Pictures	All	Image
Text	All	Text box
Boxes	All	Box shape
Ellipses	All	Circular shape
Wires	All	Connecting wire, straight line shape
Legend	All Zones Configuration	An area displayed on the sheet where descriptive information is presented.
Sheet	--	One sheet per design window.

Various design elements, such as name, color and size, can be set in the "Properties" dialog box for each object.
Size is set using the [Width] and [Height] boxes in the "Properties" dialog box. The maximum size values that can be set may vary according to the sheet size and object position. You can set a size that allows the object to fit in the sheet.
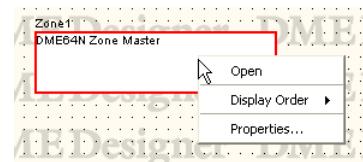
Zone

There must be at least one zone in the Area window. Zones are added and deleted using the "Zone" dialog box. Zones are not displayed in the Toolkit window or in the [Area Parts List] submenu in the [Tools] Menu
If you right-click on the name of a zone object located in the Area window, a context menu will be displayed.

■ Zone Context Menu

[Open]
Opens the Configuration window.

[Display Order]
Changes the display order of the objects, according to a command in the submenu.

[Properties]
Displays the "Area Properties" dialog box.

■ **Zone Object Properties**

When you select a zone in the Area window, then click the [Properties] command on the [Edit] menu, the "Area Properties" dialog box is displayed. Here you can set properties for zone objects. The [Properties] command is also located on the context menu for zone objects.

[Text] Box

You can enter up to 100 English characters for the object name.
The object name is displayed in the rectangular box for the object. If there is a large number of characters and the object's shape is too narrow, all characters might not be displayed.

[Font] Button

Clicking here displays the "Select Font" dialog box. This sets the font used to display the object name.
For information about the "Select Font" dialog box, see page 202.

[Color] Button

Clicking here displays the "Select Color" dialog box. This sets the color of the object name text.
For information about the "Select Color" dialog box, see page 203.

Text Position

Sets the location of the text. The list to the left sets the vertical position of the text. The list to the right sets the horizontal position.

- • Vertical Position
  Select [Top], [Center], or [Bottom].

- • Horizontal Position
  Select [Left], [Center], or [Right].

[Width] Box
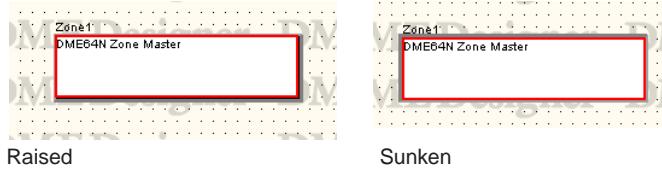
Specifies the width of the object in pixels. The default is 50 pixels.

[Height] Box

Specifies the height of the object in pixels. The default is 50 pixels.

[Style]

Sets the style of the object. From the list, select [Plain], [Raised], or [Sunken].

Raised   Sunken

Background Image

Sets background effects for the object.

- • [Color] Button

  Sets the color. Clicking here displays the "Select Color" dialog box.
  For information about the "Select Color" dialog box, see page 203.

- • [Image] Button

  Displays an image inside the object. You can use image files in the following formats: BMP
  (.bmp), PNG (.png), XPM (.xpm), and JPEG (.jpg). Clicking here displays the "Select Image"
  dialog box. Specify an image file and set its display method.
  For information about the "Select Image" dialog box, see page 205.

[OK] Button

Accepts the changed settings and closes the dialog box.
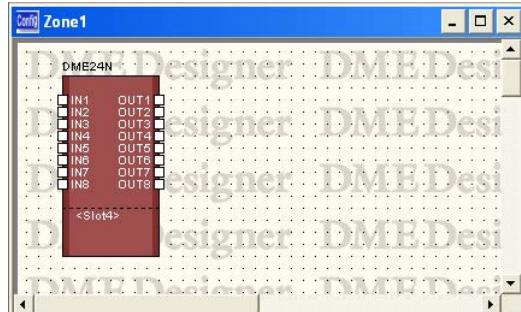
[Cancel] Button

Closes the dialog box without changing the settings.
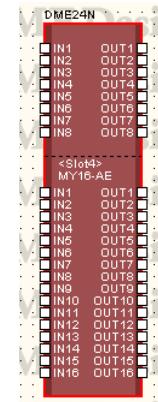
DME

DMEs are arranged in the Zone window. If DME properties settings have been made for an expansion card installed in one of the DME slots, the card will be displayed automatically.

DME24N
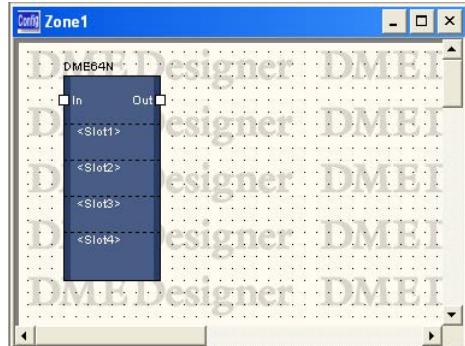
DME24N with no I/O card installed.
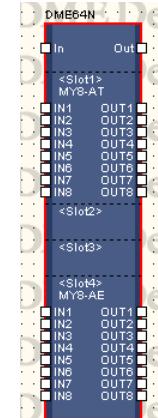
DME24N with an I/O card installed in its expansion slot.

DME64N

DME64N with no I/O cards connected in slots.
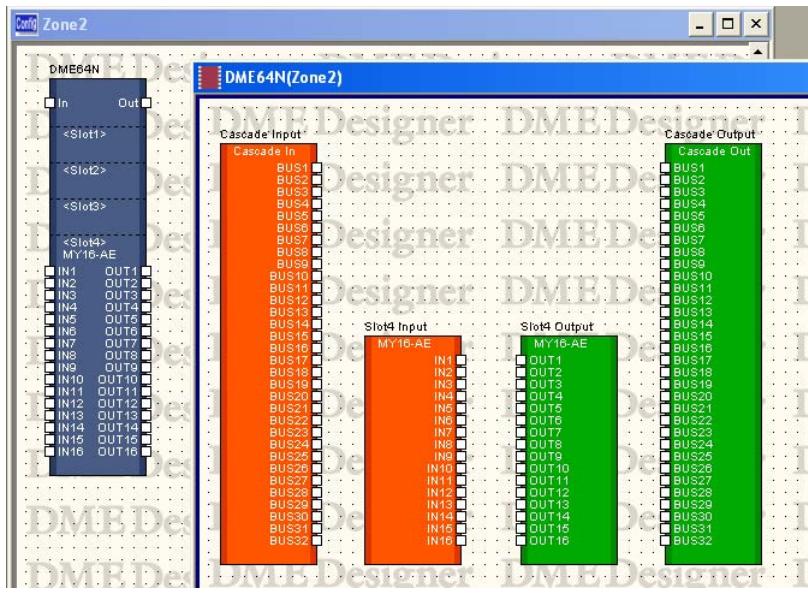
DME64N with I/O cards installed in expansion slots 1, 2, and 4.

When I/O Cards Are Installed in DME Expansion Slots

When an I/O card is selected for an expansion slot in the DME properties, an I/O port is added for the DME arranged in the Zone window. An I/O component block will be added to the configuration window.

If [None] is selected for I/O cards in the DME properties, any I/O component blocks will also be deleted automatically from the Configuration window. (Even if the I/O components are deleted, the wiring will remain.)
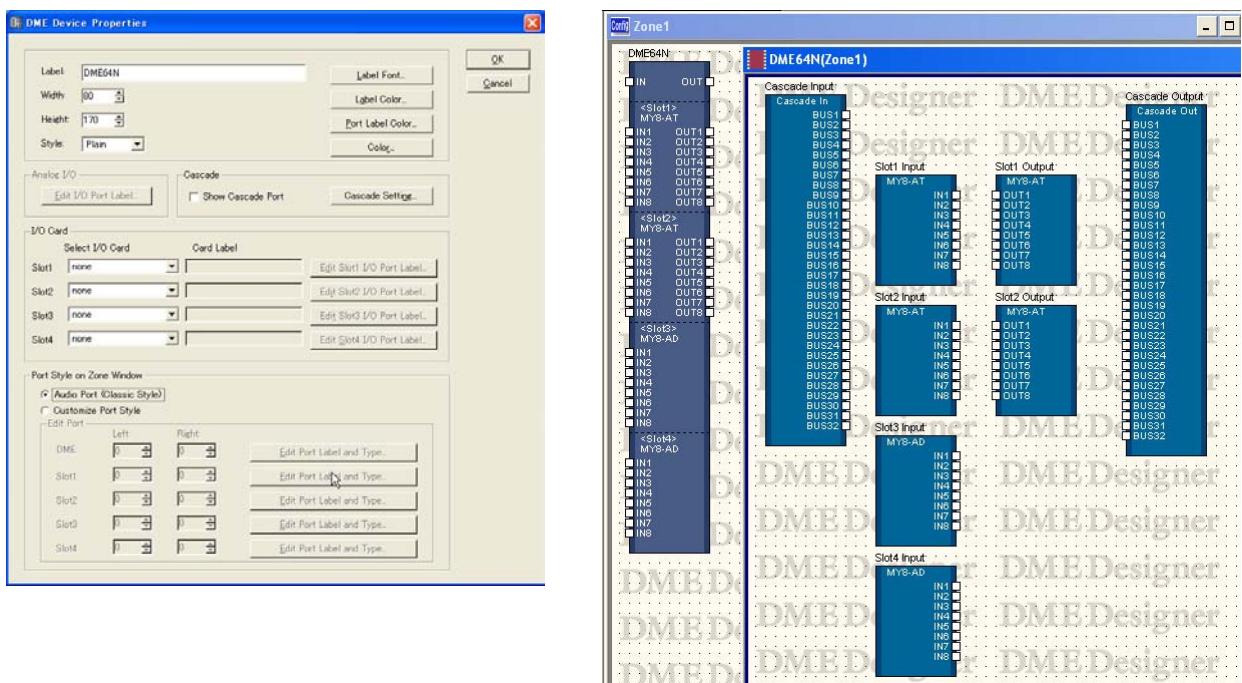
DME64N block with card inserted in a slot and the Configuration window

When the DME64N Cascade Setting is Turned ON
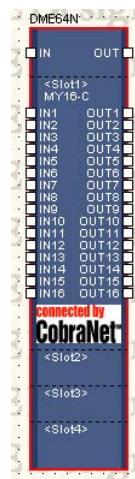
When [Show Cascade Port] is checked in the DME64N "DME Device Properties" dialog box, the cascade I/O components will be displayed in the Configuration window.

If "Show Cascade Port" is turned OFF in the DME64N "DME Device Properties" dialog box, cascade I/O components will also be deleted automatically in the Configuration window. (Even if the Cascade I/O components are deleted, the wiring will remain.)

CobraNet Card

If the I/O card is a CobraNet card, a CobraNet icon will be displayed in the DME object.

DME block with CobraNet card inserted

■ **Object Selection**

To open a configuration window for a DME object arranged in the Zone window, first select it by clicking on it, then double-click on it. If you right-click on the object, a context menu will be displayed.

■ DME Object Context Menu

[Open Configuration Window]
Opens the Configuration window.

[Cut]
Cuts the selected object and moves it to the clipboard.

[Copy]
Copies the selected object to the clipboard.

[Paste]
Pastes the DME device that is on the clipboard.

[Delete]
Deletes the object you clicked on.

[Duplicate]
Duplicates the object you clicked on.
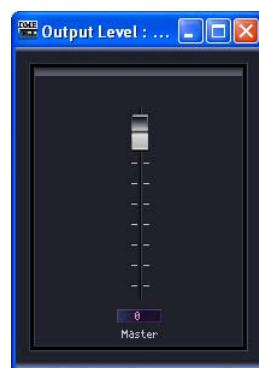
[Display Order]
Changes the display order of the objects, according to a command in the submenu.

[Flash Unit LEDs]
When selected the DME front panel will flash, and will continue flashing until selected a second time.

[Output Level]
When you select this command, the "Output Level" dialog box will be displayed. This sets the DME master volume.
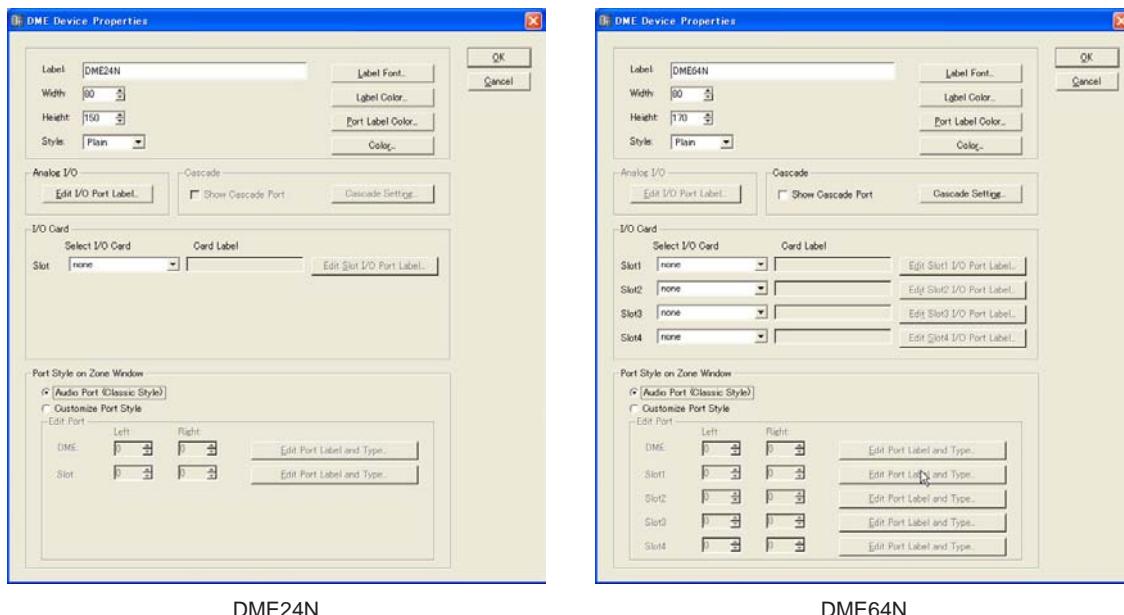
[Properties]
Displays the "DME Device Properties" dialog box.

■ **DME Properties**

To display the "DME Device Properties" dialog box, select a DME object, then click the [Properties] command on the [Edit] menu. Here you can set DME properties.

DME24N   DME64N

[Label] Box

You can enter up to 100 English characters to display over the object.

NOTE

The name set in the [Label] box will be displayed on the list in the Toolkit window, [Import]/[Export] menu commands, and on the list in the dialog box. If there are multiple examples of the same DME, set different names for each so that you can distinguish one from the other.

[Width] Box

Specifies the width of the object in pixels.

[Height] Box

Specifies the height of the object in pixels.

[Style]

Sets the style of the object. From the list, select [Plain], [Raised], or [Sunken].

[Label Font] Button

Sets the font for the label. Clicking here displays the "Select Font" dialog box.
For information about the "Select Font" dialog box, see page 202.

[Label Color] Button

This sets the color of the label text. Clicking here displays the "Select Color" dialog box.

[Port Label Color] Button

Sets the color for the I/O port label text. Clicking here displays the "Select Color" dialog box.

[Color] Button

Sets the color of the object. Clicking here displays the "Select Color" dialog box.

NOTE

For information about the "Select Color" dialog box, see page 203.

Analog I/O

Sets the label for the DME24N I/O port. When you click the [Edit I/O Port Label] button, the "Edit Port Label" dialog box is displayed.

Cascade

Turns the DME 64N cascade ON or OFF.

- **Show Cascade Port**
  Checking this enables cascade.

- **Cascade Setting**
  Here you can make settings that apply when cascade is enabled. Clicking here displays the "Cascade Setting" dialog box.

I/O Card

Settings for the [Slot1] ~ [Slot4] I/O cards. [Slot1] only can be set for DME24N.

- **[Select I/O Card]**
  Specifies the type of I/O card.

- **[Card Label]**
  I/O card names having up to 100 characters can be entered here.

- **[Edit SlotN I/O Port Label] Button**
  Specifies an I/O port label for each slot. Clicking here displays the "Edit Port Label" dialog box.

Port Style On Zone Window

Specifies how the DME ports appear in the zone window.

- **[Audio Port (Classic Style)]**
  Displays all audio ports.

- **[Custom Port Style]**
  Customizes the port display.

    [Left]
    Sets the number of ports to be displayed on the left.

    [Right]
    Sets the number of ports to be displayed to the right.

- **[Edit Port Label and Type]**
  Sets the label and type for each port. Click to display the [Edit Port Label] dialog.
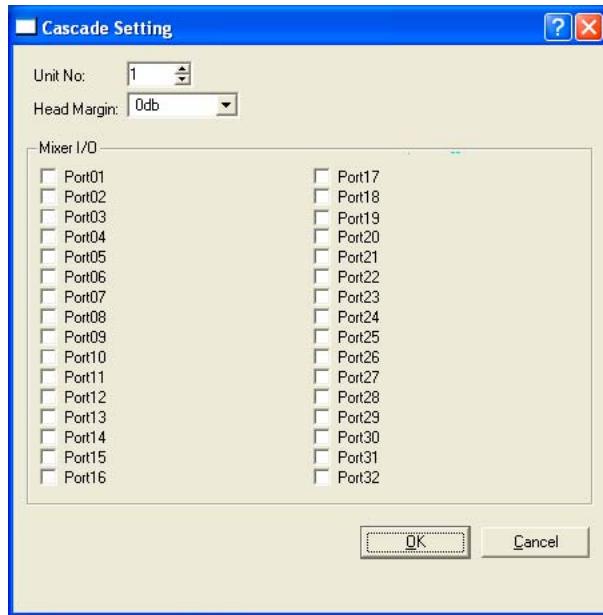
[OK] Button

Accepts the changed settings and closes the dialog box.

[Cancel] Button

Closes the dialog box without changing the settings.

■ **"Cascade Setting" Dialog Box**

Clicking the [Cascade Setting] button displays the "Cascade Setting" dialog box. Here you can display DME64E cascade connections and make settings related to them. These settings are common to the cascaded DMEs in the same zone.

Unit No. (Cascade Connection Number)

All DME units other than the first unit (default "1") are assigned automatically, and are grayed out after connection indicating that the settings cannot be changed.

Head Margin

Here you can display and set the head margin for the Cascade connection audio signal. Select [0 db] or [-18 db]. All DME Unit No. settings for DME units other than the first unit will be automatically set to the same value as the first unit when connected. These settings are grayed out after connection indicating that they cannot be changed.

Mixer I/O Channel

Here you can display and set the channel used for audio input/output to a mixer. If the checkbox is turned ON, the channel for the Cascade connection with the mixer is set. If turned OFF, the channel for connecting with the DME is set.

[Check All] Button

Checks all checkboxes.

[Clear All] Button

Clears all checkboxes.

[OK] Button

Updates the settings and closes the dialog box.

[Cancel] Button
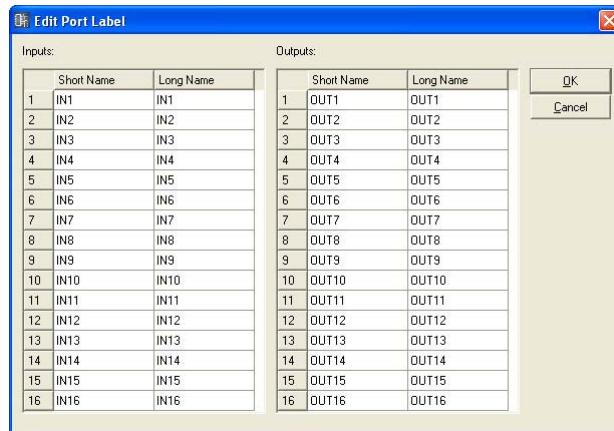
Closes the dialog box without changing the settings.

■ **"Edit Port Label" Dialog Box**

When you click the [Edit I/O Port Label]/[Edit SlotN I/O Port Label] button, the "Edit Port Label" dialog box is displayed. Here you can set the port labels displayed for components. Enter a [Short Name] and [Long Name] for [Inputs] and [Outputs]. You can enter up to 100 English characters for each name.
You can switch between long and short port names displayed in the configuration window with the [Port Long Name] command in the [View] menu. When you select this command, a checkmark appears next to it and long names are displayed. If you select this command while a checkmark is next to it, the checkmark disappears and short names are displayed.
When the Port Style On Zone Window [Custom Port Style] is selected, labels specified here will not appear in the Zone Window. Labels specified here are always displayed in the Configuration Window.
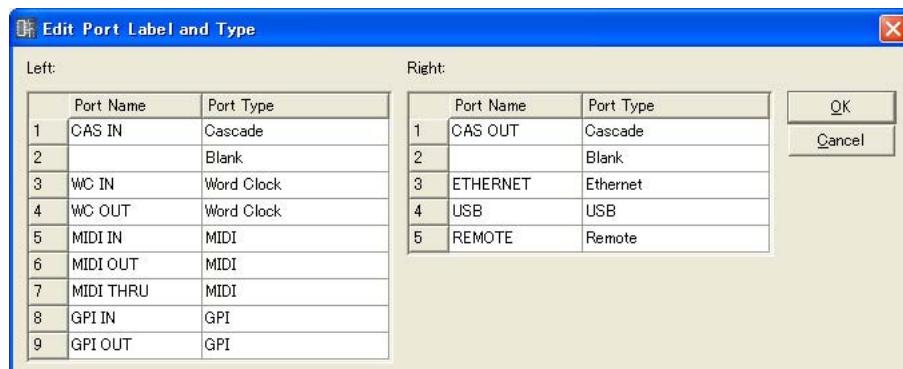
■ **Edit Port Label and Type Dialog Box**

The Edit Port Label and Type dialog box will appear when the [Edit Port Label and Type ..] button is clicked. Here you can specify the port labels and types to be displayed in for the components.
To set labels enter the [Port Name] for [Left] and [Right]. Each name can be up to 100 characters in length.
To set the port type use [Port Type] to select the [Left] and [Right] types.
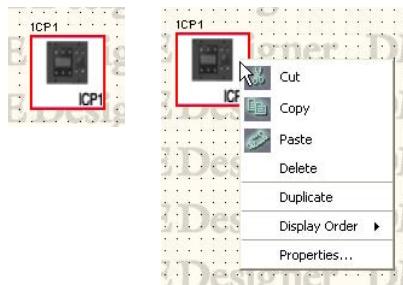
ICP

You can arrange control panel objects in the Zone window. These can be controlled using user defined parameters.
First click on an ICP object arranged in the Zone window to select it, then double-click the object. This opens a "Control Panel Properties" window. If you right-click on the object, a context menu will be displayed.

■ ICP Object Context Menu

[Cut]
Cuts the selected object and moves it to the clipboard.

[Copy]
Copies the selected object to the clipboard.

[Paste]
Pastes the control panel object that is on the clipboard. If the same control panel object exists on the sheet where you are pasting, a new ICP object will be created.

[Delete]
Deletes the object you clicked on.

[Duplicate]
Duplicates the object you clicked on.
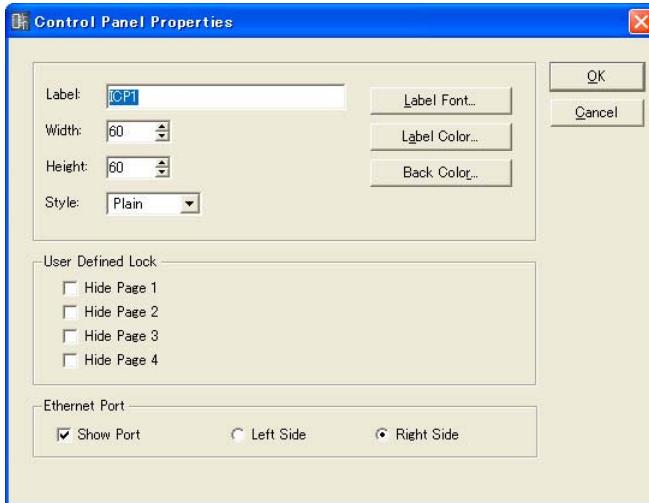
[Display Order]
Changes the display order of the objects, according to a command in the submenu.

[Properties]
Displays the properties dialog box.

■ ICP Properties

To display the "Control Panel Properties" dialog box, select a ICP object, then click the [Properties] command on the [Edit] menu.

[Label] Box

You can enter up to 100 text characters to display above the object. Labels for identical ICP objects that exist in other configurations will also be changed.

[Width] Box

Specifies the object width in pixels.

[Height] Box

Specifies the object height in pixels.

[Style]

Sets the object style. Select [Plain], [Raised], or [Sunken] from the list.

[Label Font] Button

Sets the font for the label. Clicking here displays the "Select Font" dialog box.
For information about the "Select Font" dialog box, see page 202.

[Back Color] Button

Sets the object color. Click to display the Select Color dialog box.

[Label Color] Button

This sets the color of the label text. Clicking here displays the "Select Color" dialog box.
For information about the "Select Color" dialog box, see page 203.

[User Defined Lock]

Sets whether user defined parameters will be displayed or hidden. Pages with checkmarks will not be displayed. The four [1]/[2]/[3]/[4] tabs in the "User Defined Button" dialog box correspond to the pages on the DME unit main display.

Ethernet Port

Turns Ethernet port rendering on or off. Ethernet port display will appear when the checkbox is ON. The radio buttons can be used to specify whether the display is on the left or right side.

[OK] Button

Accepts the changed settings and closes the dialog box.

[Cancel] Button

Closes the dialog box without changing the settings.
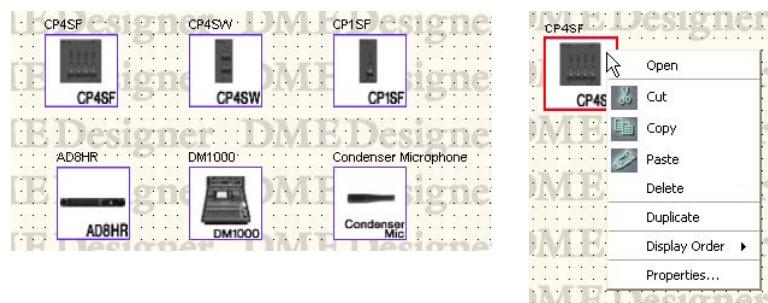
External Device

Arranges external device objects in the Zone window. These objects can be added by plug-in functions. External applications can be linked to the devices arranged in the window. These links to external applications are set using the "External Device Properties" dialog box.
To start the application linked to an external device object arranged in the Zone window, first click on the object to select it, then double-click it. If you right-click on the object, a context menu will be displayed.

NOTE

If no external application is linked to the an object, no application will start when the object is double-clicked.

■ AD824/AD8HR

The AD824 is an eight-channel analog-to-digital converter. The AD8HR is an eight-channel analog-to-digital converter that features a head amp with high quality sound.
You can connect Yamaha AD824 and AD8HR A/D converters to a DME unit and control them remotely from DME Designer. DME Designer has a component editor for controlling [AD824] and [AD8HR] units.
If you arrange an [AD824] or [AD8HR] from [External Device] in the Zone window, select the connected DME unit in the properties dialog box, and double-click on an [AD824] or [AD8HR] block, the component editor is displayed.

NOTE

If a DME is not selected in the properties dialog box, the component editor will not be displayed even if you double-click.

■ **External Device Object Context Menu**

[Open Component Editor]
Starts the application assigned to the object.
For the [AD824] and [AD8HR], it opens the component editor.

[Cut]
Cuts the selected object and moves it to the clipboard.

[Copy]
Copies the selected object to the clipboard.

[Paste]
Pastes the object that is on the clipboard.

[Delete]
Deletes the object you clicked on.

[Duplicate]
Duplicates the object you clicked on.

[Display Order]
Changes the display order of the objects, according to a command in the submenu.
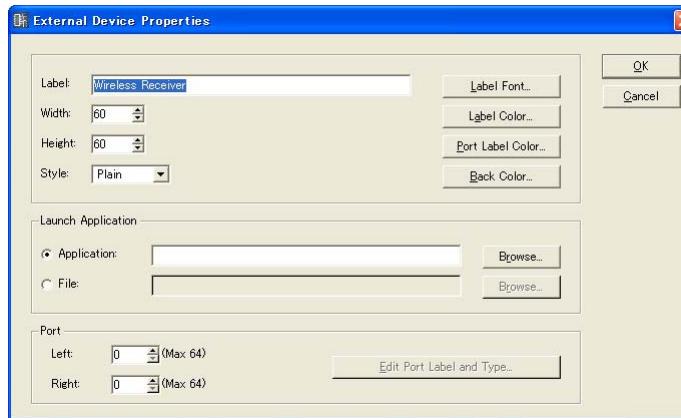
[Properties]
Displays the "External Device Properties" dialog box.
At the lowest position below [External Device], [AD824] and [AD8HR] display the "Serial Controlled Device Properties" dialog box. The other objects display the "External Device Properties" dialog box.

■ **External Device Properties**
To display the "External Device Properties" dialog box, select any external device object besides AD824 or AD8HR, then click the [Properties] command on the [Edit] menu.

[Label] Box
You can enter up to 100 English characters to display over the object.

[Width] Box
Specifies the object width in pixels.

[Height] Box
Specifies the object height in pixels.

[Style]

Sets the object style. Select [Plain], [Raised], or [Sunken] from the list.

[Label Font] Button

Sets the font for the label. Clicking here displays the "Select Font" dialog box.
For information about the "Select Font" dialog box, see page 202.

[Label Color] Button

This sets the color of the label text. Clicking here displays the "Select Color" dialog box.

[Port Label Color] Button

Sets the color of the I/O port label. Click to display the Select Color dialog box.

[Back Color] Button

Sets the object color. Click to display the Select Color dialog box.

> **NOTE**
>
> For information about the "Select Color" dialog box, see page 203.

Launch Application

The radio buttons determines whether an application or file will be linked to an external device.

- [Application] Box
  The linked application will be displayed. Click the [Browse] button to locate and select an application. Specifies the path to an application to be launched when an External Device object is double-clicked.

- [File] Box
  The linked file will be displayed. Click the [Browse] button to locate and select a file. Specifies the path to a file to be launched when an External Device object is double-clicked.

Port

Specifies the number of ports displayed for an External Device object.

- [Left]
  Sets the number of ports to be displayed on the left.

- [Right]
  Sets the number of ports to be displayed to the right.

- [Edit Port Label] Button
  Sets the label and type for each port. Click to display the [Edit Port Label] dialog.

[OK] Button

Accepts the changed settings and closes the dialog box.
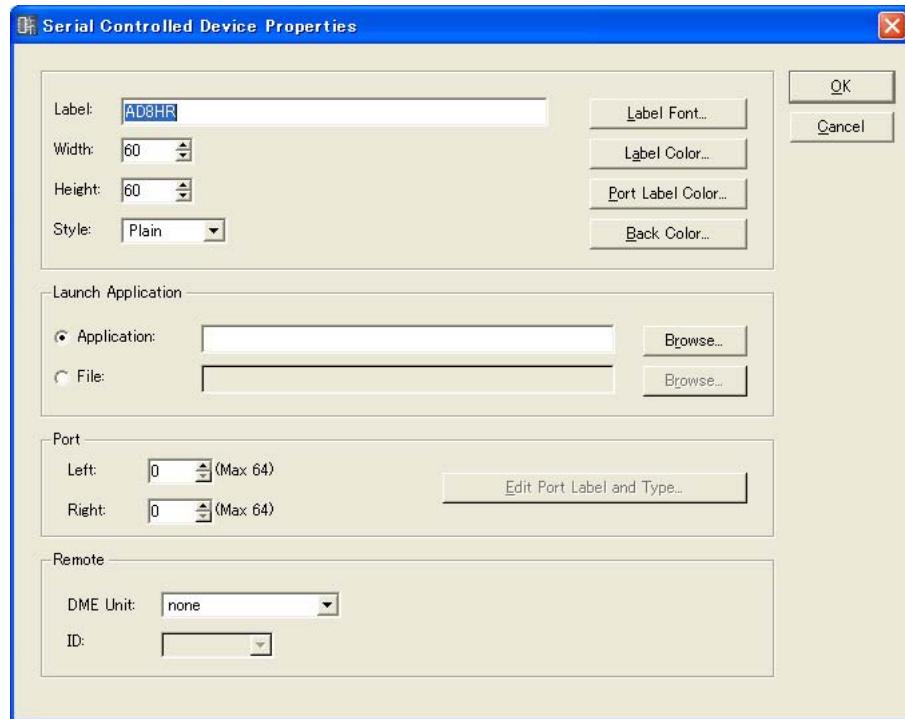
[Cancel] Button

Closes the dialog box without changing the settings.

■ **External Device Properties (AD824, AD8HR "Serial Controlled Device Properties" Dialog Box)**

To display the "Serial Controlled Device Properties" dialog box, select AD824 or AD8HR, then click the [Properties] command on the [Edit] menu.
This dialog box is the same as the "External Device Properties" dialog box, except for [Remote].

Remote

Select the DME you will control remotely from AD824 and AD8HR.

- • [DME Unit]
  The DMEs in the current configuration will be displayed in a list. Select the DME you will control remotely.
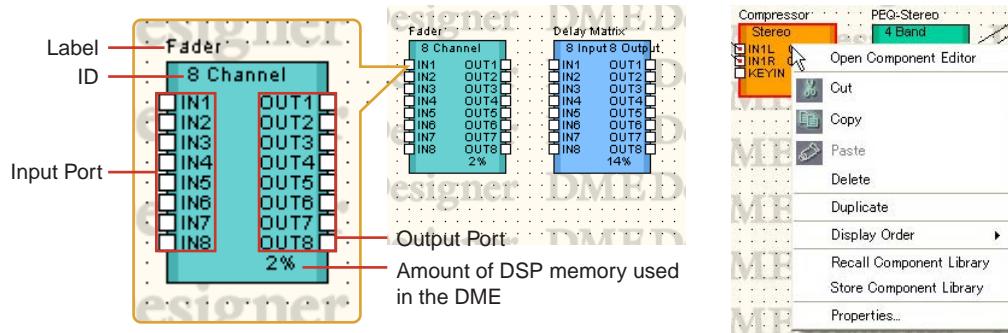
- • [ID]
  Selects an ID from 1 to 8. The default is 1.

Component

Components are arranged in the Configuration window and the User Module window. They include audio processors like mixers and compressors, and control parts like switches and sliders. They can be added by plug-in functions. Component objects arranged in a configuration are displayed in block form.

To open the component editor for an arranged component, first select it by clicking on it, then double-click on it. If you right-click on the object, a context menu will be displayed.

Label
ID
Input Port
Output Port
Amount of DSP memory used in the DME

■ Component Object Context Menu

[Open Component Editor]

Opens the component editor.

[Cut]

Cuts the selected object and moves it to the clipboard.

[Copy]

Copies the selected object to the clipboard.

[Paste]

Pastes the object that is on the clipboard.

[Delete]

Deletes the object you clicked on.

[Duplicate]

Duplicates the object you clicked on.

[Display Order]

Changes the display order of the objects, according to a command in the submenu.

[Recall Component Library]

Recalls libraries with component parameters saved in them. Clicking here displays the submenu. When a library is selected from the submenu, the library is read and the component parameters are changed.

For more information about libraries, see "Library" (page 275).

[Store Component Library]

Saves the component parameters. Click to display the Store dialog. If you then save without changing the folder, the parameters will be added to the library.
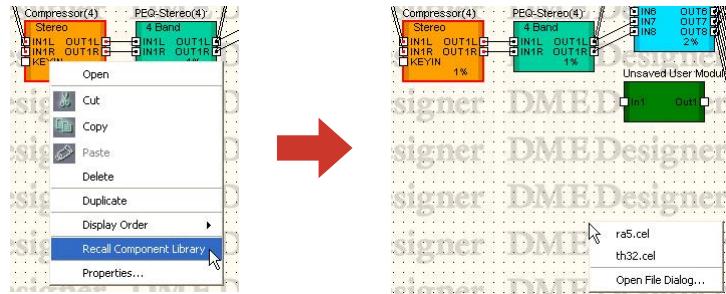
Refer to "Library" on page 275 for more information.

[Properties]

Displays the "Component Properties" dialog box.
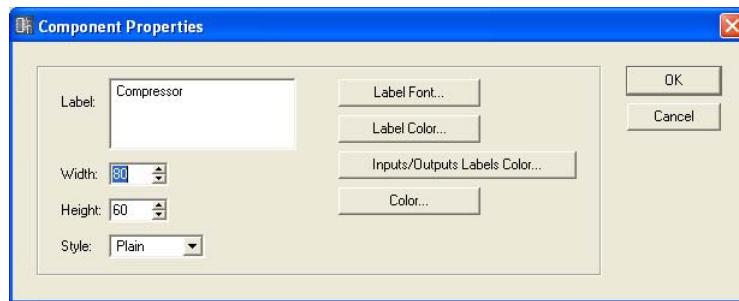
NOTE

Libraries can be recalled only by users for whom [Control Component Editor] in security is turned ON. The command is grayed out for users for whom [Control Component Editor] is turned OFF.

■ Component Properties

Here you can set properties for each component. If multiple examples of the same component type are arranged on a single sheet, changing the properties of a single component does not change the others.

To display the "Component Properties" dialog box, select a component object, then click the [Properties] command on the [Edit] menu.

[Label] Box

You can enter up to 100 English characters to display over the object.

[Width] Box

Specifies the width of the object in pixels.

[Height] Box

Specifies the height of the object in pixels.

[Style]

Sets the style of the object. From the list, select [Plain], [Raised], or [Sunken].

[Label Font] Button

Sets the font for the label. Clicking here displays the "Select Font" dialog box.
For information about the "Select Font" dialog box, see page 202.

[Label Color] Button

This sets the color of the label text. Clicking here displays the "Select Color" dialog box.

[Inputs/Outputs Label Color] Button

Sets the color for the I/O port label text. Clicking here displays the "Select Color" dialog box.

[Color] Button

Sets the color of the object. Clicking here displays the "Select Color" dialog box.

> **NOTE**
>
> For information about the "Select Color" dialog box, see page 203.

[OK] Button

Accepts the changed settings and closes the dialog box.

[Cancel] Button

Closes the dialog box without changing the settings.

SPX Component

SPX components are arranged in the Configuration window and the User Module window. Component objects arranged in a configuration are displayed in block form.
Clicking on a positioned SPX component will select it, and right-clicking will display a contextual menu.
Unlike normal components, SPX components use SPX-specific resources and therefore the usage percentage display that appears to the lower right of normal components will not appear. Check the SPX resource usage percentage via the SPX meter in the Resource Meter window.

■ Context Menu for SPX Component Objects

[Cut]

Cuts the selected object and moves it to the clipboard.

[Copy]

Copies the selected object to the clipboard.

[Paste]

Pastes the object that is on the clipboard.

[Delete]

Deletes the object you clicked on.

[Duplicate]

Duplicates the object you clicked on.

[Display Order]

Changes the display order of the objects, according to a command in the submenu.

[Properties]

Displays the "SPX Component Properties" dialog box.

[Recall Component Library]

Recalls libraries with component parameters saved in them. Clicking here displays the submenu. When a library is selected from the submenu, the library is read and the component parameters are changed.
For more information about libraries, see "Library" (page 275).
When you will change the effect type for the SPX component, select the desired type from the [Effect Type] displayed in the submenu.
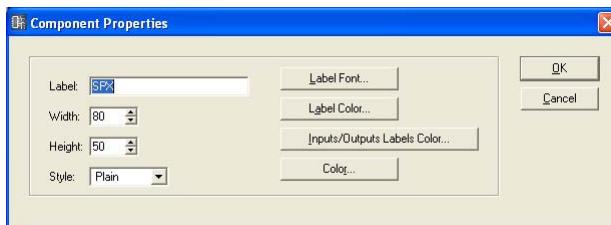
NOTE

Libraries can be recalled only by users for whom [Control Component Editor] in security is turned ON. The command is grayed out for users for whom [Control Component Editor] is turned OFF.

■ SPX Component Properties

SPX component properties are set for each component. If multiple examples of the same component type are arranged on a single sheet, changing the properties of a single component does not change the others.

To display the "SPX Component Properties" dialog box, select a component object, then click the [Properties] command on the [Edit] menu.

[Label] Box

You can enter up to 100 characters to display over the object.

[Width] Box

Specifies the width of the object in pixels.

[Height] Box

Specifies the height of the object in pixels.

[Style]

Sets the style of the object. From the list, select [Plain], [Raised], or [Sunken].

[Label Font] button

Sets the font for the label. Clicking here displays the "Select Font" dialog box.
For information about the "Select Font" dialog box, see "Select Font" dialog box (page 202).

[Label Color] Button

Sets the color for the label text. Clicking here displays the "Select Color" dialog box.

[Inputs/Outputs Label Color] Button

Sets the color for the I/O port label text. Clicking here displays the "Select Color" dialog box.

[Color] Button

Sets the color of the object. Clicking here displays the "Select Color" dialog box.

> **NOTE**
>
> For information about the "Select Color" dialog box, see "'Select Color' Dialog Box" (page 203).

[OK] Button

Updates the settings and closes the dialog box.

[Cancel] Button
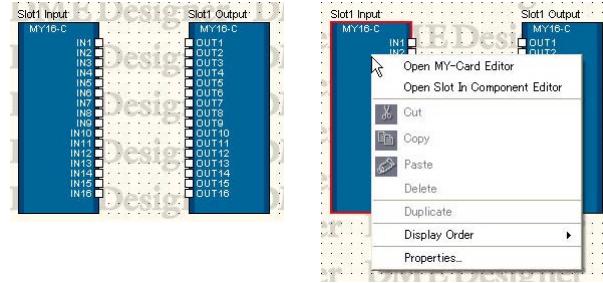
Closes the dialog box without changing the settings.

Slot Component

If an inserted I/O card is selected in the DME properties settings, it will be displayed in the Configuration window as a Slot component.
Slot component objects arranged in a configuration are displayed in block form.
If you select an arranged component by clicking on it, then double-click it, the Slot Out component editor opens. If you right click on the object, a context menu will be displayed.

■ Slot Component Object Context Menu

[Open MY-Card Editor]

Opens the editor for an MY-Card inserted in a slot.

[Open Slot Out Component Editor]

Opens the Slot Out component editor.

[Cut]/[Copy]/[Paste]/[Delete]/[Duplicate]

The functions cannot be used with Slot components.

[Display Order]
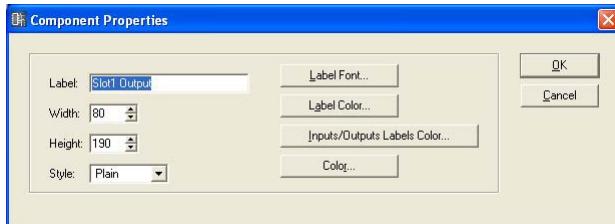
Changes the display order of the objects, according to a command in the submenu.

[Properties]

Displays the "Slot Out Component Properties" dialog box.

■ Slot Out Component Properties

To display the "Slo tOut Component Properties" dialog box, select a Slot Out component object, then click the [Properties] command on the [Edit] menu.

[Label] Box

You can enter up to 100 characters to display over the object.

[Width] Box

Specifies the width of the object in pixels.

[Height] Box

Specifies the height of the object in pixels.

[Style]

Sets the style of the object. From the list, select [Plain], [Raised], or [Sunken].

[Label Font] button

Sets the font for the label. Clicking here displays the "Select Font" dialog box.
For information about the "Select Font" dialog box, see "'Select Font' Dialog Box" (page 202).

[Label Color] Button

This sets the color of the label text. Clicking here displays the "Select Color" dialog box.

[Inputs/Outputs Label Color] Button

Sets the color for the I/O port label text. Clicking here displays the "Select Color" dialog box.

[Color] Button

Sets the color of the object. Clicking here displays the "Select Color" dialog box.

> **NOTE**
>
> For information about the "Select Color" dialog box, see "'Select Color' Dialog Box" (page 203).

[OK] Button

Updates the settings and closes the dialog box.

[Cancel] Button

Closes the dialog box without changing the settings.

User Module

A user module combines a number of other components into a module that is treated as a single component. It can be arranged in the Configuration window. A user object arranged in a window is displayed as a single block. The User Module Design Window or User Module Window will open, according to the "User Module Manager" setting when you double click the user module (page 250). If you right-click on the object, a context menu will be displayed.

■ User Module Object Context Menu

[Open User Module Design Window]
Opens the User Module Design Window.

[Open User Module Editor]
Opens the User Module Editor.

[Cut]
Cuts the selected object and moves it to the clipboard.

[Copy]
Copies the selected object to the clipboard.

[Paste]
Pastes the object that is on the clipboard.

[Delete]
Deletes the object you clicked on.

[Duplicate]
Duplicates the object you clicked on.

[Display Order]
Changes the display order of the objects, according to a command in the submenu.

[Recall Component Library]
Recalls a library into which component parameters have been saved. Click to display a sub-menu. Select a library from the sub-menu to load the parameters into the component.
Refer to "Library" on page 275 for more information.

[Store Component Library]

Saves the component parameters. Click to display the Store dialog. If you then save without changing the folder, the parameters will be added to the library.
Refer to "Library" on page 275 for more information.

[Save User Module]
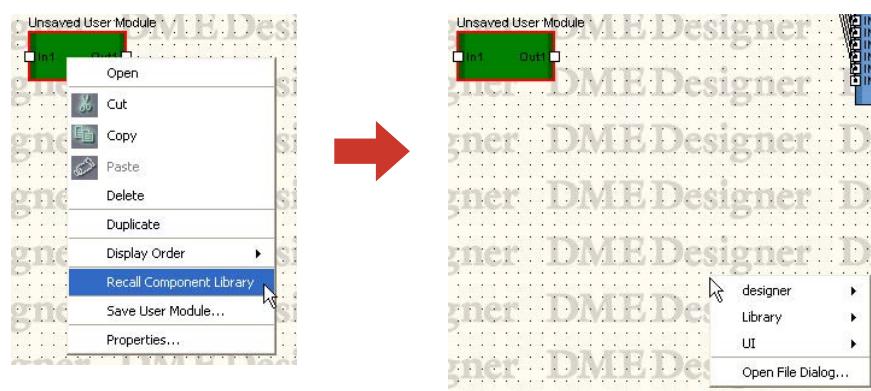
Saves the selected user module. See "Saving User Modules" on page 255.

[Properties]

Displays the "User Module Properties" dialog box.

NOTE

Libraries can be recalled only by users for whom [Control Component Editor] in security is turned ON. The command is grayed out for users for whom [Control Component Editor] is turned OFF.

The submenu displays library files saved in the "Library" folder for user modules.
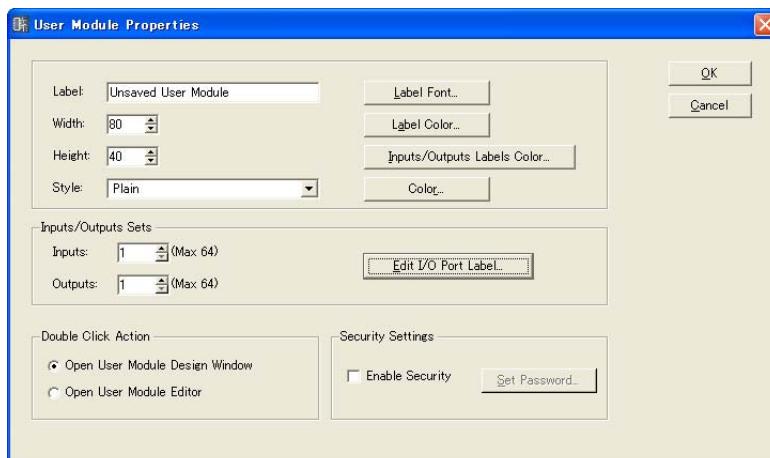
- [Open File Dialog]
  Displays the file select dialog box. You can recall libraries saved in folders other than the user module "Library" folder.

■ **User Module Properties**

To display the "User Module Properties" dialog box, select a user module object, then click the [Properties] command on the [Edit] menu.

NOTE

The "User Module Properties" dialog box is also displayed when a [Blank User Module] is arranged in the configuration window.

[Label] Box

You can enter up to 100 English characters to display over the object.

[Width] Box

Specifies the width of the object in pixels.

[Height] Box

Specifies the height of the object in pixels.

[Style]

Sets the style of the object. From the list, select [Plain], [Raised], [Sunken], or [Image]. When [Image] is selected the Open dialog will appear. Select an image file and click [Open] to place the selected image as an object.

[Label Font] Button

Sets the font for the label. Clicking here displays the "Select Font" dialog box.
For information about the "Select Font" dialog box, see .

[Label Color] Button

This sets the color of the label text. Clicking here displays the "Select Color" dialog box.

[Inputs/Outputs Labels Color] Button

Sets the color for the I/O port label text. Clicking here displays the "Select Color" dialog box.

[Color] Button

Sets the color of the object. Clicking here displays the "Select Color" dialog box.

> **NOTE**
>
> For information about the "Select Color" dialog box, see .

Inputs/Outputs Sets

Sets the number of input/output ports. Enter a number into the [Inputs] box and [Outputs] box, or set a value using the [▲] and [▼] buttons at the right of each box. The maximum of both input and output ports is 64.

Edit I/O Port Label

Input and output port names up to 100 characters in length can be entered.

Double-Click Action

Sets the action that occurs when you double-click on a user module object arranged in the Configuration window.

- [Open User Module Design Window]
  Opens the User Module window.

- [Open User Module Editor]
  Opens the User Module editor.

Security Settings
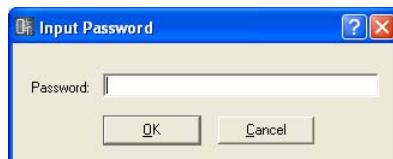
Turns user module security ON or OFF, and sets a password.

- **[Enable Security]**
  Enables user module security. If you turn this function ON when no password is currently set, the "Set Password" dialog box appears. Enter a password, then click the [OK] button.

If you change the setting from OFF to ON, the "Input Password" dialog box appears. You cannot turn Security OFF until you enter the correct password.

NOTE

When security is active the editor cannot be opened unless the appropriate password is entered. Once the password has been entered security is temporarily disabled until the DME Designer is quit, or a different file is opened.

- **[Set Password] Button**
  Changes the password for user modules. Clicking this button displays the "Input Password" dialog box. Enter the current password and click the [OK] button. The "Set Password" dialog box will be displayed, and you can set a new password.
  This button will be grayed out when [Enable Security] is turned OFF.

[OK] Button

Accepts the changed settings and closes the dialog box.

[Cancel] Button

Closes the dialog box without changing the settings.

Picture

An image can be arranged as an object on a sheet. This specifies a file for this purpose. You can use image files in the following formats: BMP (.bmp), PNG (.png), XBM (.xbm), XPM (.xpm), and JPEG (.jpg).
Before placing a picture object, prepare an image file. Copy the image file to the folder specified in the "Preferences" dialog box → [Application] tab → [ContentsFolder] in the Main Panel window.
In the project file, the location and name of the image file are registered in an relative path below the [ContentsFolder] and the linked image file is read and displayed. If the image file is moved, renamed, or the [ContentsFolder] is changed, the image cannot be displayed.

NOTE

The default for the "Preferences" dialog box → [Application] tab → [ContentsFolder] in the Main Panel window is "C:\Program Files\YAMAHA\OPT Tools\DME Designer." The [Designer] folder is located in the [DME Designer] folder. Within that folder, there is an [Images] folder prepared for saving image files.

NOTE
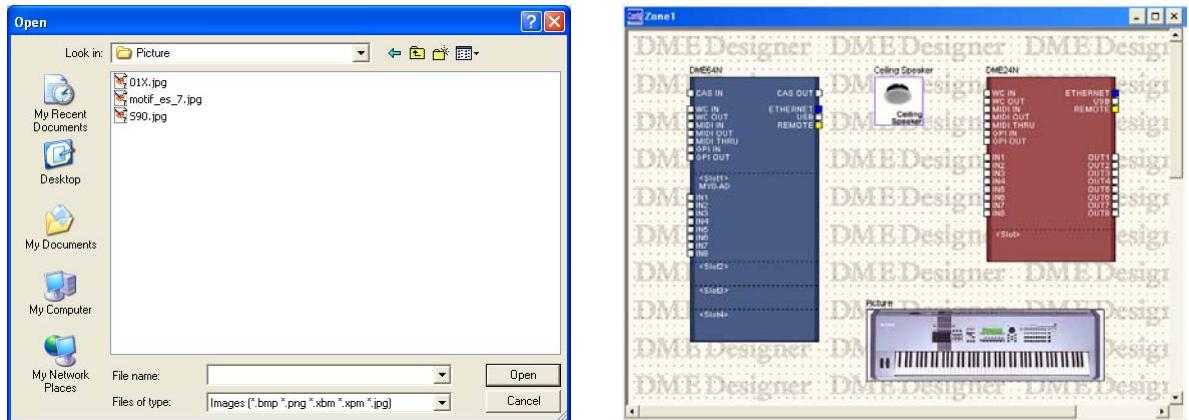
Background images for sheets are specified in the "Sheet" dialog box. Pictures are arranged as objects on the sheets.

■ Placing Pictures

There are three picture placement methods:
• You can drop the [Picture] item from the Toolkit window into each design window.
• You can double-click [Picture] on the Toolkit window.
• You can click [Picture] in the [Area Parts]/[Device List]/[Component List] on the [Tools] menu, then click each design window.
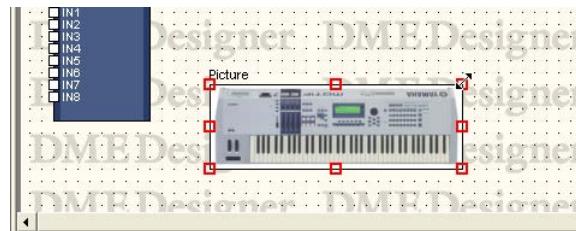
When you place a picture object, the "Open" dialog box is displayed. Select the image file and click the [Open] button. The picture will be placed in the design window.
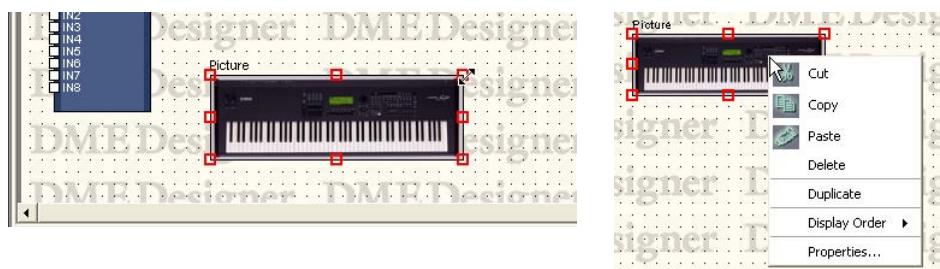
■ **Picture Object**

When you click a picture object that is located in each design window, handles (small squares) appear at the corners and sides of the object. You can expand or reduce the picture's size by dragging a handle.

If you double-click on the object, the "Open" dialog opens. There you can change the image file. If you right-click on a picture object, a context menu will be displayed.

■ **Picture Module Object Context Menu**

[Cut]
Cuts the selected object and moves it to the clipboard.

[Copy]
Copies the selected object to the clipboard.

[Paste]
Pastes the object that is on the clipboard.

[Delete]
Deletes the object you clicked on.

[Duplicate]
Duplicates the object you clicked on.
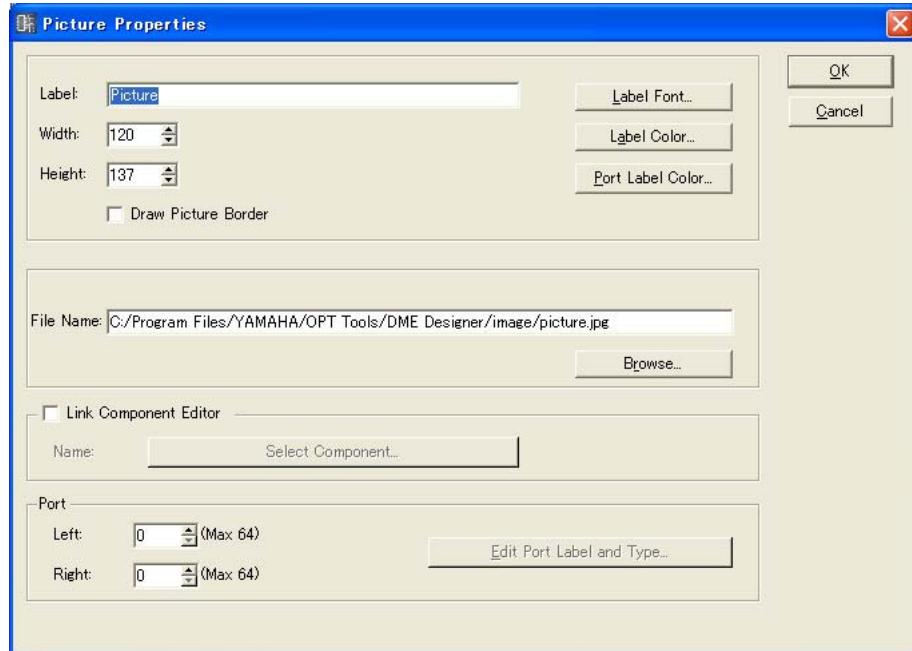
[Display Order]
Changes the display order of the objects, according to a command in the submenu.

[Properties]
Displays the "Picture Properties" dialog box.

■ **Picture Object Properties**

To display the "Picture Properties" dialog box, select a picture object, then click the [Properties] command on the [Edit] menu.

[Label] Box

You can enter up to 100 English characters to display over the object.
If the box is left blank, the label will disappear.

[Draw Picture Border]

Displays a border around picture objects.

[Label Font] Button

Sets the font for the label. Clicking here displays the "Select Font" dialog box.
For information about the "Select Font" dialog box, see page 202.

[Label Color] Button

This sets the color of the label text. Clicking here displays the "Select Color" dialog box.
For information about the "Select Color" dialog box, see page 203.

[Port Label Color] Button

Sets the color of the I/O port label. Click to display the Select Color dialog box.

[File Name] Box

Displays the path to the graphic file.

[Browse] Button

Selects a graphic file.

[Link Component Editor]

When On a Picture object can be double clicked to open the component editor specified by the [Select Component] button.

[Select Component] Button

Specifies the component editor to be opened when a Picture object is double clicked. Only effective when [Link Component editor] is On.

Port

Specifies the number of ports to be displayed for a picture object.

- **[Left]**
  Sets the number of ports to be displayed on the left.

- **[Right]**
  Sets the number of ports to be displayed to the right.

- **[Edit Port Label] Button**
  Sets the label and type for each port. Click to display the [Edit Port Label] dialog.
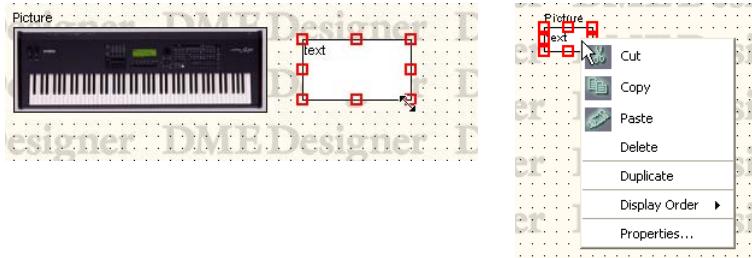
[OK] Button

Accepts the changed settings and closes the dialog box.

[Cancel] Button

Closes the dialog box without changing the settings.

Text Box

Text objects can be arranged in all design windows. Text is entered into the "Text Properties" dialog box. When first placed in the design window, the word "Text" is entered into the box.
If you click the text object, handles (small squares) appear at the corners and sides of the object. You can adjust the size by dragging the handles. You can open the "Text Properties" dialog box by double-clicking the box. If you right-click on the object, a context menu will be displayed.

■ Text Object Context Menu

[Cut]
Cuts the selected object and moves it to the clipboard.

[Copy]
Copies the selected object to the clipboard.

[Paste]
Pastes the object that is on the clipboard.

[Delete]
Deletes the object you clicked on.

[Duplicate]
Duplicates the object you clicked on.
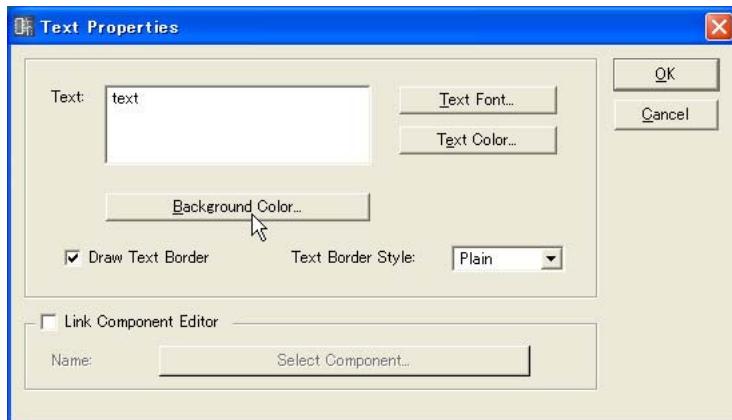
[Display Order]
Changes the display order of the objects, according to a command in the submenu.

[Properties]
Displays the "Text Properties" dialog box.

■ **Text Object Properties**

To display the "Text Properties" dialog box, double-click on a text object, or select a text object, then click the [Properties] command on the [Edit] menu.

[Text] Box

You can enter up to 10,000 English characters to display in the text object box.

[Text Font] Button

Sets the font. Clicking here displays the "Select Font" dialog box.
For information about the "Select Font" dialog box, see .

[Text Color] Button

Sets the color of the text. Clicking here displays the "Select Color" dialog box.

[Background Color] Button

Sets the color of the background. Clicking here displays the "Select Color" dialog box.

> **NOTE**

> For information about the "Select Color" dialog box, see .

[Draw Text Border]

Displays a frame around the text object. If this is not checked, only the text will be displayed on the sheet.

[Text Border Style] Box

Sets the style of the object. From the list, select [Plain], [Raised], or [Sunken].

[Link Component Editor]

When On a Text object can be double clicked to open the component editor specified by the [Select Component] button.

[Select Component] Button

Specifies the component editor to be opened when a Text object is double clicked. Only effective when [Link Component editor] is On.

[OK] Button

Accepts the changed settings and closes the dialog box.
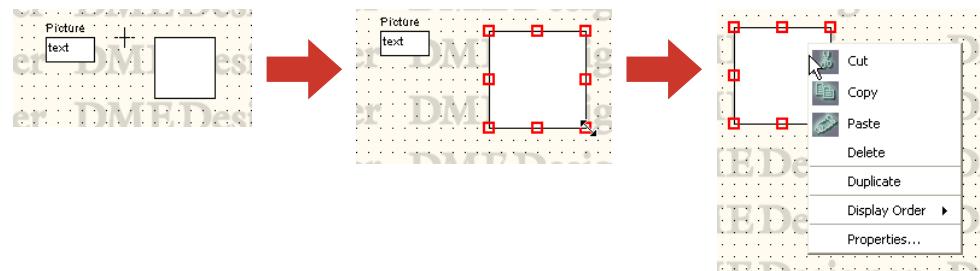
[Cancel] Button

Closes the dialog box without changing the settings.

Box (Rectangle)

You can arrange rectangles on the sheet.
If you click the box, handles (small squares) appear at the corners and sides of the object. You can adjust the size by dragging the handles. You can open the "Box Properties" dialog box by double-clicking the box. If you right-click on the object, a context menu will be displayed.

■ Box Object Context Menu

[Cut]
Cuts the selected object and moves it to the clipboard.

[Copy]
Copies the selected object to the clipboard.

[Paste]
Pastes the object that is on the clipboard.

[Delete]
Deletes the object you clicked on.

[Duplicate]
Duplicates the object you clicked on.
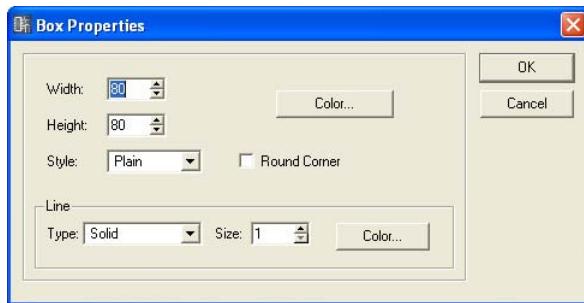
[Display Order]
Changes the display order of the objects, according to a command in the submenu.

[Properties]
Displays the "Box Properties" dialog box.

■ Box Object Properties

To display the "Box Properties" dialog box, double-click on a box object or select a box object, then click the [Properties] command on the [Edit] menu.

[Width] Box

Specifies the width of the object in pixels. The default is 50 pixels.

[Height] Box

Specifies the height of the object in pixels. The default is 50 pixels.

[Style]

Sets the style of the object. From the list, select [Plain], [Raised], or [Sunken].

[Round Corner]

Creates a rectangular box with rounded corners.

[Color] Button

Sets the color of the box. Clicking here displays the "Select Color" dialog box.
For information about the "Select Color" dialog box, see page 203.

Line

Sets the line that frames the box.

- **[Type]**
  Displays a list where you can select the type of line to frame the box. The following types are available: [Solid], [Dash], [Dot], [DashDot], and [DashDotDot].

- **[Size] Box**
  Sets the width of the line that frames the box. This setting can range from 1 to 100 pixels.

- **[Color] Button**
  Sets the color of the line that frames the box. Clicking here displays the "Select Color" dialog box.
  For information about the "Select Color" dialog box, see page 203.
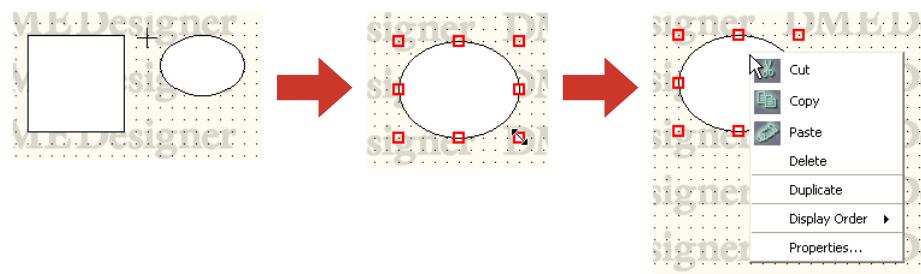
[OK] Button

Accepts the changed settings and closes the dialog box.

[Cancel] Button

Closes the dialog box without changing the settings.

Ellipse

[Ellipse] in the Toolkit window places a elliptical shape on the sheet.
When you click an Ellipse object that is located in the sheet, handles (small squares) appear at the corners and sides of the object. You can adjust the size by dragging the handles. You can open the "Ellipse Properties" dialog box by double-clicking the ellipse. If you right-click on the object, a context menu will be displayed.

■ Ellipse Object Context Menu

[Cut]
Cuts the selected object and moves it to the clipboard.

[Copy]
Copies the selected object to the clipboard.

[Paste]
Pastes the object that is on the clipboard.

[Delete]
Deletes the object you clicked on.

[Duplicate]
Duplicates the object you clicked on.
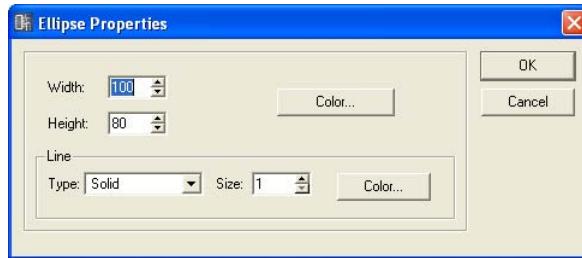
[Display Order]
Changes the display order of the objects, according to a command in the submenu.

[Properties]
Displays the "Ellipse Properties" dialog box.

■ **Ellipse Object Properties**

To display the "Ellipse Properties" dialog box, double-click on an ellipse object, or select an ellipse object, then click the [Properties] command on the [Edit] menu.

[Width] Box

Specifies the width of the object in pixels. The default is 50 pixels.

[Height] Box

Specifies the height of the object in pixels. The default is 50 pixels.

[Color] Button

Sets the color of the ellipse. Clicking here displays the "Select Color" dialog box.
For information about the "Select Color" dialog box, see page 203.

Line

Sets the line that frames the ellipse.

• **[Type]**
Displays a list where you can select the type of line to frame the ellipse. The following types are available: [Solid], [Dash], [Dot], [DashDot], and [DashDotDot].

• **[Size] Box**
Sets the width of the line that frames the ellipse. This setting can range from 1 to 100 pixels.

• **[Color] Button**
Sets the color of the line that frames the ellipse. Clicking here displays the "Select Color" dialog box.
For information about the "Select Color" dialog box, see page 203.

[OK] Button

Accepts the changed settings and closes the dialog box.
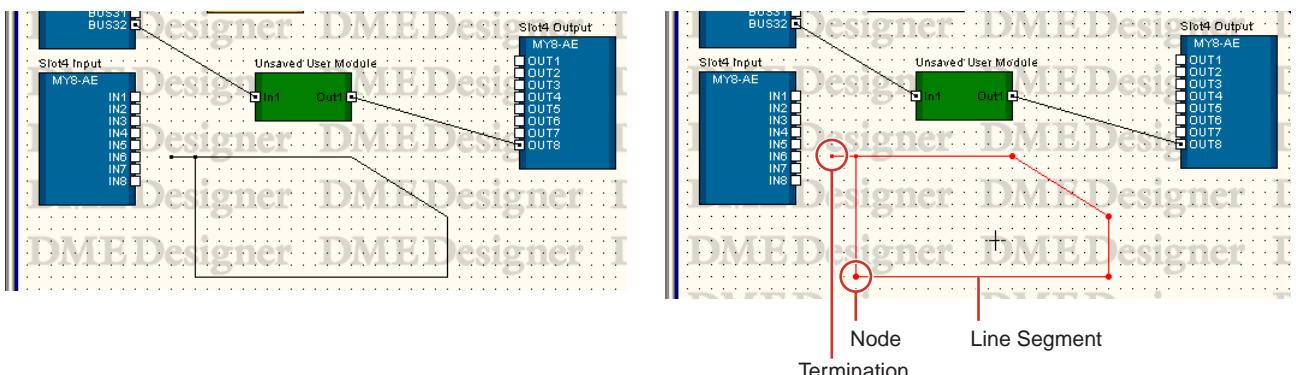
**[Cancel] Button**

Closes the dialog box without changing the settings.

Wire
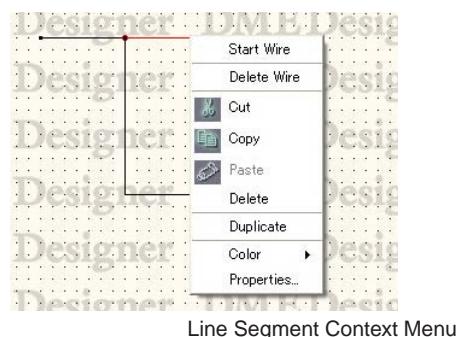
Draws lines (wires) for connecting components and creating shapes. For instructions on drawing wires, see "Drawing and Editing Wires" on page 219.
First click on an wire object arranged on the sheet to select it, then double-click the object. This opens a "Wire Properties" window.

Node   Line Segment

Termination

If you right-click on a wire object, one of three types of context menus will be displayed, depending where you clicked.

■ Wire Object Context Menu (Line Segment)

Line Segment Context Menu

[Start Wire]
Begins drawing a line segment from the location where you clicked.

[Delete Wire]
Deletes the entire wire.

[Cut]
Cuts the selected object and moves it to the clipboard.

[Copy]
Copies the selected object to the clipboard.

[Paste]
Pastes the object that is on the clipboard.

[Delete]
Deletes the line segment where you right-clicked.
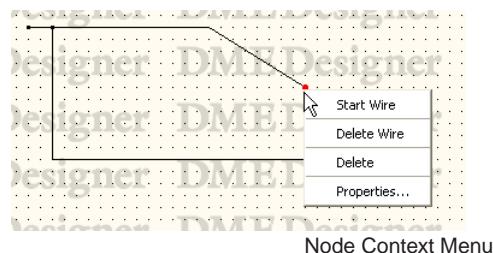
[Duplicate]
Duplicates the wire object.

[Wire Color]
Specifies the wire color.

[Properties]
Displays the "Wire Properties" dialog box.

■ **Wire Object Context Menu (Node)**

Node Context Menu

[Start Wire]
Begins drawing a wire segment from the location where you right-clicked.
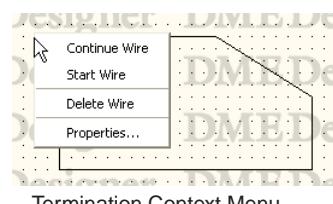
[Delete Wire]
Deletes the entire wire.

[Delete]
Deletes the node. The nodes before and after will become directly connected.

[Properties]
Displays the "Wire Properties" dialog box.

■ **Wire Object Context Menu (Termination)**

Termination Context Menu

[Continue Wire]
Begins drawing wire from a termination node.

[Start Wire]
Begins drawing a wire from the location where you right-clicked.
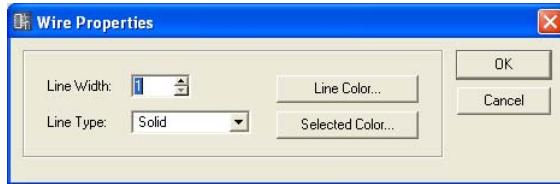
[Delete Wire]
Deletes the entire wire.

[Properties]
Displays the "Wire Properties" dialog box.

■ **Wire Object Properties**

To display the "Wire Properties" dialog box, double-click on a wire object. You can also select a wire object, then click the [Properties] command on the [Edit] menu.

[Line Width] Box

Set the line width. This setting can range from 1 to 10 pixels.

[Line Type]

Displays a list where you can select the type of line. The following types are available: [Solid], [Dash], [Dot], [DashDot], and [DashDotDot].

[Line Color] Button

Sets the color of the line. Clicking here displays the "Select Color" dialog box.

[Selected Color] Button

Sets the color of the selected line. Clicking here displays the "Select Color" dialog box.

NOTE

For information about the "Select Color" dialog box, see page 203.

[OK] Button

Accepts the changed settings and closes the dialog box.
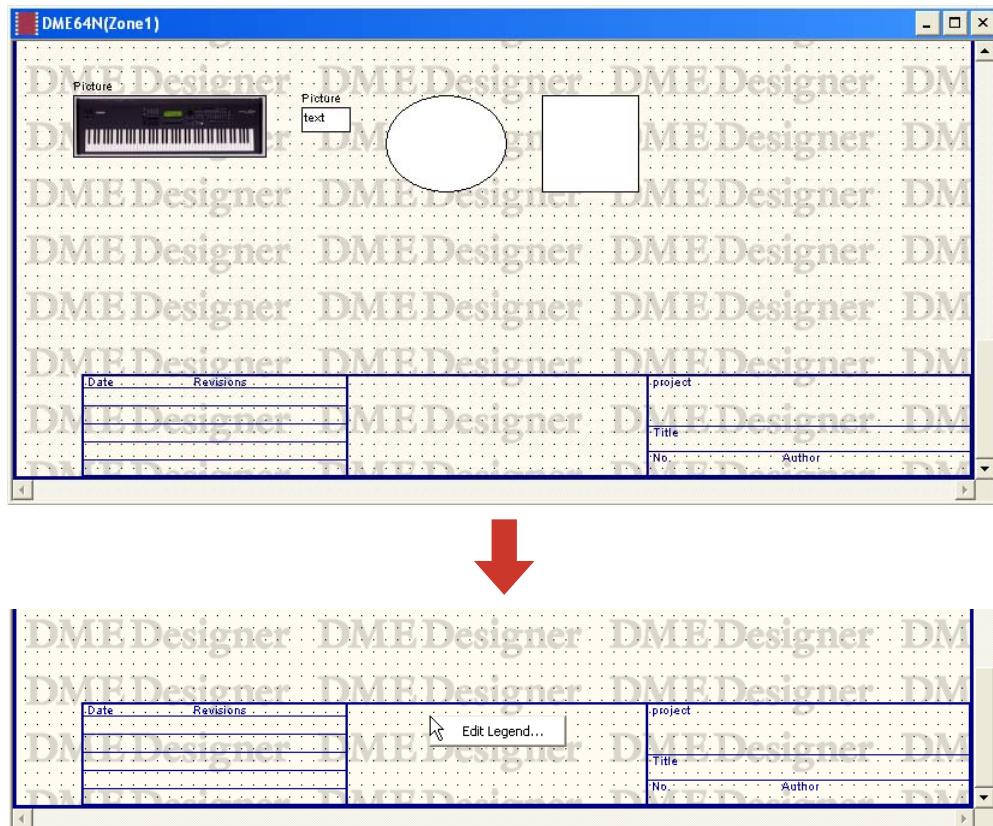
### [Cancel] Button

Closes the dialog box without changing the settings.

Legend (Descriptive Fields)
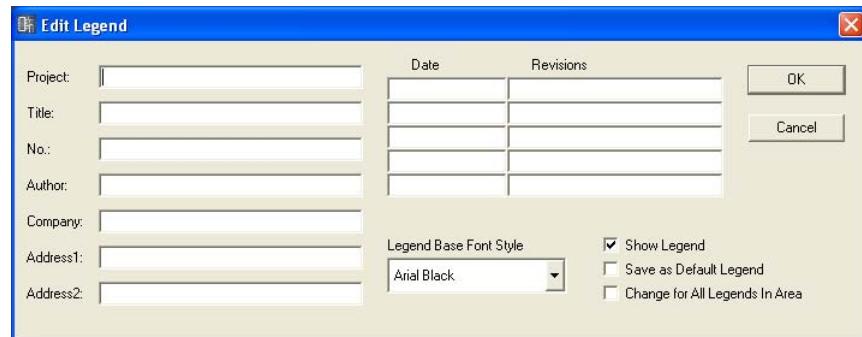
Displays a legend for all sheets except the User Module window.
When you click the [Edit Legend] command on the [Edit] menu or double-click on one of the Legend fields displayed on the sheet, the "Edit Legend" dialog box is displayed. If you right-click on the Legend, the displayed context menu will have the [Edit Legend] command only. If you click there it will display the "Edit Legend" dialog box.

The "Edit Legend" dialog box is used to enable/disable Legend display and to set the contents displayed there. You can display the [Edit Legend] command from the [Edit] menu.

■ **"Edit Legend" Dialog Box**

[Project] Box, [Title] Box, [No.] Box, [Author] Box, [Company] Box, [Address1] Box, and [Address2] Box

Used to enter the Project, Title, Number, Author, Company, Address1, and Address2. You can enter up to 100 English characters for each field.

[Date] Box and [Revisions] Box

You can enter up to five dates and five revisions. You can enter up to 100 English characters for each field.

[Legend Base Font Style]

Displays a list where you can select the font.

[Show Legend]

Place a checkmark here to display the legend on the sheet.

[Save as Default Legend]

Saves this legend as the default legend used when a new sheet is created. When a new configuration is created, it will have a legend with the same contents as this one.

[Change for All Legends In Area]

Place a checkmark here to have the changes made here reflected in sheets in all design windows included in the area.

[OK] Button

Accepts the changed settings and closes the dialog box.

[Cancel] Button
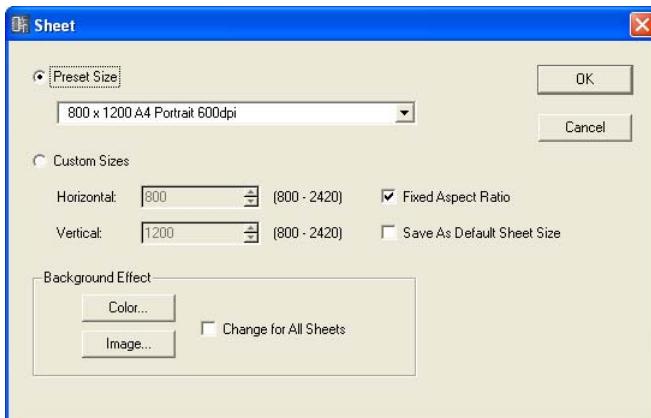
Closes the dialog box without changing the settings.

Sheet

There is one sheet in each design window for arranging objects. The size of the sheet and its background image are specified with the "Sheet" dialog box. This dialog box is displayed using the [Sheet] command from the [Tools] menu.
Make the window where you are going to change sheet settings active, then click [Tools] menu → [Sheet].

■ "Sheet" Dialog Box

[Preset Size]
Displays a list where you can select preset paper sizes.
When you select a paper size, numerical values are set for [Horizontal] and [Vertical].

[Custom Sizes]
Set a custom size by specifying the vertical and horizontal sizes of the sheet.

- [Horizontal] Box
  Sets the horizontal width of the sheet.

- [Vertical] Box
  Sets the vertical height of the sheet.

- [Fixed Aspect Ratio]
  When this is checked the relationship between horizontal and vertical is fixed. When the value for [Horizontal] or [Vertical] changed, the size of the other direction changes so that the proportions of the paper remain the same.

- [Save As Default Sheet Size]
  When turned ON, the current values will become the default for creating sheets. New sheets will be created at the same size.

  NOTE

  The upper left is the starting point for measuring sheet size. Therefore, in the [Horizontal] box set the number of pixels to the right edge, and in the [Vertical] box, set the number of pixels to the lower edge. The boundaries in which items are already arranged on the sheet will form the minimum sheet size.
  Because any objects that are moved, cut, or deleted will return to the same location if the [Undo] command is used, the minimum sheet size will be determined by the boundaries in which any objects were located, now or in the past.

Background Effect

Sets the background for the sheet.

- **[Color] Button**
  Sets the color of the background. Clicking here displays the "Select Color" dialog box.
  For information about the "Select Color" dialog box, see page 203.

- **[Image] Button**
  Displays an image as the sheet background. You can use image files in the following formats:
  BMP (.bmp), PNG (.png), XPM (.xpm), and JPEG (.jpg). Clicking here displays the "Select Image" dialog box.
  For information about the "Select Image" dialog box, see page 205.

- **[Change for All Sheets]**
  Changes all sheets so that they are the same.

[OK] Button
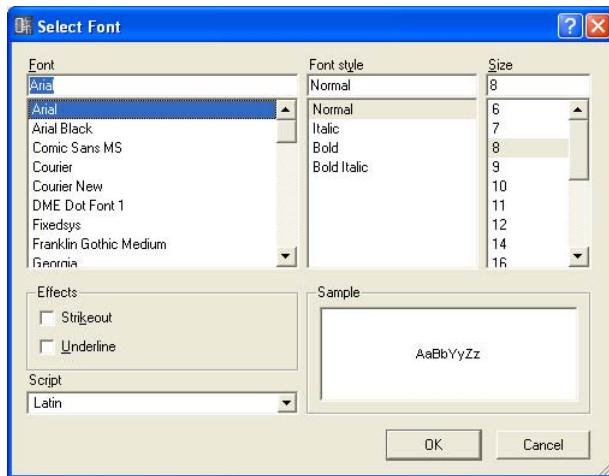
Accepts the changed settings and closes the dialog box.

[Cancel] Button

Closes the dialog box without changing the settings.

"Select Font" Dialog Box

When you click the [Font] or [Label Font] button in an object's properties dialog box, the "Select Font" dialog box is displayed. Sets the font.

■ Font

Selects the font. The currently selected font name is displayed in this box. Select a font by clicking its name on the list.

■ Font Style

Sets the style of the text. The currently selected style is displayed in the box. Select a style by clicking its name on the list below.
- Normal ....Standard style
- Italic ....Italic or slanted text
- Bold ....Bold text
- Bold Italic......Bold italic text

■ Size

Sets the text size. The currently selected size is displayed in the box. Select a size by clicking it in the list below.

■ Effects

Sets effects for the text. Check the effects you wish to set.
- Strikeout........Adds a strikeout line through the center of the text.
- Underline ......Adds an underline to the text.

■ Script
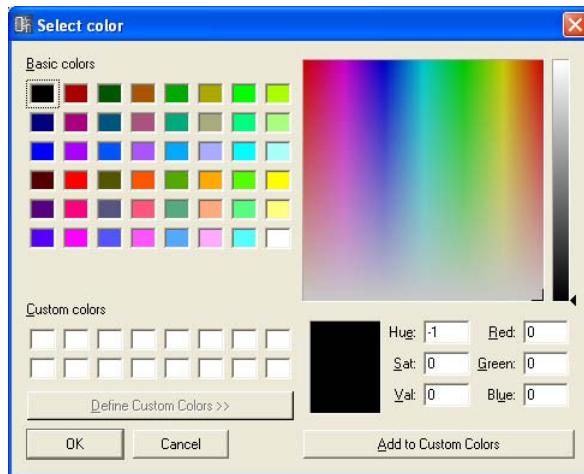
From the list, select the script (language) for the text. There is no need to change the language setting unless you want to specify a specific language.

■ Sample

Displays an example of the current settings.

"Select Color" Dialog Box

When you click the [Color] or [Label Color] button in an object's properties dialog box, the "Select color" dialog box is displayed. Sets the color of objects and text.

■ Setting Basic Colors

There are 48 basic colors provided in the [Basic colors] section. When you select a basic color by clicking on it, the position of that color in the color palette to the right is indicated by a cross (+). Information about the selected color is displayed below the color palette.
Click the [OK] button to set the color you selected.

■ Setting Colors That Are Not in the [Basic colors] Section.

You can select any color in the color palette displayed at the upper-right of the dialog box by clicking on it in the palette. Color information is displayed below the color palette. If you like the color you selected, click the [OK] button. If you don't like the color, you can select a new color by clicking in another location in the color palette, or by dragging the cross symbol to another location there.
Grey colors can be selected on the tall, thin chart to the right of the palette.
Click the [OK] button to set the color you selected.
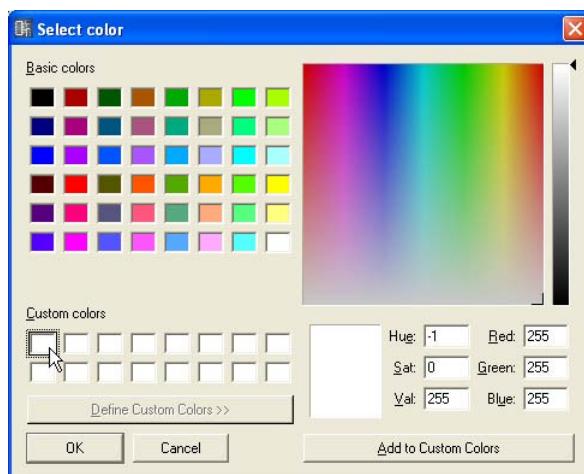
■ Saving Colors You Have Created

In the custom color section, you can save up to 16 colors you have created. When you save a custom color, it can be selected by clicking on its color button, in the same way as for the [Basic colors].
Even if you open the "Select color" dialog box from the Properties of another object, any custom color you save will be displayed and you can use that same color for the other object.

1 Click the [Custom colors] box where you will save the color you create.
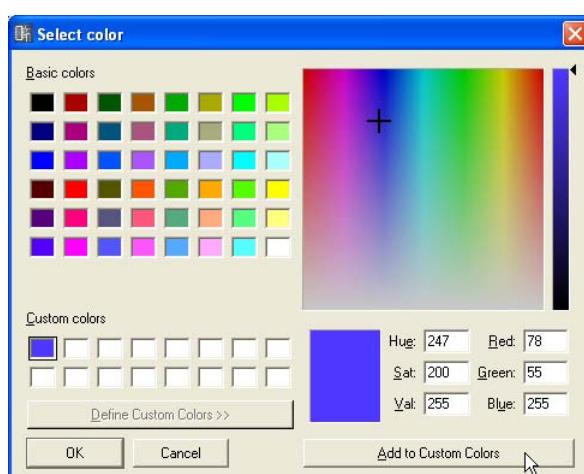
The box you clicked will be selected and a frame will appear around it.

2 Set the color on the color palette.

3 Click the [Add to Custom Colors] button.

The selected color will be added to [Custom colors].

NOTE

You can save another color in a box that already has an original color saved in it. Just click on the box to select it. The new color will overwrite the previous color, which will be lost.

"Select Image" Dialog Box

You can display an image for the background of sheets or objects. You can use image files in the following formats: BMP (.bmp), PNG (.png), XPM (.xpm), and JPEG (.jpg).
In the project file, the location and name of the image file are registered in an relative path below the [ContentsFolder] and the linked image file is read and displayed. If the image file is moved, renamed, or the [ContentsFolder] is changed, the image cannot be displayed.

> **NOTE**
>
> The default for the "Preferences" dialog box → [Application] tab → [ContentsFolder] in the Main Panel window is "C:\Program Files\YAMAHA\OPT Tools\DME Designer." The [Designer] folder is located in the [DME Designer] folder. Within that folder, there is an [Images] folder prepared for saving image files.

If you click the [Image] button in the properties dialog box for an object that can display a background image or in the "Sheet" dialog box, the "Select Image" dialog box will be displayed. Specify an image file and set its display method.

Image Layout

Selects the manner in which the image file will be displayed.

- **[Center]**

    Centers the image in the object or sheet.

- **[Tile]**

    Displays multiple copies of the image side-by-side until the available space is filled. If the image file is smaller than the sheet, it will be displayed repeatedly like tiles on a wall.

- **[Fit]**

    Expands or reduces the size of the image to match the size of the sheet where it will be displayed.
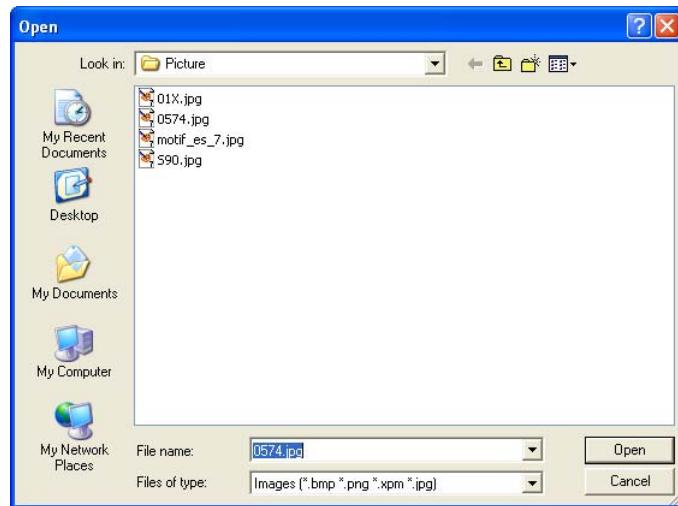
[File] Box

Specifies a path for the image file. A path can be directly entered in the box. You can also click the [Browse] button and select the image file. It will be entered automatically.
To stop display of an image, delete all characters in the box, leaving the field blank.

[Browse] Button

Specifies a path for the image file. Clicking here displays the "Open" dialog box. Select a file with one of the following extensions: ".bmp," ".png," ".xpm," or ".jpg," then click the [Open] button.


[OK] Button

Accepts the changed settings and closes the dialog box.
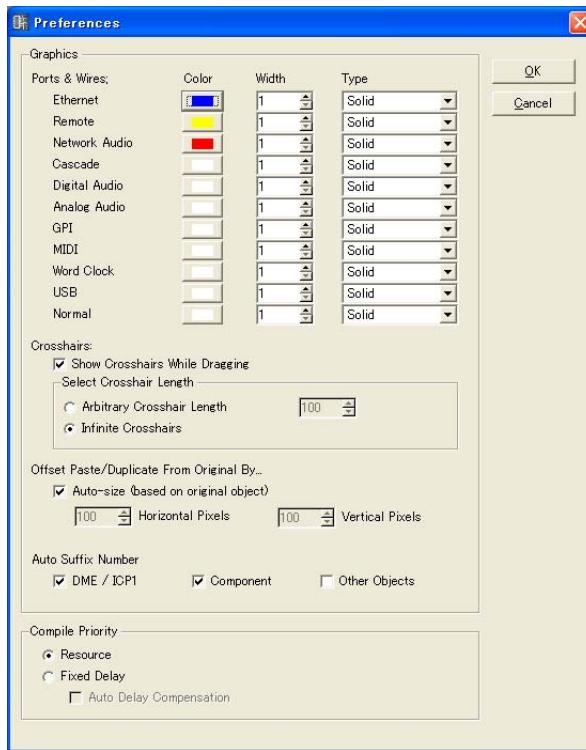
[Cancel] Button

Closes the dialog box without changing the settings.

Design Window Shared Settings and Operations

Preferences

You can set the operating environment for the Designer window in the "Preferences" dialog box. This dialog box is opened using the [Preferences] command in the Designer window [Print] menu.

■ Graphics

Ports & Wires
Specifies wire color, thickness, and type for each port type.

- **[Color]**
  Sets the default color for the port and wire.

- **[Width]**
  Sets the default wire width from a range of 1 to 5.

- **[Type]**
  Sets the port type.

  ___NOTE___

  The initial color and thickness of the wires produced when drawing connections are specified here. The color and thickness of drawn wires can be changed via the Wire Properties dialog box.

Crosshairs
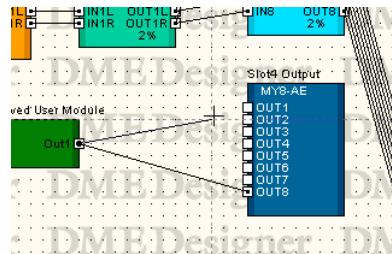
- **[Show Crosshairs While Dragging]**
  Place a checkmark here to have crosshairs displayed for guidance when dragging the wire endpoint.

- **[Arbitrary Crosshair Length]**
  Specifies the length of the crosshair lines.
  Enter a number into the [Arbitrary Crosshair Length] box to specify the length in pixels.
  [Infinite Crosshairs] causes the lines to go all the way to the edge of the window.

Offset Paste/Duplicate from Original By

Sets the position when pasting or duplicating objects.

- **[Auto-size (based on original object)]**
  If you place a checkmark here, the paste/duplicate position will be automatically adjusted so that the object does not overlap the original object.

- **[Horizontal Pixels] Box**
  Sets the horizontal distance.

- **[Vertical Pixels] Box**
  Sets the vertical distance.

Auto Suffix Number

Turns automatic appending of sequentially-numbered suffixes to the names of placed objects on or off.

- **[DME/ICP1]**
  When ON numbered suffixes will automatically be appended to added DME, and ICP objects.

- **[Component]**
  When ON numbered suffixes will automatically be appended to added SPX and user module objects.

- **[Other Objects]**
  When ON numbered suffixes will automatically be appended to added objects not covered by the above two categories.

Compile Priority

Here you can make compile settings for the configuration.

> **NOTE**
>
> These compile settings are reflected in online status. If you change the settings in offline status, it will be enabled when going online after going offline once.

- **[Resource]**
  Compiles arrangable components in order based on their component numbers. The Delay values differ depending on the signal lines.

- **[Fixed Delay]**
  Fixes the Delay value (number of Samples) for the signal lines. However, it also reduces the number of components that can be arranged.

- **[Auto Delay Compensation]**
  This turns ON or OFF a function that automatically corrects the component delay when [Fixed Delay] is selected.

  > **NOTE**
  >
  > Auto Delay Compensation will not function properly in configurations that have a loop connection.

[OK] Button
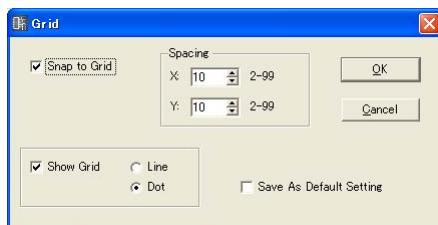
Accepts the changed settings and closes the dialog box.

[Cancel] Button

Closes the dialog box without changing the settings.

Grid

Displays a grid on the sheet in each design window to guide the placement of objects. You can also have the objects "snap to" (automatically align with) the grid when dragging them. When you click the [Grid] command on the [Tools] menu, the "Grid" dialog box is displayed. Here you can enable or disable display of the grid and set the grid interval and form.

[Snap to Grid]

Makes objects align the grid when dragging them.

Spacing

This sets the spacing of the grid. This setting can range from 2 to 99 pixels.

- **[X:] Box**

  This sets the spacing of the grid in the horizontal direction.

- **[Y:] Box**

  This sets the spacing of the grid in the vertical direction.

[Show Grid]

Displays the grid. Place a checkmark here to enable display and select the type of grid.

- **[Line]**

  Displays the grid using lines.

- **[Dot]**

  Displays the grid using dots.

[Save As Default Setting]

Place a checkmark here to make the current grid settings the default when a new sheet is created.

[OK] Button

Accepts the changed settings and closes the dialog box.

[Cancel] Button
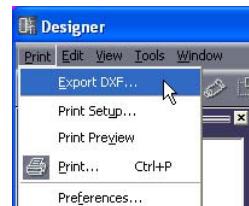
Closes the dialog box without changing the settings.

Exporting Each Design Window
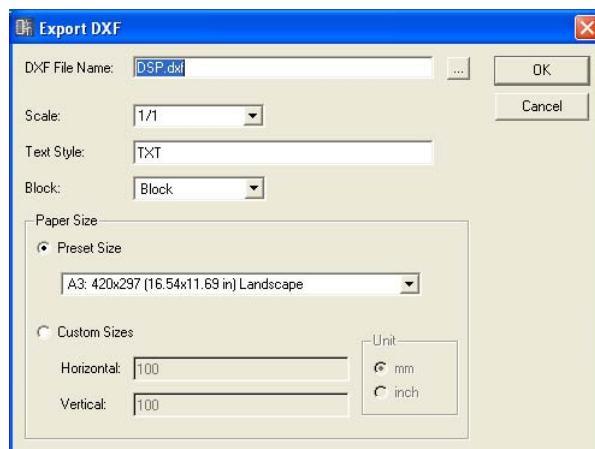
Configurations are saved in project files. This is done using the [File] menu → [Save] and [Save As] commands in the Main Panel window. For information about saving project files see "Project Files" on page 22.

Instead of saving projects in their entirety, you can output the information contained in the active window using the Designer Window [Print] → [Export DXF] command and save it in a DXF format file. These files have ".dxf" as their filename extension.

Because the DXF format uses the standard CAD file format, it can be opened using CAD software. DXF format files can also be opened by graphics software that support vector graphics, such as Adobe Illustrator®.

When you select this command, the "Export DXF" dialog box will be displayed.
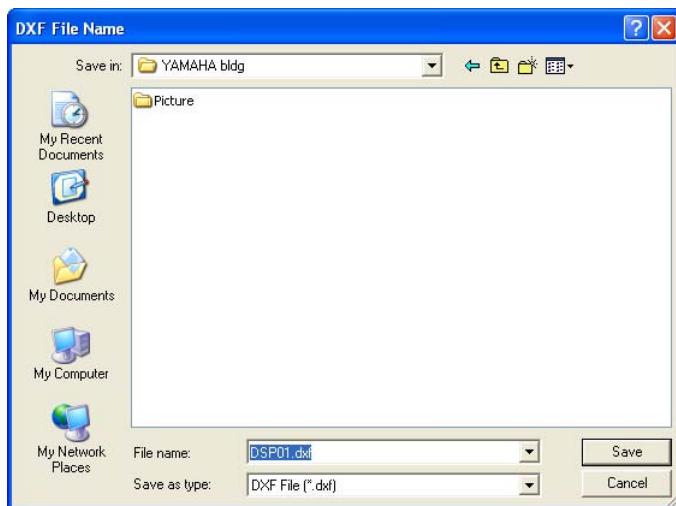
- Symbols are substituted for external devices in the following three types of folders.
    Microphone → mike symbol
    Power Amp → amp symbol
    Speaker → speaker symbol
- Text decoration except for size will be eliminated.
- Picture objects and background images for the sheet or objects will all be eliminated.
- [Style] attributes for boxes will be eliminated.

When you select the [Print] menu → [Export DXF] command, the "Export DXF" dialog box will be displayed.

■ **DXF File Name**

Enter a filename for the DXF file. The default file name entered here will vary according to the currently active window.
If you click the [...] button at the right of the box, the "DXF File Name" dialog box is displayed. Specify the DXF file filename and the folder where the file will be saved.

Enter the filename, specify the folder where the file will be saved, then click the [Save] button. When you return to the "Export DXF" dialog box, the specified filename will be displayed in the [DXF File Name] box.

NOTE

When you click on the [Save] button in the "DXF File Name" dialog box, the DXF file is not saved. Only when you click on the [OK] button in the "Export DXF" dialog box, does the DXF file become saved.

■ **Scale**

Sets the reduction ratio. When the size of the sheet is large, you can reduce it before exporting it.

■ **Text Style**

Specifies the text font for output in DXF format. The default is the "TXT" (drawing font used in CAD).

■ **Block**

Sets the block form used in the sheet. Displays a list where you can select the form.

[Block]
Makes the blocks rectangular and groups the text in the port icons and port names.

[Explode]
Makes the blocks into sets of four lines, and does not group the text in the port icons and port names.

■ **[Paper Size]**

Sets the size of the paper.

[Preset Size]

Displays a list where you can select preset paper sizes. When you select a paper size, numerical values are set for [Horizontal] and [Vertical].

[Custom Sizes]

Set a custom size by specifying the vertical and horizontal sizes of the sheet.

- [Horizontal] Box
  Sets the horizontal width of the sheet.

- [Vertical] Box
  Sets the vertical height of the sheet.

[Unit]

Selects the unit used for setting the sheet size.

[OK] Button
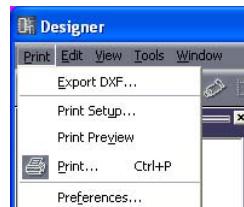
Saves the DXF file according to the settings in the dialog box.

[Cancel] Button

Cancels the DXF file export process.
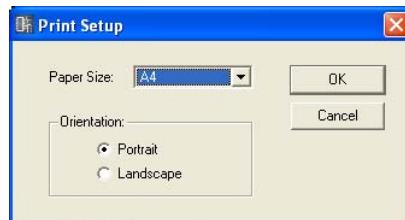
Printing Each Design Window

You can print out the content of each design window just as it appears on the screen. The content in the window will be expanded or reduced in size as necessary to match the size and orientation of the paper, and printed onto a single sheet of paper. Commands related to printing are found on the Designer Window [Print] menu.
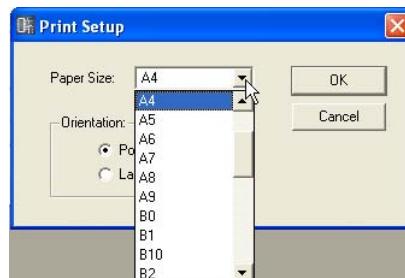
■ **[Print Setup]**

When you select this command, the "Print Setup" dialog box will be displayed. Sets the paper size and orientation.

[Paper Size]
Displays a list where you can select the paper size.

Orientation
Sets the orientation of the paper.

- [Portrait]
  Prints on the paper with its long sides vertical.

- [Landscape]
  Prints on the paper with its long sides horizontal.

[OK] Button
Accepts the changed settings and closes the dialog box.
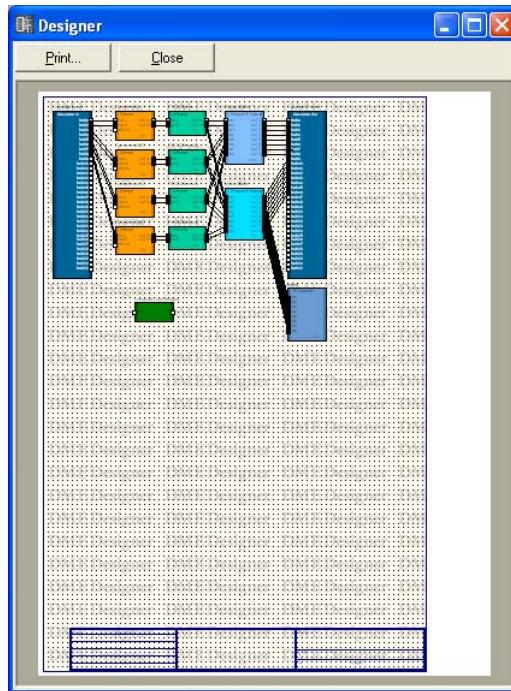
[Cancel] Button
Closes the dialog box without changing the settings.

■ **[Print Preview]**

Displays a print preview of the active design window. You can check the appearance of the page before printing it.

[Print]
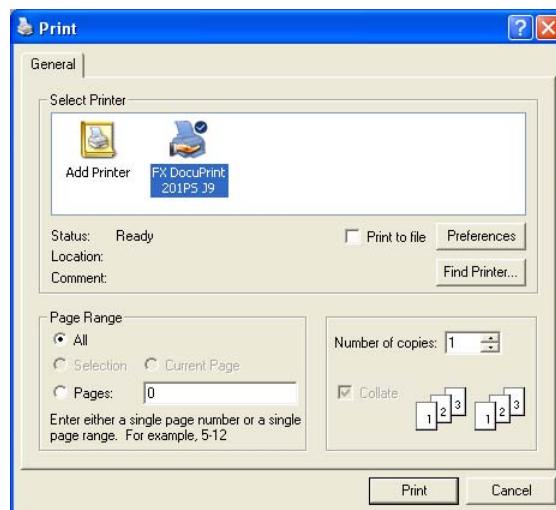
Displays the "Print" dialog box.

[Close]

Closes the print preview window.

■ **[Print]**

Prints the active window. When you select this command, the "Print" dialog box will be displayed. Enter the number of copies to print into the [Number of Copies] box, and click the [Print] button.

Arranging Objects

Multiple object placement methods are available.

■ Dragging from the Toolkit Window

You can drag items from the Toolkit window to the location where you want to place them in each design window.

■ Double-Clicking an Object in the Toolkit Window

You can double-click an object in the Toolkit window to place it in each design window.

■ Selecting from the [Tools] Menu

Available objects are displayed on the [Area Parts List]/[Device List]/[Component List] submenus which are accessed from the [Tools] menu. When you click an object name, the mouse pointer changes shape. Click the location on the sheet where you want to place the object.

■ Selecting from the Context Menu

If you right-click on the sheet, you will see the [Area Parts List]/[Device List]/[Component List] commands displayed on the context menu that appears. When you click an object name on the submenu, the mouse pointer changes shape. Click the location on the sheet where you want to place the object.

Selecting Objects

■ Selecting with a Click

You can select an object by clicking on it. If you click another object or an empty location on the sheet, it will cancel selection of the object you previously clicked.

■ Selecting with Click + <Ctrl> Key

When you want to select multiple objects, hold down the <Ctrl> key as you click each new object you want to select. If you hold down the <Ctrl> key and click again on one of the objects that is part of the multiple selection, it will cancel selection of that single object.

■ Selecting by Dragging

If you position the mouse in an empty location on the sheet and start dragging from there, a frame will be displayed as the pointer moves.
Any objects within this frame will be selected.

■ Changing the Selected Object Using the <Tab> Key

When a single object is selected, you can change the selection to the next object by pressing the <Tab> key. If you press <Shift> + <Tab>, the selection moves to the previous object. The selection order moves from left to right.

NOTE

Wires cannot be selected with the <Tab> key.

Editing Objects

Objects that have been arranged on the sheet can be edited using the [Cut], [Copy], [Paste], [Duplicate], and similar commands in the [Edit] menu. These edit commands will also appear in the context menu displayed when you right-click an object in the design window. Buttons for [Cut], [Copy], and [Paste] are also available on the Designer window toolbar.

NOTE

Some objects cannot be edited.

■ Undoing and Redoing Operations

You can undo operations using the [Undo] command on the [Edit] menu. You can use the [Redo] command to redo operations that have been undone.

■ Deleting Objects

Objects can be deleted by selecting them and pressing the <Delete> key.

NOTE

Some objects cannot be deleted. With some other objects, you must first make appropriate settings in a dialog box before you can delete them.
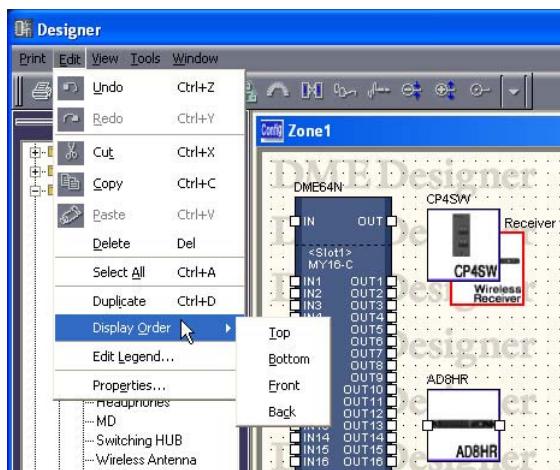
■ Moving Objects

You can move objects by dragging them with the mouse. If [Snap to Grid] is ON in the "Grid" dialog box, the dragged objects will automatically align with the grid.
You can also move a selected object using the arrow keys. If [Snap to Grid] is ON in the "Grid" dialog box, the selected object will move from grid line to grid line. If [Snap to Grid] is OFF, the object will move pixel to pixel.

Changing the Order

Objects newly placed on the sheet will be displayed above any previously placed objects they overlap. You can change this behavior using the [Display Order] command on the [Edit] menu. Select the object for which you want to change the display order, then select the appropriate command from the [Display Order] submenu on the [Edit] menu.

[Top]
Moves the selected object to the top of the stack.
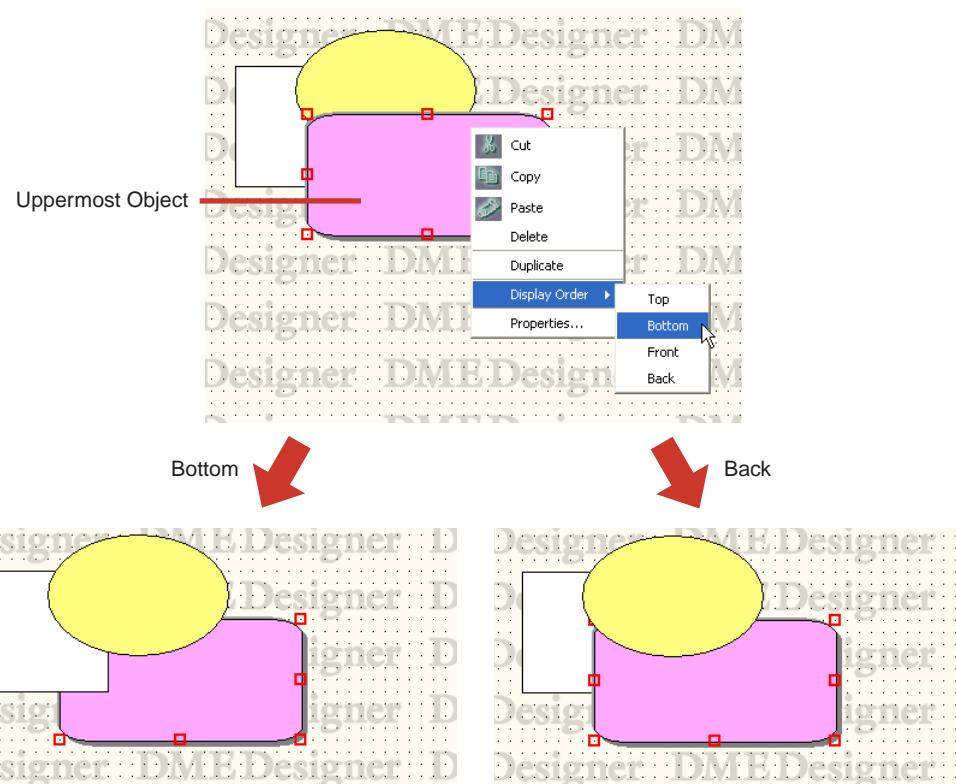
[Bottom]
Moves the selected object to the bottom of the stack.

[Front]
Moves the selected object up one level in the stack.
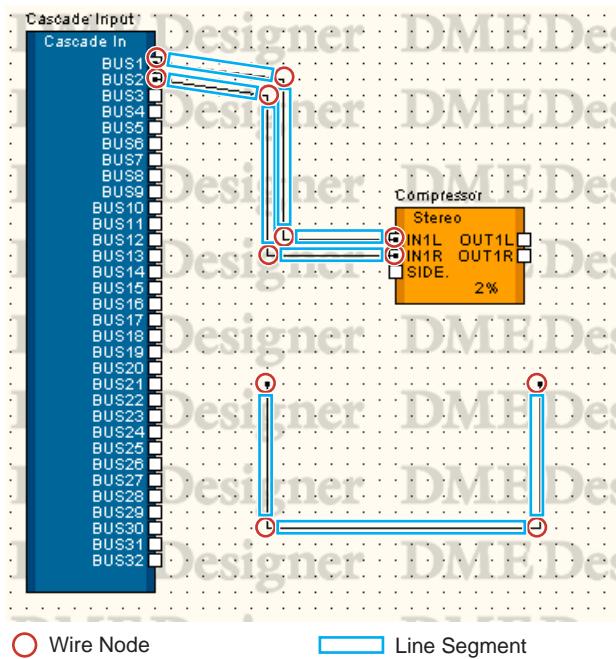
[Back]
Moves the selected object down one level in the stack.

Drawing and Editing Wires

Wire

Objects that are arranged on sheets in the Configuration or User Module windows can be connected to each other by wires. Not only does this let you logically connect signal sources (output side) and destinations (input side), it also lets you draw connections and independent lines on the display. Each wire has at least two wire nodes. Between the nodes are line segments.

○ Wire Node   ▭ Line Segment

■ Selecting Wires and Canceling Selection

You can select a line segment by clicking on it.
If you hold down the <Alt> key while clicking, you will select the entire wire.

NOTE
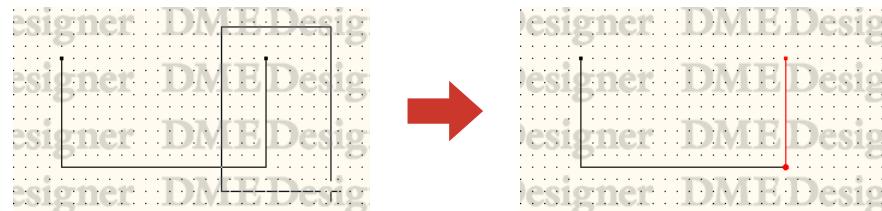
The color used when a wire object is selected can be set with [Selected Color] in the "Wire Properties" dialog box.

■ **Line Segment**

The line width default value is set from one to five pixels in the Designer window "Properties" dialog box. In the "Wire Properties" dialog box, the line thickness and color can be adjusted as required for the various wires arranged on the sheet.

Line Segment Selection
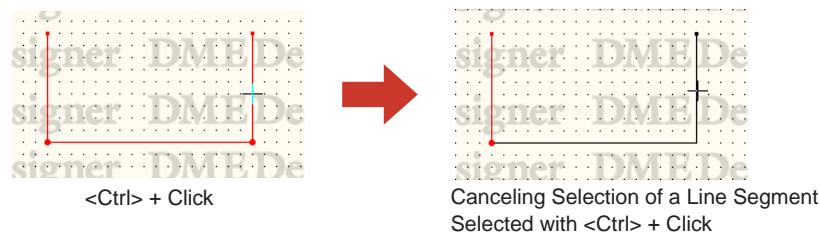
When you select a line segment by clicking on it, only that line segment is selected. If you hold down the <Ctrl> key while clicking, you can select multiple line segments. Furthermore, if you drag the mouse from an empty location on the sheet so that nodes are enclosed by a box, line segments between those nodes will be selected.

Canceling Line Segment Selection
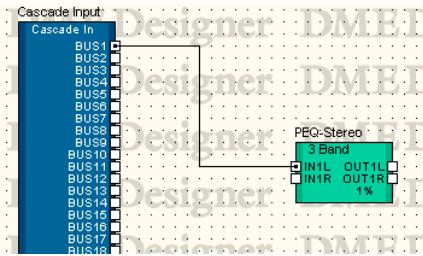
If you select another object or an empty location on the sheet, it will cancel selection of the object you previously clicked.
You can also cancel selections by holding the <Ctrl> key while clicking.

<Ctrl> + Click

Canceling Selection of a Line Segment
Selected with <Ctrl> + Click
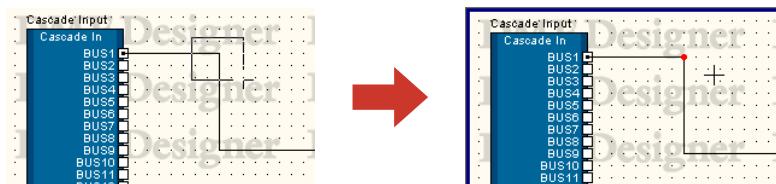
■ **Wire Nodes**

Both ends of a wire, the location where wires bend, and the location where wires diverge are called "**Nodes**." When a wire object is not selected, its nodes are not displayed. When a wire is selected, the nodes are displayed with a red circle.

Node Selection
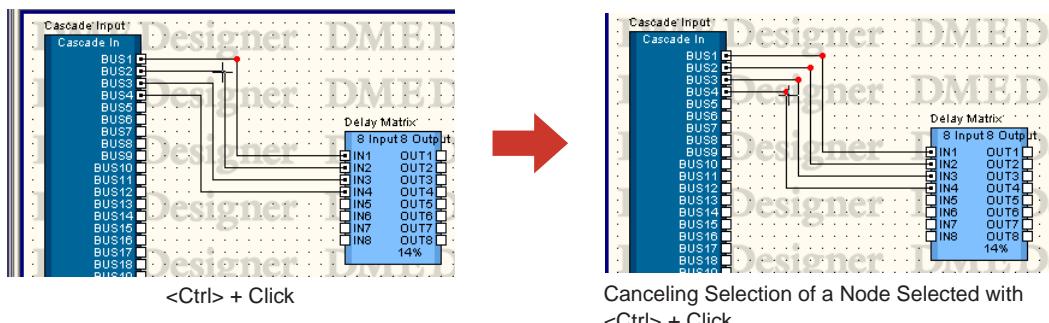
When you click on a node, only that node itself is selected. You can select multiple nodes by holding down the <Ctrl> key while clicking. Furthermore, if you drag the mouse from an empty location on the sheet so that nodes are enclosed by a box, the enclosed nodes will be selected.

Canceling Node Selection
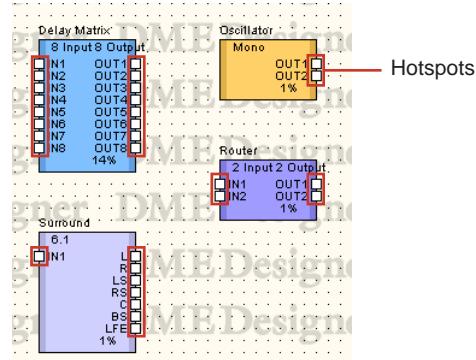
If you select another object or an empty location on the sheet, it will cancel selection of the object you previously clicked.
You can also cancel node selections by holding the <Ctrl> key while clicking. With this technique, you can cancel only the node you clicked on when multiple nodes are selected.

<Ctrl> + Click

Canceling Selection of a Node Selected with <Ctrl> + Click

Hotspot

The small white rectangles at the edge of objects are called "**Hotspots**." Wires usually connect to hotspots.
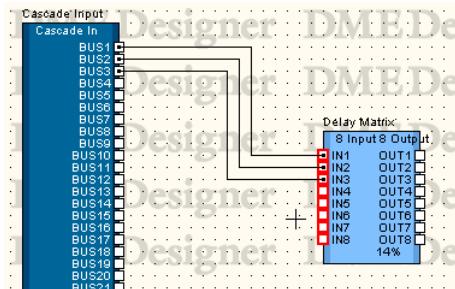
- Some hotspots do not have a connection to a logical signal within the hardware.
- Component and user module hotspots normally include logical connections.
- External device hotspots do not include logical connections.

■ Selecting Hotspots

If you click a hotspot, drawing will start. To select, press <Shift> + click.
You can select multiple hotspots as follows: Select a hotspot with <Shift> + click, then select additional hotspots using <Ctrl> + <Shift> + click.

Drawing Settings

Several functions are available to help ensure accurate wire drawing.
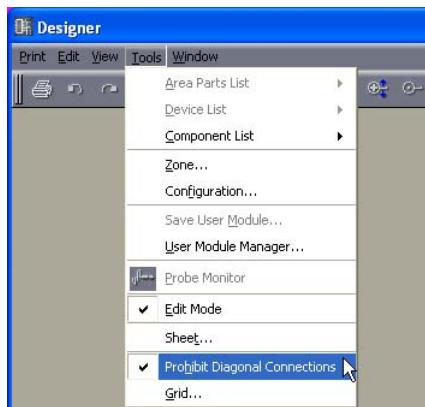
■ Grid

To accurately draw in relation to the grid, turn ON [Snap to Grid] in the "Grid" dialog box.

■ Draw Exact Vertical and Horizontal Lines

If you turn ON [Prohibit Diagonal Connections] in the [Tools] menu, wires will be drawn only vertically or horizontally. It will not be possible to draw diagonal wires. When you select this command, it is turned ON, and a checkmark appears next to it. If you select the command while it is ON, it will turn OFF.
Even if "Prohibit Diagonal Connections" is turned OFF, this function will operate whenever you press the <Shift> key while drawing.

Wire Drawing

Wire drawing starts at the positions shown in the following table:

Drawing Start Location	Start Method
Hotspot	Click
Wire End Terminal	Right-click → click [Continue Wire] on the menu
Node	Right-click → click [Start Wire] on the menu
Line Segment	Right-click → click [Start Wire] on the menu
Anywhere on the Sheet	Right-click → click [Start Wire] on the menu

NOTE

When creating diagrams the keyboard cursor keys can be used to move the mouse cursor, and the <Enter. Key can be used to create nodes.

■ Connecting Hotspots with Hotspots

Method 1   Clicking

Click the hotspot where the connection originates to begin drawing, then click the destination hotspot. The two hotspots will be connected by a wire.

NOTE

A termination cannot be connected to a terminal that will be shorted. Multiple connections cannot be made to a DME object's Cascade port.

NOTE

When creating diagrams horizontally aligned hot spots can be automatically connected by pressing the <Shift> + <→> keys or <Shift> + <←> keys.

Method 2   Dragging

Drag from the origin hotspot to the destination hotspot.

NOTE
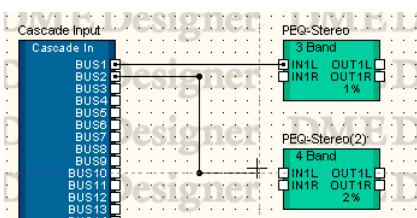
A termination cannot be connected to a terminal that will be shorted. Multiple connections cannot be made to a DME object's Cascade port.

■ Connect with Bent Line

Method 1   From Hotspot to Hotspot

Click the hotspot where the connection originates to begin drawing, then click the location (which will become a node) where you want the line to bend. Finally, click the destination hotspot to complete the connection.
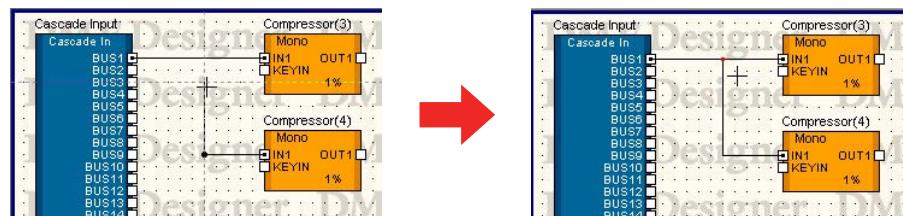
Method 2   From Hotspot to Node or Line Segment

Click the hotspot where the connection originates to begin drawing, then click the location (node) where you want the line to bend. Click an already drawn wire node or line segment to complete the connection. If you connect to a line segment, a node will be created there.

> **NOTE**
>
> A termination cannot be connected to a terminal that will be shorted. Multiple connections cannot be made to a DME object's Cascade port.
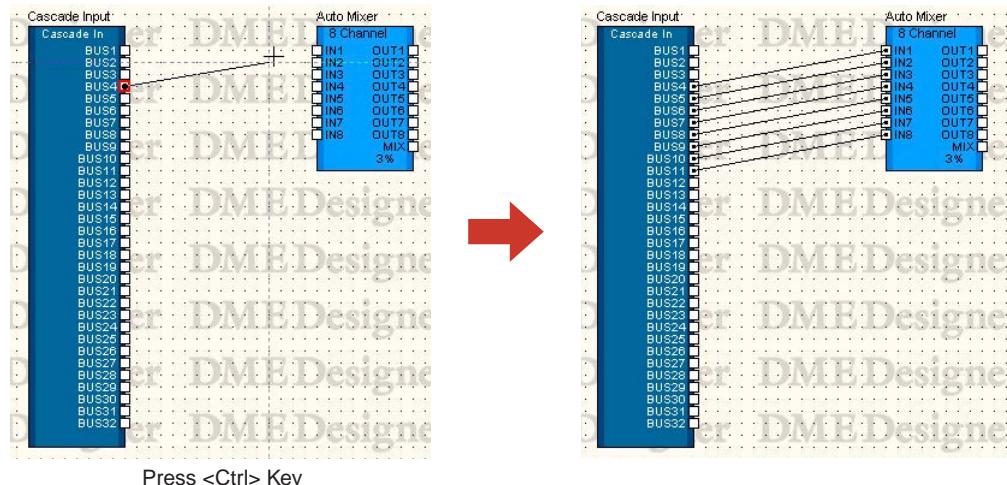
■ Connect Multiple Hotspots in a Single Operation

Method 1   <Ctrl> Key Combinations
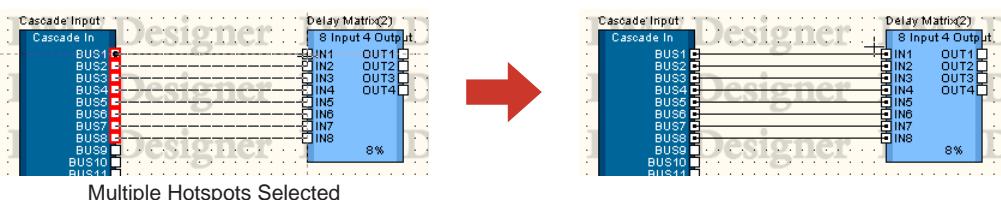
If you hold down the <Ctrl> key when finishing dragging, a wire will be drawn at all origin hotspots. The wire will be connected to the destination hotspot you dragged and those that come after.

Begin dragging from the connection origin hotspot, then press the <Ctrl> key after aligning the mouse pointer with the hotspot you will connect too. A wire will be displayed below the destination hotspot. Finish dragging while holding the <Ctrl> key down.

Press <Ctrl> Key
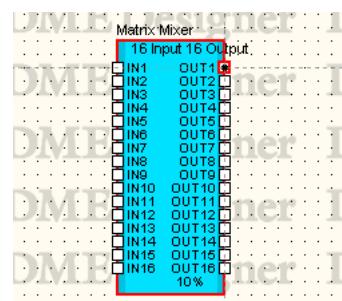
Method 2   Connect Multiple Selected Hotspots

Select multiple hotspots using <Shift> + click and <Ctrl> + click, then drag from one of the selected hotspots to the destination hotspot. The selected multiple origin hotspots will all be connected.

Multiple Hotspots Selected
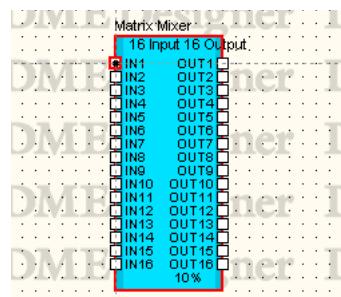
Method 3 Using Shortcuts
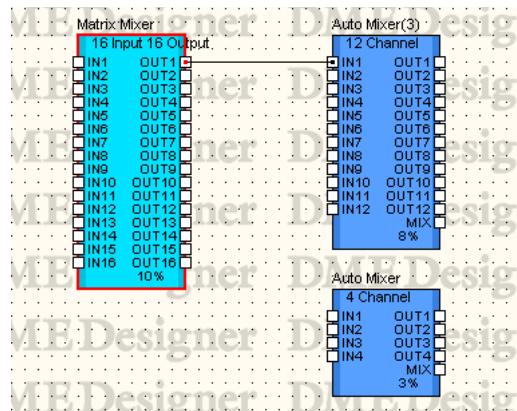
Press the [F2] key to select the uppermost open hot spot to the right of the selected object and begin drawing a wire.
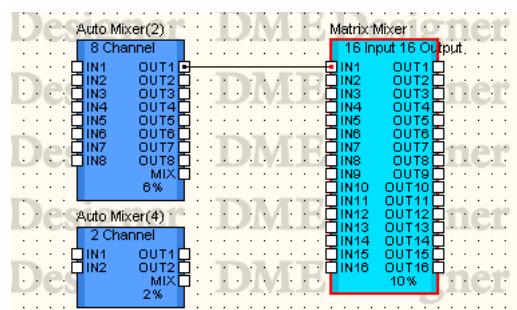
Press <Shift> + [F2] to select the uppermost open hot spot to the left of the selected object and begin drawing a wire.
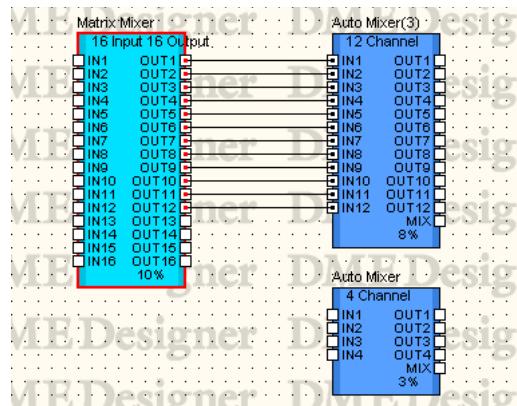
Press the [F4] key to connect the uppermost open hot spot to the right of the selected object and the uppermost open hot spot to the left of the object on the right.
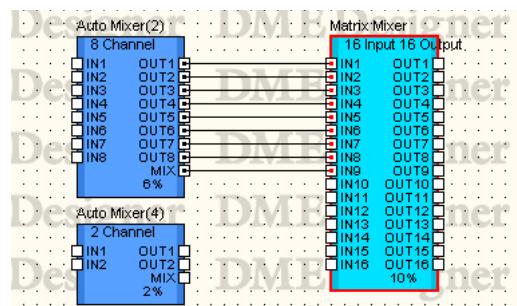
Press <Shift> + [F4] to connect the uppermost open hot spot to the left of the selected object and the uppermost open hot spot to the right of the object on the left.

Press the [F5] key to connect the uppermost open hot spot to the right of the selected object and the uppermost open hot spot to the left of the object on the right, and continue automatically making sequential connections until no more open ports are available on either object. Automatic connections will not be made over other objects.

Press <Shift> + [F5] to connect the uppermost open hot spot to the left of the selected object and the uppermost open hot spot to the right of the object on the left, and continue automatically making sequential connections until no more open ports are available on either object. Automatic connections will not be made over other objects.

Press the [F8] key to clear all wires connected to the selected object.

> **NOTE**
>
> When multiple objects are selected these operations apply to the first object selected.

> **NOTE**
>
> These shortcuts can be changed as required.
> → See Chapter 3 Main Panel Window, "Shortcut Keys" on page 134.
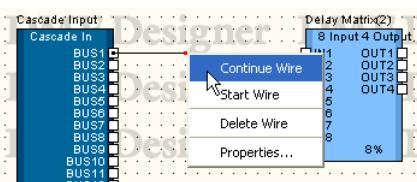
■ **Starting Drawing from the End Point/Node/Line Segment of an Existing Wire**

You can draw from the end or midway point of an existing wire. If you start from a node or line segment, a branch line will be created.
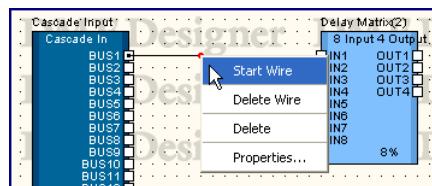
Method 1   Continue Drawing from a Wire End Point

When continuing an existing wire, right-click on the wire end point, then click [Continue Wire] on the displayed context menu.
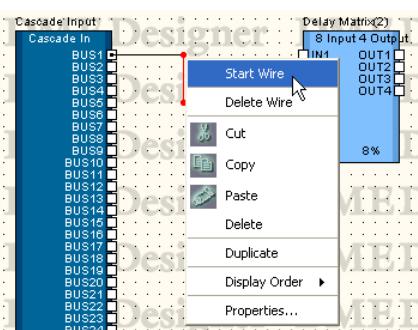
Method 2 Start Drawing from a Node

Right-click on a wire node, then click [Start Wire] on the displayed menu. You can start a branch wire from the node you clicked on.
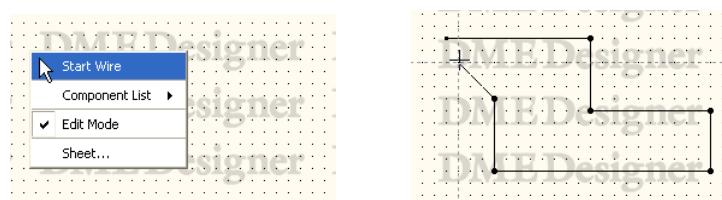
Method 3 Start Drawing from a Line Segment

Right-click on a wire line segment, then click [Start Wire] on the displayed menu. A node will be created at the point you right-clicked, and you can start a branch wire from that node.

■ Drawing from Anywhere on the Sheet

Right-click the start position for drawing, the click [Start Wire] on the context menu that is displayed. Click the location where the line should bend, then double-click at the end location to finish drawing.

■ Finishing Drawing

When the hotspots or already drawn wires are connected, drawing is finished.
To finish drawing without connecting to a hotspot, use one of the following methods:
• Right-click the mouse
• Double-click
• Press the <Esc> key
Drawing also finishes if another window is made active.

Wire Editing

You can delete wires, change node positions, connect to other wires, and perform other wire edit operations.
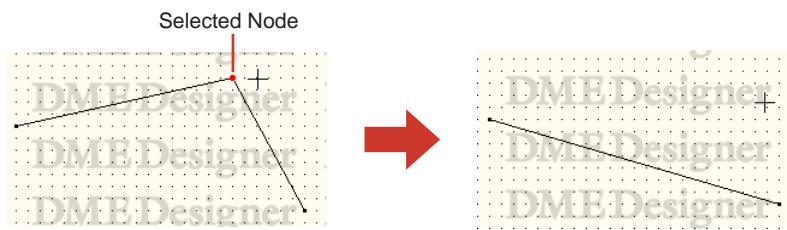
■ Delete

Deleting an Entire Wire
Right-click the wire then click [Delete Wire] in the context menu
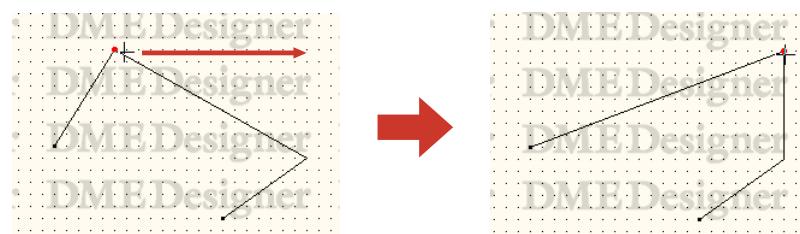
Deleting Nodes
Nodes can be deleted by selecting them and pressing the <Delete> key. Nodes on both sides of the deleted node will become directly connected.
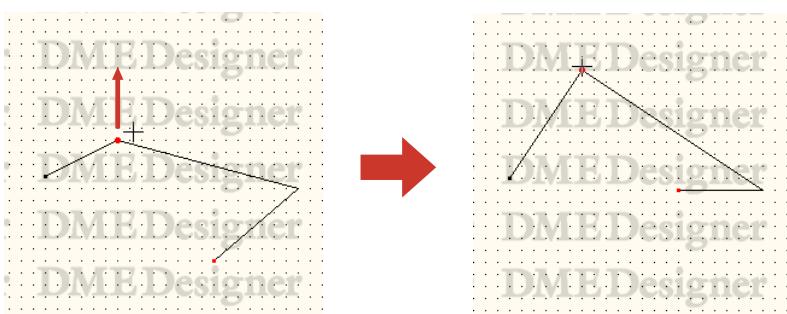
■ Editing by Dragging

Moving Nodes
You can move nodes by dragging them with the mouse.
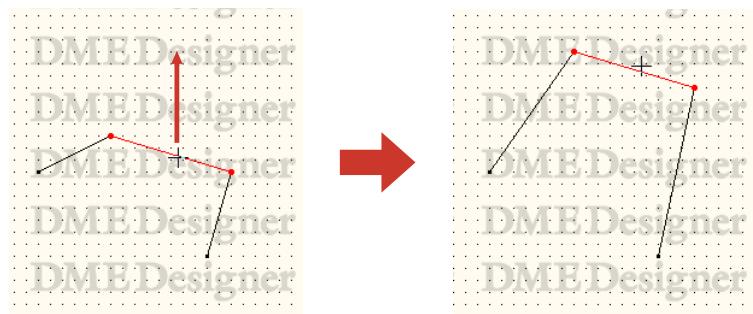
When multiple nodes are selected and dragged with the mouse, you can move all selected nodes simultaneously.
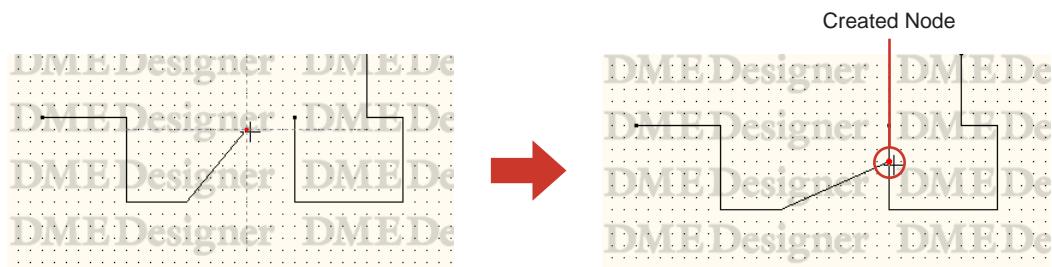
Moving Line Segments

To move a line segment, select the nodes on both sides of the segment, and drag one of the nodes.

■ Connecting to Other Wires

If you drag a node and lay it over another wire, the two will be connected at that position. If you drag it to a line segment, a node will be created.

Created Node

Logical connection

A connection from a source (output side) signal to a destination (input side) signal is called a "**logical connection**." If a logical connection is present in a configuration, the actual hardware signal will be connected. A single wire can make a single logical connection.

Logical connections are possible only in the Configuration window and the User Module window. Wires in the Area window or Zone window can be drawn for display only. Even in the Configuration window and User Module window, you can also draw wires for display only.

Window	Wire
Area Window	Drawing for display only
Zone Window	Drawing for display only
Configuration Window	Logical connection and drawing for display only
User Module Window	Logical connection and drawing for display only
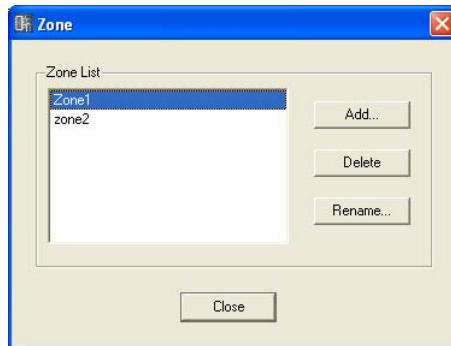
■ Situations Where No Logical Connection Is Created

- Both sides are source (output side) signals
- Both sides are destination (input side) signals
- Two source (output side) signals are connected to a destination
- There are two destination (input side) signals, and the wire is not connected to a source (output side) signal.

Adding, Deleting, and Renaming a Zone

At least one zone is included within an area. In the default Area window that zone will be named [Zone1]. Multiple zones can be arranged in an Area.
When you click the [Zone] command on the [Tools] menu, the "Zone" dialog box is displayed. Here you can add, delete, or rename a zone.

Zone List

Lists the zones included in the project. To change settings for a zone, select it by clicking it in the list.

[Add] Button

Adds a zone. Clicking here displays the "Please enter new name" dialog box. Enter a new name, then click [OK]. A zone will be added.

[Delete] Button

Deletes the zone selected on the list. Clicking here displays the "Are you sure?" dialog box. Click the [OK] button, and the zone will be deleted. Click the [Cancel] button, and the deletion will be cancelled.
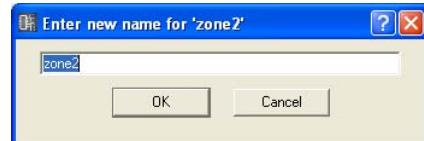
> **NOTE**
>
> A minimum of one zone is required. When only one zone remains, deletion is impossible.

[Rename] Button

Changes the name of the zone selected on the list. Clicking here displays the "Enter new name for the current zone name" dialog box. Enter a zone name, then click the [OK] button.

> **NOTE**
>
> The current name of the zone you will be renaming is displayed in the "Current Zone Name" box of the "Enter new name for current zone name" message.
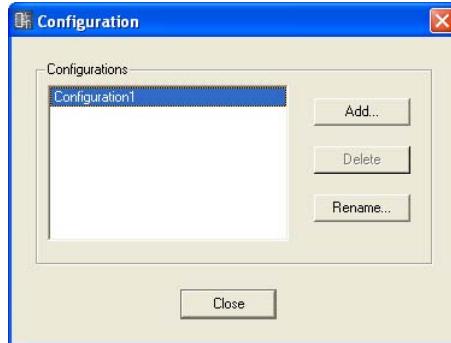
[Close] Button

Closes the "Zone" dialog box.

Adding, Deleting, and Renaming a Configuration

At least one configuration is included within a zone. In a new Zone that configuration will be named [Configuration1]. You can add configurations as required.
When you click the [Configuration] command on the [Tools] menu, the "Configuration" dialog box is displayed. Here you can add, delete, or rename a configuration.

Configurations
Lists the configurations included in the zone being edited. To change settings for a configuration, select it by clicking it in the list.

[Add] Button
Adds a configuration. Clicking here displays the "Please enter new name" dialog box. Enter a configuration name, then click [OK]. A configuration will be added.

[Delete] Button
Deletes the configuration selected on the list. Clicking here displays the "Are you sure?" dialog box. Click the [OK] button, and the configuration will be deleted. Click the [Cancel] button, and the deletion will be cancelled.

<div style="border:1px solid black;">**NOTE**</div>

A minimum of one configuration is required. When only one configuration remains, deletion is impossible.

[Rename] Button

Changes the name of the configuration selected on the list. Clicking here displays the "Enter new name for the current configuration" dialog box. Enter a configuration name, then click the [OK] button.

NOTE

The current name of the configuration you will be renaming is displayed in the "Current Configuration Name" box of the "Enter new name for current configuration name" message.

[Close] Button
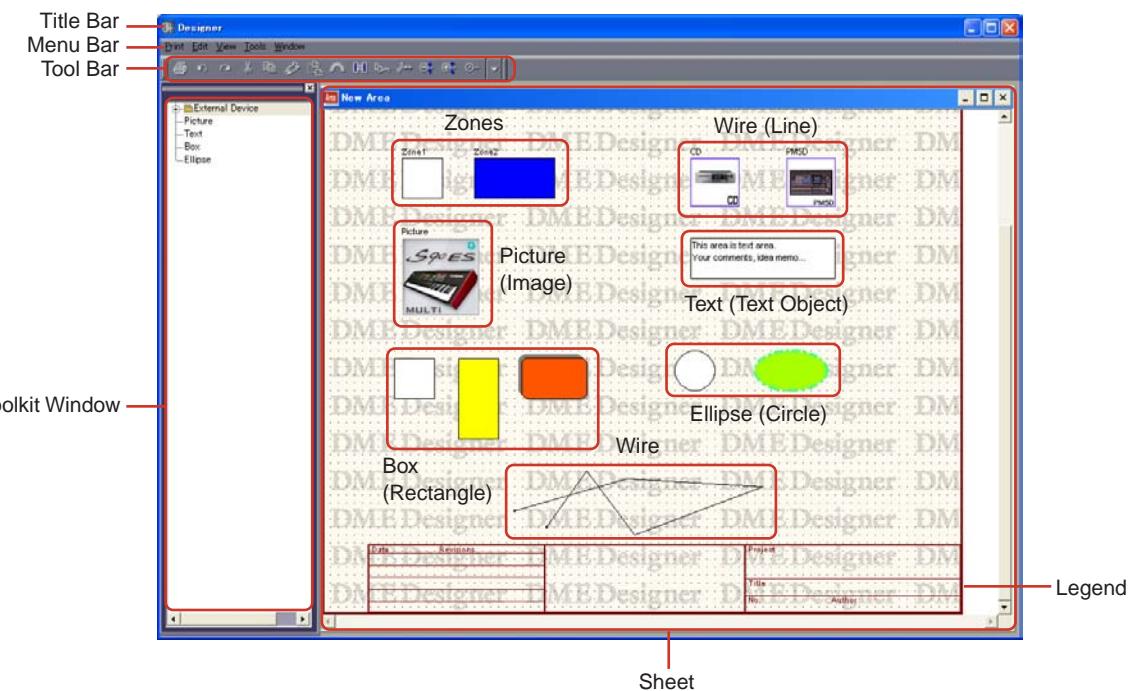
Closes the "Configuration" dialog box.

Area Window

In the Area window, the area is designed by arranging objects on a design sheet, When you click "Area" in the Navigator window, the Area window becomes active. You can also open the Area window using the [Area] command in the [View] menu.
The following objects can be arranged in the Area window:
• Zone
• External Device
• Picture
• Text
• Box
• Ellipse
• Wire
• Legend

■ **Title Bar**

You can move windows by dragging the title bar.

■ **Zone**
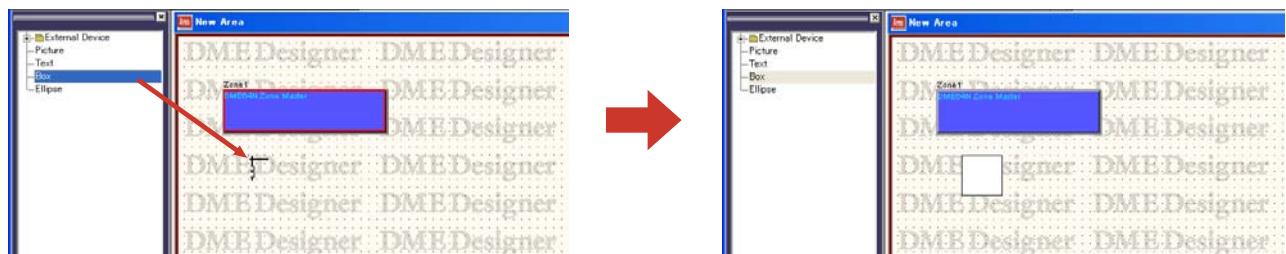
Zones are added and deleted using the "Zone" dialog box. You cannot perform operations such as deletion, cut, or copy. You can change the position and design of zone objects in the Area window. Double-click to open a Zone window.

■ **Objects**

You can perform edit operations such as arrange, cut, copy, paste, delete, and move on all objects except zones.

Arranging Objects

Objects other than zones can be placed in the window by dragging them from the Toolkit window. You can also place objects by double-clicking them in the Toolkit window. You can also display the [Area Parts List] from the [Tools] menu or from the context menu that appears when you right-click on the sheet.
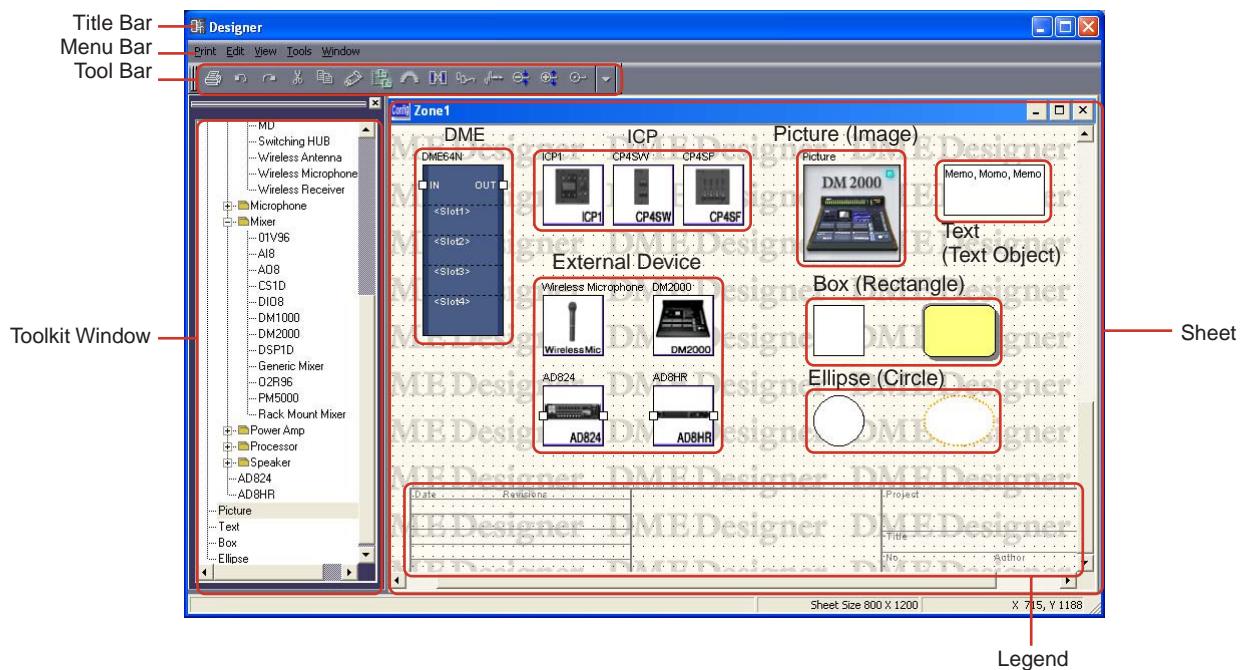
Zone Window

In the Zone window, the zone configuration is designed by arranging zone devices on a design sheet,
A zone configuration can be created that is the same as the actual hardware arrangement.
To display the Zone window, double-click in the Area window. When you click a configuration in the
Navigator window, it becomes active.
The following objects can be arranged in the Zone window:
• DME
• ICP
• External Device
• Picture
• Text
• Box
• Ellipse (Circle)
• Legend

■ Title Bar

Displays the zone name you have in the "Zone" dialog box. There is always one zone named [Zone 1] in a newly created project.

■ Configuration

You can create multiple configurations within a zone, but they cannot be arranged within the Zone window. There is a Zone window for each configuration where devices can be arranged. To switch configurations, click the desired configuration in the Navigator window.
You can add, delete, and rename configurations in the "Configuration" dialog box.

■ **Objects**

You can perform edit operations such as place, cut, copy, paste, delete, and move to devices and shapes. If you double-click on a device arranged in the window, a Configuration window or dialog box will open.
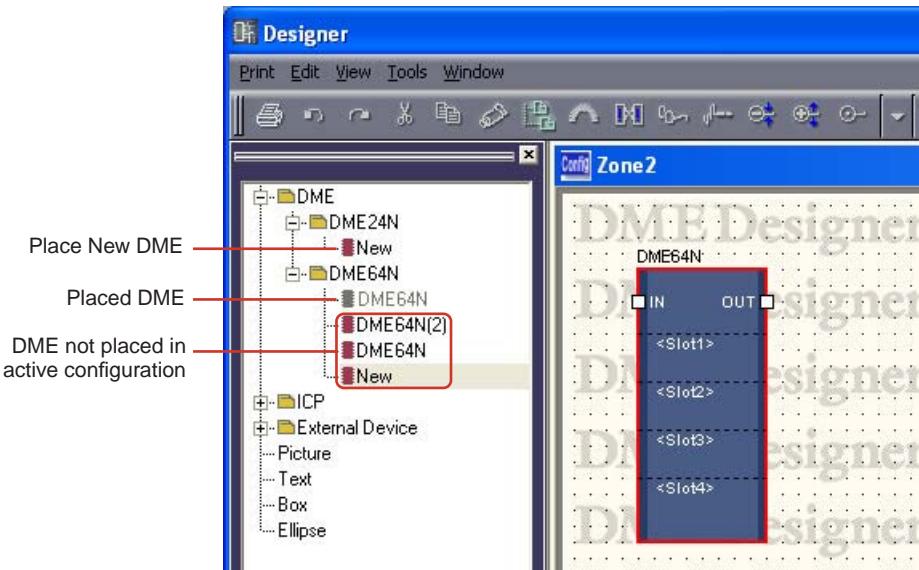
Device	Action When Double-Clicked
DME	Displays Configuration Window
ICP	Displays "Control Panel Properties" dialog box
External Device	Opens external application linked to the device.

Arranging Objects

You can place objects by dragging them from the Toolkit window. You can also place objects by double-clicking them in the Toolkit window. The same objects are displayed in the [Device List] submenu on the context menu that appears when you right-click the [Tools] menu or on the sheet. For information about the "Device List," see page 154.
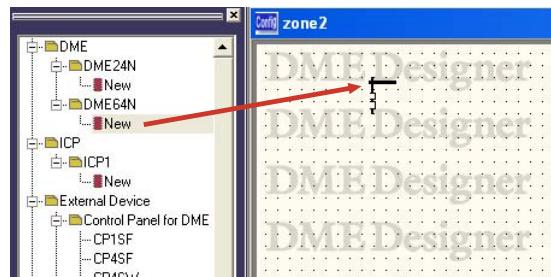
■ **DME Arrangement**

To place a DME object, first drag the [New] icon. When you drag the [New] icon and place it in the Zone window, you also add an icon for that DME to the Toolkit window. You can rename the DME in the "DME Device Properties" dialog box. This also renames the DME icon in the Toolkit Window. You can place a created DME in another configuration, but you cannot place multiple identical DMEs in a single configuration. If there are multiple DMEs in a hardware configuration, create an equivalent number of DME objects.
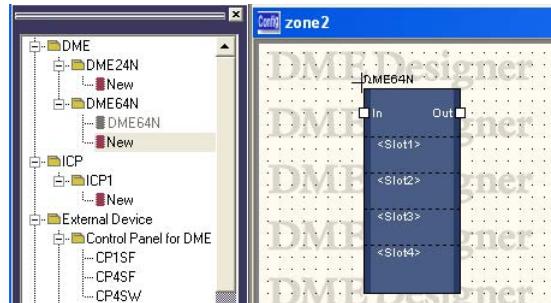
Placing a New DME

Below the DME folder in the Toolkit window are the [DME24N] and [DME64N] folders. Below these folders you will find a [New] icon. Drag it to the Zone window.

When you drag the [New] icon and place it in the Zone window, you also add an icon for that DME to the Toolkit window.
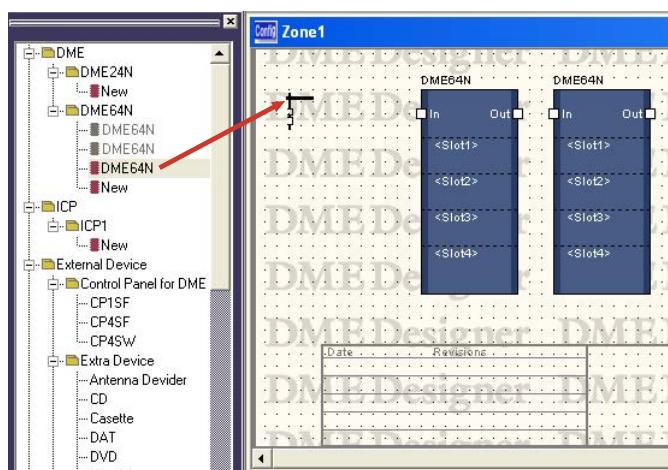
A DME added to the Toolkit window cannot be placed again in the same configuration window. The DME placed in the Toolkit window will be displayed with a muted color.
To place multiple DMEs, drag the [New] icon to add each DME.
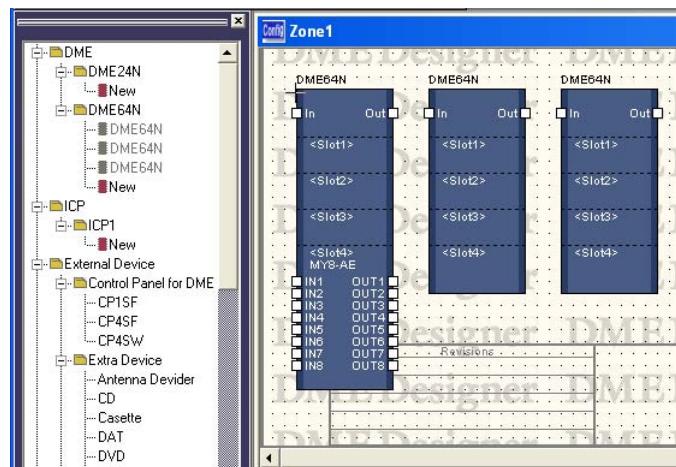
Placing Existing DMEs

When there are multiple configurations, you can place existing DMEs in configurations other than their original one.
Drag the DME icon created in the Toolkit window to the Zone window.
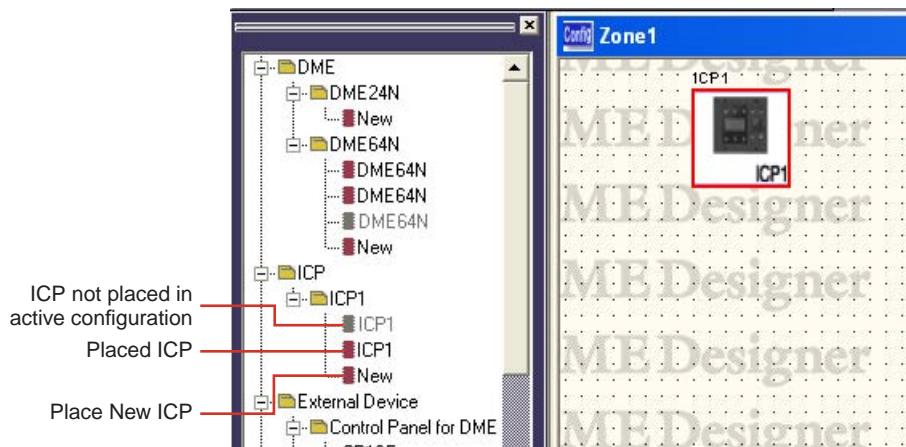
When you place the DME in the Zone window, the DME icon display in the Toolkit window will change to a muted color that indicates that it has already been placed.
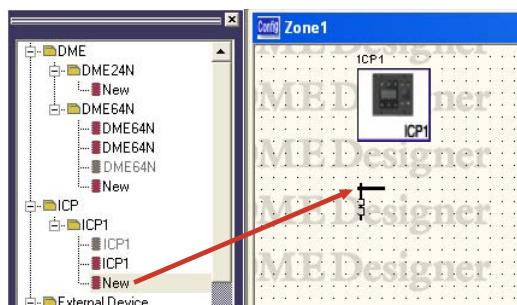
■ ICP Placement

Just like for a DME, the first step it placing an ICP is to drag the [New] icon from the Toolkit window. You can place the created ICP in another configuration, but you cannot place multiple identical ICPs in a single configuration. If there are multiple ICPs in a hardware configuration, create an equivalent number of ICP objects.
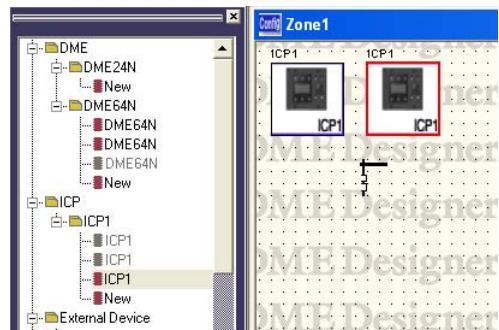
Placing a New ICP

Subordinate to the ICP folder in the Toolkit window is the [ICP1] folder. Below these folders you will find a [New] icon. Drag it to the Zone window.

When you drag the ICP [New] icon and place it in the Zone window, you also add an icon for that ICP to the Toolkit window.
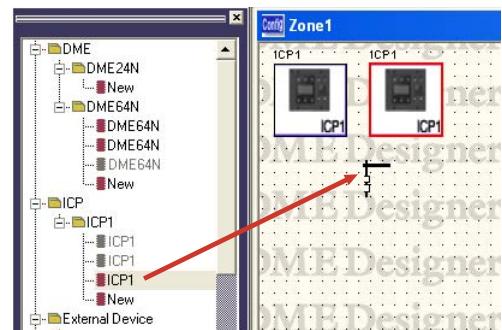
The ICP added in the Toolkit window will be displayed with a muted color to indicate it has already been placed. To place multiple ICPs, drag the [New] icon to add each new ICP.
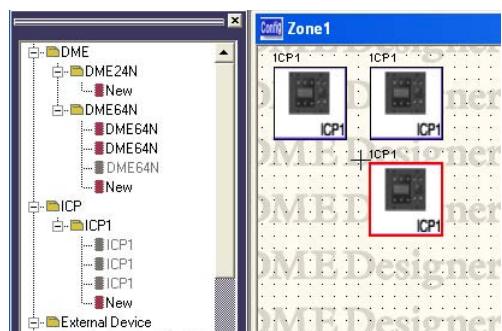
Placing Existing ICPs

When there are multiple configurations, you can place existing ICPs in configurations other than their original one.
Drag the ICP icon created in the Toolkit window to the Zone window.
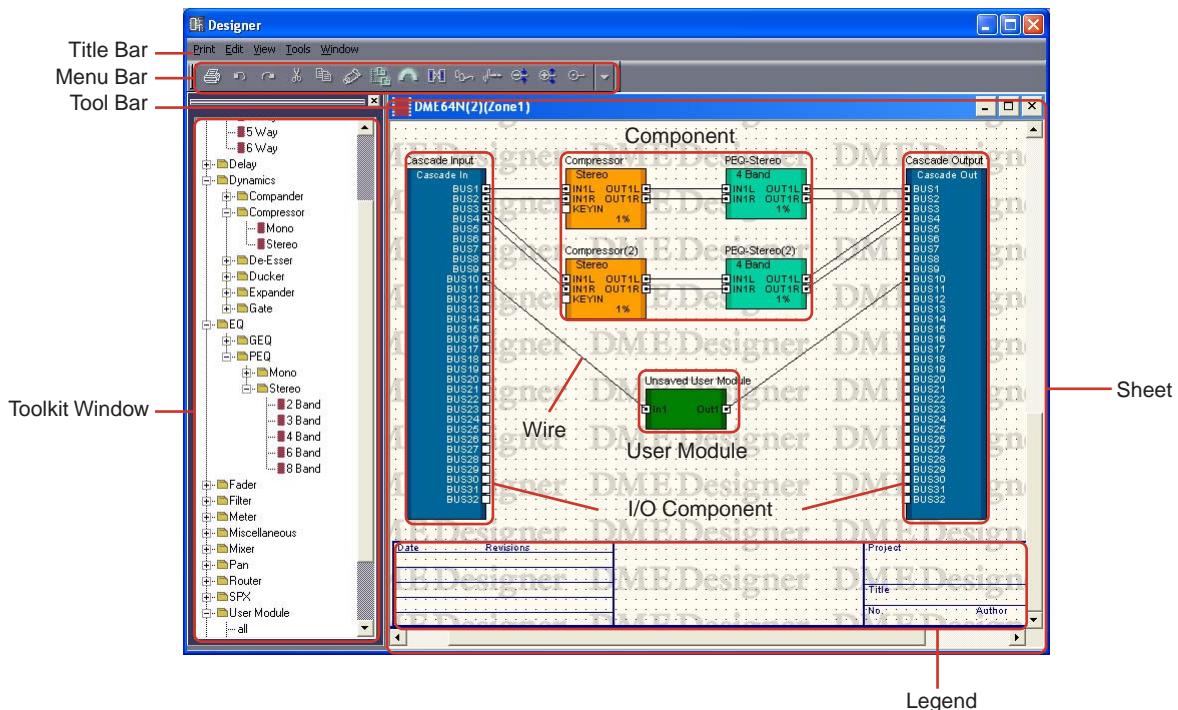
The ICP will be placed in the Zone window. The ICP added in the Toolkit window will be displayed with a muted color to indicate it has already been placed.

Configuration Window

The Configuration window is used for arranging components on the sheet and making logical connections. It is displayed when you double-click on a DME.

■ Title Bar

Displays "DME Name (Zone Name)." The configuration window for a DME64N placed in [Zone1] will be "DME64N (Zone1)." The DME name is set in the properties for the DME placed in the Zone window.

■ Objects

Objects such components, user modules, and shapes are arranged in the Configuration window. When you double-click a component placed in the window, the component editor will open. If you double-click a user module, the user module will open.

■ I/O Component
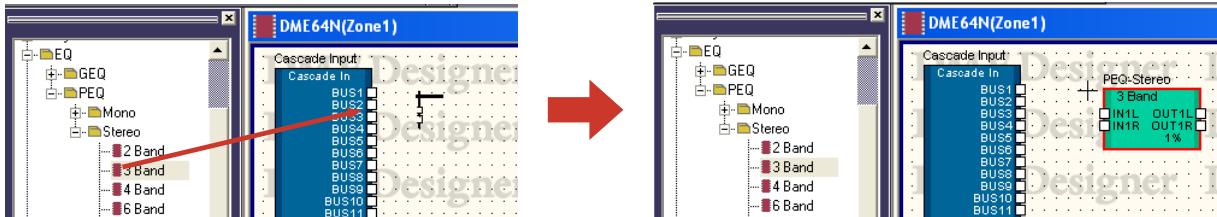
Depending on the settings for the DME placed in the Zone window, I/O components will be automatically placed or added.
• I/O components can be arranged in the DME24N configuration window.
• When "Show Cascade Port" is ON in the DME64N "DME Device Properties" dialog, Cascade I/O is added automatically.
• When you set a slot in the properties for a DME placed in the Zone window, Slot I/O will be automatically added.

You cannot apply edit operations like cut/copy/paste/duplicate to I/O components, Slot I/O, and Cascade I/O.

Placing Components

You can place objects by dragging them from the Toolkit window. You can also place objects by double-clicking them in the Toolkit window. The same objects are displayed in the [Component List] submenu on the [Tools] menu or on the context menu that appears when you right-click on the sheet. For information about the [Component List] in the Configuration window, see page 154.
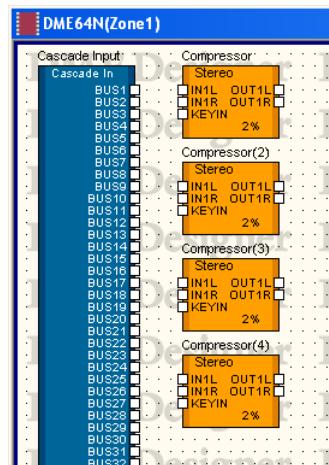
NOTE

If the [Matrix Mixer 64 input 64 output] or the [Matrix Mixer 64 input 32 output] components are placed in the DME64N configuration window, you will not be able to use other components, even though the window does not reach 100 percent. The [Matrix Mixer 64 input 64 output] or [Matrix Mixer 64 input 32 output] components cannot be used in the DME24N.

■ Arranging a Number of Components of the Same Type

You can arrange a number of components of the same type. If there are two or more of the same component, numbers will be attached to their names as follows: "Compressor (2)," "Compressor (3)" and so on. Multiple components placed in the configuration are independent, and you can set different parameters for each of them.

Probe Monitor
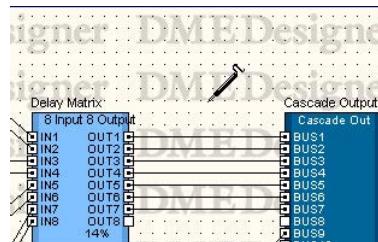
Probe monitor is a function that lets you monitor output ports in your configuration with headphones. You can turn it ON or OFF using [Probe Monitor] in the [Tools] menu or the [Probe Monitor] button on the toolbar. The probe monitor can be set to ON or OFF for each DME.

The probe monitor can be used only when online with the DME and Configuration window or user module active. When the probe monitor is ON, no editing is possible except in the Component Editor.
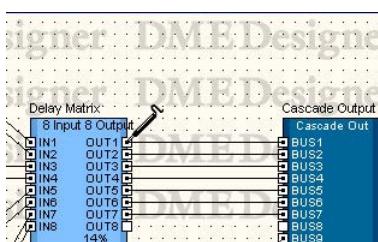
■ Probe Monitor Procedure

1 Turn the probe monitor ON.
Click [Probe Monitor] in the [Tools] menu or the [Probe Monitor] button on the toolbar.
The shape of the mouse pointer changes.
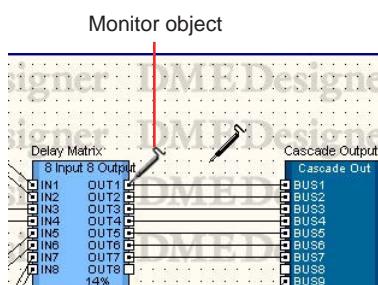
2 Click the output port you want to monitor.
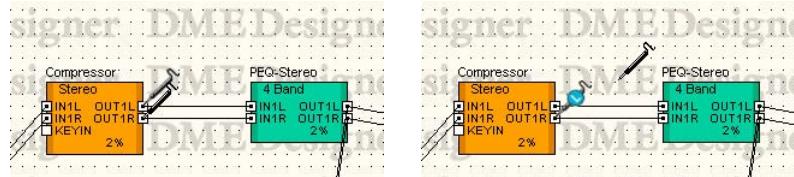
The output port you clicked will be selected and monitoring will begin.

Monitor object

If you click another output port, the location being monitored will change.

■ L/R Selection

To monitor the left channel and right channel simultaneously, <Shift> + click on the left channel, then do the some for the right channel.

■ Exiting the Probe Monitor

Click [Probe Monitor] in the [Tools] menu or the [Probe Monitor] button on the toolbar to turn OFF the probe monitor. When probe monitor is turned off, the mouse pointer returns to its normal shape.

■ Monitoring the Second or Later Time

The software remembers the location being monitored even when probe monitoring is turned OFF. The next time probe monitoring is turned ON, the location that was being monitored previously will be selected.

NOTE

If the configuration is edited after turning monitoring OFF, the monitor location will not be selected.
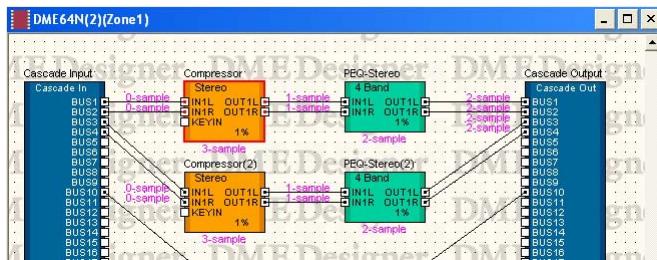
Show Signal Delay (Delay Display Value)

The signal delays according to the processing time in the audio processor. The [Show Signal Delay] command from the [Tools] menu calculates a delay value and displays it for the component. Selecting this command switches delay value display between ON and OFF. A checkmark appears when display is turned ON.

When turned ON, the settings are compiled to obtain a delay value, which is displayed for components and lines. The delay value obtained through compilation remains valid until the configuration is edited. Sample units are used to display the delay value.
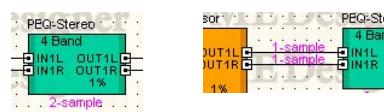
This corresponds to the [Show Signal Delay] button on the toolbar.

ON and OFF settings for [Show Signal Display] are saved for each configuration window. Switching the setting between ON and OFF in another configuration window has no effect on the current window. You can edit the configuration while [Show Signal Delay] is turned ON.

When you turn ON [Show Signal Delay], the delay value appears above the object.

Delay values for components and I/O components are displayed at the lower center of the object.

Delay values for wires are displayed beside the input port of the connected object.

> **NOTE**
>
> Delay values for SPX components vary depending on the Bypass ON/OFF status, because SPX components add the effect signal to the original signal. When [Show Signal Delay] is turned ON, the delay value for the Bypass ON status will be displayed.
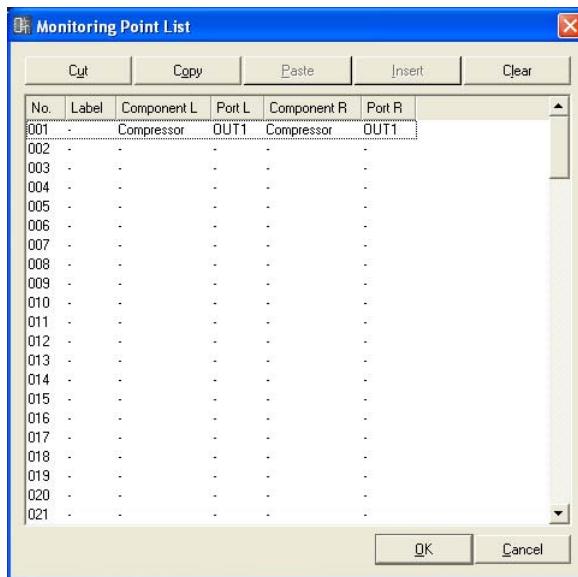
> **NOTE**
>
> Delay values for Wav File Player components are displayed for external inputs. Delay values for local Wave files cannot be displayed.

Monitoring Point List

When you click [Monitoring Point List] in the [Tools] menu, the "Monitoring Point List" dialog box is displayed. Here you can register or edit points for monitoring with headphones.

NOTE

Monitoring points can be edited only by users for whom the [Edit] security checkbox has been turned ON.

■ **[Cut] Button**

Cuts the selected monitoring point information. When monitoring point information is cut, information below that point moves up.

■ **[Copy] Button**

Copies the selected monitoring point information.

■ **[Paste] Button**

Pastes the copied monitoring point information at the selected line.

■ **[Insert] Button**

The copied monitoring point information is inserted at the selected point.

■ **[Clear] Button**

Deletes the selected monitoring point information.

■ **Monitoring Point List**

Displays and allows editing of monitoring point information.

[No.]

Displays the numbers for monitor link points. Numbers are assigned in order from the top.

[Label]

Displays and allows editing of monitoring point names. Clicking here selects the text. You can then enter a new name.

[Component L]

Sets the monitoring point L channel component. Clicking here displays a list of components arranged in the active configuration window. You can then select components for monitoring.

NOTE

Components arranged in user modules are also displayed in the list. However, components for user modules for which security is set will not be displayed.

[Port L]

Sets the monitoring point L channel port. Clicking here displays a list of ports for the component selected in the [Component L] field. Click the port you want to monitor.

NOTE

If you click a port in the designer window while the "Monitoring Point List" dialog box is displayed, the port will be registered to the monitoring point of current selected row. If you will register the monitoring points as stereo, click a port while holding down the <Shift> key to register Component L and Port L, then click a port again while holding down the <Shift> key to register Component R and Port R.

[Component R]

Sets the monitoring point R channel component. Clicking here displays a list of components arranged in the active configuration window. You can then select components for monitoring.

NOTE

Components arranged in user modules are also displayed in the list. However, components for user modules for which security is set will not be displayed.

[Port R]

Sets the monitoring point R channel port. Clicking here displays a list of ports for the component selected in the [Component R] field. Click the port you want to monitor.

■ **[OK] Button**

Updates the settings and closes the dialog box.

■ **[Cancel] Button**

Closes the dialog box without changing the settings.

Analyze (Configuration Analysis)

When you click the [Analyze] command on the [Tools] menu or the [Analyze] button on the toolbar, the "Analyze" dialog box is displayed. The wire connections in the currently active configuration window are analyzed, and the results are displayed in the "Analyze" dialog box.

Because this function allows you to make sure there are no problems with component arrangement and wires without connecting to the DME unit, it is useful for eliminating complier errors before executing Synchronization.

NOTE
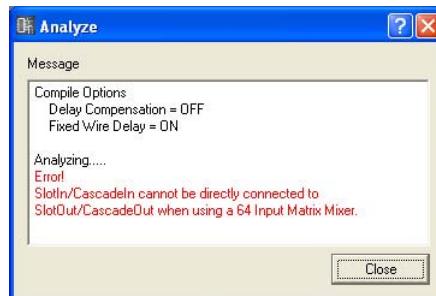
The [Analyze] command on the [Tools] menu can be selected only when a configuration window is active.

■ **Message Box**

Displays the progress of the analysis operation. When the analysis finishes, the results are displayed.

If errors are detected during analysis, they will display as shown below.

■ **[Close] Button**

Closes the dialog box.

User Module

User Modules

A module treated as a single component that combines a number of other components is called a "**user module**." A user module can be arranged in the Configuration window just like any other component. User module editing consists of placing the component and making logical connections with wires, the same as for configurations.

User modules are saved in the project file, but they can also be saved as files. User modules saved as files can be displayed in the Toolkit window and used in other project files.
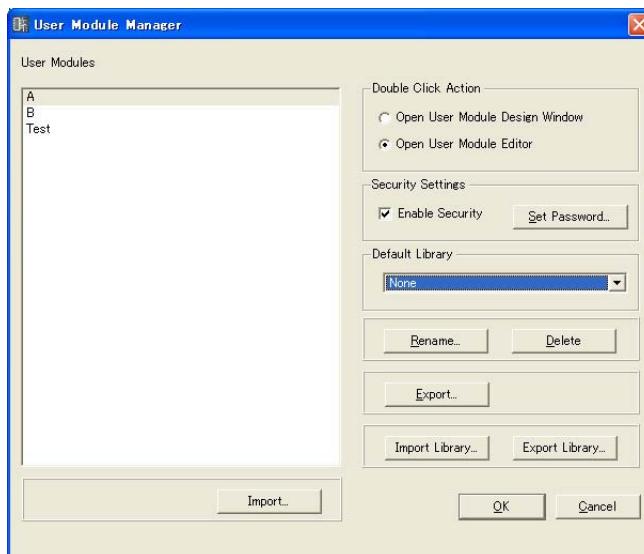
A "User Modules" folder will be created in the folder specified in [Contents Folder] in the "Preferences" dialog box in the Main Panel window. User modules will be saved there. If you do not change the setting in the "Preferences" dialog box, the location will be "C:\Program Files\YAMAHA\OPT Tools\DME Designer\User Modules."

NOTE

The Main Panel Menu "Preferences" dialog box is displayed using [Preference] in the [File] menu.

User Module Manager

When you click [User Module Manager] on the [Tools] menu, the "User Module Manager" dialog box is displayed. You can change settings, rename or delete in the window that opens when you double-click a user module.

■ **User Modules**

Lists user modules that are saved in the "User Modules" folder. Select the target user module by clicking on it.

NOTE

Only user modules saved can be displayed. User modules placed in the component editor are saved in project files, and can be used without being saved as files. However, they will not be displayed in the "User Module Manager" dialog box list.

■ **Double Click Action**

Sets the action that occurs when you double-click on a user module placed in the Configuration window.

[Open User Module Design Window]

Opens the User Module window.

[Open User Module Editor]

Opens the User Module editor. The user module editor is a window where controls for components that are placed in a user module can be laid out and their parameters changed. For more information about the user module editor, see "User Control/User Module Editor" on page 279.

■ **Security Settings**

Makes security settings for the user module selected on the list.

[Enable Security]

Enables user module security. If security is enabled, a password is requested when attempting to open the User Module window. If the correct password is not entered, the window will stay closed. When you place a checkmark here, the "Set Password" dialog box appears. Enter the same password into the [Password] box and [Confirm Password] box, and click the [OK] button.

To disable user module security, turn OFF the checkbox. If you click the checkbox when it already has a checkmark, the "Input Password" dialog box appears. Enter the password set for this user module, and click the [OK] button. You can disable security in this way. If you do not enter the correct password, you will not be able to disable security.

[Set Password] Button

Changes the password. Clicking here displays the "Input Password" dialog box. Enter the current password and click the [OK] button. The "Set Password" dialog box will be displayed. Enter the same password into the [Password] box and [Confirm Password] box, and click the [OK] button.
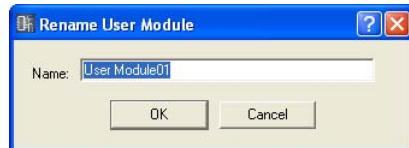
■ **Default Library**

Specifies the default library file for newly-created user modules.

■ **[Rename] Button**

Changes the name of the user module selected on the list. Clicking here displays the "Rename User Module" dialog box. Enter a name into the user module name box, and click the [OK] button.

NOTE

The user module name also becomes the file name. When naming a user module, do not use characters that cannot be used for filenames.

■ **[Delete] Button**

Deletes the user module selected on the list.
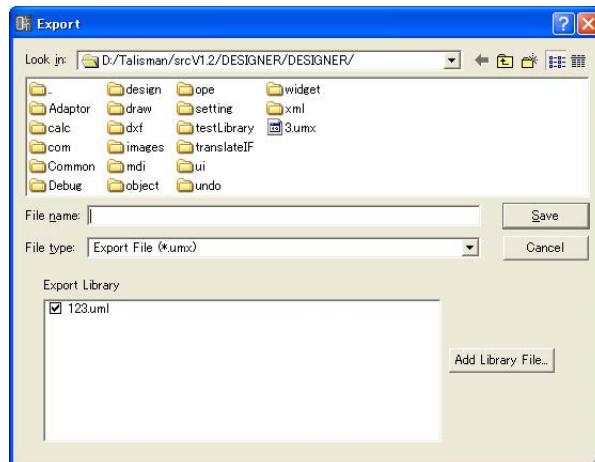
■ **[Import] Button**

Imports the user module settings and library from the user module export file.

■ **[Export] Button**

Saves the user module settings and library to the user module export file.
Click to display the Export dialog, All features of this dialog window are the same as the standard Windows file save dialog, except for the [Export Library] option.
[Export Library] can be sued to select the library to be saved.
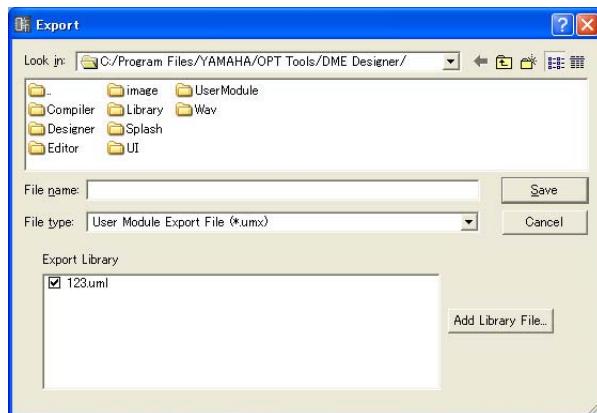
■ **[Import Library] Button**

Loads a file from the specified folder into the library.

■ **[Export Library] Button**

Saves the library to a file.
Use [Export Library] to select the library to be saved.

■ **[OK] Button**

Accepts the changed settings and closes the dialog box.

■ **[Cancel] Button**

Closes the dialog box without changing the settings.

NOTE
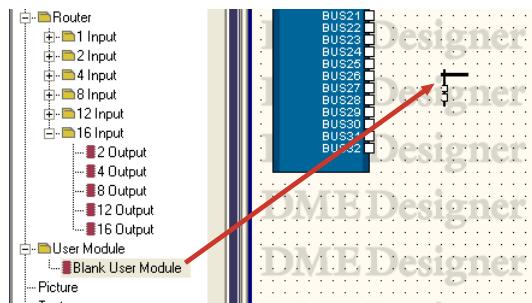
Settings in the "User Module Manager" dialog box are changed when you click the [OK] button. If you mistakenly set security, change the password, or delete a user module, you can click the [Cancel] button to close the dialog box and return to the original unchanged settings.
Please note that [Import], [Export], [Import Library], and [Export Library] will be applied even if the [Cancel] button is clicked.
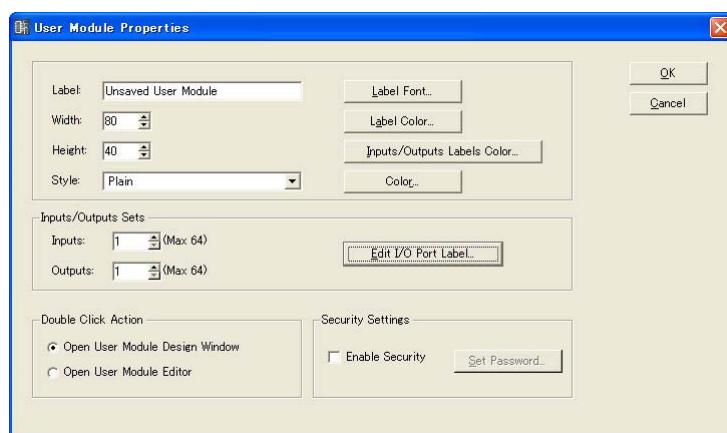
Creating User Modules

When you place a blank user module in the Configuration window, a new user module is created.

1 Make the Configuration window active.

2 Click the [+] next to [User Module] in the Toolkit window.

The items in the level below the [User Module] folder will be displayed.

3 Drag the [Blank User Module] to the Configuration window.
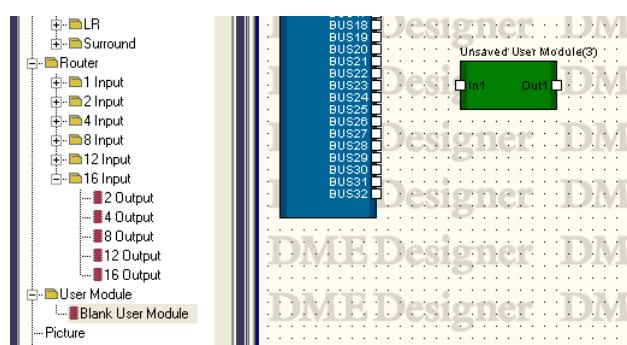
When you release the mouse button at the location where you will place the user module, the "User Module Properties" dialog box is displayed.

4 Here you can set object properties.

[Inputs/Outputs Sets] is set to 1. Set the required number of ports.

5 Click the [OK] button.

A user module will be created, and placed in the Configuration window.

The user module properties can also be changed later. For information about the "User Module" Properties" dialog box, see "User Module" on page 181.
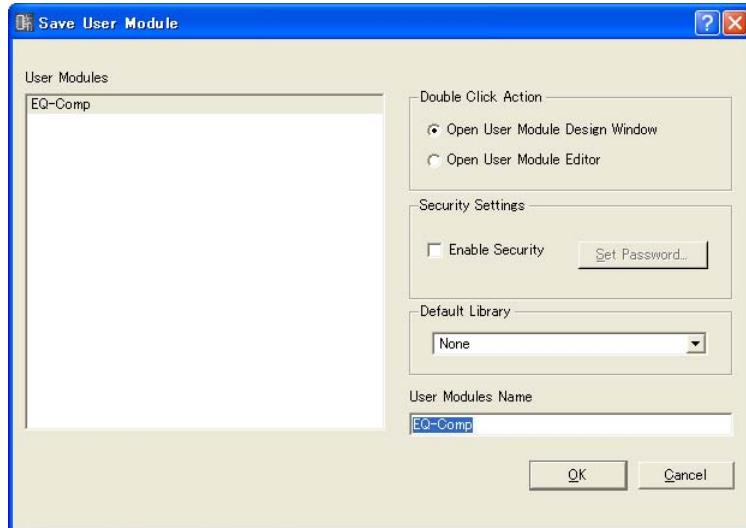
Saving User Modules

When user modules are saved, they appear below [User Module] in the Toolkit window. They can be used in other project files.

> User modules placed in the component editor are saved in the project file. When you want to use a user module in another project or in another configuration in the same project, save it using the "Save User Module" command.

Save the User Module using the [Save User Module] command on the [Tools] menu. The [Save User Module] command can be used only when a user module is selected in the Configuration window. When you select the command, the "Save User Module" dialog box will be displayed. Enter a name for the User Module, then click the [OK] button.

Set [Double Click Action] and [Security Settings] at the lower part of the "Save User Module" dialog box.
They correspond to the same items in the "User Module Manager" dialog box. When saved with different settings than the "User Module Manager" dialog box, the saved settings are immediately applied.

■ **Double Click Action**

Sets the window that opens when you double-click on a user module placed in the component editor.

[Open User Module Design Window]

Opens the User Module window.

[Open User Module Editor]

Opens the User Module editor.

■ **Security Settings**

Sets user module security.

[Enable Security]

Enables user module security.
If you place a checkmark here, the "Set Password" dialog box appears. Enter the same password into the [Password] box and [Confirm Password] box, and click the [OK] button.
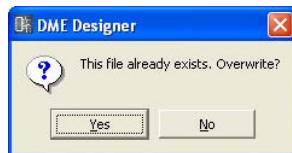
[Set Password] Button

Changes the password. Clicking here displays the "Input Password" dialog box. Enter the current password and click the [OK] button. The "Set Password" dialog box will be displayed. Enter the same password into the [Password] box and [Confirm Password] box, and click the [OK] button.

If you try to save a user module with the same name as an already saved user module, a message asking "This file already exists. Overwrite?" will be displayed. To overwrite, click the [Yes] button. To change the name, click the [No] button, and change the file name in the "Save User Module" dialog box.

NOTE

When the "Save User Module" dialog box is displayed, the name set in the user module's "User Module Properties" dialog box will be entered into the [File name] box. If you change the name of a user module and save it using the "Save User Module" dialog box, the filename in the user module and the user module name displayed in the Toolkit window will also change.
The [Label] box displayed in the "User Module Properties" dialog box will not change.
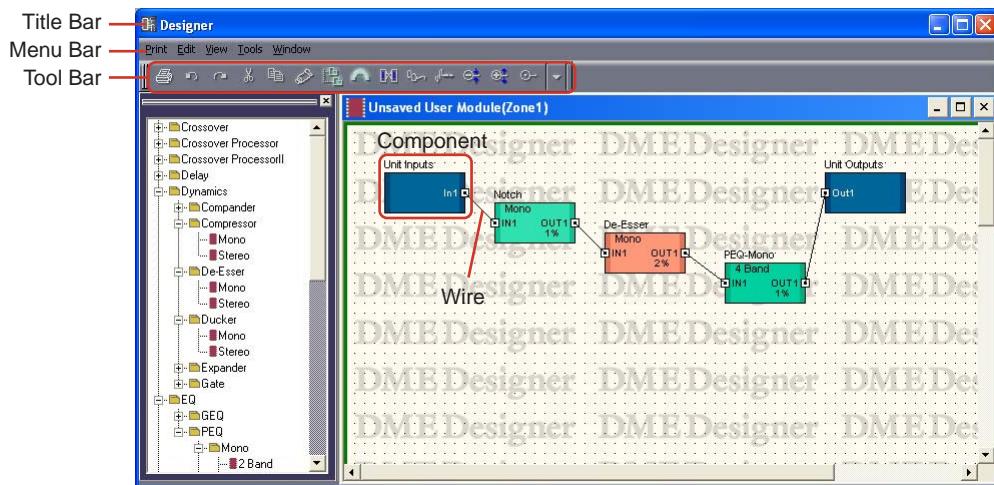
NOTE

If characters not usable in file names are used in the file name set in the "User Module Properties" dialog box, an error message will be displayed at the same time as the "Save User Module" dialog box. Delete the unusable characters before saving.

User Module Window

User modules are edited in the User Module window. The User Module window is used for arranging components on the sheet and making logical connections. It is displayed when you double-click on an object arranged in the Configuration window.

■ Title Bar

The user module names are displayed on the title bar. User module names are set in the "User Module Properties" dialog box.

■ Objects
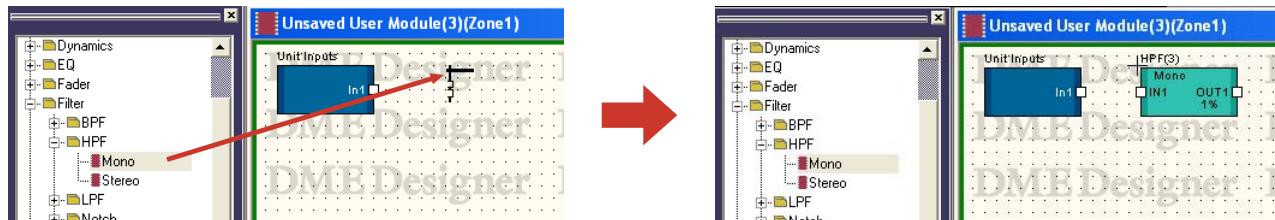
You can place, cut, copy, paste, delete, and move component and shape objects. When you double-click an object placed in the window, the component editor will open.

■ Placing Components

Components are placed the same as in the Configuration window.
You can place objects by dragging them from the Toolkit window to the User Module window. You can also place objects by double-clicking them in the Toolkit window. The same objects are displayed in the [Component List] submenu on the [Tools] menu or on the context menu that appears when you right-click on the sheet.
For information about the User Module window [Component List], see .
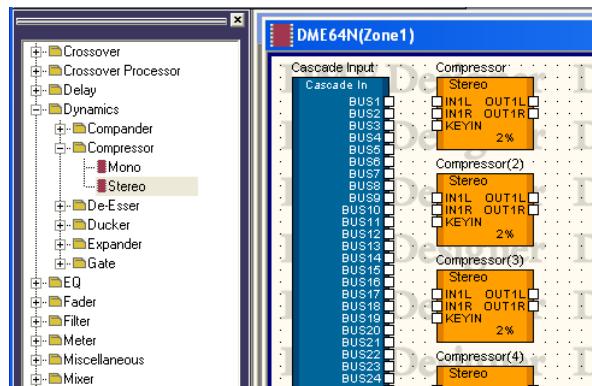
■ **Placing a Number of Components of the Same Type**

You can arrange a number of components of the same type. If there are two or more of the same component, numbers will be attached to their names as follows: "Compressor (2)," "Compressor (3)" and so on. Multiple components placed in the configuration are independent, and you can set different parameters for each of them.
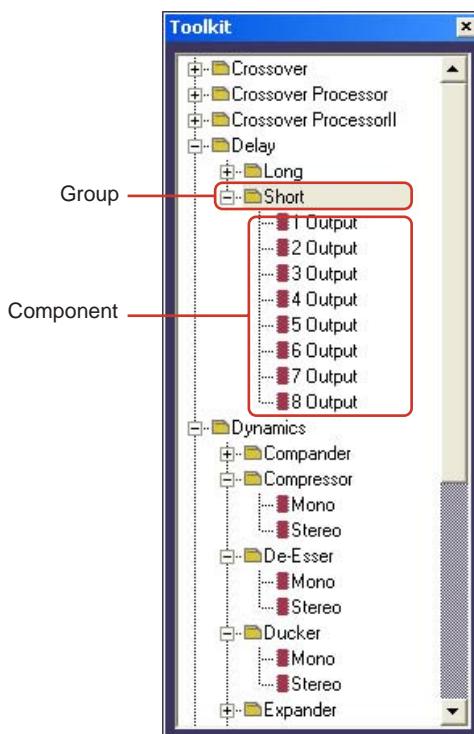
Types of Components

Component Groups

When the Configuration window and User Module window are made active, a component list is displayed in the Toolkit window, and you can use the [Component List] on the [Tools] menu. Components can be separated into groups based on types. In the Toolkit window, component groups are displayed as folders. Some of the groups in the Toolkit window are further divided into subgroups. Click the [+]/[-] buttons to the left of the folders to display the components.
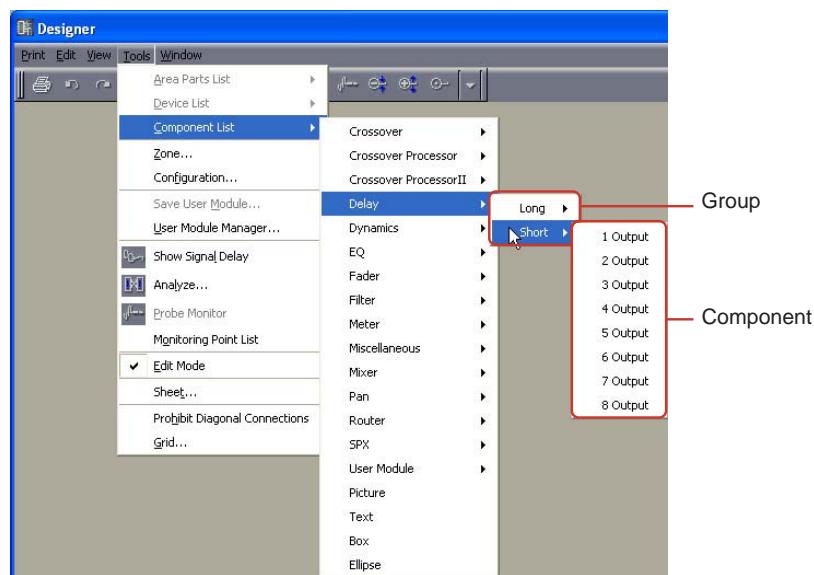
NOTE

When the User Module window is active, [User Module] is not present on the menu.

In the Designer window [Tools] menu → [Component List] menu, component groups are displayed as submenu items.
The items with small rightward-facing triangles are groups. Those without triangles are components.

NOTE

When the User Module window is active, [User Module] is not present in the menu.

Component List

Group		Component Variations
Crossover		2 Way 3 Way 4 Way 5 Way 6 Way
Crossover Processor		2 Way 3 Way 4 Way 5 Way 6 Way
Crossover Processor II		2 Way 3 Way 4 Way 5 Way 6 Way
Delay	Long	1 Output 2 Output 3 Output 4 Output 5 Output 6 Output 7 Output 8 Output
	Short	1 Output 2 Output 3 Output 4 Output 5 Output 6 Output 7 Output 8 Output

Group			Component Variations
Dynamics	Compander	CompanderH	Mono Stereo
		CompanderS	Mono Stereo
	Compressor		Mono Stereo
	De-Esser		Mono Stereo
	Ducking		Mono Stereo
	Expander		Mono Stereo
	Gate		Mono Stereo
	Limiter		Mono Stereo
EQ	GEQ	Mono	7 Band 15 Band 31 Band
		Stereo	7 Band 15 Band 31 Band
	PEQ	Mono	2 Band 3 Band 4 Band 6 Band 8 Band
		Stereo	2 Band 3 Band 4 Band 6 Band 8 Band
Fader			1 Channel 2 Channel 4 Channel 8 Channel 12 Channel 16 Channel
Filter	BPF		Mono Stereo
	HPF		Mono Stereo
	LPF		Mono Stereo
	Notch		Mono Stereo
	Programmable BPF		Mono Stereo
	Programmable HPF		Mono Stereo
	Programmable LPF		Mono Stereo
Meter			1 Channel 2 Channel 4 Channel 8 Channel 12 Channel 16 Channel
Miscellaneous	Oscillator		Mono
	Wav File Player		

Group			Component Variations
Mixer	Auto Mixer		2 Channel 4 Channel 8 Channel 12 Channel 16 Channel
	Delay Matrix	2 Input	2 Output 4 Output 8 Output 12 Output 16 Output
		4 Input	2 Output 4 Output 8 Output 12 Output 16 Output
		8 Input	2 Output 4 Output 8 Output 12 Output 16 Output
	Matrix Mixer	2 Input	1 Output 2 Output
		4 Input	1 Output 2 Output 4 Output
		8 Input	1 Output 2 Output 4 Output 8 Output
		12 Input	1 Output 2 Output 4 Output 8 Output 12 Output
		16 Input	1 Output 2 Output 4 Output 8 Output 12 Output 16 Output
		32 Input	16 Output 32 Output
		64 Input	32 Output 64 Output
Pan	LCR		1 Channel 2 Channel 4 Channel 8 Channel 12 Channel 16 Channel
	LR		1 Channel 2 Channel 4 Channel 8 Channel 12 Channel 16 Channel
	Surround		3-1 5.1 6.1

Group		Component Variations
Router	1 Input	2 Output 4 Output 8 Output 12 Output 16 Output
	2 Input	2 Output 4 Output 8 Output 12 Output 16 Output
	4 Input	2 Output 4 Output 8 Output 12 Output 16 Output
	8 Input	2 Output 4 Output 8 Output 12 Output 16 Output
	12 Input	2 Output 4 Output 8 Output 12 Output 16 Output
	16 Input	2 Output 4 Output 8 Output 12 Output 16 Output
Source Selector	3 Position	1 Channel
	4 Position	1 Channel 2 Channel 6 Channel
	8 Position	1 Channel 2 Channel 6 Channel
	16 Position	1 Channel
Speaker Processor		1 Way 2 Way 3 Way 4 Way 5 Way 6 Way
SPX		
Slot		Slot In Component Editor Slot Out Component Editor
Cascade		Cascade In Component Editor Cascade Out Component Editor

Component Editor Window

Component Editor

Component parameters are edited in the component editor. The same component can be placed multiple times on the same sheet in a Configuration or User Module window. If there are multiple examples of the same component in a configuration window or user module window, each component is independent and its parameters are set individually in a separate Component Editor window.

Opening the Component Editor

When you double-click on a component located in a Configuration window, the Component Editor window will open. There is not just one window that is called the component editor. The contents of the editor and the name on the title bar will differ according to type of component for which the window was opened.

Component Editor Window Structure

The contents of the Component Editor window vary according to the component.
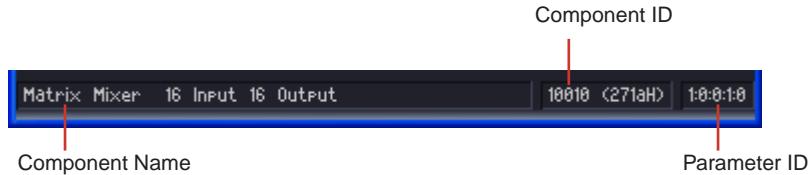
■ Title Bar

Displays the label. Label settings are made in the "Component Properties" dialog box. For information about component labels see "Component" (page 174) in "Objects.".

■ Back Button

This button appears in the child window of windows that have a parent-child relationship, and can be clicked to return the parent window.

■ Status Bar

Component ID

```
Matrix Mixer  16 Input 16 Output          10010 (271aH)  1:0:0:1:0
```

Component Name   Parameter ID

Component Name

Displays the component name.

Component ID

Displays the component ID.

> **NOTE**
>
> When controlling the DME64N/24N by connecting an RS-232C compatible controller to the [REMOTE] terminal, a component ID is required for distinguishing the same components in the DME64N/24N. The component ID is included in the signal that controls the component parameters. For details about control methods, contact your nearest Yamaha representative or the authorized distributor at the end of the DME64N/24N Owner's Manual.

Parameter ID

Displays the parameter ID for controls that are being operated.

■ Snap

Up to four component editor parameter sets can be recorded temporarily. You can switch between parameter sets using buttons.
Parameter sets can be copied by dragging and dropping a button onto any other button. Copy can also be carried out from the contextual menu that appears when a button is right-clicked.

■ Library

Saves and recalls component editor parameter sets as files.
→ See "Library" on page 275.

■ Graph

Displays the effects of the component in a graphical format. When parameters are changed, the graph changes too. In graphs that have control points, adjust parameters by dragging the points. As you drag the points, the corresponding parameters reflect the changes you make.

■ Meter

Displays the signal level.

■ Slider/Knob

You can change parameters by dragging the corresponding sliders or knobs.
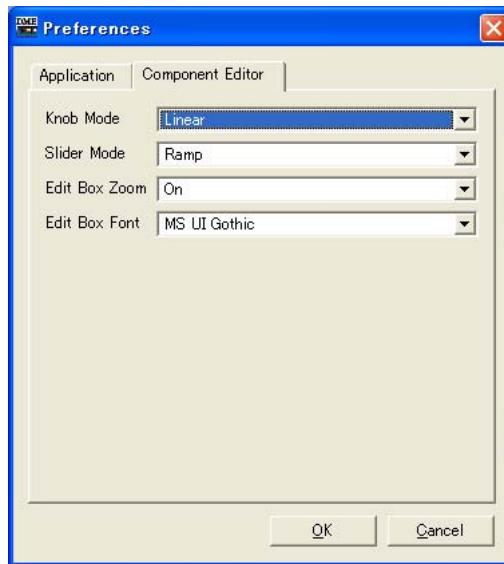
Changing Parameters

In the Component Editor window, parameter settings can be made by dragging buttons and sliders, not only by directly entering numbers. In locations where multiple controls, like edit boxes and knobs, are combined, you can change the values either way.

■ Preference

When you click the [Preference] command on the [File] menu in the Main Panel window, the "Preferences" dialog box is displayed. You can set the action of the knobs and sliders on the [Component Editor] tab of the "Preferences" dialog box.
When you close the dialog box after changing settings, those changes are immediately reflected in the component.

Knob Mode
Sets how the knobs operate.

Slider Mode
Sets the action that occurs when you click on the scale located under the sliders.

Edit Box Zoom
Specifies whether the edit box will be enlarged or not on mouse-over.

Edit Box Font
Specifies the edit box font.

> **NOTE**
>
> This is the font when the box is enlarged, not the font that is used when the box is at it's smallest size. The text may bleed beyond the box with some fonts.

■ **Knob**
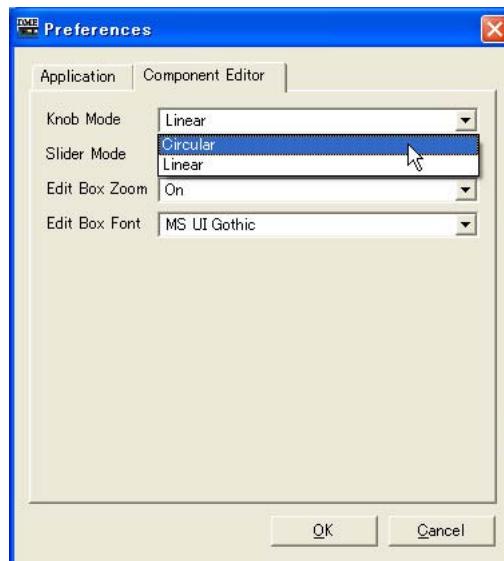
You can change the way knobs operate, using the [Component Editor] tab → [Knob Mode] setting in the "Preferences" dialog box.

Circular

The knob is dragged following its shape, as though you were drawing a circle.

Linear
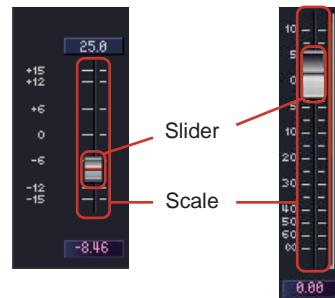
As you drag the knob to the upper, the value increases. Dragging it down decreases the value.

NOTE
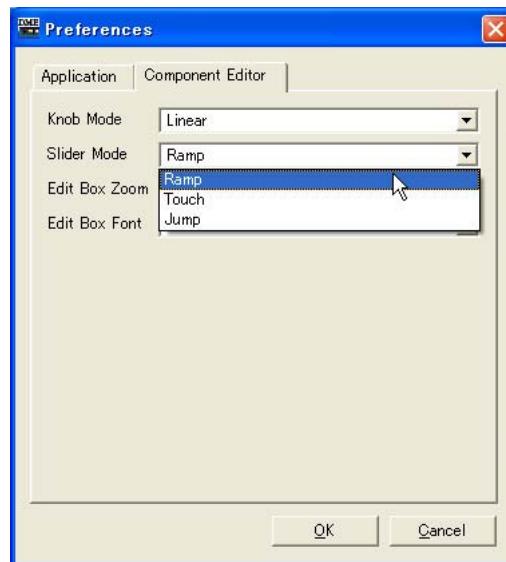
To make a finer setting, press the <Shift> key while dragging the knob.
If you click a knob while pressing the <Ctrl> key, the setting will return to its default value.

■ **Slider**

You can change the parameter by dragging the slider.
You can set the action that results from using the mouse on the scale area with [Component Editor] tab → [Slider Mode] in the "Preferences" dialog box.

Ramp

When the fader bar is clicked the knob will move a preset amount in the corresponding direction.

Touch

The slider does not move without directly touching it, even if you click the mouse button.

Jump

The slider jumps to the location where you click.

NOTE

To make a finer setting, press the <Shift> key while dragging the slider.
If you click a slider while pressing the <Ctrl> key, the setting will return to its default value.
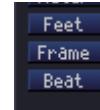
■ **Buttons**

There are several types of buttons.

Switches between ON/OFF. When turned on, the button lights up. The color depends on the button's function.

When turned ON   When turned OFF

In button sets of this type, you can select one of several buttons. When you do all other buttons in the set turn off.

Click here to execute a command.

Click this button

to switch all channels in the block.

Displays a menu.

Displays another window.

■ **Edit Box**

Displays current values for settings. You can modify values by typing from the keyboard or using the mouse. When a value is changed, the knob or slider moves.

Mouse-over

When [Edit Box Zoom] in the [Component Editor] tab of the Preferences dialog box is checked, the edit box will zoom when the mouse is positioned over it (mouse-over).
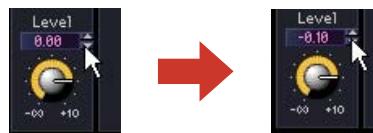
Click

Text in the selected edit box will turn red. Values can be entered and edited via the keyboard. It is not necessary to enter the unit. Press the <ENTER> key to confirm the entry and display the unit.

Changing Values Using Spin Boxes

When the mouse pointer is placed over an edit box, a spin box appears. Clicking the up arrow button [▲] increases the value, while clicking the down arrow [▼] decreases it.

Double-click

Selects a number. You can change the selected number using the keyboard. There is no need to enter units. When you press the <Enter> key, the numbers you entered will be set and the units displayed.

Enter a number from the keyboard.

Set the value with the <Enter> key.

Moving with the <Tab> Key
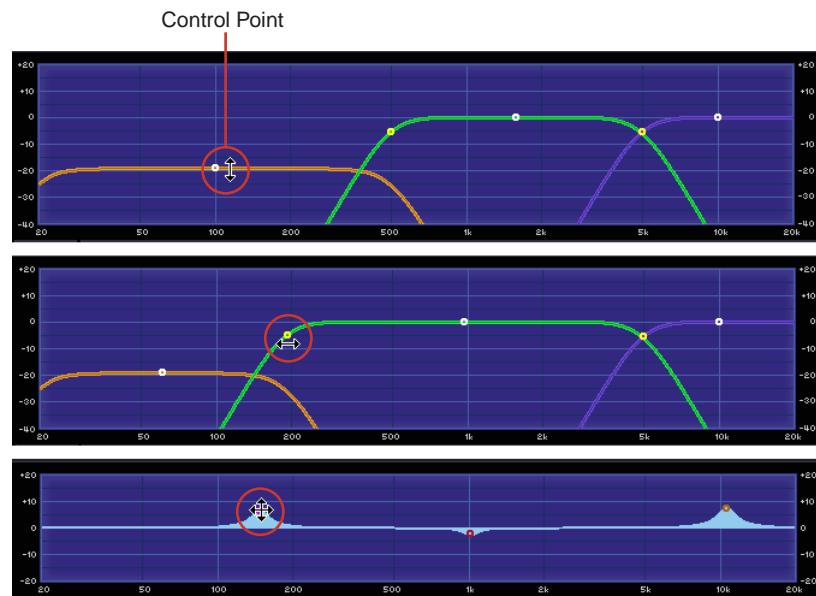
If you press <Tab> key while an edit box is selected, the selection will move to the next edit box. If you press <Shift> + <Tab>, the selection moves to the previous edit box.

Changing Selections with the Key/Mouse Wheel

You can modify values in selected edit boxes using the direction keys or the mouse wheel.

- Up and Down Arrow Keys

  Increases or decreases number settings.

- <PageUp> Key/<PageDown> Key

  Increases or decreases number settings in large increments. The <PageUp> key increases and the <PageDown> key decreases the setting.

- <Enter> Key

  When you press the <Enter> key, the numbers you entered will be confirmed.

- <Ctrl> Key + <Enter> Key

  When you press the <Ctrl> + <Enter> key, the setting will return to its default value.

- Mouse Wheel

  Rolling the mouse wheel upward (away from you) increases the value. Rolling it down (towards you) decreases the value.

- Dragging

  Dragging upward increases the value, while dragging downward decreases it.

- <ESC> Key

  The <ESC> key can be used to cancel a value being entered.

■ Graph

Control Point

Displays parameters graphically. When parameters are changed, the graph also changes.
In graphs that have control points, you can adjust parameters by dragging the points. On graphs with control points that are limited to movement in one direction only, aligning the mouse pointer with the control point and pressing the mouse button causes the mouse pointer to change to a double-headed arrow pointing in both directions of movement. Change the parameter by dragging in the directions of the arrow.
Control points that can be dragged in any direction usually have their position determined by multiple parameters in the component editor. These multiple parameters can be adjusted by dragging the point.
When there are multiple control points in the graph, they are identified by their colors. A bar with the same color as each control point can be found below the corresponding knob or edit box.

NOTE

When a graph that has control points is copied to the User Control Editor or User Module Editor, the controls points will not be displayed. The controllers assigned to the corresponding parameters must also be copied to display the control points.

Snap

About Snap

The Snap function records parameters for the component editor, user control editor, and user module editor temporarily. Clicking a button switches the parameter set, setting all parameters in the editor to the status that existed when the parameters were recorded in the memory. You can record the current values for parameters. Furthermore, when you recall a library, it is recorded to the Snap button that is on at that time. For more information about libraries, see "Library" (page 275).

Snap Buttons

■ **Snap Buttons ([A] through [D])**

The Snap buttons allow you to switch between parameter sets. The buttons change in appearance according to their ON/OFF status and to whether or not there were changes to the parameter set from when the editor was started.

When there has been no change to the parameter set since the editor was started

When a button is selected it lights up.

ON OFF

When a parameter set that is different than when the editor was started has been recorded to a button

The color of the button name changes on buttons for which the parameter set has changed. When a button is selected it lights up.

ON OFF

■ **Recording Parameter Sets**

Recording parameters from the current window
The parameters present when the snap button is switched are recorded to the snap button before the switch.

1 Click the snap button ([A] through [D]) that will record the parameter set. This turns it ON.

2 Set the parameters in the editor to the settings you want to record.

3 Click another snap button.

Recalling a Library

1 Click the snap button that has recorded the parameter set. This turns it ON.

2 The library is recalled.

■ **Switching Parameter Set**
If you click a snap button that has a parameter set recorded, the system switches to the parameter set recorded there.

■ **Copying Parameter Sets**
Parameter sets can be copied between snap buttons [A]~[D].
- Select from the contextual menu.
- Drag and drop.
  Drag-and-drop copy will also work between components of the same type.

Library

The Library
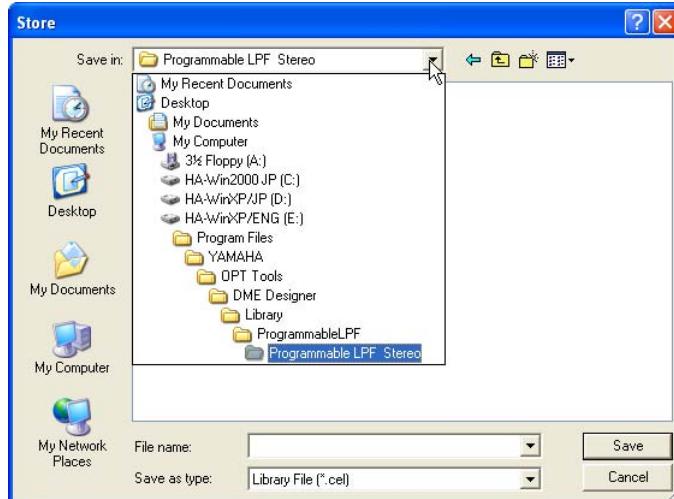
Component editor, user control editor, and user module editor parameters can be saved as library files. By reading back a saved library file, you can reset all the editor parameters to the status they had when the file was saved. Saving in a library file is called "storing," while bringing back the settings is called "recalling" them.

Library files have the following file name extensions: ".cel" for component editors, ".ucl" for user control editors, and ".uml" for user module editors.

If you store library files in folders that conform to the following path, they will be automatically displayed in the component editor [Recall Library] menu: "C:\Program Files\YAMAHA\OPT Tools\DME Designer\Editor\Library\Component Group Name\Component Name."
The dialog box used for storing items in the library opens with the library folder displayed.

If you save like this without changing the folder, the item you saved will be displayed on the [Recall Library] menu. When a library is saved, it can be displayed in the component editor for other project files besides the currently open one, and also in new project files.

> **NOTE**
>
> If you change the [Contents Folder] in the "Preferences" dialog box in the Main Panel window, a "Library" folder will be created in the specified folder, and a folder for each component will be created there.

> **NOTE**
>
> In the "Save Library File" dialog box, you can specify another folder for saving library files, and save them there. Library files that are saved in another folder also can be recalled by specifying the folder.

■ Library Filenames

Because the library filenames are displayed in the [Recall Library] menu, use a filename that helps you understand the contents of the parameter set in the file. When saving in the default folder, there is no need to include the component name in the filename.

For example, when you are storing a parameter set in the stereo compressor library, the "Save Library File" dialog will be displayed with the "C:\Program Files\YAMAHA\OPT Tools\DME Designer\Editor\Library\Compressor\Compressor Stereo" folder selected. If you save in that folder, the file you save will be displayed only in the [Recall Library" menu for stereo compressor components only. It will not be displayed in any other library.

If you use a filename that makes it easy to understand the parameter contents or the conditions under which they are used, you can select them without confusion when recalling.

Storing in the Library

The library is the place to store component editor parameters.

■ Editor Window

1 Set the parameters to be stored in the library.

2 Click the [Store Library] button in the component editor.
The "Save Library File" dialog box will be displayed.

3 Enter the filename.
Select a filename that makes it easy to understand the contents of the parameter set.

4 Specify the folder for saving the file.
If you want the saved file displayed on the [Recall Library] menu, do not change the folder for saving.

5 Click the [Save] button.

■ Designer Window

Right-click a component or user module in the Designer window to show the contextual menu. Use the [Store Component Library] command to store the library.

The menu that appears when the contextual menu [Store Component Library] command is clicked is the same as the menu that appears when the Edit window [Store Library] button is clicked. Specify a file name and save the file.

Recalling a Library

The recall function reads stored parameters into the component editor.
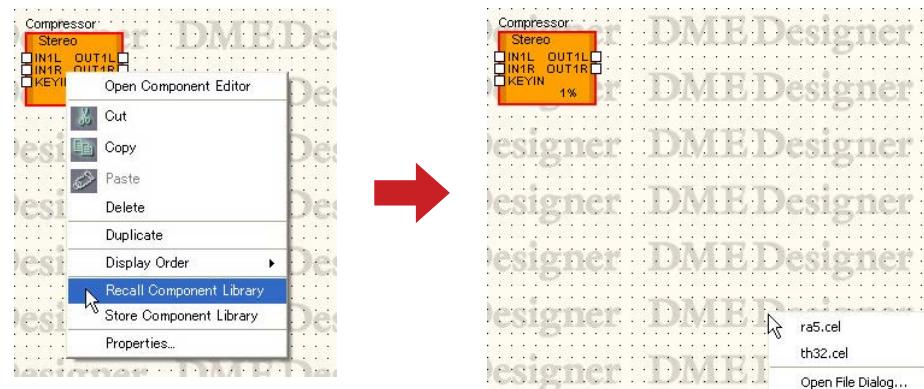
■ Editor Windows

You can recall libraries in the component editor, user control editor, and user module editor windows by clicking the [Recall Library] button. When a library is recalled in an editor window, the parameter set is recorded to the selected snap button.
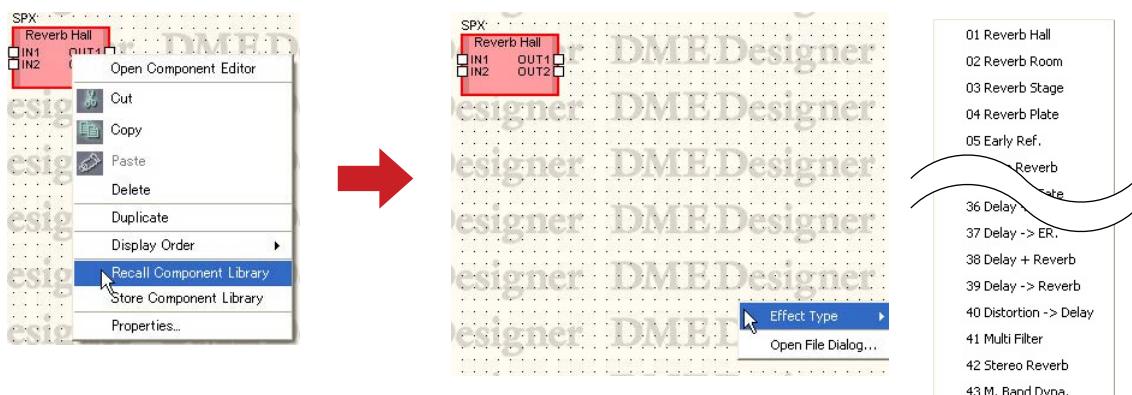
1 Click the snap button ([A] through [D]) that will record the parameter set.

2 Click the [Recall Library] button in the component editor.
The [Recall Library] menu will be displayed.

3 Click the library name (filename) in the [Recall Library] menu.
The parameters in the library will be recalled.

■ Designer Window

If you right-click on a component or user module in the design window, a context menu will be displayed. You can recall a library using the [Recall Component Library] command.
If you click [Recall Component Library] in the context menu, the same menu is displayed as when you click the [Recall Library] button in the editor window. If you select a library that is displayed in the submenu, that library is recalled.

Not only the library name, but also the effect type is displayed in the submenu that appears when you right-click on an SPX component.

■ **Recalling a Library Stored in a Folder Other Than the Default**

Libraries not stored in the default folder do not appear on the [Recall Library] menu. You must specify the file you want in order to recall it.

1 Click the [Recall Library] button in the component editor.

The [Recall Library] menu will be displayed.

2 Click the [Recall Library] menu [Open File Dialog].

The "Open" dialog box will be displayed.

3 Move to the correct folder and select a library file.

4 Click the [Open] button.
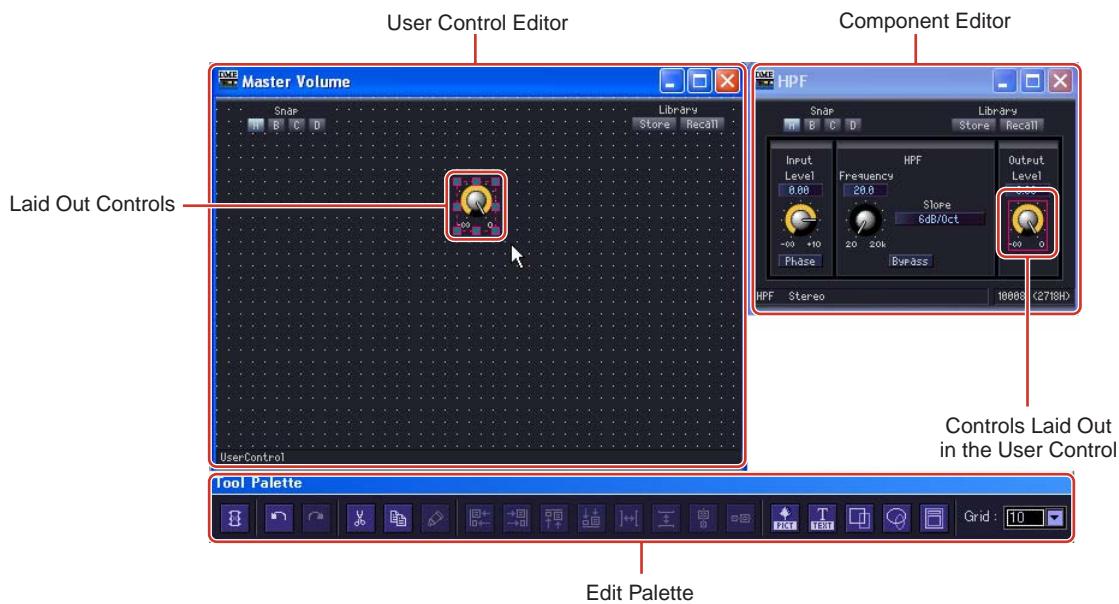
User Control/User Module Editor

User Control

The user control function lets you lay out a set of component controls in the Configuration window or User Module window, and create a control window with them. The controls in the user control editor are linked to the controls for the original component. If the parameters are changed in the user control editor, the parameters will change in the same way in the component editor. If parameters are changed in the component editor, the controls in the user control window will also change in the same way.

You can create a compact control window by only including controls for parameters that are used frequently.

You can also lay out controls for multiple components, so that you can adjust parameters for them from a single window.

There is also a [Library] button in the user control editor, which you can use to save parameters to the library.

User controls are created by selecting [View] menu → [User Control] → [New User Control] in the Main Panel window. Created user controls are displayed in the [View] menu → [User Control] submenu. If you select one, a window will open for it. The controls which can be opened by the user control editor are automatically set according to the user security settings of the currently logged in user.

[User Control] Menu

User controls are displayed in the [View] → [User Control] submenu of the Main Panel window. If you click the [User Control] button in the Main Panel window, you will display the same menu as the [View] menu → [User Control] submenu.

User Control Name

Displays a menu of user controls included in the current configuration of the current zone. Clicking one of the user controls opens the user control editor. A checkmark appears next to already open windows.

New User Control

When you select the "New User Control" command, the "User Control Manager" dialog box will be displayed. Here you can create, delete, rename, and otherwise manage user controls. For information about the "User Control Manager" dialog box, see page 70.

Creating New User Controls

New user controls are added in the "User Control Manager" dialog box.

1 Click [User Control Manager] on the Main Panel window [Tools] menu.

The "User Control Manager" dialog box will be displayed.

> **NOTE**
>
> You can also display the "User Control Manager" dialog box by clicking the [View] menu → [User Control] → [New User Control] command.

2 Click the [New] button.

The "New User Control" dialog box will be displayed.

3 Enter the name for the new user control into the [Name] box.

4 Sets security for User Control.

Different settings are provided for individual security levels and users.
Security cannot be set higher than the user security level.

Click the [User Level] [▼] button to select a security level.

Use [User Name] to select a user.

5 Click the [OK] button.
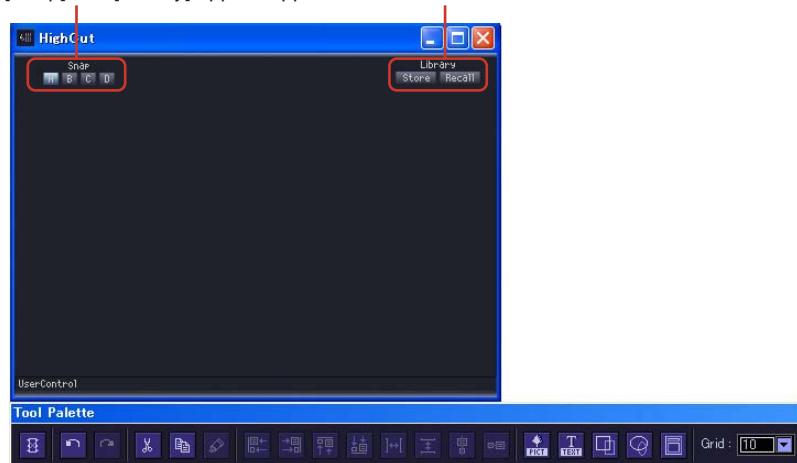
The user control will be created and displayed on the list in the "User Control Manager" dialog box.

6 Click the [OK] button in the "User Control Manager" dialog box.

When a new user control is created, it will be displayed in the [View] menu → [User Control] submenu in the Main Panel window. If you click the control, it will be displayed in a user control editor window.

[Snap] and [Library] appear appears in a new user control.

User Control Security

Security can be set independently for each User Control. User Control levels higher than the user security level will not be displayed in the menu or the User Control Manager dialog box.
The security level settings for both the user control and the user affect editing and display of user controls.

■ User Control Security Level

Security 1 ~ 10 can be set for each level or user. Level 1 is the highest level and 10 is the lowest. If the security level for a user control is set to 2, only users at level 1 or level 2 can display or edit it Security levels for user controls can be changed in the "User Control Manager" dialog box by a user who has logged on at a security level equal to or higher than the user control.
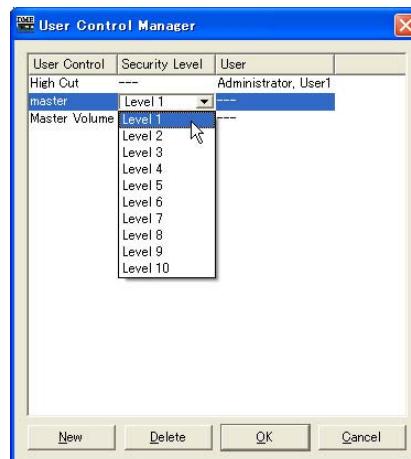
1 Click [User Control Manager] on the Main Panel window [Tools] menu.
The "User Control Manager" dialog box will be displayed.

2 Changing User Control Security

- To Change the Security level
Click the [Security Level] box of the User Control to be changed.
The security level list will appear.

NOTE
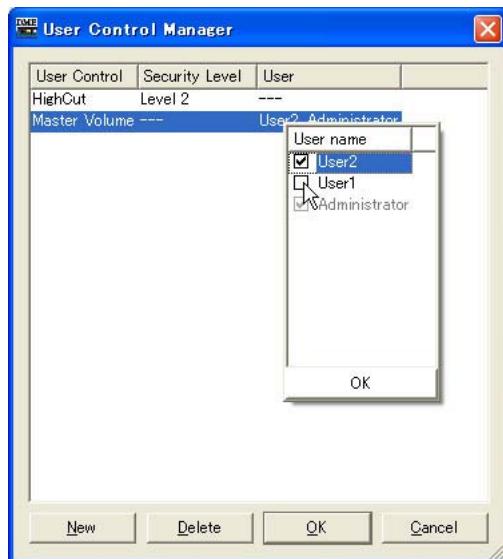
The levels displayed on the list will differ according to the security level of the user.

Click the level to be set for the User Control.
The selected level will be displayed in the [Security Level] box.

- Setting Security for Individual Users
  Click the [User] box of the User Control to be changed.
  The user list will appear.

The users that can be selected will depend on the user security level.

Click the user to be set for the User Control.
The selected user name will be displayed in the [User] box.

3 Click the [OK] button.

■ User Security Settings

In the "Security" dialog box in the Main Panel window, you can set the user control levels at which to allow or disallow editing and display.
A user can edit user controls if a check has been placed for that user in the [Operation Security] → [Edit] checkbox. User controls at a level equal to or lower than the level set in [Operation Security] → [User Control Level] will be displayed in the menu.
Using user security, you can set whether user controls will open at logon or when a file is opened. If [Startup User Control] is turned ON, the user control editor will be automatically displayed when files that include user controls are opened.
For information about the "Security" dialog box, see "Security (Creating Users and Making User Settings)" on page 55.
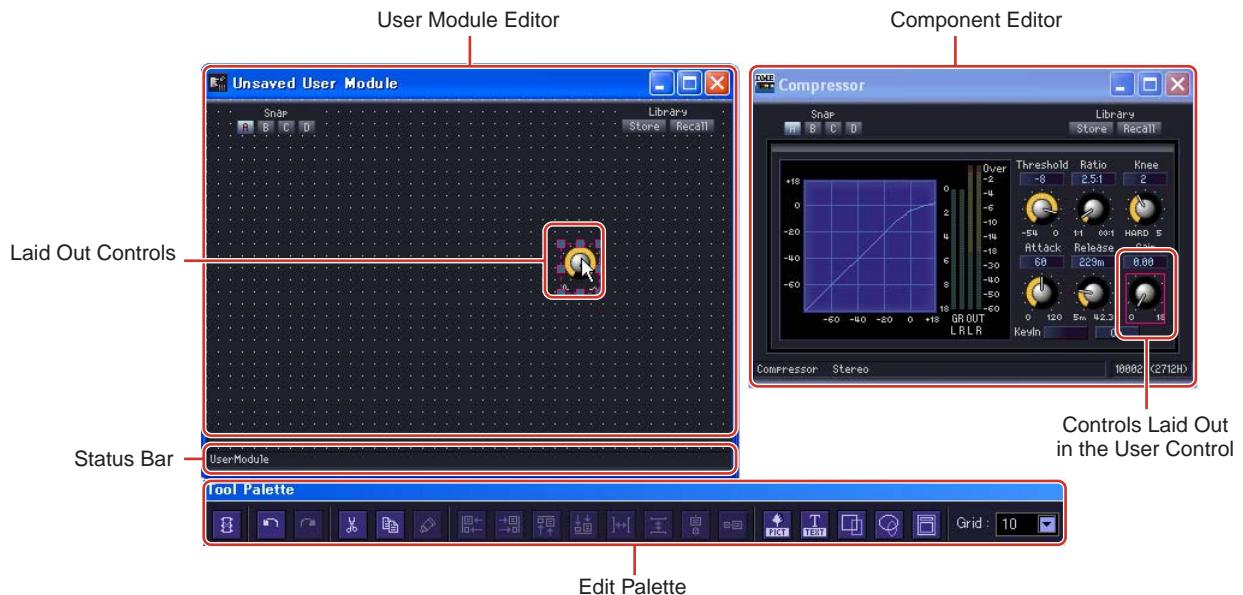
User Module Editor

The user module editor lets you make a layout of controls for components arranged in the user module window. For each user module there is one user module editor. The name of the user module is displayed in the title bar. Only components that are arranged in a particular user module can be laid out in the specific control window that is associated with that user module. Both the user module and the control window will have the same name.

NOTE

You can copy controls from a user module to the user control editor.

User Module Editor   Component Editor

Laid Out Controls

Controls Laid Out
in the User Control

Status Bar

Tool Palette

Edit Palette
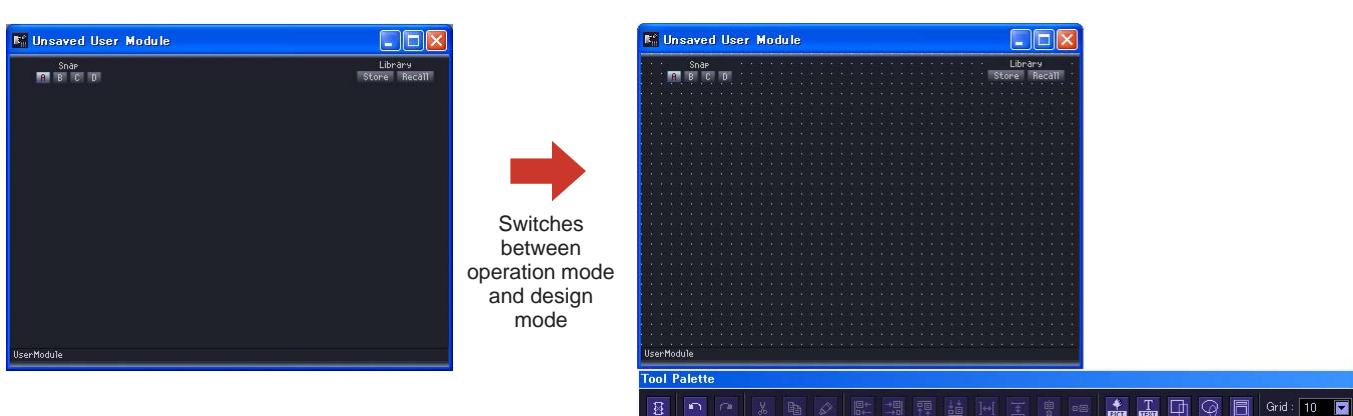
■ Opening a User Module Editor Window

Use [Double Click Action] in the "User Module Manager" dialog box or "User Module Properties" dialog box to set the window that will open when you double-click in the Configuration window. If the [Open User Module Editor] checkbox has been turned ON for a user module, a user module editor can be opened for it. For information about the "User Module Manager" dialog box, see page 250. For information about the "User Module Properties" dialog box, see page 181.
A User Module can also be opened via the User Module contextual menu in the Designer window.

Operation Mode and Design Mode

There are two modes for the user control editor/user module editor and the component editor: "**operation mode**" and "**design mode**." In operation mode you adjust parameters, while in design mode you lay out controls.

You can switch between operation mode and design mode using the context menu that is displayed when you right-click in the user control editor/user module editor or component editor.

Switches between operation mode and design mode

The [Design Mode] command switches the design mode between ON and OFF. A checkmark appears when the design mode is turned ON. If you click in the context menu when the checkmark is present, design mode will turn OFF, and the edit window will return to operation mode.

NOTE

Only users for whom the [Operation Security] → [Edit] checkbox in the "Security" dialog box has been checked can turn the design mode ON.

NOTE

You can select controls in the component editor so that you can copy them into the user control editor/user module editor. When you want to select multiple objects, hold down the <Ctrl> key as you click each new object you want to select.

Status Bar

The lock icon will appear in the User Module when security is active.
→ User Module properties (page 181).
→ User Module (page 250).
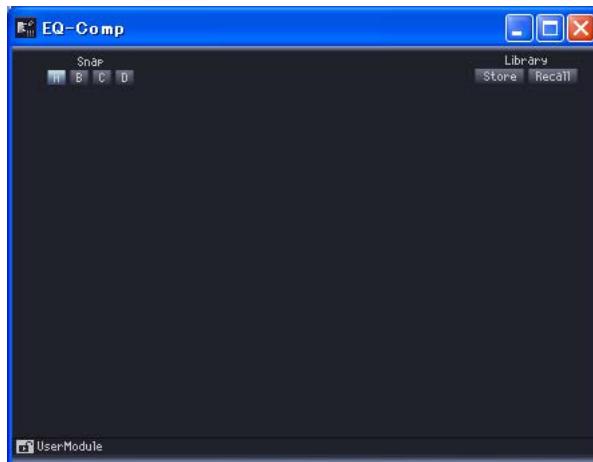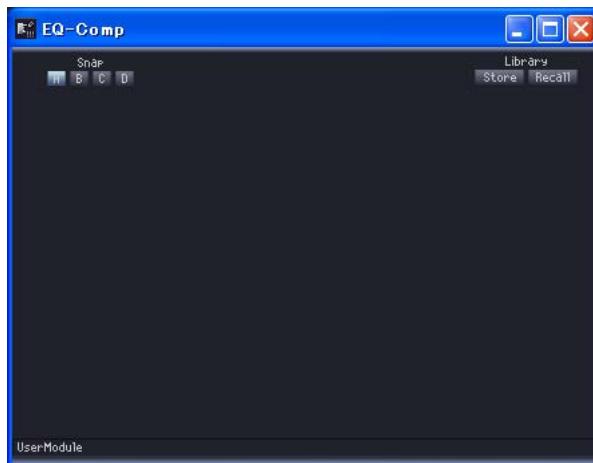
The lock icon will appear locked when the password has not been entered, and layouts edited in the Design Mode cannot be saved.

When the password is entered it becomes temporarily possible to save the layout.
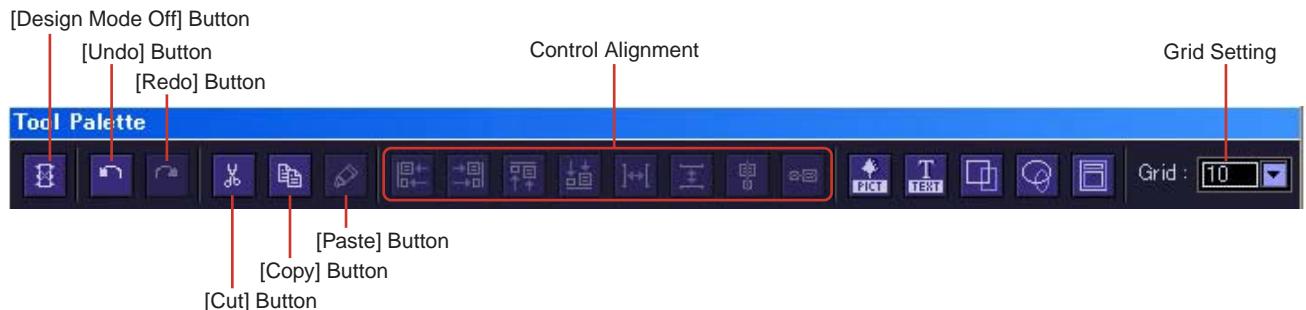
The lock icon will not appear if the [Enable Security] checkbox in the "Properties" dialog box is not checked.

Edit Palette

The edit palette is automatically displayed whenever the user control editor/user module editor is active in design mode. Whenever you move the user control editor/user module editor, the edit palette moves together with it. When you turn OFF design mode, the palette disappears.
Commands for editing in the user control editor/user module editor are provided on the edit palette.

[Design Mode Off] Button

[Undo] Button   Control Alignment   Grid Setting

[Redo] Button

[Paste] Button

[Copy] Button

[Cut] Button

■ **[Design Mode Off] Button**

Turns OFF the design mode.

■ **[Undo] Button/[Redo] Button**

Used to undo/redo operations.

■ **[Cut] Button/[Copy] Button**

Cuts or copies the selected controls.
→ See "Cut/Copy/Paste Controls" on page 303.
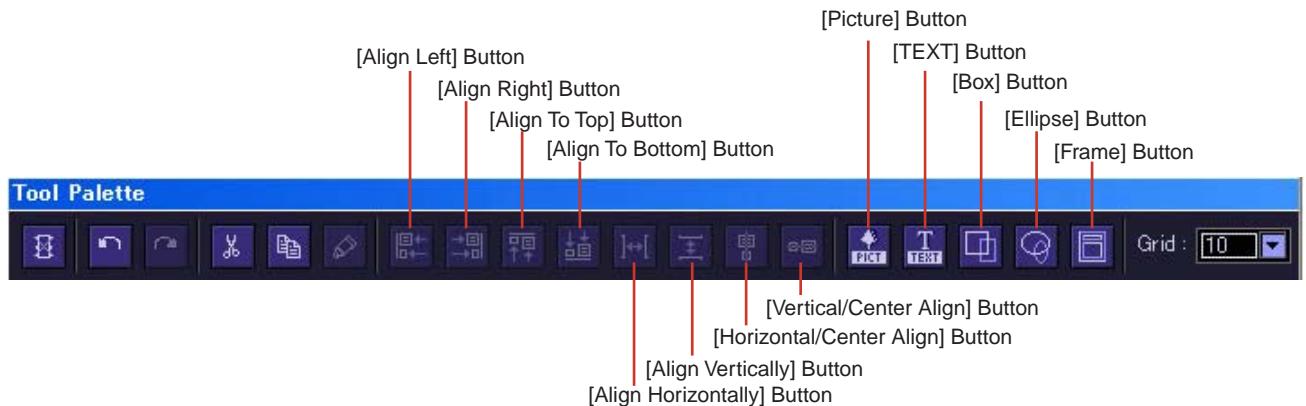
■ **[Paste] Button**

Pastes cut or copied controls.
→ See "Cut/Copy/Paste Controls" on page 303.

■ **Alignment of Controls**

Aligns the positions of multiple controls.

[Picture] Button
[Align Left] Button
[Align Right] Button
[TEXT] Button
[Align To Top] Button
[Box] Button
[Align To Bottom] Button
[Ellipse] Button
[Frame] Button

[Vertical/Center Align] Button
[Horizontal/Center Align] Button
[Align Vertically] Button
[Align Horizontally] Button

[Align Left] Button

Aligns all selected controls with the left edge of the leftmost selected control.

[Align Right] Button

Aligns all selected controls with the right edge of the rightmost selected control.

[Align To Top] Button

Aligns all selected controls with the top edge of the uppermost selected control.

[Align To Bottom] Button

Aligns all selected controls with the bottom edge of the lowermost selected control.

[Align Horizontally] Button

This button can be used only when three or more controls are selected.
It arranges the controls in a uniform horizontal line. Without changing the position of the leftmost and rightmost control, this button arranges the controls between them at uniform intervals. It puts the same amount of space between each control and its neighbor.

[Align Vertically] Button

This button can be used only when three or more controls are selected.
It arranges the controls in a uniform vertical line. Without changing the position of the uppermost and lowermost control, this button arranges the controls between them at uniform intervals. It puts the same amount of space between each control and its neighbor.

[Horizontal/Center Align] Button

Aligns the selected controls horizontally with the center position.

[Vertical/Center Align] Button

Aligns the selected controls vertically with the center position.

■ [Picture] Button

Places a graphic file.

■ [TEXT] Button

Places a text box.

■ [Box] Button

Places a square.

■ [Ellipse] Button
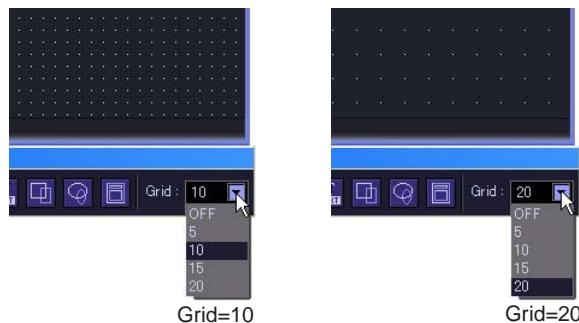
Places an ellipse.

■ [Frame] Button

Places a frame.

■ Grid Setting

When arranging controls, you can align them along the grid. This menu sets the spacing of the grid.

Grid=10   Grid=20

Clicking the [▼] button displays a menu. Click the menu to set the grid spacing. Select [OFF] to turn OFF the grid.

NOTE

When the grid is turned ON (when any grid item besides OFF is selected), clicking any control that is not aligned with the grid position, will cause it to align with the nearest grid.
Please note that after copying multiple controls in one operation from the component editor and adjusting their positions manually, their positions could become disarranged when you select them by clicking on them, if they do not already align with the grid interval.
Furthermore, if you change the grid spacing after aligning the positions of controls in the user control editor/user module editor, the controls will be placed into positions that do not align with the grid even if they are arranged using the align buttons. When there are controls that do not align with the grid, turn the grid OFF.
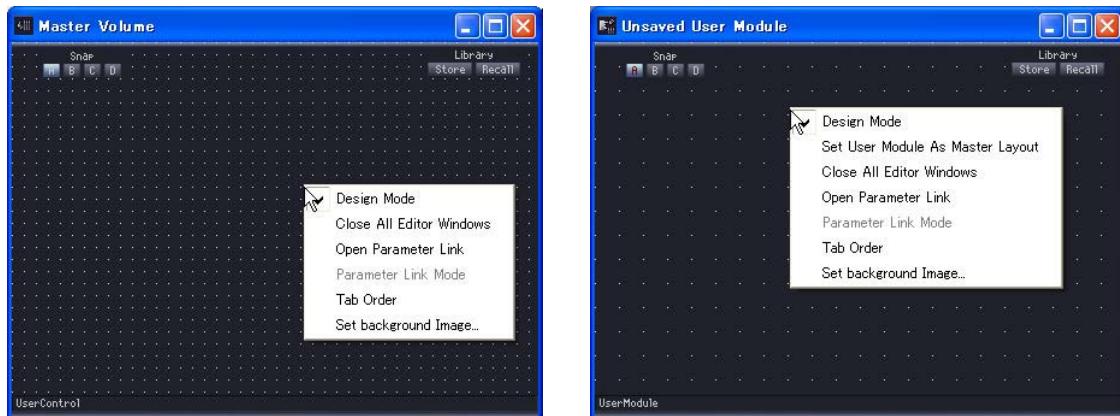
User Control Editor/User Module Editor Context Menu

The context menus that appear when you right-click in a window will differ in operation mode and in design mode. In design mode, other commands will be added, depending on where you click.
The context menu for the user module editor contains the [Set User Module As Master Layout] command.

■ Operation Mode

Commands that are displayed in the context menus for operation mode will also be displayed in design mode.
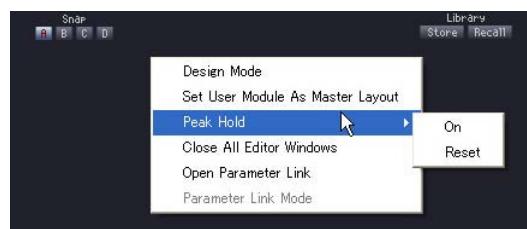
[Design Mode]
Switches between design mode and operation mode. When you are in design mode, a checkmark will appear to the left of the command name.

[Peak Hold]
Turns the peak hold meter ON or OFF and performs a reset. The ON or OFF setting for peak hold applies to the whole zone.

- [On]
  When you select this, peak hold is turned ON, and a checkmark appears next to it. If you select this item while it is checked, peak hold is turned OFF.

- [Reset]
  Resets peak hold.

  NOTE

  Peak hold is a function that makes it easy to see the maximum signal value by lighting up at the level of the maximum value as the signal peak comes in.

[Close All Editor Windows]
Closes all component editor windows.

[Open Parameter Link]
Opens the "Parameter Link" window. For information about the Parameter Link window, see "Parameter Link" (page 73).

[Parameter Link Mode]

A checkmark appears when this is turned ON.
Turning this ON changes to parameter link mode, where group parameters can be linked.
When this is turned OFF, group parameters will not be linked, and they can be changed
individually. Turn this OFF when editing the offset for each parameter.
Parameter link mode is linked to the [Parameter Link] check box in the Parameter Link window.
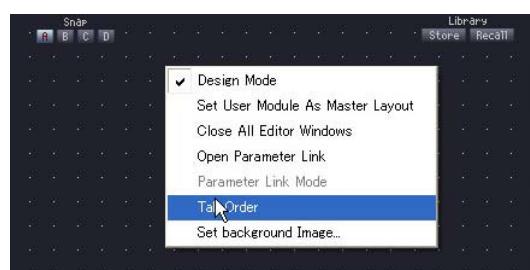
[Set User Module As Master Layout] (User Module Editor Only)

Sets the layout of active user module editor as the master layout. The window size and the
background will be applied to user module editors created in the future.

■ The Context Menu Displayed in Design Mode When You Right-Click an Empty Location

[Tab Order]

When using user control editors or user module editors, this function displays the order in which
you move through them by pressing the <Tab> key. When you select this command, numbers are
displayed next to the edit boxes. A checkmark appears next to [Tab Order] in the context menu. To
exit tab order settings, click [Tab Order] the context menu or click anywhere besides a tab order
number in the user control editor.

Clicking the displayed numbers changes the order. The numbers are changed in the order that
they are clicked. To exit tab order settings, click [Tab Order] the context menu or click anywhere
besides a tab order number in the user control editor.
→ See "Changing the Tab Order" on page 313.

[Set Background Image]

Sets a background image for a window. Clicking here displays the "Background Image" dialog
box.
→ See "Setting Background Images for Windows" on page 295.

■ **The Context Menu Displayed in Design Mode When You Right-Click a Control**

[Open Original Component Editor]
This menu is displayed when you right-click a control in design mode. It opens the component editor for the control you clicked.

[Add Parameter to Parameter Link]
Adds a control to the parameter link group. Click the group name displayed in the submenu. See "Creating Parameter Links" (page 314).

If you click a parameter link group name, a control is added to that group.

[Property]
Opens the properties dialog box for the control.
→ See "Control Properties" on page 303.

NOTE

There some controls, such as edit boxes and sliders, that do not display the [Property] command.

Changing the Window Size
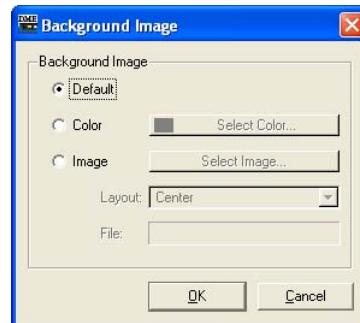
In design mode, you can change the window size of the user control editor. If you align the mouse pointer with a side or corner of the window, its shape will change into a double-headed arrow. When the arrow is shaped like this, dragging it will change the size of the window.

Even if you change the width of the window, the library button will remain where it is, in the upper right corner.

Setting Background Images for Windows

The default color for the user control editor/user module editor window background is black, the same as for the component editor window. However, you can change the color or display an image in the background. These settings are made in the "Background Image" dialog box. To display this dialog box, right-click in the user control editor window while in design mode, then click [Set Background Image] on the displayed context menu.

■ [Default]
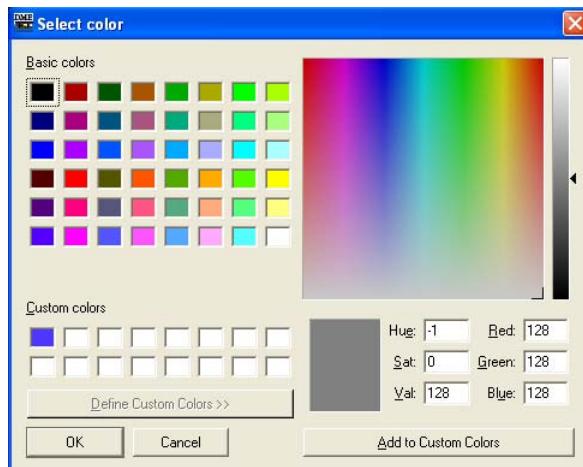
Sets the background color to black, the same as the component editor. Select this if you have set the background with [Color] or [Image], and you want to return to the original background.

■ [Color]

Sets the color of the background. Use the [Select Color] button to select a color.

[Select Color] Button

Clicking here displays the "Select color" dialog box. This sets the color of the background. For information about the "Select color" dialog box, see page 203.

NOTE
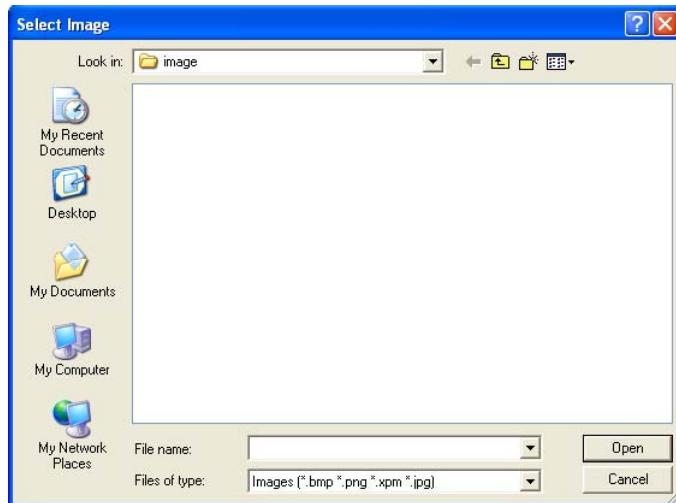
If you select a light color, it may be difficult to see the grid.

■ [Image]

Displays an image for the background. You can use image files in the following formats: BMP (.bmp), PNG (.png), XPM (.xpm), and JPEG (.jpg). Use the [Select Image] button to select an image file.

[Select Image] Button

Clicking here displays the "Select Image" dialog box. Here you can select an image file to be displayed as the window background.

[Layout] Box

This box displays a list where you can select how the image file will be displayed.

- [Center]
  Centers the image in the window.

- [Tile]
  Displays multiple copies of the image side-by-side until the available space is filled. If the image file is smaller than the window, it will be displayed repeatedly like tiles on a wall.

- [Fit]
  Expands or reduces the size of the image to match the size of the window where it will be displayed.

[File] Box
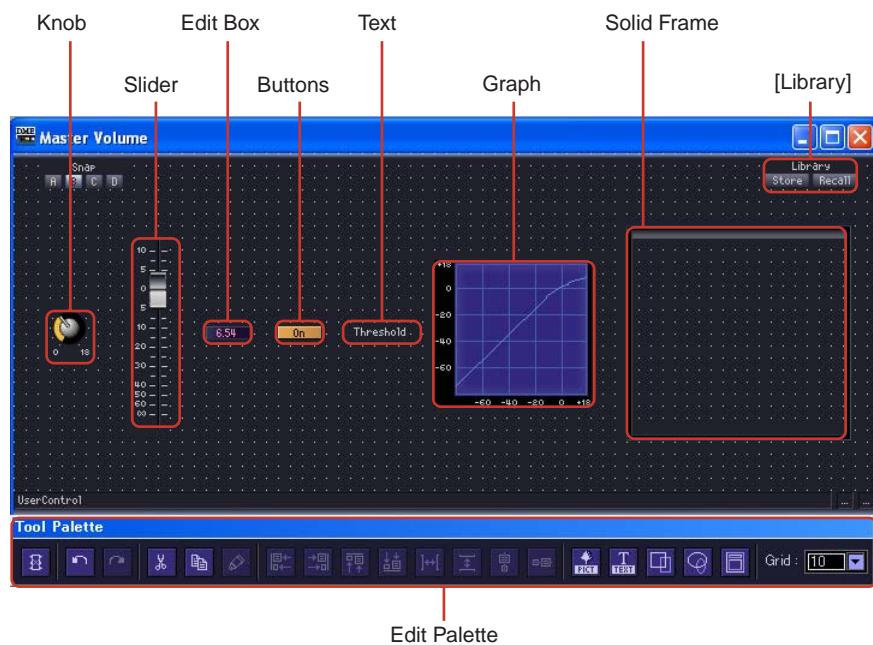
Specifies a path for the image file.
Click the [Select Image] button and select an image file. The path will be automatically entered.

Placing Controls

Controls can be placed when you are in the design mode. You can turn the design mode ON and OFF by right-clicking in the user control editor/user module editor, or component editor, then clicking the [Design Mode] command in the context menu that is displayed.
You can place controls by dragging them from the component editor or by using the copy and paste commands.

Edit Palette
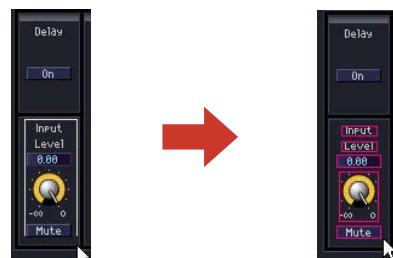
■ Selecting Controls

If you click a control in the component editor while in design mode, the control will be selected and a red frame will be displayed around it. Controls like knobs, sliders, edit boxes, and labels are all separate objects. Only the item clicked will be selected.

If you hold down the <Ctrl> key while clicking, you can select multiple controls and labels. If you use <Ctrl> + click on a selected control, it will cancel that control's selection.
If you position the mouse in an empty location on the sheet and start dragging from there, a frame will be displayed as the pointer moves. All controls enclosed by that frame will be selected.
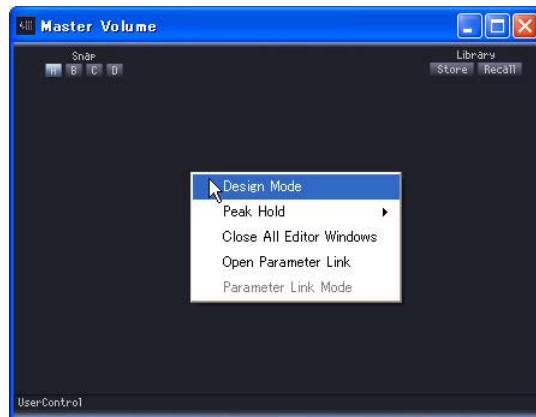
> **NOTE**
>
> If you drag controls like knobs and sliders, edit boxes and labels that show parameter types, and place them one-by-one in the user control editor, they must be arranged in the user control editor. If you select multiple items and drag them, you can copy them as a group into the user control editor, keeping their original arrangement.
> When copying multiple controls from a single component editor, if you select all the controls you want copy and drag them together as a unit, their original positional relationship and tab order will be maintained.

■ Placing Controls by Dragging Them (User Control Editor)
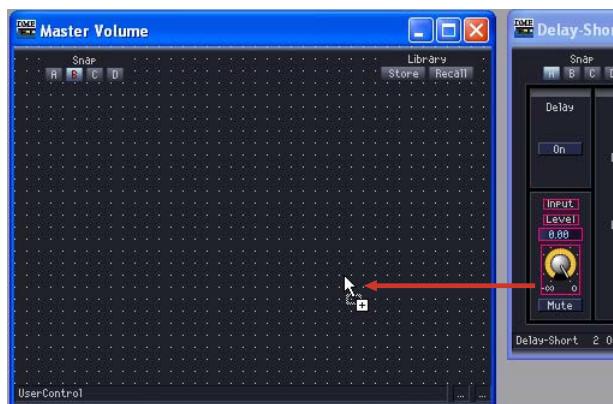
You can drag the controls you want to copy from the component editor to the user control editor.

1 Open the component edit window that has the controls you will be placing in the user control box.

2 Open the user control editor.

User control names are displayed in the [View] → [User Control] submenu in the Main Panel window Click a user control name to open its window.

3 Right-click in the component editor or the user control editor.

The context menu will be displayed.

4 Click [Design Mode] on the menu.
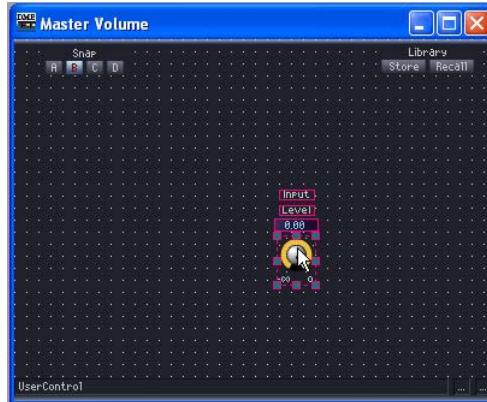
Design mode will be turned ON.

5 Drag the controls from the component editor to the user control editor.
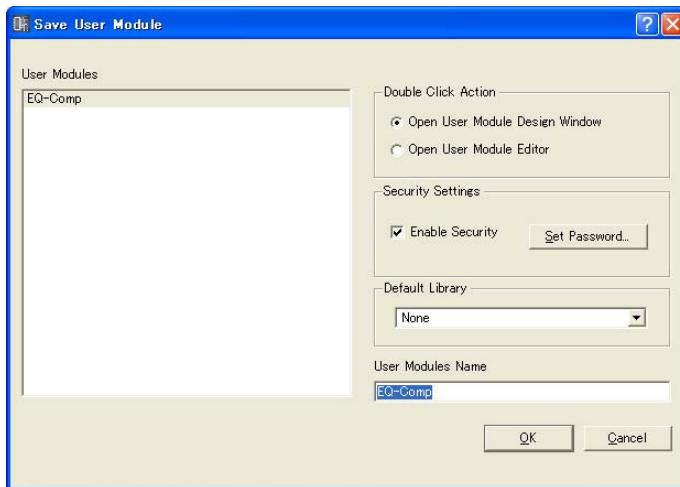
Arrange the controls in the user control editor.

■ **Placing Controls by Dragging Them (User Module Editor)**
You can drag the controls you want to copy from the component editor window in the user module to the user module editor.

1 Create a user module, then arrange and connect the components for it.

2 Store the user module by checking [Double Click Action] → [Open User Module Editor] in the Store dialog box (see "Saving User Modules" on page 255 for details about storing user modules).

3 Double-click a user module in the Configuration window.
The user module editor and edit windows for the components arranged in the user module will be displayed.

4 Right-click in the component editor or user module editor, then click the [Design Mode] command in the context menu.
Design mode will be turned ON.

5 Drag the controls from the component editor to the user module editor.
Arrange the controls in the user control editor.

■ **Placing Controls Using Copy and Paste**

Copy the controls in the component editor and paste in the user control editor or user module editor.

To copy controls in the component editor, press the [Copy] command shortcut keys, <Ctrl> + <C>.

To paste in the user control editor or user module editor, press the [Paste] command shortcut key, <Ctrl> + <V>, or the [Paste] button on the edit palette.

1 Click on the source component editor window to make it active, then select the control or controls you want to copy.
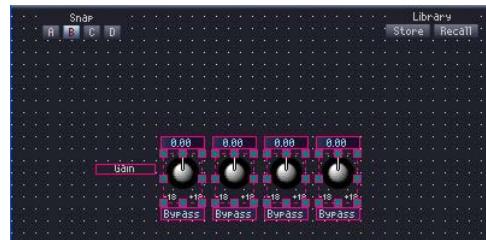
2 Press the <C> key while holding down the <Ctrl> key.

The selected controls will be copied to the clipboard.

3 With the target user control editor or user module editor active, press the <V> key while holding down the <Ctrl> key.

You can also paste by clicking the [Paste] button on the edit palette.

The controls will be copied.

■ When You Cannot Copy

Regardless of whether you drag or use copy and paste, you cannot create multiple copies from the same single component. If you drag controls that are already copied into the user control editor or user module editor, the mouse pointer will change into the "unavailable" mark (a circle with a diagonal slash), indicating that you cannot copy.

You can copy more than one component of the same type into the user control editor, as long as they come from different components located in the configuration or user module.

Controls for components arranged in the configuration can be copied only to the user control editor.
Controls for components arranged in a user module can be copied to both the user control editor and the user module.

■ Order of Controls

Controls newly pasted in the user control editor will be displayed above any previously pasted controls they overlap. The tab order for edit boxes will be the order in which they were pasted. Because the order cannot be changed, paste solid frames with parameter groups arranged on them before copying controls.

> **NOTE**
>
> In the component editor, you can select multiple controls using <Ctrl> + click or by dragging. Once controls are copied, they will be pasted in the order in which they were copied.

Moving and Aligning Controls

In the user control editor or user module editor, you can move or align copied controls.

■ Selecting Controls

In the user control editor or user module editor, controls are selected in the same way as in the component editor. Click a control to select it, or press <Ctrl> + click to select multiple controls. If you use <Ctrl> + click on a selected control, it will cancel that control's selection. If you position the mouse in an empty location in the user control editor or user module editor and start dragging from there, a frame will be displayed as the pointer moves. All controls enclosed by that frame will be selected.
A red frame will be drawn around the selected controls.

■ Moving Controls

Move selected controls by dragging them or by pressing the arrow keys on your keyboard. When you select multiple controls using <Shift> + click, you can move all of them at the same time.

Dragging

When grid is ON, the upper left of the dragged controls will automatically align with the grid. When dragging, the coordinates displayed here refer to the upper left corner of the object being dragged. The "Distance to Right" and "Distance to Bottom" are displayed in pixel units, using the upper-left of the window as a reference point.

When multiple controls are selected and dragged, the coordinates are those of the upper-left corner of the control where the mouse is aligned.

Arrow Keys

When the grid is ON, the arrow keys move controls a grid unit at a time. When the grid is OFF, controls are moved one pixel at a time.

■ Alignment

You can align controls using the following alignment buttons on the edit palette: [Align Left], [Align Right], [Align To Top], [Align To Bottom], [Align Horizontally], [Align Vertically], [Horizontal/Center Align], and [Vertical/Center Align].
You can only use the [Align Horizontally] or [Align Vertically] buttons when three or more controls are selected.

Cut/Copy/Paste Controls

You can edit controls arranged in the user control editor or user module editor using the [Cut], [Copy], and [Paste] commands in the edit palette.

■ Cut

Cuts controls arranged in the user control editor. Select one or more controls, then press the [Cut] button on the edit palette

■ Copy

Copies controls arranged in the user control editor or user module editor. Select one or more controls, then press the [Copy] button on the edit palette.

■ Paste

Pastes cut or copied controls. Click the [Paste] button on the edit palette. If you cannot paste, the button color turns pale.

■ Delete

Controls can be deleted by selecting them and pressing the <Delete> key.

Undo and Redo Commands During Editing

You can undo or redo control movements, size changes, or deletions using the [Undo] and [Redo] commands in the [Edit] menu.

NOTE

If you close an editor window, you will no longer be able to undo and redo operations performed there.

Control Properties

A properties dialog box will open when you either double click a controller in the User Control Editor or User Module Editor, or right-click the controller and select [Properties] from the contextual menu. Here you can specify a design for the controller.
Multiple properties of the same type can be set at the same time by clicking the controllers while holding the <Ctrl> key and then opening the properties dialog box.
Edited items are shown in bold text until you either click [OK] or [Cancel].

NOTE

Sliders have no property settings.

■ **"Knob Properties" Dialog Box**

When you right-click on a knob, then select [Properties] from the context menu, the "Knob Properties" dialog box will be displayed. This dialog box sets the size of the knob.

[Size]
Displays a list where you can select the knob size. Select [Large], [Medium], [Small], or [Very Small].
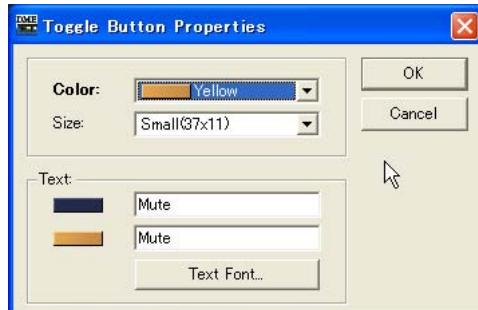
> **NOTE**
>
> You can change the size of a knob by dragging one of the marks at the four corners (top, bottom, left, right) of the knob in the user control editor.

[Color]
Select a color from the list: [White], [Red], [Yellow], [Green], [Blue], or [Violet].

■ **"Toggle Button Properties" Dialog Box**

The Toggle Button Properties dialog box will appear when you either double click the ON/OFF button or right-click it and select [Properties] from the contextual menu. This sets the text displayed by the button, along with the color of the button.
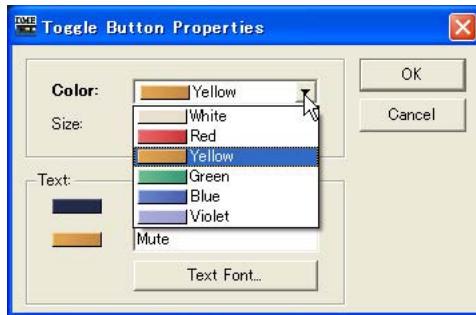
[Text] box
Enter the text to be displayed by the button. You can set different text for when the button is ON and for when it is OFF.

[Size]
Select a button size from the list: [Small (37x11)], [Small (51x11], [Medium (74x11)], [Medium (74x22)], or [Large (111x33)].

[Color]
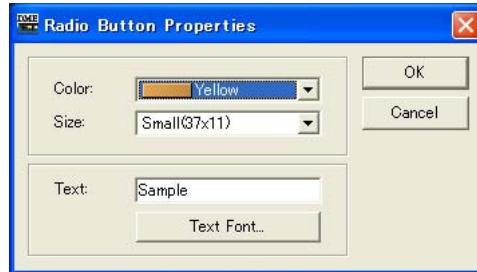
Displays a list where you can select the color of the button. If you click the [▼], a list of button colors will be displayed.

[Text Font] Button

Sets the font, size and style. Clicking here displays the "Select Font" dialog box.
For information about the "Select Font" dialog box, see .

■ "Radio Button Properties" Dialog Box

The Radio Button Properties dialog box will appear when you either double click a radio button or right-click it and select [Properties] from the contextual menu. You can set the button's color, size, and font.

[Color]

Select a color from the list: [White], [Red], [Yellow], [Green], [Blue], or [Violet].

[Size]

Select a button size from the list: [Small (37x11)], [Small (44x11], [Medium (75x11)], [Medium (74x22)], or [Large (111x33)].

[Text] Box
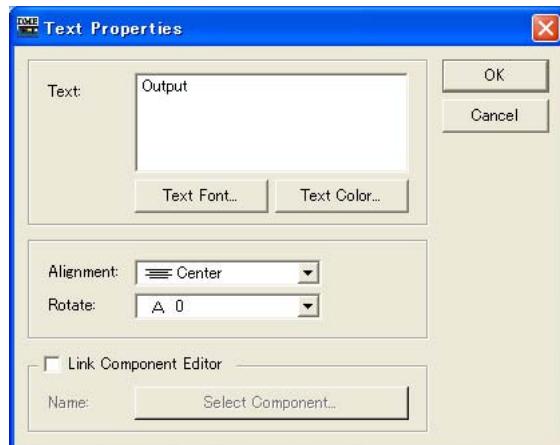
Enter the text to be displayed by the button.

[Text Font] Button

Sets the font, size and style. Clicking here displays the "Select Font" dialog box.
For information about the "Select Font" dialog box, see .

■ **"Text Properties" Dialog Box**

The Text Properties dialog box will appear when you either double click a parameter name or other text, or right-click it and select [Properties] from the contextual menu. Here you can enter the text to be displayed.
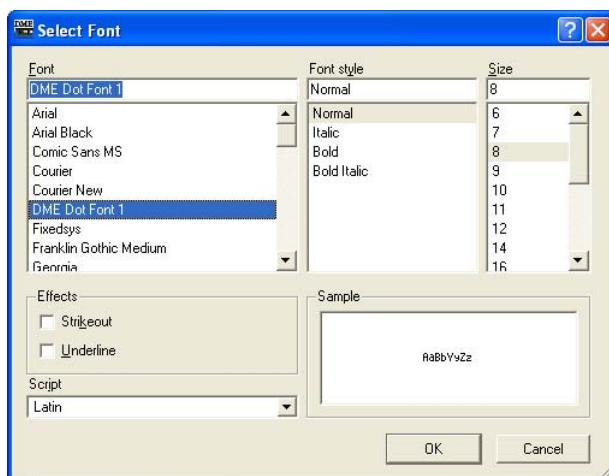
[Text] Box

Enter the text to be displayed by the button.

[Text Font] button

Click this button to display the "Select Font" dialog box. Sets the font, font size, and style. For information about the "Select Font" dialog box, see .

[Alignment]

Specifies the horizontal alignment of the text: [Left], [Center], or [Right].

[Rotate]

Rotates the text by the specified angle: [-90], [0], [90], or [180].

[Link Component Editor]

Specifies the component editor to be opened when text is clicked.

[Text Color] Button

Click this button to display the "Select Color" dialog box. Sets the color of the text. For information about the "Select Color" dialog box, see .

■ **Edit Box Properties**

The Edit Box Properties dialog box will appear when you either double click an edit box or right-click it and select [Properties] from the contextual menu. Here you can set the edit box size.

[Size]

Select an edit box size from the list: [Large], [Medium], or [Small].

■ **Level Meter Properties**

The Level Meter Properties dialog box will appear when you either double click a level meter or right-click it and select [Properties] from the contextual menu. Here you can specify the number of meter segments and scale.

[Segment]
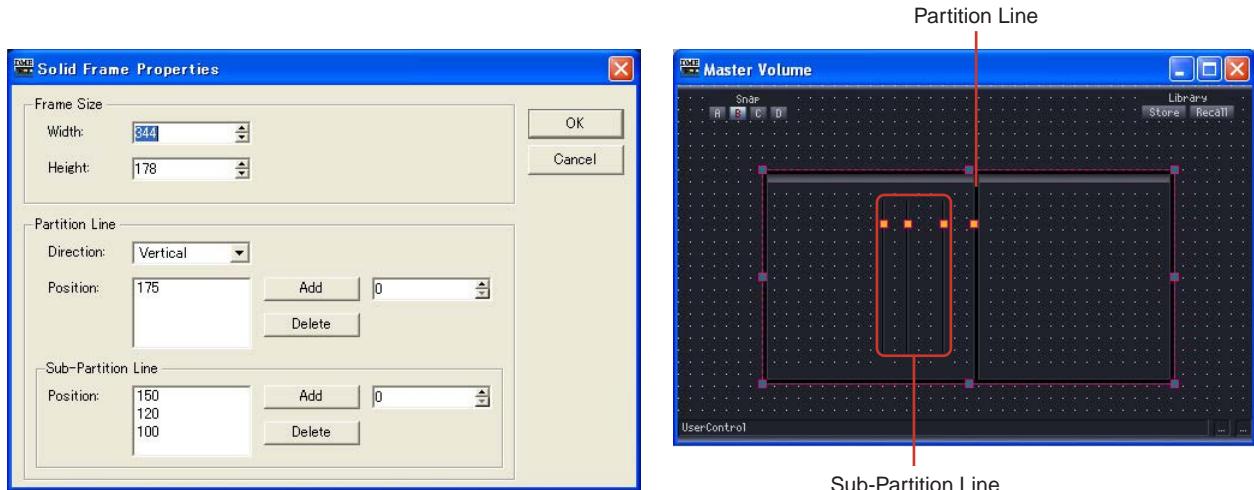
Select a number of meter segments from the list: [2], [6], or [60].

[Scale]

Select the type of scale to be displayed beside the meter from the list. This option is only available when [Segment] is set to 60.

■ **"Solid Frame Properties" Dialog Box**

The Solid Frame Properties dialog box will appear when you right-click a solid frame and select [Properties] from the contextual menu. Here you can enter the text to be displayed. Here you can set the frame size and divider location.

Partition Line

Sub-Partition Line

Frame Size

The width is set using the [Width] and the height is set using [Height]. The units are pixels.

> **NOTE**
>
> You can change the size of a frame by dragging one of the marks at the four corners (top, bottom, left, right) of the frame in the user control editor.

Partition Line/Sub-Partition Line

Sets partition lines within the frame. [Partition Line] is a long partition line displayed from end to end, and [Sub-Partition Line] is a short partition line.

- **[Direction]**

  Select the direction of a partition line from the list. [Vertical] inserts a vertical partition line and [Horizontal] inserts a horizontal partition line. When [None] is select, partition lines are not displayed.

- [Position]
  Displays the currently set line position. Displays the number of pixels from the top of the solid frame when [Vertical] is selected for the [Direction], and the number of pixels from the left of the solid frame when [Horizontal] is selected.

  NOTE

  You can change the position of a partition line by dragging one of the marks on the line in the user control editor.
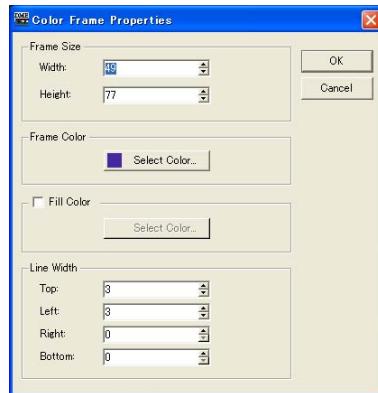
- [Add] Button
  If you set the position of the partition line in the box on the right and click the [Add] button, the partition line will be added and displayed in the [Position] list.

- [Delete] Button
  Deletes the partition line selected in the [Position] list.

■ **"Color Frame Properties" Dialog Box**

The Color Frame Properties dialog box will appear when you right-click a solid frame and select [Properties] from the contextual menu. Here you can enter the text to be displayed. Here you can set the frame size and divider location.

Frame Size

The width is set using the [Width] and the height is set using [Height]. The units are pixels and the minimum value is 3.

NOTE

You can change the size of a frame by dragging one of the marks at the four corners (top, bottom, left, right) of the frame in the user control editor.

Frame Color

Sets the color of the color frame.
Click this button to display the "Select color" dialog box. For information about the "Select color" dialog box, see page 203.

Fill Color
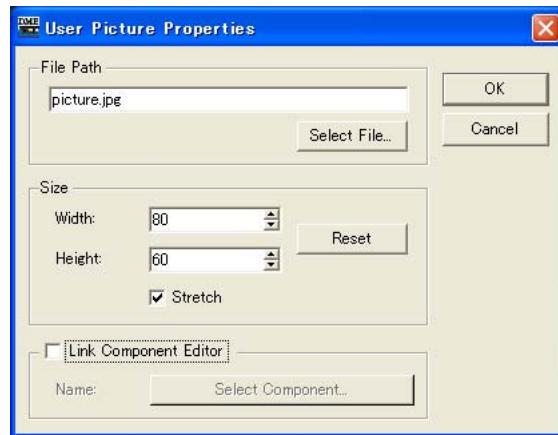
Sets the frame fill color.
Click the [Select Color] button to display the "Select color" dialog box. Refer to "Select Color" Dialog Box in the Object section on page 203 for information on this dialog box.

Line Width

Sets the thickness of the lines at [Top]/[Left]/[Right]/[Bottom]. Set "0" to display no lines.

■ **User Picture Properties Dialog Box**

Right-click the image and select [Properties] from the contextual menu to display the User Picture Properties dialog box.

[File Path] Box

Displays the path to the graphic file.

[Select File] Button

Selects a graphic file.

Size

- [Width]
  Specifies the width in pixels.

- [Height]
  Specifies the height in pixels.

- [Reset] Button
  Click to display the graphic at it's original size.
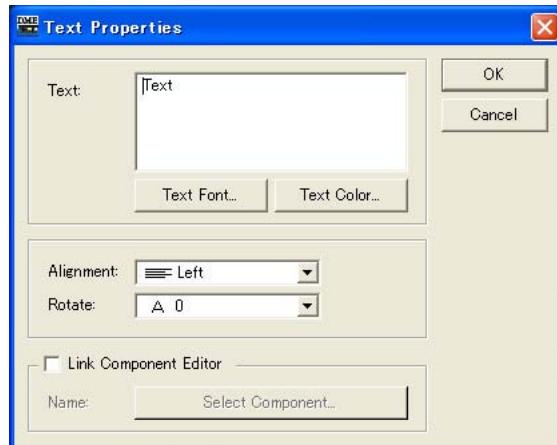
- [Stretch]
  When ON, the graphic will be enlarged when a size that is bigger than it's original size is specified.

[Link Component Editor]

When ON, clicking the [Select Component] button selects the editor that is opened when the graphic is clicked.

■ **Text Properties Dialog Box**

Right-click the text box and select [Properties] from the contextual menu to display the Text Properties dialog box.

[Text] Box

Displays and edits the text to be displayed.

[Text Font]

Selects the font. Click to display the Select Font dialog box.
Refer to "Select Font" Dialog Box on page 202 for more information on the Select Font dialog box.

[Text Color] Button

Sets the text color. Click to display the Select Color dialog box.

[Alignment]

Selects [Left], [Center], or [Right] text alignment.

[Rotate]
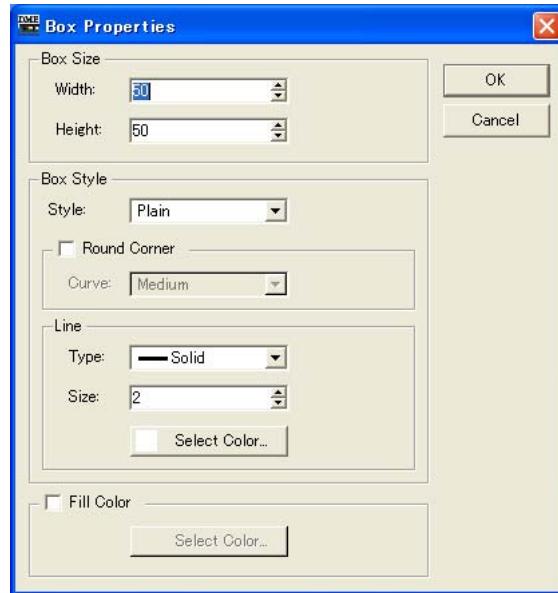
Rotates the text box.

[Link Component Editor]

When ON, clicking the [Select Component] button selects the editor that is opened when the text box is clicked.

■ **Box Properties Dialog Box**

Right-click the box and select [Properties] from the contextual menu to display the Box Properties
dialog box.

Box Size

  • [Width]
    Specifies the width in pixels.

  • [Height]
    Specifies the height in pixels.

Box Style

  • [Style]
    Sets the style of the object. Select [Plain], [Raised], or [Sunken] from the list.

  • [Round Corner]
    Turn ON to produce a round-cornered box. Use [Curve] to select the degree of roundness.

Line
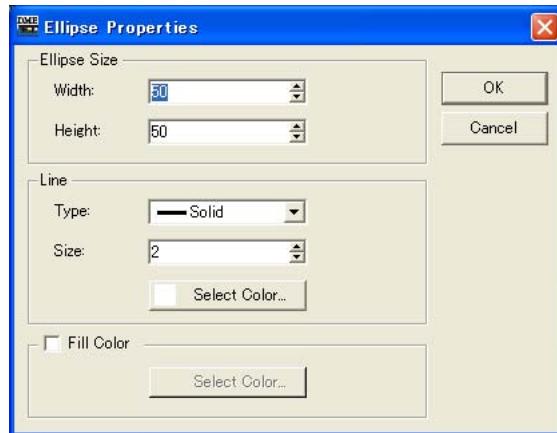
  • [Type]
    Select a type of frame line from the list: [Solid], [Dash], [Dot], [Dash Dot]. Or [Dash Dot Dot].

  • [Size]
    Sets the thickness of the frame line in pixels. The range is from 1 to 100.

  • [Select Color] Button
    Sets the color of the frame line. Click to display the "Select color" dialog box.
    Refer to "Select Color" Dialog Box on page 203 for more information on the Select Color
    dialog box.

Fill Color

  • [Select Color] Button
    Sets the frame fill color. Click to display the "Select color" dialog box.
    Refer to "Select Color" Dialog Box on page 203 for more information on the Select Color
    dialog box.

■ Ellipse Properties Dialog Box

Right-click the ellipse and select [Properties] from the contextual menu to display the Ellipse Properties dialog box.

Ellipse Size

- **[Width]**
  Specifies the width in pixels.

- **[Height]**
  Specifies the height in pixels.

Line

- **[Type]**
  Select a type of frame line from the list: [Solid], [Dash], [Dot], [Dash Dot]. Or [Dash Dot Dot].

- **[Size]**
  Sets the thickness of the frame line in pixels. The range is from 1 to 100.

- **[Select Color] Button**
  Sets the color of the frame line. Click to display the "Select color" dialog box.
  Refer to "Select Color" Dialog Box on page 203 for more information on the Select color dialog box.

Fill Color

Sets the ellipse fill color when ON.

- **[Select Color] Button**
  Sets the ellipse fill color. Click to display the "Select color" dialog box.
  Refer to "Select Color" Dialog Box on page 203 for more information on the Select color dialog box.
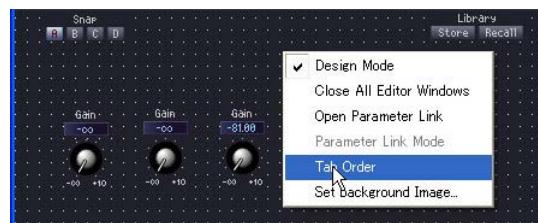
Changing the Tab Order

The tab order for controls is determined by the order in which they were pasted into the user control editor or user module editor. If you right-click the user control editor or user module editor, you can check or change the tab order using the [Tab Order] command on the context menu.

If you select the [Tab Order] command, tab order numbers will be displayed at the upper-left of each edit box. Clicking the displayed numbers changes the order.

1 Right-click in the user control editor or user module editor.

The context menu will be displayed.
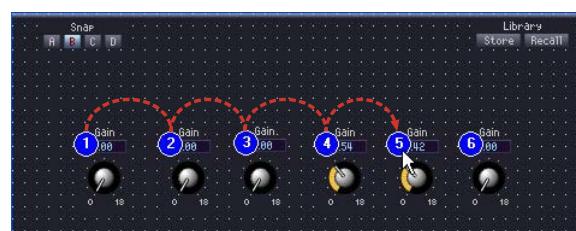
2 Click [Tab Order] in the context menu.

Numbers for the current tab order are displayed to the upper-left of each edit box.

3 Click the tab order numbers in the order in which you want to set the tab order.

Even if you do not want to change tab order number 1, click all the numbers in the order you desire, starting from number 1. When you click on each number, it will change to the number that reflects the order in which it was clicked.

4 Once you have finished specifying the order, click somewhere within the window where there is no tab number.

The tab order numbers will disappear.

The changed tab order will apply the next time DME Designer is started.

Creating Parameter Links

You can group controls (parameters) and link their parameters. You can create parameter link groups and add controls to them in the component editor. Parameter link settings are made in the Parameter Link window. For information about parameter links and the Parameter Link window, see "Parameter Link" (page 73).
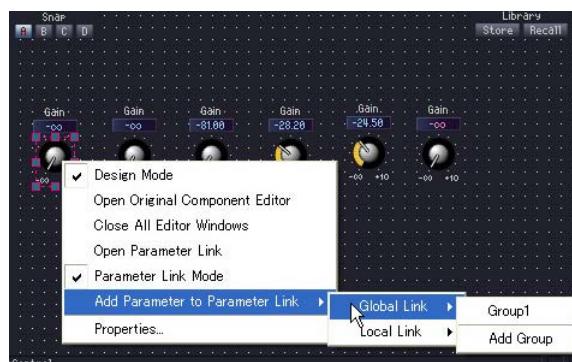
> **NOTE**
>
> A parameter can belong to one group only. Furthermore, only parameters of the same type can be grouped.

■ Creating Parameter Links

If you right-click on a control, a context menu will be displayed.
The [Global Link] → [Add Group] and [Local Link] → [Add Group] commands create new groups.
Controls can be added by right-clicking.
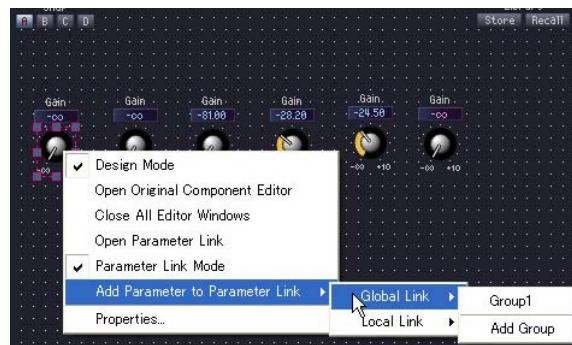
■ Adding Controls to a Group
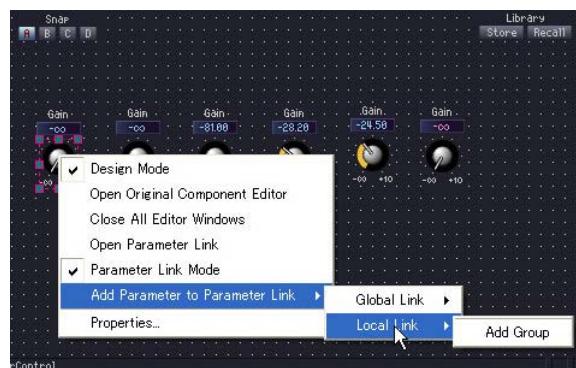
If you right-click a control in the component editor, a context menu will be displayed. You can create groups or add controls using commands in the [Add Parameter to Parameter Link] submenu. Groups that do not have the same type of parameters will be grayed out and cannot be selected.

Global Link

The group names for global link groups are displayed in the [Global Link] submenu. When you click a group name, a control is added to the group.

Local Link

The group names for local like groups are displayed in the [Local Link] submenu. When you click a group name, a control is added to the group.
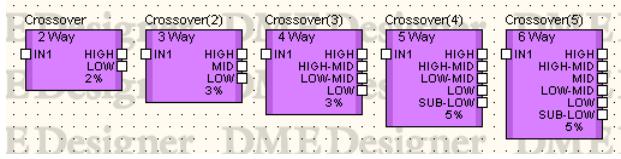
■ Adding Multiple Controls

You can select multiple controls in Design Mode. When multiple controls are selected, multiple parameters can be added to a group simultaneously.

Crossover

Separates input signals into multiple frequency channels and outputs them. The following five types of components are available in the Crossover group: 2 Way, 3 Way, 4 Way, 5 Way, and 6 Way.
Crossover components have a single input and multiple outputs.

Double-click a component to display the component editor for it.

Crossover component

	Name			Function
❶	Crossover Curve			Displays the level of each frequency band, distinguished by color.
	Section	Parameter	Setting Range	Function
❷	Input	Level	-∞ to +10 dB	Sets the input signal level.
❸	Output	Level	-∞ to ±0 dB	Sets the output signal level for each frequency band.
❹		Mute	ON/OFF	Mutes the output signal level for each frequency band.
❺		Phase	ON/OFF	Reverses the phase of the output signal for each frequency band.
❻	Frequency	Frequency	20 Hz to 20 kHz	Sets the cross frequency between each frequency band.

❼	LPF	Type	Thru 6 dB/Oct 12 dB/Oct AdjustGc 12 dB/Oct Butrwrth 12 dB/Oct Bessel 12 dB/Oct Linkwitz 18 dB/Oct AdjustGc 18 dB/Oct Butrwrth 18 dB/Oct Bessel 24 dB/Oct AdjustGc 24 dB/Oct Butrwrth 24 dB/Oct Bessel 24 dB/Oct Linkwitz 36 dB/Oct AdjustGc 36 dB/Oct Butrwrth 36 dB/Oct Bessel 48 dB/Oct AdjustGc 48 dB/Oct Butrwrth 48 dB/Oct Bessel 48 dB/Oct Linkwitz	Sets the attenuation for each octave and the filter type. [THRU] turns off the filter.
❽		Frequency	20 Hz to 20 kHz	Sets the LPF cutoff frequency.
❾		Gc	-6 dB to +6 dB	When [AdjustGc] (Adjustable Gc) is selected for [Type], this sets the gain for the cutoff frequency.
❿	HPF	Type	Thru 6 dB/Oct 12 dB/Oct AdjustGc 12 dB/Oct Butrwrth 12 dB/Oct Bessel 12 dB/Oct Linkwitz 18 dB/Oct AdjustGc 18 dB/Oct Butrwrth 18 dB/Oct Bessel 24 dB/Oct AdjustGc 24 dB/Oct Butrwrth 24 dB/Oct Bessel 24 dB/Oct Linkwitz 36 dB/Oct AdjustGc 36 dB/Oct Butrwrth 36 dB/Oct Bessel 48 dB/Oct AdjustGc 48 dB/Oct Butrwrth 48 dB/Oct Bessel 48 dB/Oct Linkwitz	Sets the attenuation for each octave and the filter type. [THRU] turns off the filter.
⓫		Frequency	20 Hz to 20 kHz	Sets the HPF cutoff frequency.
⓬		Gc	-6 dB to +6 dB	When [AdjustGc] (Adjustable Gc) is selected for [Type], this sets the gain for the cutoff frequency.

The number of output channels varies according to the component variation.

2 Way	Low/High
3 Way	Low/Mid/High
4 Way	Low/Low-Mid/High-Mid/High
5 Way	Sub-Low/Low/Low-Mid/High-Mid/High
6 Way	Sub-Low/Low/Low-Mid/Mid/High-Mid/High

Set the attenuation curve for the lowest band and the middle bands with the Low Pass Filter (LPF) and High Pass Filter (HPF), and the highest band with HPF. Each frequency band has its own color, with Low being red, Mid being green, and so on. These correspond to the colors of the lines on the graph.

■ **Graphic Control Points**

The graph control points show [Output Level] and [Frequency]. As you modify the parameters using the knobs and edit boxes, the control points move. Also, as you drag the points, the [Output Level] and [Frequency] parameters reflect the changes you make.

You can adjust the [Output Level] parameter by vertically dragging the control point in the center of each curve.

Changing the [Output Level] Parameter

You can adjust the [Frequency] parameter by horizontally dragging the control point at the intersection of the curves for each frequency band.

Changing the [Frequency] Parameter

■ LFP/HPF

[Type] sets the attenuation slope and the filter type for the LPF and HPF. The selected items are displayed on the buttons. Clicking these buttons displays a menu. Combinations of six slope types and four filter types are available. [6dB/Oct], [12dB/Oct], [18dB/Oct], [24dB/Oct], [36dB/Oct], and [48dB/Oct] set the attenuation per octave. A low value produces gentle attenuation. A large value produces sudden attenuation.

Type

- THRU
  No filter is applied. There is no attenuation, which produces a level line at all frequencies.

- AdjustGc (Adjustable Gc)
  With this setting, you can adjust Gc (gain on the cutoff frequency) between -6 dB and +6 dB. If you set -3 dB it becomes a Butterworth filter. If you set -6 dB, it becomes Linkwitz-Riley filter. When you select Adjustable Gc, the Gc knob is displayed.

- Butrwrth (Butterworth)
  This filter has the most general characteristics. The pass band is flat and the gain for the cutoff frequency is -3 dB.
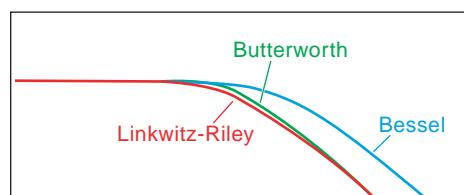
- Bessel
  For curves where phase characteristics are important, Bessel has gentler attenuation than Butterworth, and there is little distortion of the waveform when square waves are passed through.

- Linkwitz (Linkwitz-Riley)
  As second-order filters, the sum of the output voltages for LPF and HPF have a gain of 0 dB across the entire band. The pass band is flat, but the cutoff frequency gain is -6 dB.
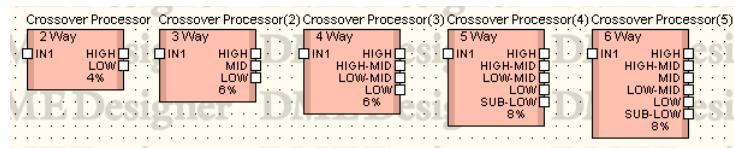
Crossover Processor

A crossover processor consists of a crossover, delay, parametric equalizer, and compressor. After the input signal is processed by the crossover, effects of the delay, parametric equalizer, and compressor are applied to each frequency band. The following two types are available in the Crossover Processor group: Crossover Processor and Crossover Processor II.

Crossover Processor

The following five types of components are available in the Crossover Processor group: 2 Way, 3 Way, 4 Way, 5 Way, and 6 Way. Crossover processors have a single input and 2 to 6 outputs.

Double-click a component to display the component editor for it. Band numbers may vary depending on the component, but they share a common configuration in the component editor.
If you click the [Crossover], [Compressor], [PEQ], or [Delay] button in the [Navigator] section, an editor for the crossover, compressor, parametric equalizer, or delay will be displayed in a separate window. A separate component editor will open for each output channel (such as Low or Mid) when you click on the compressor, parametric equalizer, or delay.

Component editor for Crossover Processor

	Section	Parameter	Setting Range	Function
❶	Navigator	Crossover	--	This opens the crossover editor window.
❷		Delay	--	This opens the delay editor window.
❸		PEQ	--	This opens the parametric equalizer editor window.
❹		Compressor	--	This opens the compressor editor window.
❺	Input	Level	-∞ to +10 dB	Sets the input signal level.
❻	Output	Level	-∞ to +10 dB	Sets the output signal level for each frequency band.
❼		Mute	ON/OFF	Mutes the signal for each frequency band.
❽		Phase	ON/OFF	Reverses the phase of the output signal for each frequency band.

The output number varies according to the component variation.

2 Way	Low/High
3 Way	Low/Mid/High
4 Way	Low/Low-Mid/High-Mid/High
5 Way	Sub-Low/Low/Low-Mid/High-Mid/High
6 Way	Sub-Low/Low/Low-Mid/Mid/High-Mid/High

Set the attenuation curve for the lowest band and the middle bands with the Low Pass Filter (LPF) and High Pass Filter (HPF), and the highest band with HPF. Each frequency band has its own color, with Low being red, Mid being green, and so on. These correspond to the colors of the lines on the graph.

■ Crossover

When you click the [Crossover] button for the crossover processor, it opens the crossover editor window.

[Crossover Processor-Crossover] editor window

	Name			Function
❶	Crossover Curve			Displays the level of each frequency channel, distinguished by color.
	Section	Parameter	Setting Range	Function
❷	Frequency	Frequency	20 Hz to 20 kHz	Sets the cross frequency between each frequency band.

❸	LPF	Type	Thru 6 dB/Oct 12 dB/Oct AdjustGc 12 dB/Oct Butrwrth 12 dB/Oct Bessel 12 dB/Oct Linkwitz 18 dB/Oct AdjustGc 18 dB/Oct Butrwrth 18 dB/Oct Bessel 24 dB/Oct AdjustGc 24 dB/Oct Butrwrth 24 dB/Oct Bessel 24 dB/Oct Linkwitz 36 dB/Oct AdjustGc 36 dB/Oct Butrwrth 36 dB/Oct Bessel 48 dB/Oct AdjustGc 48 dB/Oct Butrwrth 48 dB/Oct Bessel 48 dB/Oct Linkwitz	Sets the attenuation for each octave and the filter type. [THRU] turns off the filter.
❹		Frequency	20 Hz to 20 kHz	Sets the LPF cutoff frequency.
❺		Gc	-6 dB to +6 dB	When [AdjustGc] (Adjustable Gc) is selected for [Type], this sets the gain for the cutoff frequency.
❻	HPF	Type	Thru 6 dB/Oct 12 dB/Oct AdjustGc 12 dB/Oct Butrwrth 12 dB/Oct Bessel 12 dB/Oct Linkwitz 18 dB/Oct AdjustGc 18 dB/Oct Butrwrth 18 dB/Oct Bessel 24 dB/Oct AdjustGc 24 dB/Oct Butrwrth 24 dB/Oct Bessel 24 dB/Oct Linkwitz 36 dB/Oct AdjustGc 36 dB/Oct Butrwrth 36 dB/Oct Bessel 48 dB/Oct AdjustGc 48 dB/Oct Butrwrth 48 dB/Oct Bessel 48 dB/Oct Linkwitz	Sets the attenuation for each octave and the filter type. [THRU] turns off the filter.
❼		Frequency	20 Hz to 20 kHz	Sets the HPF cutoff frequency.
❽		Gc	-6 dB to +6 dB	When [AdjustGc] (Adjustable Gc) is selected for [Type], this sets the gain for the cutoff frequency.

■ **Delay**

When you click the [Delay] button for the crossover processor, it opens the delay editor window. Here you can set the delay for each frequency band.

[Crossover Processor - Delay] editor window

	Parameter	Setting Range	Function
❶	Delay	ms: 0 to 500 Sample: the range depends on the Fs value. Meter: 0 to 171.8 Feet: 0 to 563.6 Frame: the range depends on the Frame value. Beat: the range depends on the Beat value.	Sets the delay time.
❷	Level	-∞ to ±0 dB	Sets the output signal level for each channel
❸	On	ON/OFF	Turns delay ON.
❹	Mute	ON/OFF	Mutes the signal for each frequency band.
❺	Delay Scale	ms Sample Meter Feet Frame Beat	Selects the units for setting the delay time. The selected button will light up, and the units in the [Delay] edit box will change. If [Beat] is selected, use the knob to set the BPM (beats/minute).

■ Parametric Equalizer

When you click [PEQ] button for the crossover processor, it opens the parametric equalizer editor window. Here you can make parametric equalizer settings for each frequency band.

[Crossover Processor-PEQ] editor window
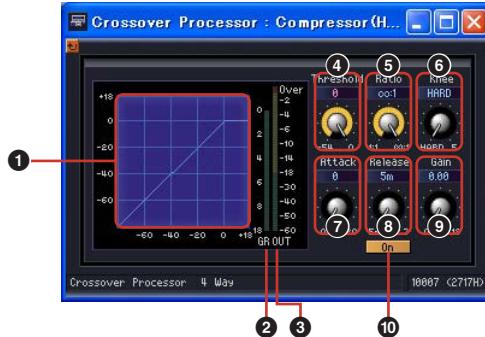
	Name		Function
❶	PEQ Curve		Displays the PEQ curve.
	Parameter	Setting Range	Function
❷	Type	PEQ L.SHELF 6 dB/Oct L.SHELF 12 dB/Oct H.SHELF 6 dB/Oct H.SHELF 12 dB/Oct HPF LPF	Select the filter type from a menu.
❸	Q:	0.1 to 16.0	Sets the frequency band width for each band.
❹	Frequency	20 Hz to 20 kHz	Sets the frequency for each band.
❺	Gain	-18 dB to +18 dB	Sets the gain for each band.
❻	Bypass	ON/OFF	Turns ON bypass for each band.
❼	PEQ On	ON/OFF	Turns the PEQ ON.

■ Compressor

When you click the [Compressor] button for the crossover processor, it opens the compressor editor window. Here you can make compressor settings for each frequency band.
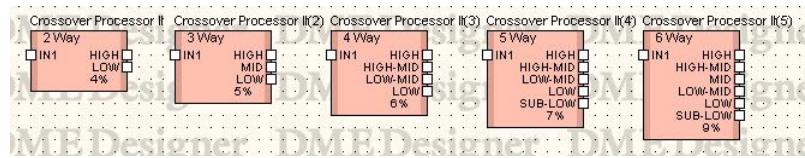
[Crossover Processor-Compressor] editor window

Name		Function
❶	Compressor Curve	Displays results graphically. The horizontal axis is the input signal level, and the vertical axis is the output level.
❷	Gain Reduction Meter	Displays the gain reduction attenuation.
❸	Output Meter	Displays the output signal level.
	Parameter	Setting Range	Function

	Parameter	Setting Range	Function
❹	Threshold	-54 dB to ±0 dB	Sets the threshold value.
❺	Ratio	1:1 to ∞:1	Sets the compression ratio.
❻	Knee	HARD, 1, 2, 3, 4, 5	Sets the way compression is applied.
❼	Attack	0 to 120 ms	Sets the attack time.
❽	Release	44.1 kHz: 6 ms to 46 s 48 kHz: 5 ms to 42.3 s 88.2 kHz: 3 ms to 23 s 96 kHz: 3 ms to 21.1 s	Sets the release time. The setting range may very, depending on the operating frequency.
❾	Gain	±0 dB to +18 dB	Sets the output gain.
❿	On	ON/OFF	Turns the compressor ON. When you turn this button OFF, the compressor is bypassed.

Crossover Processor II

The following five types of components are available in the Crossover Processor II group: 2 Way, 3 Way, 4 Way, 5 Way, and 6 Way. Crossover processor II components have a single input and 2 to 6 outputs.

Double-click a component to display the component editor for it. The number of bands may vary depending on the component, but they share a common configuration in the component editor. There are input and output level meters in the upper part of the window. If you click the [Crossover], [Delay], [PEQ], or [Compressor] button in the [Navigator] section, an editor for the crossover, delay, parametric equalizer, or compressor will be displayed in a separate window. A separate component editor will open for each output channel (such as Low or Mid) when you click on the delay, parametric equalizer, or compressor.

Crossover Processor II

	Name			Function
❶	Input Meter			Displays the input signal level.
❷	Output Meter			Displays the output signal level.

	Section	Parameter	Setting Range	Function
❸	Input	Gain	-∞ to +10 dB	Sets the input signal level.
❹		Mute	ON/OFF	Mutes the input signal.
❺	Output	Gain	-∞ to +10 dB	Sets the output signal level for each frequency band.
❻		Mute	ON/OFF	Mutes the output signal for each frequency band.

	Name			Function
❼	Navigator	Crossover	--	This opens the crossover editor window.
❽		Delay	--	This opens the delay editor window.
❾		PEQ	--	This opens the parametric equalizer editor window.
❿		Compressor	--	This opens the compressor editor window.

■ Crossover

When you click the [Crossover] button for the crossover processor, it opens the crossover editor window.

Crossover Processor II component editor

	Name			Function
❶	Crossover Curve			Displays the level of each frequency band, distinguished by color.
	Section	**Parameter**	**Setting Range**	**Function**
❷	Frequency	Frequency	20 Hz to 20 kHz	Sets the cross frequency between each frequency band.
❸	Polarity	Polarity	Normal/Inverted	Reverses the output signal phase for each frequency band.
❹	Mute	Mute	ON/OFF	Mutes the signal for each frequency band. This is linked to the Mute setting in the original window. The display appears as a dotted line when muted.

❺	LPF	Type	Thru 6 dB/Oct 12 dB/Oct AdjustGc 12 dB/Oct Butrwrth 12 dB/Oct Bessel 12 dB/Oct Linkwitz 18 dB/Oct AdjustGc 18 dB/Oct Butrwrth 18 dB/Oct Bessel 24 dB/Oct AdjustGc 24 dB/Oct Butrwrth 24 dB/Oct Bessel 24 dB/Oct Linkwitz 36 dB/Oct AdjustGc 36 dB/Oct Butrwrth 36 dB/Oct Bessel 48 dB/Oct AdjustGc 48 dB/Oct Butrwrth 48 dB/Oct Bessel 48 dB/Oct Linkwitz	Sets the attenuation for each octave and the filter type. [THRU] turns off the filter.
❻		Frequency	20 Hz to 20 kHz	Sets the LPF cutoff frequency.
❼		Gc	-6 dB to 6 dB	When [Adjustable Gc] is selected for [Type], this sets the gain for the cutoff frequency.
❽	HPF	Type	Thru 6 dB/Oct 12 dB/Oct AdjustGc 12 dB/Oct Butrwrth 12 dB/Oct Bessel 12 dB/Oct Linkwitz 18 dB/Oct AdjustGc 18 dB/Oct Butrwrth 18 dB/Oct Bessel 24 dB/Oct AdjustGc 24 dB/Oct Butrwrth 24 dB/Oct Bessel 24 dB/Oct Linkwitz 36 dB/Oct AdjustGc 36 dB/Oct Butrwrth 36 dB/Oct Bessel 48 dB/Oct AdjustGc 48 dB/Oct Butrwrth 48 dB/Oct Bessel 48 dB/Oct Linkwitz	Sets the attenuation for each octave and the filter type. [THRU] turns off the filter.
❾		Frequency	20 Hz to 20 kHz	Sets the HPF cutoff frequency.
❿		Gc	-6 dB to 6 dB	When [Adjustable Gc] is selected for [Type], this sets the gain for the cutoff frequency.

■ Delay

When you click the [Delay] button for the crossover processor, it opens the delay editor window.
Here you can set the delay for each frequency band.

	Parameter	Setting Range	Function
❶	Delay	ms: 0 to 500 Sample: the range depends on the Fs value. Meter: 0 to 171.8 Feet: 0 to 563.6 Frame: the range depends on the Frame value. Beat: the range depends on the Beat value.	Sets the delay time.
❷	Level	-∞ to ±0 dB	Sets the output signal level for each channel.
❸	On	ON/OFF	Turns delay ON.
❹	Delay Scale	ms Sample Meter Feet Frame Beat	Selects the units for setting the delay time. The selected button will light up, and the units in the [Delay] edit box will change. If [Beat] is selected, use the knob to set the BPM (beats/minute).

■ **Parametric Equalizer**
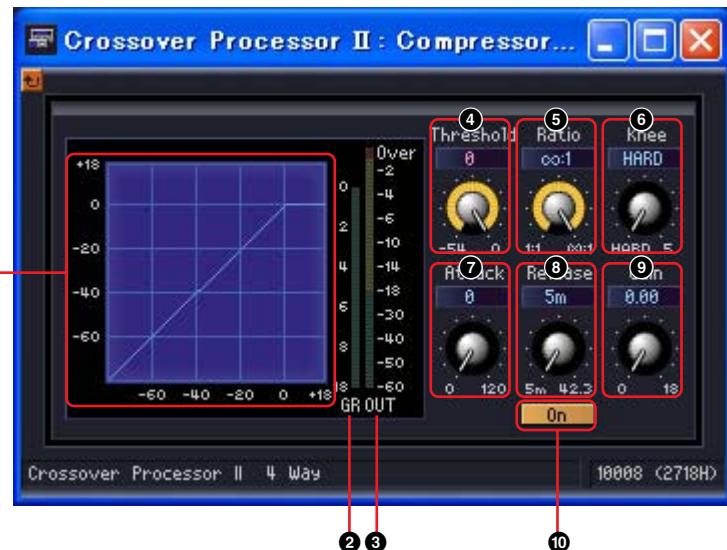
When you click the [PEQ] button for the crossover processor, it opens the parametric equalizer editor window. Here you can make parametric equalizer settings for each frequency band.

	Name		Function
❶	PEQ Curve		Displays the PEQ curve.
	Parameter	**Setting Range**	**Function**
❷	Type	PEQ L.SHELF 6 dB/Oct L.SHELF 12 dB/Oct H.SHELF 6 dB/Oct H.SHELF 12 dB/Oct HPF LPF	Select the filter type from the menu.
❸	Q	0.1 to 16.0	Sets the band width of each band.
❹	Frequency	20 Hz to 20 kHz	Sets the frequency of each band.
❺	Gain	-18 dB to +18 dB	Sets the frequency gain for each band.
❻	Bypass	ON/OFF	Bypasses all PEQ bands.
❼	PEQ On	ON/OFF	Turn the PEQ ON.

■ **Compressor**

When you click the [Compressor] button for the crossover processor, it opens the compressor editor window. Here you can make compressor settings for each frequency band.


	Name		Function
❶	Compressor Curve		Displays results graphically. The horizontal axis is the input signal level, and the vertical axis is the output level.
❷	Gain Reduction Meter		Displays the gain reduction attenuation.
❸	Output Meter		Displays the output signal level.
	Parameter	Setting Range	Function
❹	Threshold	-54 dB to ±0 dB	Sets the threshold value.
❺	Ratio	1:1 to ∞:1	Sets the compression ratio.
❻	Knee	HARD, 1, 2, 3, 4, 5	Sets the way compression is applied.
❼	Attack	0 to 120 ms	Sets the attack time.
❽	Release	44.1 kHz: 6 ms to 46 s 48 kHz: 5 ms to 42.3 s 88.2 kHz: 3 ms to 23 s 96 kHz: 3 ms to 21.1 s	Sets the release time. The setting range may vary, depending on the operating frequency.
❾	Gain	±0 dB to +18 dB	Sets the output gain.
❿	On	ON/OFF	Turns the compressor ON. When you turn this button OFF, the compressor is bypassed.

Delay

This is a multi-tap delay that provides independent delay and level control for each output. You can specify the delay time in milliseconds, samples, meters, feet, time code frames, or number of beats. Within the delay group, there are two subgroups called Long and Short. Each has a different setting range for the delay.

Delay Long

Delay long components are available with from one to eight outputs. Each has a single input and from one to eight outputs.

Double-click a component to display the component editor for it. Only the number of outputs in each component is different. The other parts are the same.
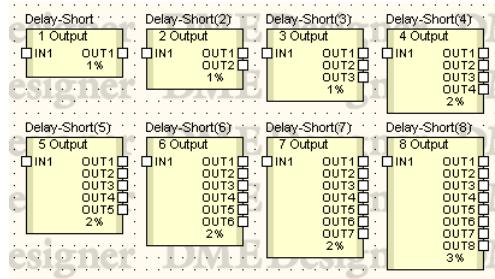
Delay Long Component Editor

	Section	Parameter	Setting Range	Function
❶	Delay	All Bypass	ON/OFF	Bypasses from input to output.
❷	Input	Level	-∞ to ±0 dB	Sets the input signal level.
❸		Mute	ON/OFF	Mute the input signal.
❹	Delay Tap	Delay	ms: 0 to 1300 Sample: the range depends on the Fs value. Meter: 0 to 446.7 Feet: 0 to 1465.4 Frame: the range depends on the Frame value. Beat: the range depends on the Beat value.	Sets the delay time. There are two edit boxes, displaying milliseconds and the units selected for [Delay Scale].
❺		Level	-∞ to ±0 dB	Sets the output signal level for each channel.
❻		On	ON/OFF	Turns ON each channel's delay.
❼		Mute	ON/OFF	Turns ON muting for each channel's output.
❽	Delay Scale	Delay Scale	ms Sample Meter Feet Frame Beat	Selects the units for setting the delay time. The selected button will light up, and the units in the [Delay] edit box will change. If [Beat] is selected, use the knob to set the BPM (beats/minute).

Delay Short

Delay short components are available with from one to eight outputs. Each has a single input and from one to eight outputs.

Double-click a component to display the component editor for it. Only the number of outputs in each component is different. The other parts are the same.

Delay-Short component editor
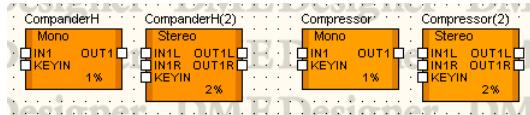
	Section	Parameter	Setting Range	Function
❶	Delay	All Bypass	ON/OFF	Bypasses from input to output.
❷	Input	Level	-∞ to ±0 dB	Sets the input signal level.
❸		Mute	ON/OFF	Mute the input signal.
❹	Delay Tap	Delay	ms: 0 to 130 Sample: the range depends on the Fs value. Meter: 0 to 44.7 Feet: 0 to 146.5 Frame: the range depends on the Frame value. Beat: the range depends on the Beat value.	Sets the delay time. There are two edit boxes, displaying milliseconds and the units selected for [Delay Scale].
❺		Level	-∞ to ±0 dB	Sets the output signal level for each channel.
❻		On	ON/OFF	Turns ON each channel's delay.
❼		Mute	ON/OFF	Turns ON muting for each channel's output.
❽	Delay Scale	Delay Scale	ms Sample Meter Feet Frame Beat	Selects the units for setting the delay time. The selected button will light up, and the units in the [Delay] edit box will change. If [Beat] is selected, use the knob to set the BPM (beats/minute).

Dynamics

Components in the dynamic group adjust the dynamic range of the sound. There are eight types of components, each of which is available in mono channel and stereo channel versions. The seven types are: compander hard, compander soft, compressor, de-esser, ducking, expander, gate, and limiter.

■ KeyIn
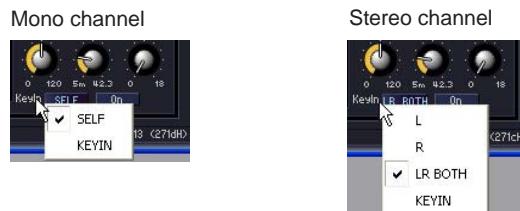
All components in the dynamic group, except the de-esser, have KeyIn input. This is used as a trigger source that activates the effects of the component.

The trigger source is set in the [KeyIn] section of the component editor.

[KeyIn] Section

The currently selected trigger source is displayed on the button. Click the button and select the trigger source from the menu.

Mono channel   Stereo channel

- [SELF]
  Sets the input signal as the trigger source for mono channel components.

- [L]/[R]
  Sets the left or right input signal as the trigger source for stereo channel components.

- [LR BOTH]
  Sets both the left and right input signals as the trigger source for stereo channel components. The strongest input signal will be the trigger source, whether from the left or right channel.
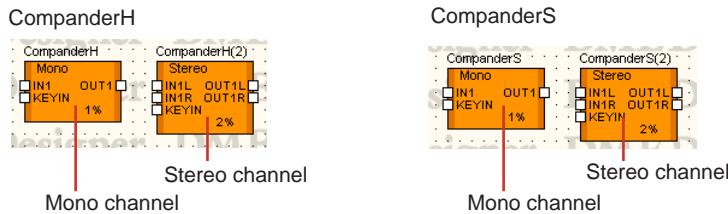
- [KEYIN]
  The KeyIn input will be the trigger source.

Compander

The compander combines the effects of a compressor and an expander. A compressor compresses signals that exceed the threshold, while the expander reduces signals that fall below the threshold. There are two compander groups, CompanderH (compander hard) and CompanderS (compander soft). Within each group, there are mono channel and stereo channel companders.
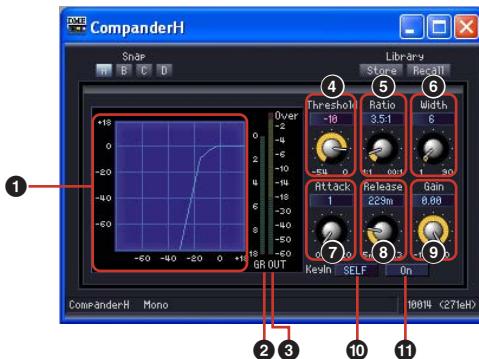
Mono channel companders have one input, one output, and one KeyIn input. Stereo channel companders have two inputs, two outputs, and one KeyIn input.
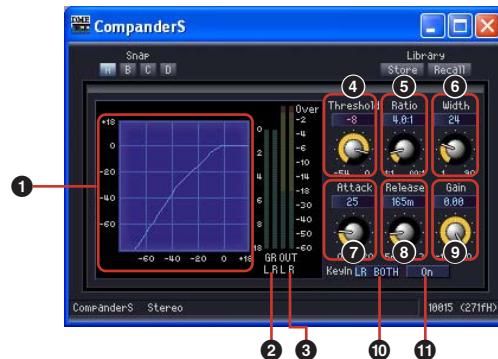
CompanderH

CompanderS

Stereo channel

Mono channel

Stereo channel

Mono channel

Double-click a component to display the component editor for it. The parameters are the same for mono channel and stereo channel components.
The compander hard and compander soft differ in the compression ratio of their fixed expander. The expander compression is expressed by the straight portion of the lower-left part of the compander curve. The compression ratio of the compander hard is large. The slope is also large. The compression ratio of the compander soft is small, with a gentle compression. The parameters in the component editor are the same.

CompanderH Mono component editor
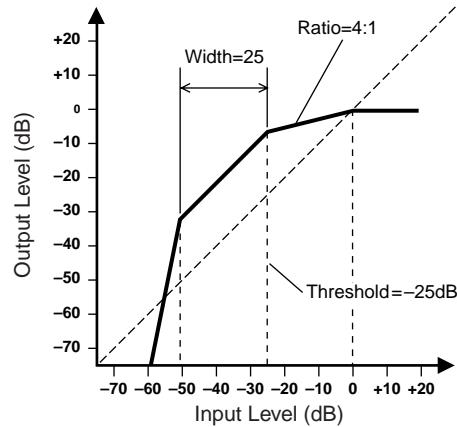
CompanderS Stereo component editor

	Name	Function
❶	Compander Curve	Displays results graphically. The horizontal axis is the input signal level, and the vertical axis is the output level.
❷	Gain Reduction Meter	Displays the gain reduction attenuation.
❸	Output Meter	Displays the output signal level.

	Parameter	Setting Range	Function
❹	Threshold	-54 dB to ±0 dB	Sets the threshold value.
❺	Ratio	1:1 to ∞:1	Sets the compression ratio.
❻	Width	+1 dB to +90 dB	Sets the width of the expander.
❼	Attack	0 to 120 ms	Sets the attack time.
❽	Release	44.1 kHz: 6 ms to 46 s 48 kHz: 5 ms to 42.3 s 88.2 kHz: 3 ms to 23 s 96 kHz: 3 ms to 21.1 s	Sets the release time. The setting range may very, depending on the operating frequency.
❾	Gain	-18 dB to ±0 dB	Sets the output gain.
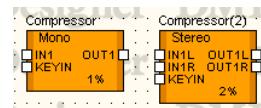
⑩	KeyIn	Mono	SELF KEYIN	Selects the trigger source from a menu. The currently selected trigger source is displayed on the button.
		Stereo	L R LR BOTH KEYIN	
⑪	On	ON/OFF		Turns the compander ON.

Compressor

Compresses signals that exceed a threshold. Narrows the dynamic range of the signal, making it easier to mix or record signals with a wide dynamic range such as vocals or piano music. Both mono channel and stereo channel compressors are provided.
Mono channel compressors have one input, one output, and one KeyIn input. Stereo channel compressors have two inputs, two outputs, and one KeyIn input.
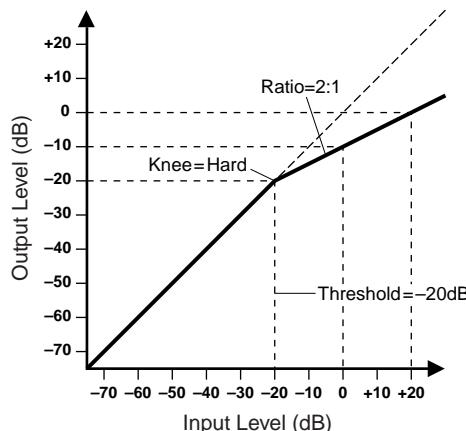
Double-click a component to open the component editor for it. The parameters are the same for mono channel and stereo channel components.

Compressor component editor

	Name		Function
❶	Compressor Curve		Displays results graphically. The horizontal axis is the input signal level, and the vertical axis is the output level.
❷	Gain Reduction Meter		Displays the gain reduction attenuation.
❸	Output Meter		Displays the output signal level.
	Parameter	Setting Range	Function
❹	Threshold	-54 dB to ±0 dB	Sets the threshold value.
❺	Ratio	1:1 to ∞:1	Sets the compression ratio.
❻	Knee	HARD, 1, 2, 3, 4, 5	Sets the way compression is applied.
❼	Attack	0 to 120 ms	Sets the attack time.
❽	Release	44.1 kHz: 6 ms to 46 s 48 kHz: 5ms to 42.3 s 88.2 kHz: 3 ms to 23 s 96 kHz: 3 ms to 21.1 s	Sets the release time. The setting range may very, depending on the operating frequency.
❾	Gain	±0 dB to +18 dB	Sets the output gain.
❿	KeyIn	Mono — SELF KEYIN Stereo — L, R, LR BOTH KEYIN	Selects the trigger source from a menu. The currently selected trigger source is displayed on the button.
⓫	On	ON/OFF	Turns the compressor ON.

De-Esser

Compresses the signal above a specified frequency. The de-esser controls sibilant (hissing) sounds included in speech that are produced by the letter "S." Both mono channel and stereo channel de-essers are provided.
Mono channel de-essers have one input and one output each. Stereo channel de-essers have two inputs and two outputs each.
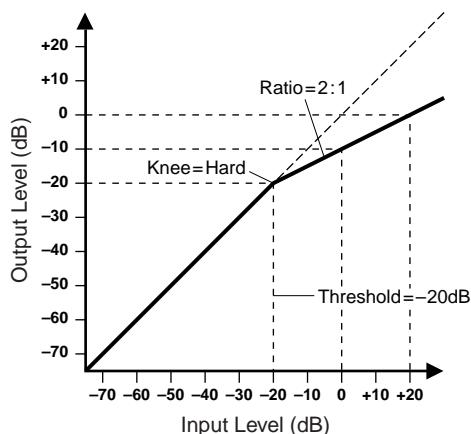
Double-click a component to open the component editor for it. The parameters are the same for mono channel and stereo channel components.

De-Esser component editor
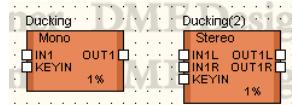
	Name		Function
❶	De-Esser Curve		Displays results graphically. The horizontal axis is the input signal level, and the vertical axis is the output level.
❷	Gain Reduction Meter		Displays the gain reduction attenuation.
❸	Output Meter		Displays the output signal level.
	Parameter	Setting Range	Function
❹	Threshold	-54 dB to ±0 dB	Sets the threshold value.
❺	Ratio	1:1 to ∞:1	Sets the compression ratio.
❻	Knee	HARD, 1, 2, 3, 4, 5	Sets the way the de-esser effect is applied.
❼	Attack	0 to 120 ms	Sets the attack time.
❽	Release	44.1 kHz: 6 ms to 46 s 48 kHz: 5 ms to 42.3 s 88.2 kHz: 3 ms to 23 s 96 kHz: 3 ms to 21.1 s	Sets the release time. The setting range may very, depending on the operating frequency.
❾	Gain	±0 dB to +18 dB	Sets the output gain.
❿	Frequency	80 Hz to 10 kHz	Sets the minimum signal frequency for compression.
⓫	On	ON/OFF	Turns the de-esser ON.
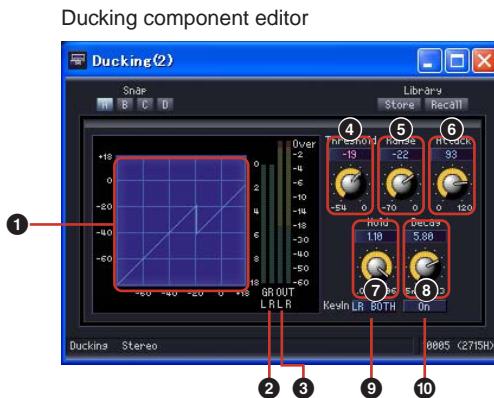
Ducking
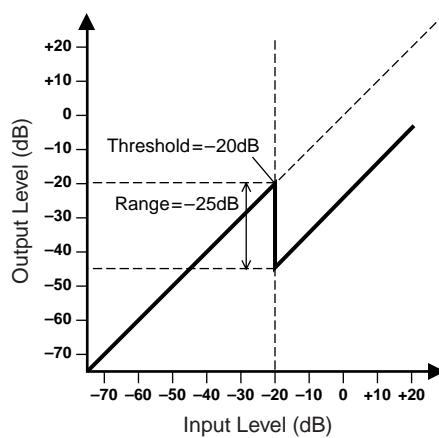
Attenuates the output a particular amount, when an input signal exceeds its threshold. Both mono channel and stereo channel duckers are provided.
Mono channel duckers have one input, one output, and one KeyIn input. Stereo channel duckers have two inputs, two outputs, and one KeyIn input.

Double-click a component to open the component editor for it. The parameters are the same for mono channel and stereo channel components.

Ducking component editor
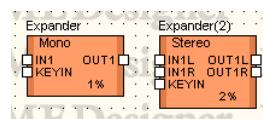
	Name	Function
❶	Ducking Curve	Displays results graphically. The horizontal axis is the input signal level, and the vertical axis is the output level.
❷	Gain Reduction Meter	Displays the gain reduction attenuation.
❸	Output Meter	Displays the output signal level.

	Parameter	Setting Range		Function
❹	Threshold	-54 dB to ±0 dB		Sets the threshold value.
❺	Range	-70 dB to ±0 dB		Sets the amount by which the level is reduced.
❻	Attack	0 to 120 ms		Sets the attack time.
❼	Hold	44.1 kHz: 0.02 ms to 2.13 s 48 kHz: 0.02 ms to 1.96 s 88.2 kHz: 0.01 ms to 1.06 s 96 kHz: 0.01 ms to 981 ms		Sets the hold time. The setting range may very, depending on the operating frequency.
❽	Decay	44.1 kHz: 6 ms to 46 s 48 kHz: 5 ms to 42.3 s 88.2 kHz: 3 ms to 23 s 96 kHz: 3 ms to 21.1 s		Sets the decay time. The setting range may very, depending on the operating frequency.
❾	KeyIn	Mono	SELF KEYIN	Selects the trigger source from a menu. The currently selected trigger source is displayed on the button.
		Stereo	L R LR BOTH KEYIN	
❿	On	ON/OFF		Turns the ducking ON.

Expander

Widens the dynamic range of the signal. Low-level signals such as noise are diminished. Both mono channel and stereo channel expanders are provided.
Mono channel expanders have one input, one output, and one KeyIn input. Stereo channel expanders have two inputs, two outputs, and one KeyIn input.
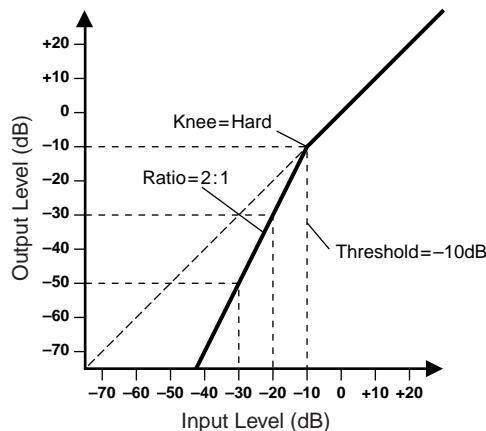

Double-click a component to open the component editor for it. The parameters are the same for mono channel and stereo channel components.

Expander component editor

	Name		Function
❶	Expander Curve		Displays results graphically. The horizontal axis is the input signal level, and the vertical axis is the output level.
❷	Gain Reduction Meter		Displays the gain reduction attenuation.
❸	Output Meter		Displays the output signal level.
	Parameter	**Setting Range**	**Function**
❹	Threshold	-54 dB to ±0 dB	Sets the threshold value.
❺	Ratio	1:1 to ∞:1	Sets the compression ratio.
❻	Knee	HARD, 1, 2, 3, 4, 5	Sets the way the expander is applied.
❽	Attack	0 to 120 ms	Sets the attack time.
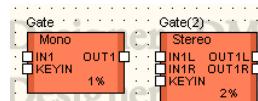
❽	Release	44.1 kHz: 6 ms to 46 s 48 kHz: 5 ms to 42.3 s 88.2 kHz: 3 ms to 23 s 96 kHz: 3 ms to 21.1 s		Sets the release time. The setting range may very, depending on the operating frequency.
❾	Gain	±0 dB to +18 dB		Sets the output gain.
❿	KeyIn	Mono	SELF KEYIN	Selects the trigger source from a menu. The currently selected trigger source is displayed on the button.
		Stereo	L R LR BOTH KEYIN	
⓫	On	ON/OFF		Turns the expander ON.

Gate

Attenuates signals that are lower than the threshold level. Both mono channel and stereo channel gates are provided.
Mono channel gates have one input, one output, and one KeyIn input. Stereo channel gates have two inputs, two outputs, and one KeyIn input.
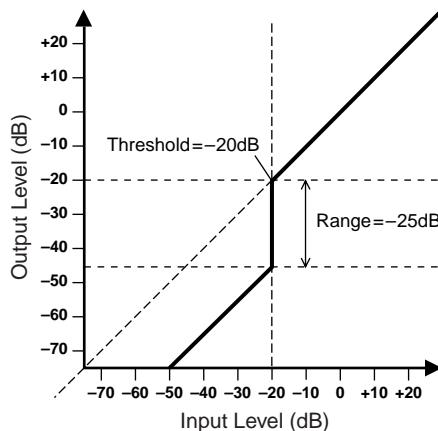
Double-click a component to open the component editor for it. The parameters are the same for mono channel and stereo channel components.

Gate component editor

	Name		Function
❶	Gate Curve		Displays results graphically. The horizontal axis is the input signal level, and the vertical axis is the output level.
❷	Gain Reduction Meter		Displays the gain reduction attenuation.
❸	Output Meter		Displays the output signal level.
	Parameter	Setting Range	Function
❹	Threshold	-54 dB to ±0 dB	Sets the threshold value.
❺	Range	-70 dB to ±0 dB	Sets the amount by which the level is reduced.
❻	Attack	0 to 120 ms	Sets the attack time.
❼	Hold	44.1 kHz: 0.02 ms to 2.13 s 48 kHz: 0.02 ms to 1.96 s 88.2 kHz: 0.01 ms to 1.06 s 96 kHz: 0.01 ms to 981 ms	Sets the hold time.
❽	Decay	44.1 kHz: 6 ms to 46 s 48 kHz: 5 ms to 42.3 s 88.2 kHz: 3 ms to 23 s 96 kHz: 3 ms to 21.1 s	Sets the decay time. The setting range may very, depending on the operating frequency.
❾	KeyIn	Mono — SELF / KEYIN Stereo — L / R / LR BOTH / KEYIN	Selects the trigger source from a menu. The currently selected trigger source is displayed on the button.
❿	On	ON/OFF	Turns the gate ON.

Limiter
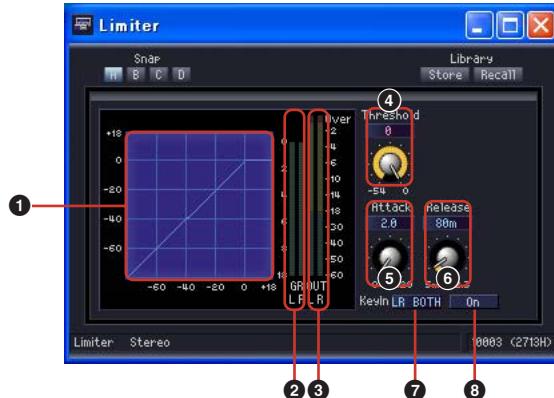
Signals above the threshold are compressed at an ∞:1 ratio, preventing output of signals that exceed the threshold level. Mono channel and stereo channel components are provided.
Mono channel components have a single input and output plus a key input, while stereo channel components have two inputs and outputs and a key input.
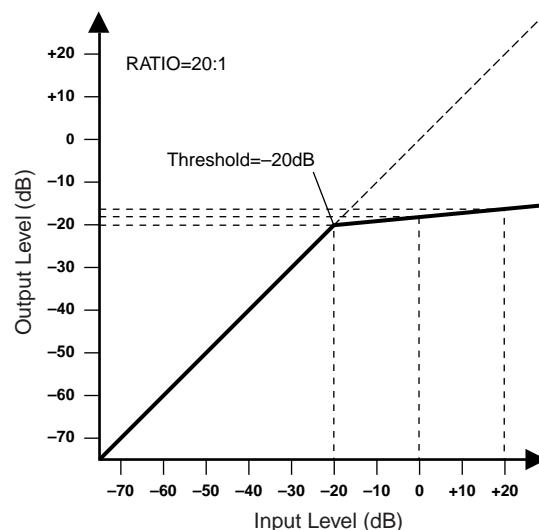
Double click the component to open the component editor. Mono channel and stereo channel components have the same parameters.

Limiter component editor

	Name		Function
❶	Limiter Curve		Displays the limiter response in graph form. The horizontal axis represents input signal level and the vertical axis represents output level.
❷	Gain Reduction Meter		Displays the amount of gain reduction.
❸	Output Meter		Displays the output signal level.
	Parameter	Setting Range	Function
❹	Threshold	-54 dB to ±0 dB	Sets the threshold value.
❺	Attack	0 to 120 ms	Sets the attack time.
❻	Release	44.1 kHz: 6 ms to 46 s 48 kHz: 5 ms to 42.3 s 88.2 kHz: 3 ms to 23 s 96 kHz: 3 ms to 21.1 s	Sets the release time. The range varies according to the operating frequency.
❾	KeyIn	Mono — SELF / KEYIN Stereo — L / R / LR BOTH / KEYIN	The trigger source can be selected from this menu. The currently selected source is displayed in the button.
❿	On	ON/OFF	Turns the limiter ON.

Equalizer (EQ)

The equalizer boosts or cuts the levels of specified frequencies. The EQ group contains graphic equalizers (GEQ) and parametric equalizers (PEQ).
The frequency bands in the graphic equalizer are fixed. The graphical interface lets you visually check the gain of each frequency. There are three different types of equalizers, each with a different number of frequency bands. Mono channel and stereo channel equalizers are available for each type.
With the parametric equalizer, you can freely adjust the frequency bands, their amplitudes, and bandwidths. There are six different types of parametric equalizers, each with a different number of frequency bands. Mono channel and stereo channel equalizers are available for each type.
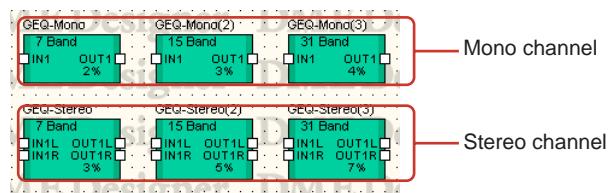
Graphic Equalizer (GEQ)
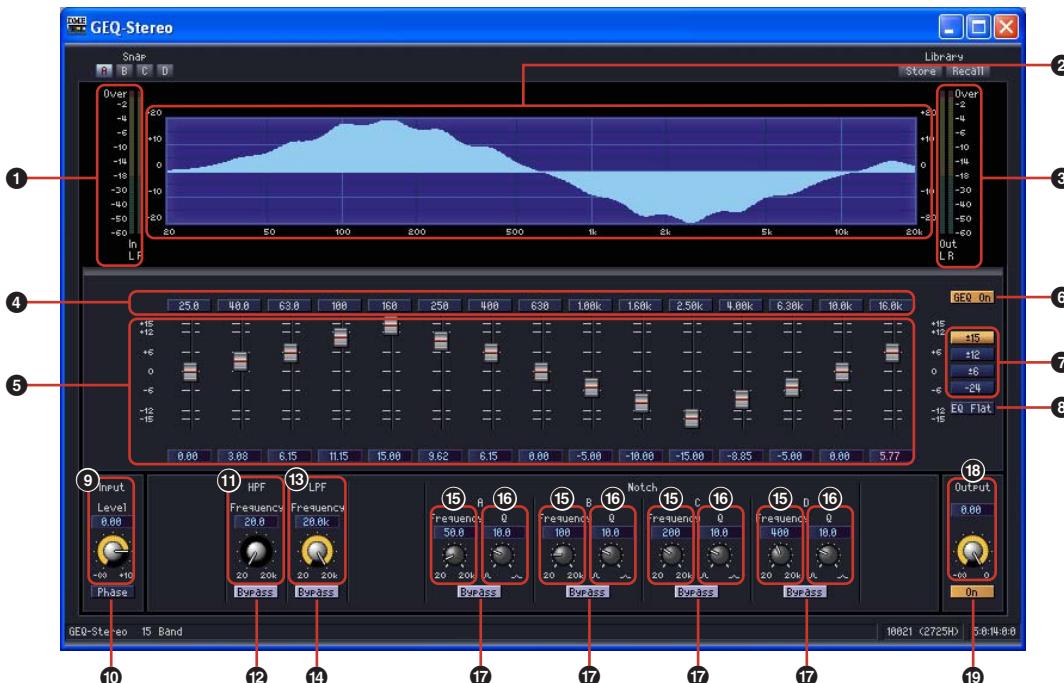
Boosts or cuts signals within the specified frequencies. The mono group contains 7 band, 15 band, and 31 band mono channel components. The stereo group contains 7 band, 15 band, and 31 band stereo channel components.
Mono channel GEQs have one input and one output each. Stereo channel GEQs have two inputs and two outputs each.


Double-click a component to display the component editor for it. The number of bands varies depending on the component, but all share a common configuration in the component editor.

Component editor for GEQ
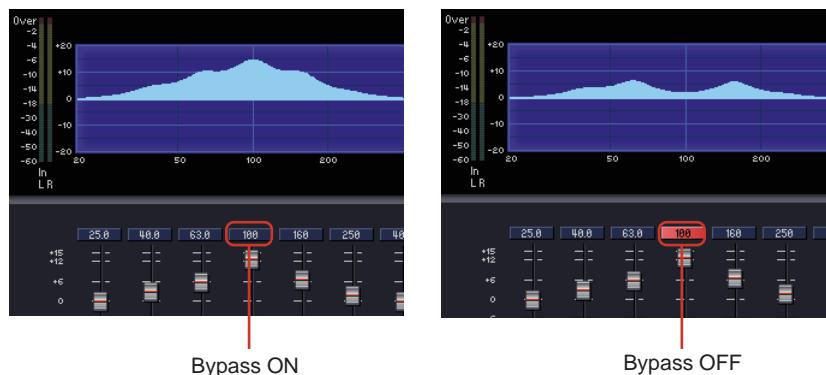
	Name	Function
❶	Input Meter	Displays the input signal level.
❷	EQ Curve	Displays the equalizer effect.
❸	Output Meter	Displays the output signal level.

	Section	Parameter	Setting Range	Function
❹	Equalizer	Bypass	ON/OFF	Bypasses all bands in the GEQ equalizer section.
❺		Gain	Set by [Range].	Sets the output gain for its band.
❻		GEQ ON	ON/OFF	Turns the GEQ ON.
❼		Range (Button)	±15 ±12 ±6 -24	Selects the gain adjust width.
❽		EQ Flat	--	Returns the faders of all bands to 0dB.
❾	Input	Level	-∞ to +10 dB	Sets the input signal level.
❿		Phase	ON/OFF	Reverses the phase of the input signal.
⓫	HPF	Frequency	20 Hz to 20 kHz	Sets the HPF cutoff frequency.
⓬		Bypass	ON/OFF	Turns bypass ON.
⓭	LPF	Frequency	20 Hz to 20 kHz	Sets the LPF cutoff frequency.
⓮		Bypass	ON/OFF	Turns bypass ON.
⓯	Notch	Frequency	20 Hz to 20 kHz	Sets the notch filter frequency.
⓰		Q:	0.1 to 63.0	Sets the width of the frequency band that will be changed by the filter.
⓱		Bypass	ON/OFF	Turns bypass ON.
⓲	Output	Level	-∞ to ±0 dB	Sets the signal level.
⓳		On	ON/OFF	Turns output ON.

■ EQ Graph [Bypass] Button
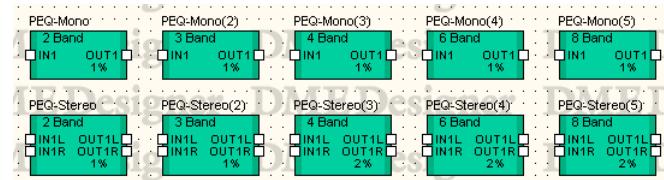
A number for each frequency band is displayed on these buttons. When you click the button, it lights up and the bypass turns ON. When you turn this ON, bypassed sound (unchanged sound) is output. When you turn this OFF, the sound is output with effects applied.

Bypass ON

Bypass OFF

Parametric Equalizer (PEQ)

Boosts or cuts signals within specified frequencies. In both the Mono group and Stereo group there are 2 band, 3 band, 4 band, 6 band, and 8 band components available.
Mono channel PEQs have one input and one output each. Stereo channel PEQs have two inputs and two outputs each. The number of bands varies depending on the component, but all share a common configuration in the component editor.

Double-click a component to display the component editor for it. The number of bands varies depending on the component, but all share a common configuration in the component editor.

PEQ component editor

		Name			Function
❶	EQ Curve				Displays the equalizer effect. You can change the parameter by dragging the control point with the mouse.
	Section	Parameter	Setting Range		Function
❷	Input	Level	-∞ to +10 dB		Sets the input signal level.
❸		Phase	ON/OFF		Reverses the phase of the input signal.
❹	Equalizer	Type	PEQ L.SHELF 6 dB/Oct L.SHELF 12 dB/Oct H.SHELF 6 dB/Oct H.SHELF 12 dB/Oct HPF LPF		Select the filter type from the menu.
❺		Q	0.1 to 16.0		Sets the band width for each frequency band.
❻		Frequency	20 Hz to 20 kHz		Sets the frequency for each band.
❼		Gain	-18 dB to +18 dB		Sets the level of the frequency that will be changed.
❽		Bypass	ON/OFF		Turns ON bypass for each band.

❾	Equalizer	PEQ ON	ON/OFF	Turns the PEQ ON
❿	Output	Level	-∞ to ±0 dB	Sets the output signal level.
⓫		On	ON/OFF	Turns output ON.

■ Filter Type

Various types of curves are available for changing the level. Click the [Type] button and select the type from the menu.

- **PEQ**

  This is a general parametric equalizer.

- **L. SHELF (Low Shelving)**

  There is no sound attenuation at low frequencies. The sound is attenuated at a constant rate from the cutoff frequency towards the higher frequencies. The attenuation rate per octave can be set to [6 dB/Oct] or [12 dB/Oct].

- **H.SHELF (High Shelving)**

  There is no sound attenuation at high frequencies. The sound is attenuated at a constant rate from the cutoff frequency towards the lower frequencies. The attenuation rate per octave can be set to [6 dB/Oct] or [12 dB/Oct].

- **HPF**
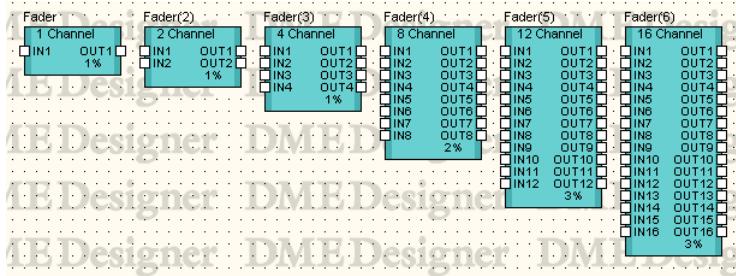
  This is a high-pass filter (Q=0.7). Attenuates the low frequencies with a gentle curve (12 dB/Oct).

- **LPF**

  This is a low-pass filter (Q=0.7). Attenuates the high frequencies with a gentle curve (12 dB/Oct).
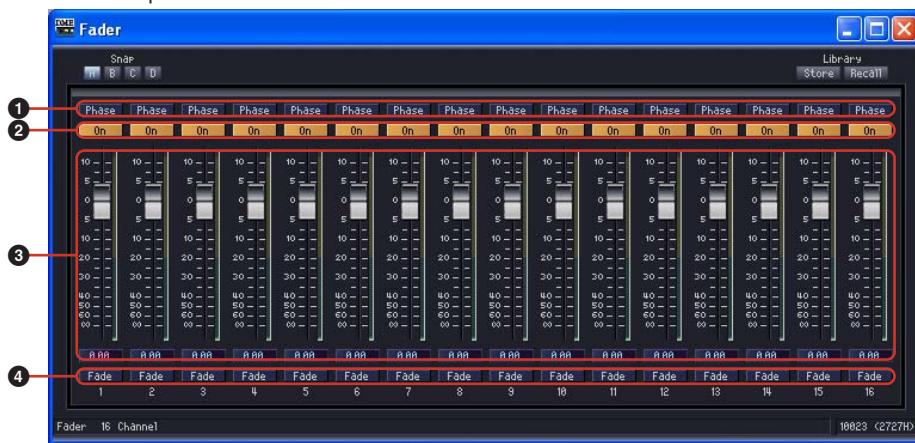
Fader

Controls the output level for each channel. Fader components are available for 1, 2, 4, 8, 12, and 16 channels.

Double-click a component to display the component editor for it. The number of channels varies, but all components share a common configuration in the component editor.

Fader component editor

	Parameter	Setting Range	Function
❶	Phase	ON/OFF	Reverses the phase of the output signal for each channel.
❷	On	ON/OFF	Turns ON each channel's output.
❸	Fader	-∞ to +10 dB	Sets the output signal level for each channel.
❹	Fade	ON/OFF	Sets fade during scene recall ON or OFF.

■ [Fade]

Sets the action of the fader when there is a large change in its position during scene recall. When you turn this ON, the fader moves gradually to the position after the jump. If you turn this OFF, it immediately jumps to the parameters saved in the recalled scene.
See "The 'Scene Manager' Dialog Box" (page 63) for details about settings for the components to be faded and the time period when the [Fade] is On.
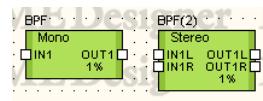
Filters

A filter passes specific frequencies and attenuates all others.
There are seven types of filters available in the filter group: band pass filter (BPF), high pass filter
(HPF), low pass filter (LPF), notch filter (Notch), programmable BPF, programmable HPF, and
programmable LPF.

Band Pass Filter (BPF)

The band pass filter passes the signal from a specified frequency band, while attenuating frequencies
outside that band. There are two types of BPF components: mono channel and stereo channel. Mono
channel BPFs have one input and one output. Stereo channel BPFs have two of each.
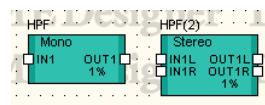
BPF component editor

	Section	Parameter	Setting Range	Function
❶	Input	Level	-∞ to +10 dB	Sets the input signal level.
❷		Phase	ON/OFF	Reverses the phase of the input signal.
❸	BPF	Frequency	20 Hz to 20 kHz	Sets the center frequency.
❹		Q:	0.1 to 16.0	Sets the band width of a frequency band.
❺		Bypass	ON/OFF	Turns bypass ON.
❻	Output	Level	-∞ to ±0 dB	Sets the output signal level.

High Pass Filter (HPF)

The high pass filter passes frequencies in the signal that are higher than a specified frequency, while attenuating lower frequencies in the signal. There are two types of HPF components: mono channel and stereo channel. Mono channel HPFs have one input and one output. Stereo channel HPFs have two of each.
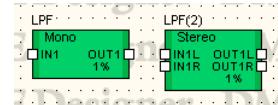
Double-click a component to display the component editor for it. The parameters are the same for mono channel and stereo channel components.

HPF component editor

	Section	Parameter	Setting Range	Function
❶	Input	Level	-∞ to +10 dB	Sets the input signal level.
❷		Phase	ON/OFF	Reverses the phase of the input signal.
❸	HPF	Frequency	20 Hz to 20 kHz	Sets the cutoff frequency.
❹		Slope	6 dB/Oct 12 dB/Oct	Sets the attenuation for each octave.
❺		Bypass	ON/OFF	Turns bypass ON.
❻	Output	Level	-∞ to ±0 dB	Sets the output signal level.

Low Pass Filter (LPF)

The low pass filter passes frequencies in the signal that are lower than a specified frequency, while attenuating higher frequencies in the signal. There are two types of LPF components: mono channel and stereo channel. Mono channel LPFs have one input and one output. Stereo channel LPFs have two of each.
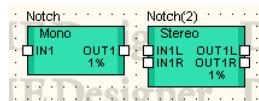
Double-click a component to display the component editor for it. The parameters are the same for mono channel and stereo channel components.

LPF component editor

	Section	Parameter	Setting Range	Function
❶	Input	Level	-∞ to +10 dB	Sets the input signal level.
❷		Phase	ON/OFF	Reverses the phase of the input signal.
❸	LPF	Frequency	20 Hz to 20 kHz	Sets the cutoff frequency.
❹		Slope	6 dB/Oct 12 dB/Oct	Sets the attenuation for each octave.
❺		Bypass	ON/OFF	Turns bypass ON.
❻	Output	Level	-∞ to ±0 dB	Sets the output signal level.

Notch Filter (Notch)

The notch filter attenuates the signal within a specified frequency band, while passing frequencies outside that band. There are two types of notch filter components: mono channel and stereo channel. Mono channel notch filters have one input and one output. Stereo channel notch filters have two of each.

Double-click a component to display the component editor for it. The parameters are the same for mono channel and stereo channel components.

Notch component editor
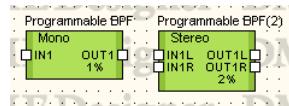
	Section	Parameter	Setting Range	Function
❶	Input	Level	-∞ to +10 dB	Sets the input signal level.
❷		Phase	ON/OFF	Reverses the phase of the input signal.
❸	Notch	Frequency	20 Hz to 20 kHz	Sets the center frequency.
❹		Q:	0.1 to 63.0	Sets the band width of the frequency band that will be changed
❺		Bypass	ON/OFF	Turns bypass ON.
❻	Output	Level	-∞ to ±0 dB	Sets the output signal level.

Programmable BPF

The band pass filter passes the signal from a specified frequency band, while attenuating frequencies outside that band. With the programmable band pass filter you can set the filter type and the slope between the frequency band that is passed and the band that is cutoff.
There are two types of programmable BPF components: mono channel and stereo channel. Mono channel programmable BPFs have one input and one output. Stereo channel programmable BPFs have two of each.

Double-click a component to display the component editor for it. The parameters are the same for mono channel and stereo channel components.

Programmable BPF component editor

	Section	Parameter	Setting Range	Function
❶	Input	Level	-∞ to +10 dB	Sets the input signal level.
❷		Phase	ON/OFF	Reverses the phase of the input signal.
❸	HPF	Frequency	20 Hz to 20 kHz	Sets the HPF cutoff frequency.
❹		Type	Thru 6 dB/Oct 12 dB/Oct AdjustGc 12 dB/Oct Butrwrth 12 dB/Oct Bessel 12 dB/Oct Linkwitz 18 dB/Oct AdjustGc 18 dB/Oct Butrwrth 18 dB/Oct Bessel 24 dB/Oct AdjustGc 24 dB/Oct Butrwrth 24 dB/Oct Bessel 24 dB/Oct Linkwitz 36 dB/Oct AdjustGc 36 dB/Oct Butrwrth 36 dB/Oct Bessel 48 dB/Oct AdjustGc 48 dB/Oct Butrwrth 48 dB/Oct Bessel 48 dB/Oct Linkwitz	Sets the attenuation for each octave and the filter type. [THRU] turns off the filter.
❺		Gc	-6 dB to +6 dB	When [AdjustGc] (Adjustable Gc) is selected for [Type], this sets the gain for the cutoff frequency.
❻		Bypass	ON/OFF	Turns bypass ON.

	Section	Parameter	Setting Range	Function
❼	LPF	Frequency	20 Hz to 20 kHz	Sets the LPF cutoff frequency.
❽		Type	Thru 6 dB/Oct 12 dB/Oct AdjustGc 12 dB/Oct Butrwrth 12 dB/Oct Bessel 12 dB/Oct Linkwitz 18 dB/Oct AdjustGc 18 dB/Oct Butrwrth 18 dB/Oct Bessel 24 dB/Oct AdjustGc 24 dB/Oct Butrwrth 24 dB/Oct Bessel 24 dB/Oct Linkwitz 36 dB/Oct AdjustGc 36 dB/Oct Butrwrth 36 dB/Oct Bessel 48 dB/Oct AdjustGc 48 dB/Oct Butrwrth 48 dB/Oct Bessel 48 dB/Oct Linkwitz	Sets the attenuation for each octave and the filter type. [THRU] turns off the filter.
❾		Gc	-6 dB to +6 dB	When [AdjustGc] (Adjustable Gc) is selected for [Type], this sets the gain for the cutoff frequency.
❿		Bypass	ON/OFF	Turns bypass ON.
⓫	Output	Level	-∞ to ±0 dB	Sets the output signal level.

Programmable HPF

The high pass filter passes frequencies in the signal that are higher the specified frequency, while attenuating lower frequencies in the signal. With the programmable high pass filter you can set the filter type and the slope between the frequency band that is passed and the band that is cutoff. There are two types of programmable HPF components: mono channel and stereo channel. Mono channel programmable HPFs have one input and one output. Stereo channel programmable HPFs have two of each.

Double-click a component to display the component editor for it. The parameters are the same for mono channel and stereo channel components.
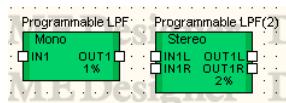
Programmable HPF component editors


	Section	Parameter	Setting Range	Function
❶	Input	Level	-∞ to +10 dB	Sets the input signal level.
❷		Phase	ON/OFF	Reverses the phase of the input signal.
❸	HPF	Frequency	20 Hz to 20 kHz	Sets the HPF cutoff frequency.
❺		Type	Thru 6 dB/Oct 12 dB/Oct AdjustGc 12 dB/Oct Butrwrth 12 dB/Oct Bessel 12 dB/Oct Linkwitz 18 dB/Oct AdjustGc 18 dB/Oct Butrwrth 18 dB/Oct Bessel 24 dB/Oct AdjustGc 24 dB/Oct Butrwrth 24 dB/Oct Bessel 24 dB/Oct Linkwitz 36 dB/Oct AdjustGc 36 dB/Oct Butrwrth 36 dB/Oct Bessel 48 dB/Oct AdjustGc 48 dB/Oct Butrwrth 48 dB/Oct Bessel 48 dB/Oct Linkwitz	Sets the attenuation for each octave and the filter type. [THRU] turns off the filter.
❻		Gc	-6 dB to +6 dB	When [AdjustGc] (Adjustable Gc) is selected for [Type], this sets the gain for the cutoff frequency.
❼		Bypass	ON/OFF	Turns bypass ON.
❽	Output	Level	-∞ to ±0 dB	Sets the output signal level.

Programmable LPF

The low pass filter passes frequencies in the signal that are lower than the specified frequency, while attenuating higher frequencies in the signal. With the programmable low pass filter you can set the filter type and the slope between the frequency band that is passed and the band that is cutoff. There are two types of programmable LPF components: mono channel and stereo channel. Mono channel programmable LPFs have one input and one output. Stereo channel programmable LPFs have two of each.

Double-click a component to display the component editor for it. The parameters are the same for mono channel and stereo channel components.

Programmable LPF component editor

	Section	Parameter	Setting Range	Function
❶	Input	Level	-∞ to +10 dB	Sets the input signal level.
❷		Phase	ON/OFF	Reverses the phase of the input signal.
❸	LPF	Frequency	20 Hz to 20 kHz	Sets the LPF cutoff frequency.
❺		Type	Thru 6 dB/Oct 12 dB/Oct AdjustGc 12 dB/Oct Butrwrth 12 dB/Oct Bessel 12 dB/Oct Linkwitz 18 dB/Oct AdjustGc 18 dB/Oct Butrwrth 18 dB/Oct Bessel 24 dB/Oct AdjustGc 24 dB/Oct Butrwrth 24 dB/Oct Bessel 24 dB/Oct Linkwitz 36 dB/Oct AdjustGc 36 dB/Oct Butrwrth 36 dB/Oct Bessel 48 dB/Oct AdjustGc 48 dB/Oct Butrwrth 48 dB/Oct Bessel 48 dB/Oct Linkwitz	Sets the attenuation for each octave and the filter type. [THRU] turns off the filter.
❻		Gc	-6 dB to +6 dB	When [AdjustGc] (Adjustable Gc) is selected for [Type], this sets the gain for the cutoff frequency.
❼		Bypass	ON/OFF	Turns bypass ON.
❽	Output	Level	-∞ to ±0 dB	Sets the output signal level.

Meter

Displays signal levels. Meter components are available with 1, 2, 4, 8, 12, and 16 channels.

Double-click a component to display the component editor for it. The number of channels varies depending on the component, but all share a common configuration in the component editor.

Meter component editor
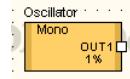
	Name	Function
❶	Meter	Displays signal levels for each channel.

Miscellaneous

In the Miscellaneous group, there are the Oscillator subgroup and the Wav File Player.

Oscillator

The Oscillator subgroup contains a monochannel oscillator component. The oscillator generates sine waves at fixed frequencies of 100 Hz, 1 kHz, and 10 kHz, a variable frequency sine wave, pink noise, and burst noise. The oscillator component has two outputs.

Double-click a component to display the component editor for it.

Oscillator component editor

	Section	Parameter	Setting Range	Function
❶	Wave Form	Sine	100 Hz 1 kHz 10 kHz Vari	Selects the frequency and waveform that will be generated. Only one of the six [Sine] and [Noise] buttons can be selected.
❷		Noise	Pink Burst	
❸		Frequency	20 Hz to 20 kHz	When [Vari] is selected for [Sine], this sets the frequency of the generated sine wave.
❹	Output	Level	-∞ to +6 dB	Displays the signal level.
❺		On	ON/OFF	Turns ON the oscillator.
❻		Meter	--	Displays the output signal level.

Pink Noise

A standard signal used for sound measurement.
This sound covers a frequency range of 20 Hz to 20 kHz. As the frequency doubles, the energy of the sound is cut in half. The sound level is equal at all frequencies.

Burst
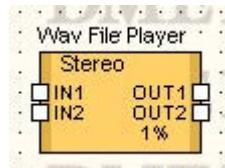
Outputs pink noise continuously.

Wav File Player

The Wav File Player is a component for playing Wave files. Only one Wav File Player component can be arranged for each single DME unit.

If you switch the effect type for SPX components while playing Wave file by Wav File Player, drop-outs in the sound played in the Wav File Player may occur.

Double-click the component to display the component editor for it.

Wav File Player component editor

	Section	Parameter	Setting Range	Function
❶	Ex. Input	Level	-∞ to 0 dB	Sets the input level from an input port. Only effective when "External Input" is selected as the playback file.
❷	Wav File Player	Play	001 to 100	Selects and displays the playback file. Only files set in the DME unit in which this component is placed by the Wav File Manager can be selected.
❸		List	--	Open the Wav File Manager to display a list of files set in the DME unit in which this component is located. This list functions as a play list.
❹		▐◀◀	--	Selects the previous file in the play list.
❺		▶▶▐	--	Selects the next file in the playsuit.
❻		▶	--	Plays the selected Wave file. Mute is turned OFF when "External Input" is selected.
❼		■	--	Stops playback of the Wave file. Muted when "External Input" is selected.
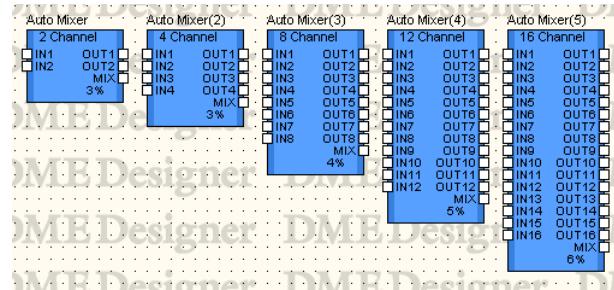
Playback will be paused if synchronization is carried out in the "Designer ← DME" direction during playback.
Playback will resume once synchronization is complete, but if a Wave file was being played it will resume playback from the beginning.

Mixer

The Mixer group contains the Auto Mixer, Delay Matrix, and Matrix Mixer.
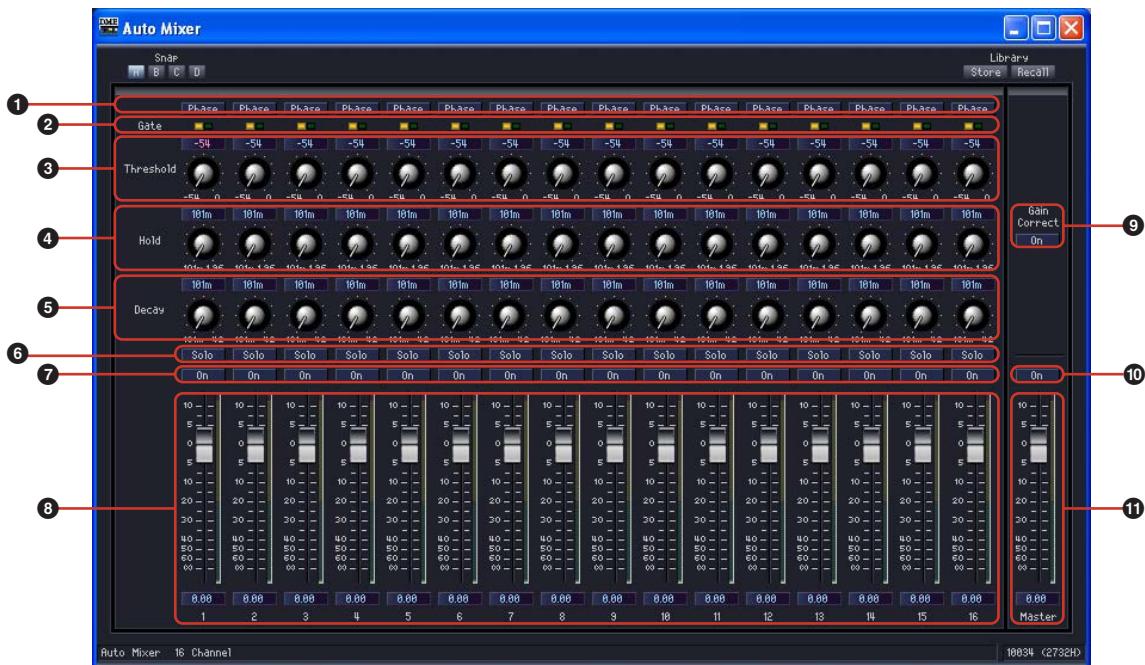
Auto Mixer

There is a noise gate for each input channel, which passes only signals that exceed a specified threshold. There are five mixer types, each with a different number of inputs.

Double-click a component to display the component editor for it. The number of channels varies depending on the component, but all share a common configuration in the component editor. The auto mixer component editor consists of two sections: input channels and master output.
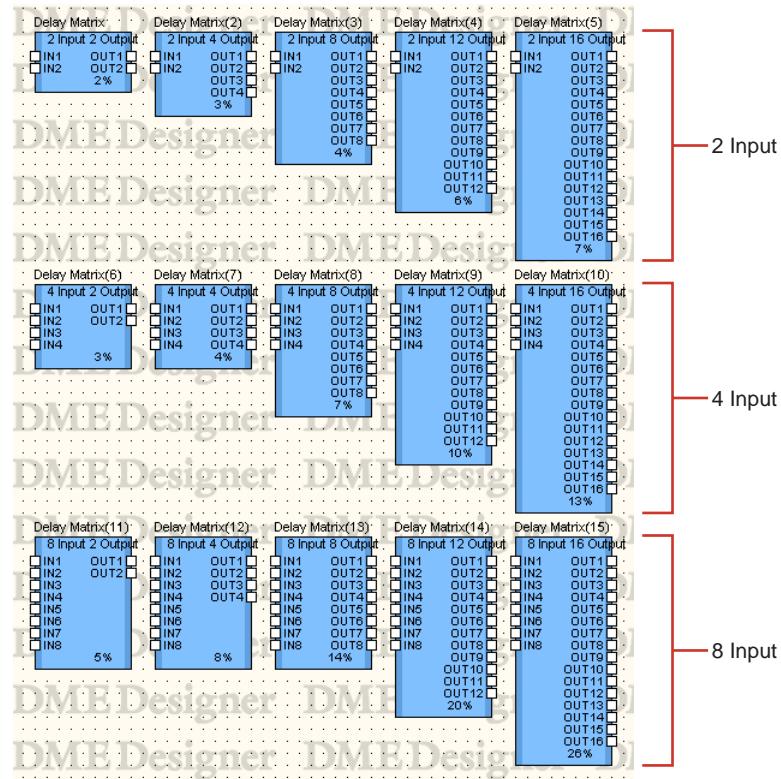
Auto Mixer component editor

	Section	Parameter	Setting Range	Function
❶	Input Channels	Phase	ON/OFF	Reverses the phase of each channel's input signal.
❷		Gate Indicator	--	When the gate is open, the light turns green. When the gate is closed, the light turns yellow.
❸		Threshold	-54 dB to ±0 dB	Sets the threshold value for each gate.
❹		Hold	44.1 kHz: 110 m to 2.13 s 48 kHz: 101 m to 1.96 s 88.2 kHz: 55.1 m to 1.06 s 96 kHz: 50. 6m to 981 m	Sets the gate hold time. The setting range may vary, depending on the operating frequency.
❺	Input Channels	Decay	44.1 kHz: 110 m to 46 s 48 kHz: 101 m to 42.3 s 88.2 kHz: 55 m to 23 s 96 kHz: 51 m to 21.1 s	Sets the speed for closing the gate. The setting range may vary, depending on the operating frequency.
❻		Solo	ON/OFF	Turns solo ON.
❼		On	ON/OFF	Turns ON each channel's input.
❽		Fader	-∞ to +10 dB	Sets the input signal level for each channel.
❾	Master Output	Gain Correct	ON/OFF	Turns ON gain correction.
❿		On	ON/OFF	Turns ON each channel's output.
⓫		Master	-∞ to +10 dB	Sets the output signal level.

Delay Matrix

This is a matrix mixer that allows you to set an independent delay time and level adjustment for each output. There are three groups of delay matrix, based on the number of inputs: 2 Input, 4 Input, and 8 Input. In each of the three groups there are five mixers available with 2, 4, 8, 12, or 16 outputs, for a total of 15 components.

Double-click a component to display the component editor for it. The number of input and output channels varies depending on the component, but all share a common configuration in the component editor.

The delay matrix component editor consists of four sections: input, output, matrix, and block. The [Master] buttons in the [Input] and [Output] sections display windows where you can make master input and output settings. Delay and level for each channel are set in separate windows that display four channels each.

Delay Matrix component editor

	Section	Name	Function
❶	Input	Master	Opens the Input Master window.
❷	Output	Master	Opens the Output Master window.
❸	Matrix	Delay meters Output level meters	Displays output level and delay time for each output channel. Clicking here displays the Crosspoint window.
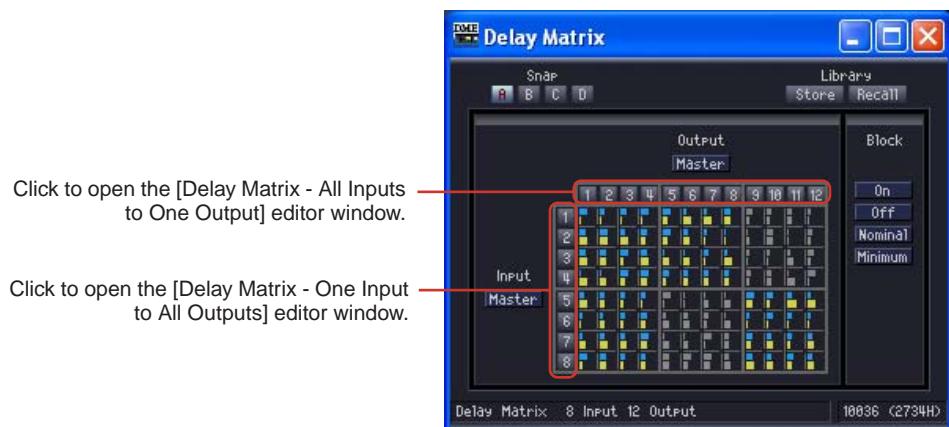
	Section	Name	Function
❹	Block	On	Turns ON output for all channels in the Crosspoint window. Lights the [ON] button (does not change the delay matrix component editor).
❺		Off	Turns OFF output for all channels in the Crosspoint window (does not change the delay matrix component editor).
❻		Nominal	Resets all output levels in the Crosspoint window, making them 0 dB. The delay settings are not changed.
❼		Minimum	Resets all output levels in the Crosspoint window, making them -∞ dB. The delay settings are not changed.

■ Matrix (Delay Meter/Output Level Meter)

The upper row has delay meters, while the middle row has output level meters. You can view parameters for all output channels at once.

Delay Meter

Output Level Meter

When you click the output channel number on the matrix, the [Delay Matrix - All Inputs to One Output] editor window opens. When you click the input channel number on the left side of the matrix, the [Delay Matrix - One Input to All Outputs] editor window opens.

Click to open the [Delay Matrix - All Inputs to One Output] editor window.

Click to open the [Delay Matrix - One Input to All Outputs] editor window.

The matrix is divided into groups. For the 2 Input matrix, each group has two input channels and four output channels. For the 4 Input matrix, each group has four input channels and four output channels. Groups in matrixes with more than four inputs are the same as for the 4 Input matrix. When you place the mouse pointer over a group, its channel numbers are highlighted. Click to open the [Delay Matrix - Crosspoint] editor window.

Click to open the "In 1-4 x Out 1-4" Crosspoint window.

Click to open the "In 5-8 x Out 5-8" Crosspoint window.

For 2 input matrix, click to open the "In 1-2 x Out 1-4" Crosspoint window.

■ Input Master

If you click the [Input Master] button in the delay matrix component editor, it will open the [Delay Matrix - InputMaster] editor window. Here you can turn the master input for each channel ON and OFF and set the level.

[Delay Matrix - InputMaster] editor window

	Section	Parameter	Setting Range	Function
❶	Input	Phase	ON/OFF	Reverses the phase of each channel's signal.
❷		Level	-∞ to +10 dB	Sets the level of the signal from each channel's input.
❸		Solo	ON/OFF	Turns ON solo for each channel.
❹		On	ON/OFF	Turns ON each channel's input.
❺	Block	On	--	Turns ON input for all channels in the Input Master window. When turned ON, the [On] button lights up.
❻		Off	--	Turns OFF input for all channels in the Input Master window.
❼		Nominal	--	Resets all input signal levels in the Input Master window, making them 0 dB.
❽		Minimum	--	Resets all input signal levels in the Input Master windows, making them -∞ dB.

■ Output Master

If you click the [Output Master] button in the delay matrix component editor, it will open the [Delay Matrix - OutputMaster] editor window. Here you can turn the master output for each channel ON and OFF and set the level.

[Delay Matrix - OutputMaster] editor window

|	Section	Parameter	Setting Range	Function
❶	Output	Meter	--	Displays the output signal level for each channel.
❷		Level	-∞ to +10 dB	Sets the output signal level for each channel.
❸		On	ON/OFF	Turns ON each channel's output.
❹	Block	On	--	Turns ON output for all channels in the Output Master window. When turned ON, the [On] button lights up.
❺		Off	--	Turns OFF output for all channels in the Output Master window.
❻		Nominal	--	Resets all output signal levels in the Output Master window, making them 0 dB.
❼		Minimum	--	Resets all output signal levels in the Output Master window, making them -∞ dB.

■ **All Inputs to One Output**

When you click the output channel number on the matrix, the [Delay Matrix - All Inputs to One Output] editor window opens. All input channels and one output channel are displayed. The output channel is the one you have clicked on in the delay mixer component editor.

	Section	Parameter	Setting Range	Function
❶	Bus Send Level	Delay	0 to 500	Sets the delay time for each input channel.
❷		Level	-∞ to +10 dB	Sets the output signal level for each input channel.
❸		On	ON/OFF	Turns ON the output for each input channel.
❹	Output	Channel	--	Displays the selected output channel. Select another channel from a menu.
❺		On	ON/OFF	Turns ON the output for the channel displayed in the window.
❻		Meter	--	Displays the output signal level of the channel displayed in the window.
❼	Block	On	--	Turns ON all channel inputs. When turned ON, the [On] button lights up.
❽		Off	--	Turns OFF all channel inputs.
❾		Nominal	--	Resets all of input signal levels, making them 0 dB.
❿		Minimum	--	Resets all of input signal levels, making them -∞ dB.

Output Channel Switching

The [Delay Matrix - All Inputs to One Output] editor window displays the output channel clicked on in the delay matrix component editor. The [Channel] buttons in the [Output] section of the [Delay Matrix - All Inputs to One Output] editor window switch the channel group that is displayed in the window.

If you make the delay matrix component editor active while the [Delay Matrix - All Inputs to One Output] editor window is displayed, and then click another output channel, that channel group will be displayed in the [Delay Matrix - All Inputs to One Output] editor window.
One [Delay Matrix - All Inputs to One Output] editor window is displayed for each delay matrix component editor.

■ One Input to All Outputs

When you click the input channel number on the left side of matrix, the [Delay Matrix - One Input to All Outputs] editor window opens. One input channel and all output channels are displayed. The input channel is the one you have clicked on in the delay mixer component editor.

	Section	Parameter	Setting Range	Function
❶	Input	Channel	--	Displays the selected input channel. Select another channel from a menu.
❷		Phase	ON/OFF	Reverses the phase of the input signal.
❸		Level	-∞ to +10 dB	Sets the input signal level.
❹		Solo	ON/OFF	Turns solo ON.
❺		On	ON/OFF	Turns input ON.
❻	Bus Send Level	Delay	0 to 500	Sets the delay time for each output channel.
❼		Level	-∞ to +10 dB	Sets the signal level for each output channel.
❽		On	ON/OFF	Turns ON the output for each output channel.
❾	Block	On	--	Turns ON all channel outputs. When turned ON, the [On] button lights up.
❿		Off	--	Turns OFF all channel outputs.
⓫		Nominal	--	Resets all output signal levels, making them 0 dB.
⓬		Minimum	--	Resets all output signal levels, making them -∞ dB.

Input Channel Switching

The [Delay Matrix - One Input to All Outputs] editor window displays the input channel for the channel number clicked on in the delay matrix component editor.
The [Channel] buttons in the [Input] section of the [Delay Matrix - All Inputs to One Output] editor window switch the channel group that is displayed in the window.

If you make the delay matrix component editor active while the [Delay Matrix - One Input to All Outputs] editor window is displayed, and then click another input channel, that channel will be displayed in the [Delay Matrix - One Input to All Outputs] editor window.
One [Delay Matrix - One Input to All Outputs] editor window is displayed for each delay matrix component editor.

■ Crosspoint

If you click a level meter in the delay matrix component editor, that group's [Delay Matrix - Crosspoint] editor window will be displayed. Turns the input channels ON and OFF and sets their levels. Just like the delay matrix component editor, the input channels are arranged vertically while the output channels are arranged horizontally.

[Delay Matrix - Crosspoint] editor window

	Section	Parameter	Setting Range	Function
❶	Input	Channel	--	Switches to another channel group.
❷	Output	Channel	--	Switches to another channel group.
❸	Bus Send Level	Delay	0 to 500	Sets the delay time for each crosspoint.
❹		Level	-∞ to +10 dB	Sets the output signal level for each crosspoint.
❺		On	ON/OFF	Turns ON output for each crosspoint.
❻	Block	On	--	Turns ON output for all channels in the Crosspoint window. The [On] button lights up.
❼		Off	--	Turns OFF output for all channels in the Crosspoint window.
❽		Nominal	--	Resets all output signal levels in the Crosspoint window, making them 0 dB.
❾		Minimum	--	Resets all output signal levels in the Crosspoint window, making them -∞ dB.

Channel Group Switching

The [Delay Matrix - Crosspoint] editor window displays four channels each for Input and Output. It displays the channel group you click on in the delay matrix component editor. The [Channel] buttons in the [Input] and [Output] sections of the [Delay Matrix - Crosspoint] editor window switch the channel group that is displayed in the window.


[Input] section
[Channel] menu

[Output] section
[Channel] menu
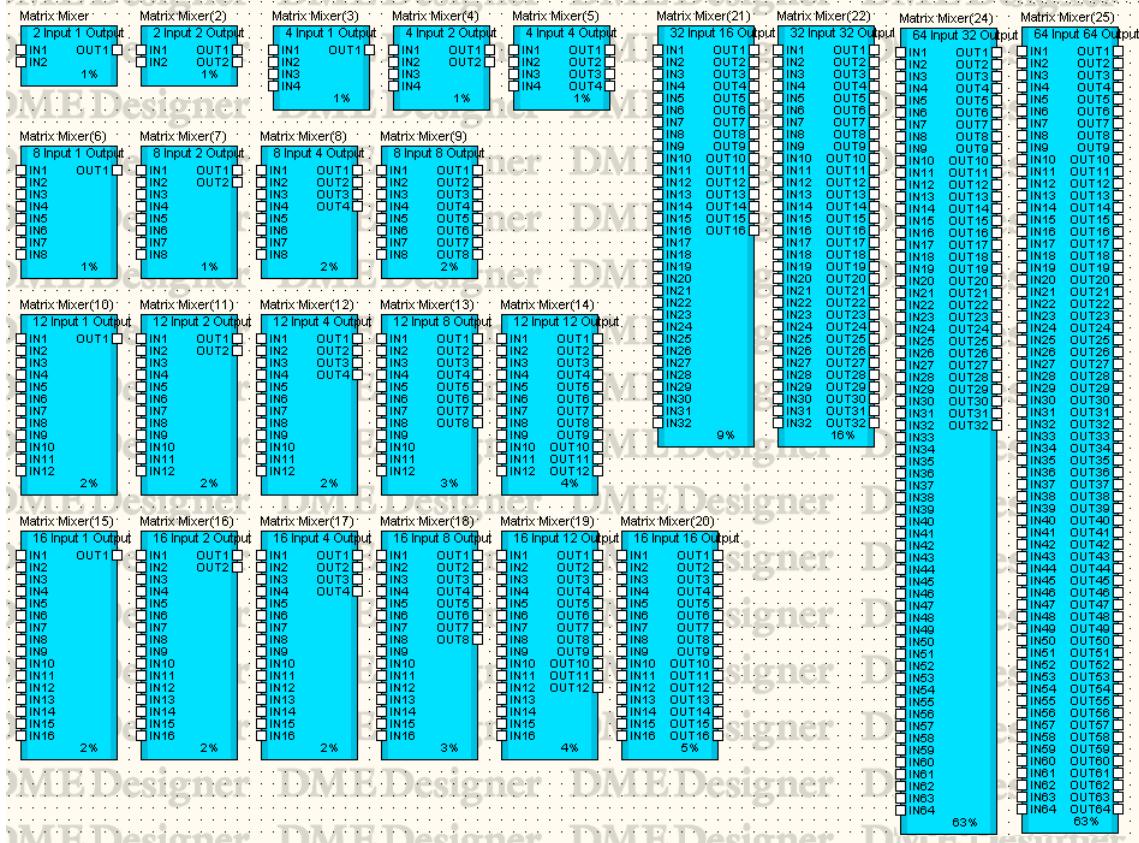
If you click another channel group when the delay matrix component editor is active and an [Delay Matrix - Crosspoint] editor window is displayed, that channel group will be displayed in the open [Delay Matrix - Crosspoint] editor window.
Only one [Delay Matrix - Crosspoint] matrix window is displayed for each delay matrix component editor.

Matrix Mixer

In the matrix mixer, the input channels and output buses are arranged in a checkerboard configuration. You can adjust the group balance for each output bus. There are 24 components in the in the Matrix Mixer group, each with different numbers of input and output channels. There are seven groups based on the number of inputs, as follows: 2 Input, 4 Input, 8 Input, 12 Input, 16 Input, 32 Input, and 64 Input.

> **NOTE**
>
> If a 64 input 64 output Matrix Mixer component or a 64 input 32 output Matrix Mixer component is placed in the DME64N configuration window, no other components can be used even though the resource meter does not reach 100%. The 64 input 64 output Matrix Mixer component or the 64 input 32 output Matrix Mixer component cannot be used in the DME24N.

Double-click a component to display the component editor for it. The number of input and output channels varies depending on the component, but all share a common configuration in the component editor.
The matrix mixer component editor consists of four sections: input, output, matrix, and block. The [Master] buttons in the [Input] and [Output] sections display windows where you can make master input and output settings. The level for each channel is set in separate windows that display four channels each.

Matrix Mixer component editor
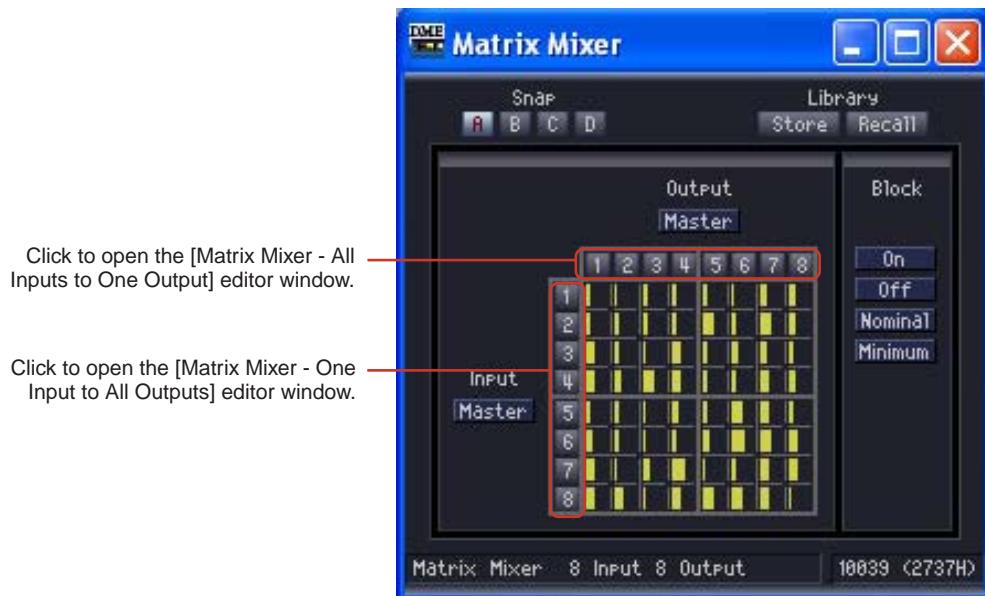
	Section	Name	Function
❶	Input	Master	Opens the Input Master window.
❷	Output	Master	Opens the Output Master window.
❸	Matrix	Output level meters	These meters display the output level for each channel. Clicking here displays the Crosspoint window.
❹	Block	On	Turns ON output for all channels in the Crosspoint window. Lights the [ON] button (does not change the matrix mixer component editor).
❺		Off	Turns OFF output for all channels in the Crosspoint window (does not change the matrix mixer component editor).
❻		Nominal	Resets all output levels in the Crosspoint window, making them 0 dB.
❼		Minimum	Resets all output levels in the Crosspoint window, making them -∞ dB.

■ Matrix (Output Level Meters)
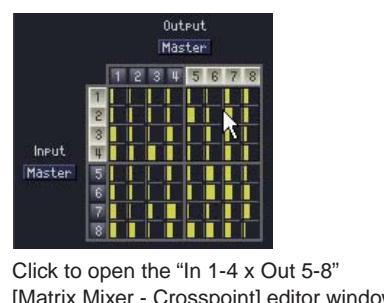
In the matrix, you can view levels for all output channels at once. The meter will be grayed out when the corresponding channel is set to Off.

Output level meter

When you click an output channel number on the matrix, the [Matrix Mixer - All Inputs to One Output] editor window opens. When you click the input channel number on the left side of the matrix, the [Matrix Mixer - One Input to All Outputs] editor window opens.

Click to open the [Matrix Mixer - All Inputs to One Output] editor window.

Click to open the [Matrix Mixer - One Input to All Outputs] editor window.

The matrix is divided into groups, each with four input channels and four output channels. When you place the mouse pointer over a group, its channel numbers are highlighted. Click to open the [Matrix Mixer - Crosspoint] editor window.

Click to open the "In 1-4 x Out 5-8"
[Matrix Mixer - Crosspoint] editor window

■ Input Master

If you click the [Input Master] button in the matrix mixer component editor, it will open the [Matrix Mixer - InputMaster] editor window. Here you can turn the master input for each channel ON and OFF and set the level.

[Matrix Mixer - InputMaster] editor window

	Section	Parameter	Setting Range	Function
❶	Input	Phase	ON/OFF	Reverses the phase of each channel's signal.
❷		Level	-∞ to +10 dB	Sets the signal level from each channel input to the output bus.
❸		Solo	ON/OFF	Turns ON solo for each channel.
❹		On	ON/OFF	Turns ON each channel's input.
❺	Block	On	--	Turns ON input for all channels in the Input Master window. When turned ON, the [On] button lights up.
❻		Off	--	Turns OFF input for all channels in the Input Master window.
❼		Nominal	--	Resets all output signal levels in the Input Master window, making them 0 dB.
❽		Minimum	--	Resets all output signal levels in the Input master window, making them -∞ dB.

■ Output Master Window

If you click the [Output Master] button in the matrix mixer component editor, it will open the Output Master window. Her you can turn the master output for each channel ON and OFF and set the level.

[Matrix Mixer - OutputMaster] editor window

	Section	Parameter	Setting Range	Function
❶	Output	Meter	--	Displays the output signal level for each channel.
❷		Level	-∞ to +10 dB	Sets the output signal level for each channel.
❸		On	ON/OFF	Turns ON each channel's output.
❹	Block	On	--	Turns ON output for all channels in the Output Master window. When turned ON, the [On] button lights up.
❺		Off	--	Turns OFF output for all channels in the Output Master window.
❻		Nominal	--	Resets all output signal levels in the Output Master window, making them 0 dB.
❼		Minimum	--	Resets all output signal levels in the Output Master window, making them -∞ dB.

■ **All Inputs to One Output**

When you click the output channel number on the matrix, the [Matrix Mixer - All Inputs to One Output] editor window opens. All input channels and one output channel are displayed. The output channel is the one you have clicked on in the matrix mixer component editor.

	Section	Parameter	Setting Range	Function
❶	Bus Send Level	Level	-∞ to +10 dB	Sets the output signal level for each input channel.
❷		On	ON/OFF	Turns ON the output for each input channel.
❸	Output	Channel	--	Displays the selected output channel. Select another channel from a menu.
❹		On	ON/OFF	Turns ON the output for the channel displayed in the window.
❺		Meter	--	Displays the output signal level of the channel displayed in the window.
❻	Block	On	--	Turns ON all channel inputs. When turned ON, the [On] button lights up.
❼		Off	--	Turns OFF all channel inputs.
❽		Nominal	--	Resets all input signal levels, making them 0 dB.
❾		Minimum	--	Reset all input signal levels, making them -∞ dB.

Output Channel Switching

[Matrix Mixer - All Inputs to One Output] editor window displays the output channel clicked in the matrix mixer component editor. The [Channel] buttons in the [Output] section of the [Matrix Mixer - All Inputs to One Output] editor window switch the channel group that is displayed in the window.

If you make the matrix mixer component editor active while the [Matrix Mixer - All Inputs to One Output] editor window is displayed, and then click another output channel, that channel group will be displayed in the [Matrix Mixer - All Inputs to One Output] editor window.
One [Matrix Mixer - All Inputs to One Output] editor window is displayed for each matrix mixer component editor.

■ **One Input to All Outputs**

When you click the input channel number on the left side of the matrix, the [Matrix Mixer - One Input to All Outputs] editor window opens. One input channel and all output channels are displayed. The input channel is the one you have clicked on in the delay mixer component editor.

	Section	Parameter	Setting Range	Function
❶	Input	Channel	--	Displays the selected input channel. Select another channel from a menu.
❷		Phase	ON/OFF	Reverses the phase of the input signal.
❸		Level	-∞ to +10 dB	Sets the input signal level.
❹		Solo	ON/OFF	Turns solo ON.
❺		On	ON/OFF	Turns input ON.
❻	Bus Send Level	Level	-∞ to +10 dB	Sets the signal level for each output channel.
❼		On	ON/OFF	Turns ON the output for each output channel.
❽	Block	On	--	Turns ON all channel outputs. When turned ON, the [On] button lights up.
❾		Off	--	Turns OFF all channel outputs.
❿		Nominal	--	Resets all output signal levels, making them 0 dB.
⓫		Minimum	--	Resets all output signal levels, making them -∞ dB.

Input Channel Switching

The [Matrix Mixer - One Input to All Outputs] editor window displays the input channel for the channel number clicked on in the matrix mixer component editor.
The [Channel] buttons in the [Input] section of the [Matrix Mixer - All Inputs to One Output] editor window switch the channel group that is displayed in the window.

If you make the matrix mixer component editor active while the [Matrix Mixer- One Input to All Outputs] editor window is displayed, and then click another input channel, that channel will be displayed in the [Matrix Mixer - One Input to All Outputs] editor window.
One [Matrix Mixer - One Input to All Outputs] editor window is displayed for each matrix mixer component editor.

■ Crosspoint

If you click a level meter in the matrix mixer component editor, the output crosspoint window for the group will be displayed. Turns the input channels ON and OFF and sets their levels. Just like the matrix mixture component editor, the input channels are arranged vertically while the output channels are arranged horizontally.

[Matrix Mixer : Crosspoint] editor window

	Section	Parameter	Setting Range	Function
❶	Input	Channel	--	Switches to another channel group.
❷	Output	Channel	--	Switches to another channel group.
❸	Bus Send Level	Level	-∞ to +10 dB	Sets the output signal level for each crosspoint.
❹		On	ON/OFF	Turns ON output for each crosspoint.
❺	Block	On	--	Turns ON output for all channels in the Crosspoint window. When turned ON, the [On] button lights up.
❻		Off	--	Turns OFF output for all channels in the Crosspoint window.
❼		Nominal	--	Resets all output signal levels in the Crosspoint window, making them 0 dB.
❽		Minimum	--	Resets all output signal levels in the Crosspoint window, making them -∞ dB.

Channel Group Switching

The [Matrix Mixer - Crosspoint] editor window displays four channels each for Input and Output. It displays the channel group that was clicked on in the matrix mixer component editor. The [Channel] buttons in the [Input] and [Output] sections of the [Matrix Mixer - Crosspoint] editor window switch the channel group that is displayed.

[Input] section
[Channel] menu

[Output] section
[Channel] menu

If you click another channel group when the matrix mixer component editor is active and an [Matrix Mixer - Crosspoint] editor window is displayed, that channel group will be displayed in the open [Matrix Mixer - Crosspoint] editor window.
Only one [Matrix Mixer - Crosspoint] matrix window is displayed for each matrix mixer component editor.

Pan

The Pan group contains the following subgroups: LCR, LR, and Surround.

■ Pan Nominal Position

Component editors for both LCR and Surround contain the "Pan Nominal Position" parameter.
The button for that parameter displays its current setting. Clicking the button displays a menu with
[Center] and [LR], which are used to set the pan 0 dB reference.

Center (Center Nominal)
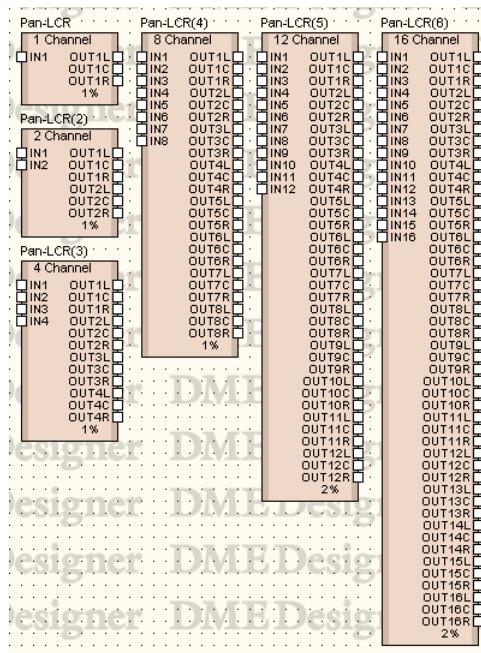
Uses the center volume as a reference, setting it as 0 dB. The LR speakers are -3 dB.

LR (LR Nominal)

Uses the LR speaker volumes as a reference, setting them as 0 dB. The center volume is +3 dB.

LCR

In the LCR component, one input is divided into left, center, and right outputs. The number of outputs
is triple the inputs. Components are available with 1, 2, 4, 8, 12, and 16 channels.

Double-click a component to display the component editor for it. The number of channels varies
depending on the component, but all share a common configuration in the component editor.
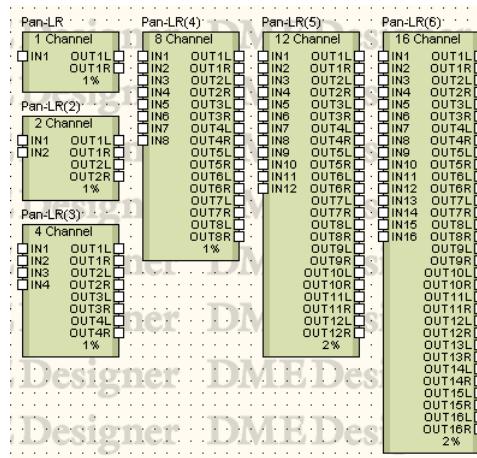
LCR component editor

	Parameter	Setting Range	Function
❶	CSR	0 to 100%	Sets the ratio for sending the center signal to LR.
❷	Pan	L63 - Center - R63	Sets LR orientation.
❸	Pan Nominal Position	Center LR	Selects the nominal position from a menu.

LR

Separates a single input into left and right outputs. Components are available with 1, 2, 4, 8, 12, and 16 channels.

Double-click a component to display the component editor for it. The number of channels varies depending on the component, but all share a common configuration in the component editor.

Pan component editor
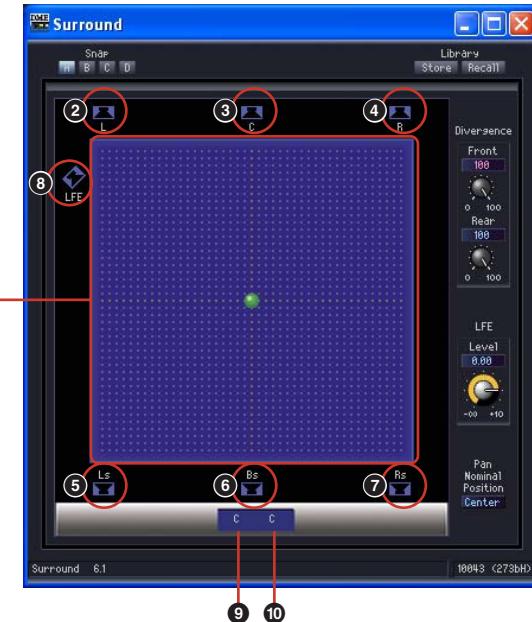
	Parameter	Setting Range	Function
❶	Pan	L63 - R63	Sets the LR orientation.
❷	Pan Nominal Position	Center LR	Selects the nominal position from a menu.

Surround

There are three types of surround pan components in the Surround subgroup: 3-1, 5.1, and 6.1.
The surround pan component editor has a two-dimensional surround pan graph where you can set the location of the sound image.

Surround 6.1 component editor
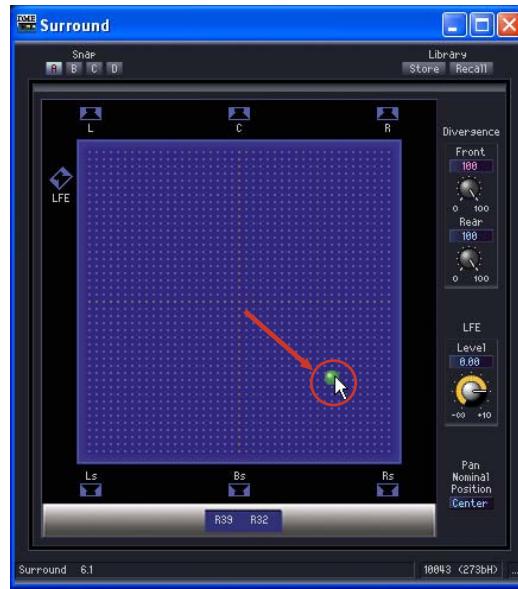
		Name		Location, Setting Range	Function
❶	2D Surround Pan Graph			--	Sets the sound image orientation. You can move the sound image by clicking and dragging.
❷	Speaker Button	L	Left	L63 F63	Clicking here moves the sound image to the button location.
❸		C	Center	C F63	
❹		R	Right	R63 F63	
❺		Ls	Left Surround	L63 R63	
❻		Bs	Back Surround	C R63	
❼		Rs	Right Surround	R63 R63	
❽		LFE	Low Frequency Effect (Sub Woofer)	--	Indicates that there is a sub woofer. Clicking makes the LFE level 0 dB. The sound image does not move by clicking.
❾	Left-Right Position			L63 - C - R63	Displays the LR sound image.
❿	Front-Back Position			L63 - C - R63	Displays the front-back sound image.

You can set the sound location using the mouse in the two-dimensional surround pan graph.
The sound image location is displayed at the bottom of the two-dimensional surround pan graph, but numbers cannot be entered there.
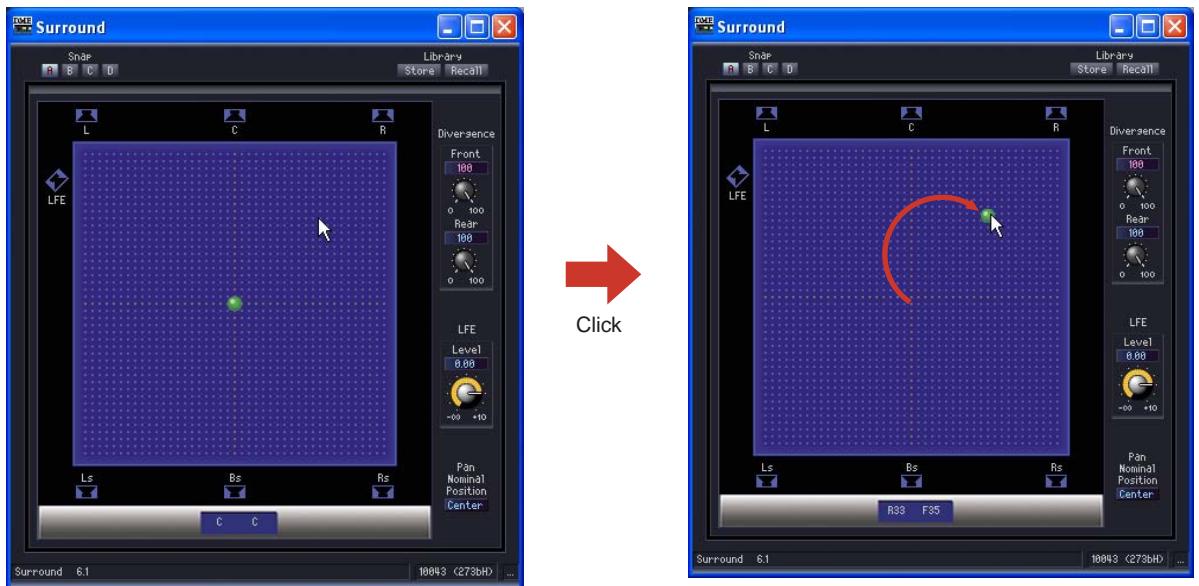
Dragging

You can move the control by dragging it with the mouse.
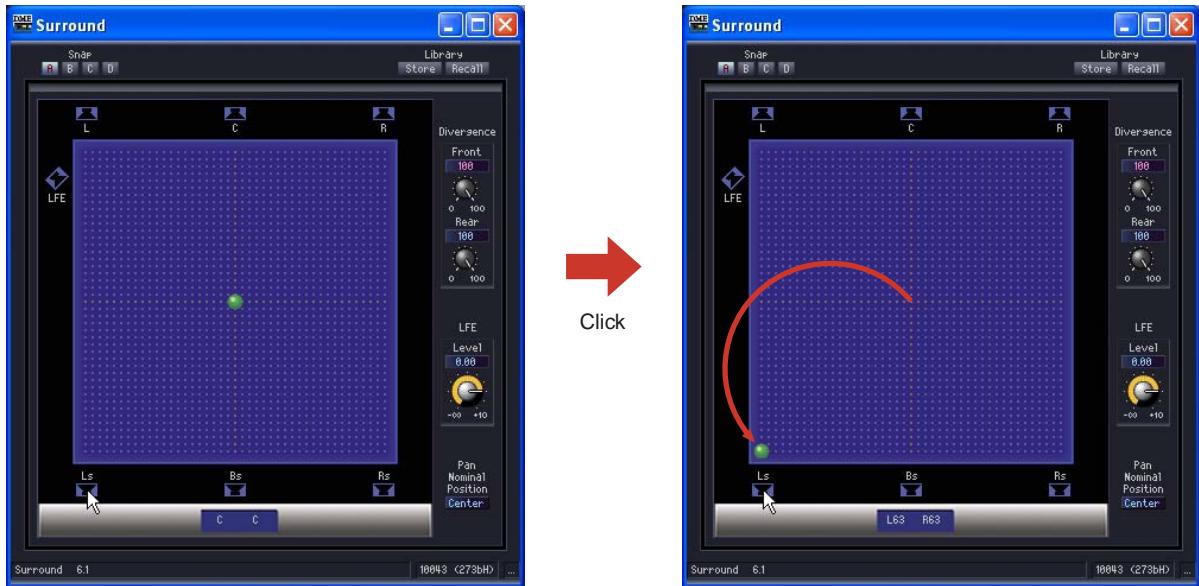
Click

If you click within the graph, the control point will move to that position.
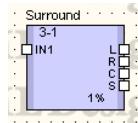
Speaker Button

If you click any speaker button besides the [LFE] button, the control point will jump to that speaker's position.
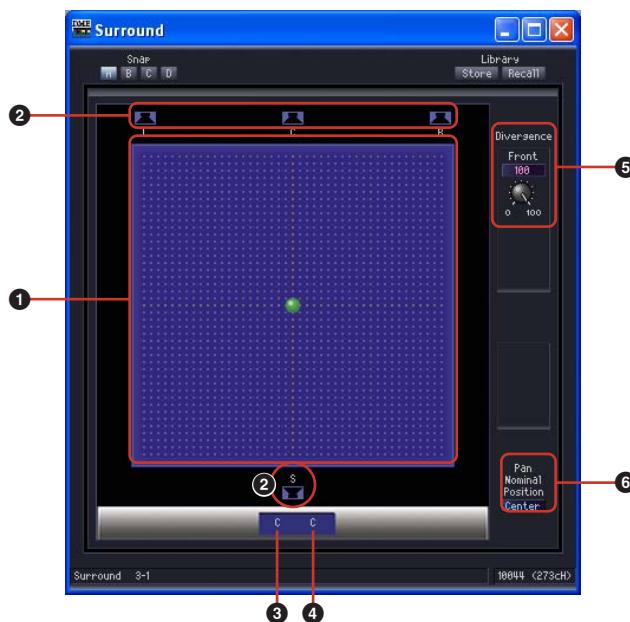
Click

■ **Surround 3-1**

Surround 3-1 has four channel surround pan, with three channels in front, and one in the rear. There is one input and four outputs.

Double-click a component to display the component editor for it.
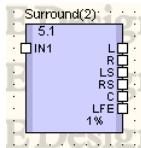
Surround 3-1 component editor
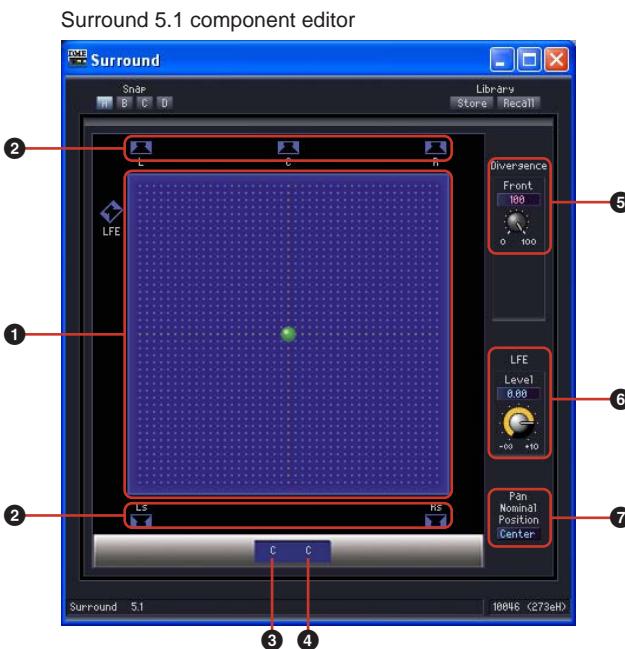
	Section	Name/Parameter	Setting Range	Function
❶	2D Surround Pan Graph	2D Surround Pan Graph	--	Sets the sound image orientation. You can move the sound image by clicking and dragging.
❷		Speaker Button	--	Clicking here moves the sound image to the button location.
❸	Position	Left-Right Position	L63 - C - R63	Displays the LR surround location.
❹		Front-Back Position	F63 - C - R63	Displays the front-back surround location.
❺	Divergence	Front	0 to 100%	Sets the ratio for sending the front-center signal to front L and front R.
❻	Pan Nominal Position		Center LR	Selects the nominal position from a menu.

■ Surround 5.1

Surround 5.1 has surround pan with three channels in front, two in the rear, and one sub woofer channel. There is one input and six outputs.

Double-click a component to display the component editor for it.

Surround 5.1 component editor

	Section	Name/Parameter	Setting Range	Function
❶	2D Surround Pan Graph	2D Surround Pan Graph	--	Sets the sound image orientation. You can move the sound image by clicking and dragging.
❷		Speaker Button	--	Clicking here moves the sound image to the button location.
❸	Position	Left-Right Position	L63 - C - R63	Displays the LR surround location.
❹		Front-Back Position	F63 - C - R63	Displays the front-back surround location.
❺	Divergence	Front	0 to 100%	Sets the ratio for sending the front-center signal to front L and front R.
❻	LFE	Level	-∞ to +10 dB	Sets output level to the sub woofer.
❼	Pan Nominal Position		Center LR	Selects the nominal position from a menu.

■ Surround 6.1

Surround 6.1 has surround pan with three channels in front, three in the rear, and one sub woofer channel. There is one input and seven outputs.

Double-click a component to display the component editor for it.

Surround 6.1 component editor
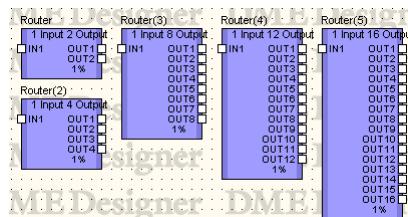
|	Section	Name/Parameter	Setting Range	Function
❶	2D Surround Pan Graph	2D Surround Pan Graph	--	Sets the sound image orientation. You can move the sound image by clicking and dragging.
❷		Speaker Button	--	Clicking here moves the sound image to the button location.
❸	Position	Left-Right Position	L63 - C - R63	Displays the LR surround location.
❹		Front-Back Position	F63 - C - R63	Displays the front-back surround location.
❺	Divergence	Front	0 to 100%	Sets the ratio for sending the front-center signal to front L and front R.
❻		Rear	0 to 100%	Sets the ratio for sending the rear-center signal to rear L and rear R.
❼	LFE	Level	-∞ to +10 dB	Sets output level to the sub woofer.
❽	Pan Nominal Position		Center LR	Selects the nominal position from a menu.
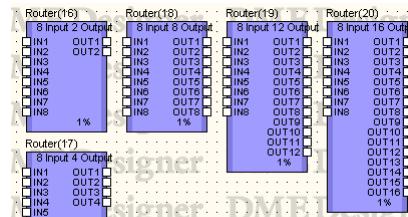
Router

The router assigns inputs to outputs. Each of the six router groups has a different number of inputs. The groups are 1 input, 2 input, 4 input, 8 input, 12 input and 16 input. Each group has five components, with 2, 4, 8, 12, and 16 outputs.
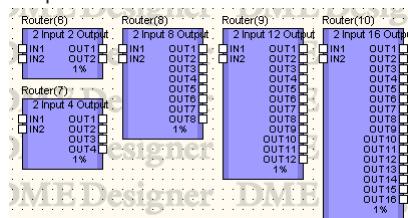
1 Input
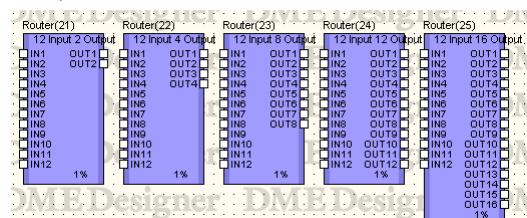
8 Input
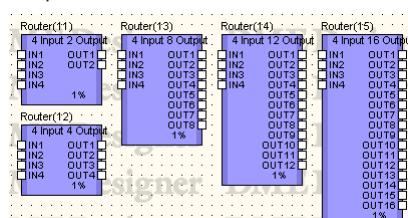
2 Input
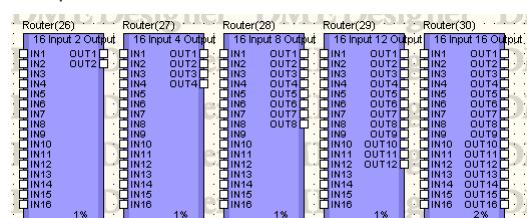
12 Input
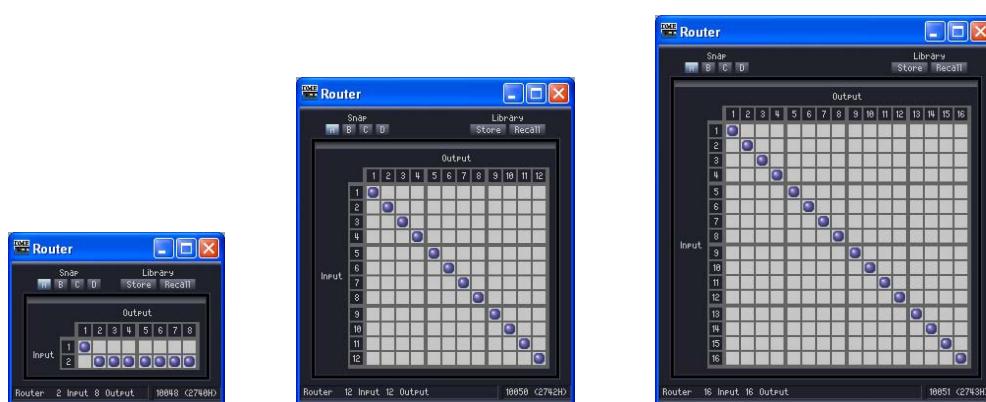
4 Input

16 Input

Double-click a component to display the component editor for it. The number of channels varies depending on the component, but all share a common configuration in the component editor.
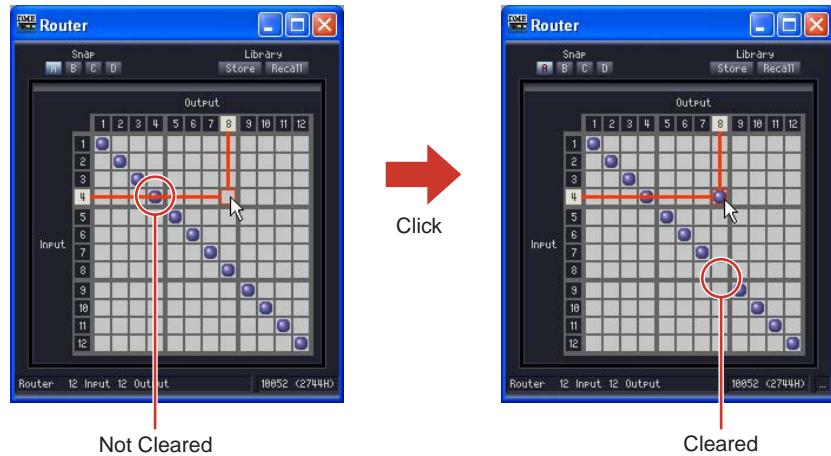
Routers let you route signals from various [Input] locations by connecting them to various [Output] locations.
One output can be connected to one input only. A single input can be output to multiple channels, but multiple inputs cannot be output over a single channel. In other words, you can distribute the inputs, but you cannot mix them. You cannot setup routing for more signals than the number of output channels.
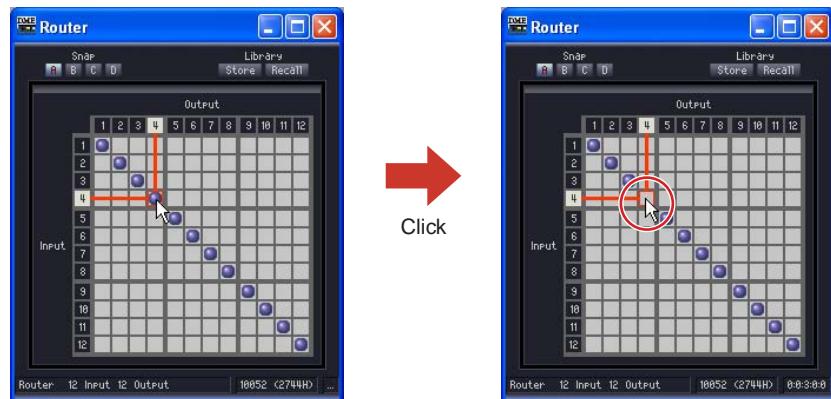
■ **Routing Settings**

To change an assignment, click at the position where the desired input and output channels intersect. When the mouse pointer is moved over a cell, the input and output channels are highlighted, and a red line is displayed connecting them. Click to set routing for that position. If another output channel has been assigned to the clicked input channel, the original assignment will not be cleared. If another input channel has been assigned to the clicked output channel, the original assignment will be cleared.

Not Cleared   Click   Cleared

■ **Clearing Routing Settings**

If you click the dot that indicates routing, the routing indicated by that dot will be cleared and the dot will be erased.

Click
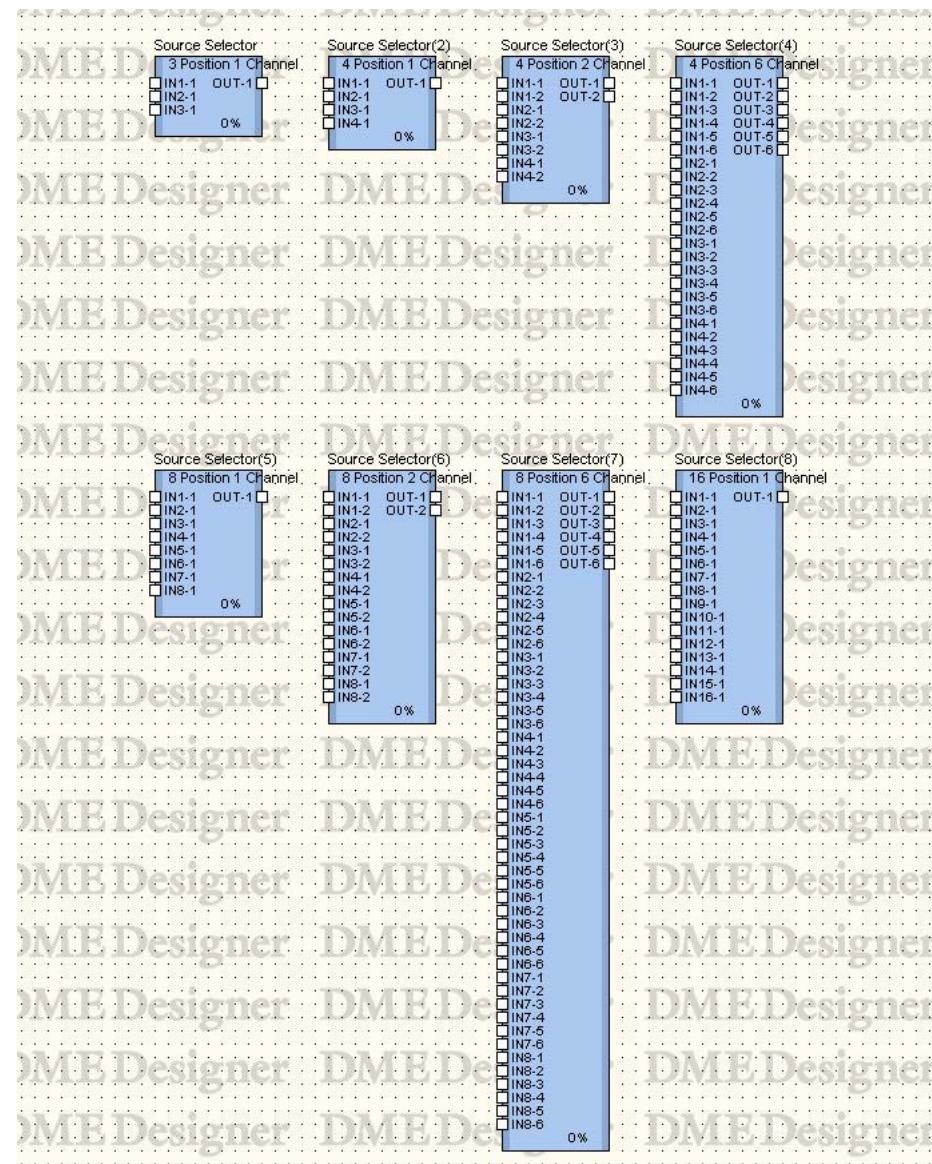
Source Selector

This component selects a single input source from multiple input sources.
"Position" is the number of input sources, and "Channel" is the number of channels included in the source. For example, a "4 Position 2 Channel" component allows you to select a single 2-channel source from four 2-channel input sources.
3 Position and 16 Position components are all 1 Channel types, while 1, 2, and 6 Channel versions of 4 Position and 8 Position components are provided.

Double-click a component to open the component editor. The component editor is the same for all types, the only difference being the number of sources.
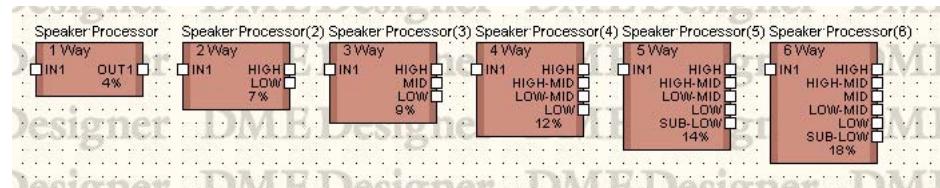
Source Selector Component

The Source Selector connects the selected input to the output. For example, if you select [1] for a 4 Position 2 Channel component, IN1-1 will be connected to OUT-1 and IN1-2 will be connected to OUT2. If you select [2] IN2-1 will be connected to OUT-1 and IN2-2 will be connected to OUT2.

Speaker Processor

The Speaker Processor is a crossover processor that includes APF (All Pass Filter), horn EQ, and limiter functions. Six component types are available: 1 Way, 2 Way, 3 Way, 4 Way, 5 Way, and 6 Way. Speaker Processor components have one input and one or multiple outputs.

Double-click a component to open the component editor.

Speaker processor Component

	Name			Function
❶	Crossover response (phase)			Crossover phase response, color coded for output channel.
❷	Crossover response (level)			Crossover level response, color coded for each output channel.
❸	Input meter			Displays the input signal level.
❹	Output meter			Displays the output level for each band.
❺	Crossover Curve Display Button			Turns crossover curve display for each output channel on or off.
	Section	**Parameter**	**Range**	**Function**
❻	Delay	Delay	ON/OFF	Applies delay to the crossover response.
❼	PEQ	PEQ	ON/OFF	Applies PEQ to the crossover response.

❽	Navigator	Input Level	-∞ to +10 dB	Specifies the input signal level.
❾		Crossover	–	Opens the crossover editor window.
❿		Delay	–	Opens the delay editor window.
⓫		PEQ	–	Opens the parametric equalizer editor window.
⓬		Output Level	-∞ to +10 dB	Sets the output level from each output channel.
⓭		Mute	ON/OFF	Mutes the output of each output channel.
⓮		Limiter	–	Opens the limiter editor window.

Different numbers of channels are provided by each component variation.

1 Way	ALL
2 Way	Low/High
3 Way	Low/Mid/High
4 Way	Low/Low-Mid/High-Mid/High
5 Way	Sub-Low/Low/Low-Mid/High-Mid/High
6 Way	Sub-Low/Low/Low-Mid/Mid/High-Mid/High

Each frequency band has its own color, with Low being red, Mid being green, and so on.

■ **Graph Control Points**

The crossover level control points indicate [Output Level] and [Frequency]. The control points will move in response to [Output Level] changes made via the knobs or edit boxes. The [Output Level] and [Frequency] parameters can also be changed by directly dragging the control points. Changes to the [Frequency] parameter are shown on the crossover phase response graph.
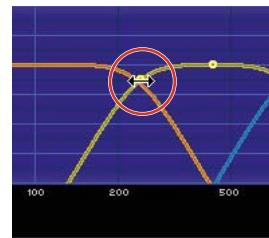
The control point in the center of the graph can be dragged vertically to change the [Output Level] parameter.

The [Output Level] parameter changes.

Control points at the intersections between the frequency bands can be dragged horizontally to change the [Frequency].

The crossover phase response will change.

■ Crossover

Click the Speaker Processor [Crossover] button to open the crossover editor window.

[Speaker Processor - Crossover] editor window

	Section	Parameter	Range	Function
❶	Polarity	Polarity	Normal/Inverted	Inverts the polarity of each output channel.
❷	Mute	Mute	ON/OFF	Mutes the output of each output channel. This parameter is linked to the Mute setting in the original window.
❸	Frequency	Frequency	20 Hz to 20 kHz	Sets the crossover frequency between output channels. The display appears as a dotted line when muted.
❹	LPF	Type	Thru 6dB/Oct 12dB/Oct AdjustGc 12dB/Oct Butrwrth 12dB/Oct Bessel 12dB/Oct Linkwitz 18dB/Oct AdjustGc 18dB/Oct Butrwrth 18dB/Oct Bessel 24dB/Oct AdjustGc 24dB/Oct Butrwrth 24dB/Oct Bessel 24dB/Oct Linkwitz 36dB/Oct AdjustGc 36dB/Oct Butrwrth 36dB/Oct Bessel 48dB/Oct AdjustGc 48dB/Oct Butrwrth 48dB/Oct Bessel 48dB/Oct Linkwitz	Sets the roll-off slope and filter type for each octave. The filter is bypassed when [Thru] is selected.
❺		Frequency	20 Hz to 20 kHz	Sets the LPF cutoff frequency.
❻		Gc	-6 dB to +6 dB	Sets the cutoff frequency gain when the [Type] setting is [AdjustGc] (Adjustable Gc).

	Section	Parameter	Range	Function
❼	HPF	Type	Thru 6dB/Oct 12dB/Oct AdjustGc 12dB/Oct Butrwrth 12dB/Oct Bessel 12dB/Oct Linkwitz 18dB/Oct AdjustGc 18dB/Oct Butrwrth 18dB/Oct Bessel 24dB/Oct AdjustGc 24dB/Oct Butrwrth 24dB/Oct Bessel 24dB/Oct Linkwitz 36dB/Oct AdjustGc 36dB/Oct Butrwrth 36dB/Oct Bessel 48dB/Oct AdjustGc 48dB/Oct Butrwrth 48dB/Oct Bessel 48dB/Oct Linkwitz	Sets the roll-off slope and filter type for each octave. The filter is bypassed when [Thru] is selected.
❽		Frequency	20 Hz to 20 kHz	Sets the HPF cutoff frequency.
❾		Gc	-6 dB to +6 dB	Sets the cutoff frequency gain when the [Type] setting is [AdjustGc] (Adjustable Gc).

■ Delay

Click the Speaker Processor [Delay] button to open the window. Delay can be set independently for each output channel.

[Speaker Processor - Delay] editor window

	Parameter	Range	Function
❶	Delay	ms: 0 to 500 Sample: the range depends on the Fs value. Meter: 0 to 171.8 Feet: 0 to 563.6 Frame: the range depends on the Frame value. Beat: the range depends on the Beat value.	Sets the delay time. Two edit boxes show milliseconds and the unit specified in the [Delay Scale] section. Sets the output level for each band.
❷	On	ON/OFF	Turns delay ON.
❸	Delay Scale	ms Sample Meter Feet Frame Beat	Selects the delay time units. The selected button will light and the [Delay] edit box will change accordingly. When [Beat] is selected the knobs can be used to adjust BPM.

■ Parametric Equalizer

Click the Crossover Processor [PEQ] button to open the window. Parametric equalization is provided for each crossover band.

[Speaker Processor - PEQ] edit window

	Name	Function
❶	Crossover response (phase)	Shows crossover phase response.
❷	Crossover response (level)	Shows crossover level response.

	Parameter	Range	Function
❸	Type	PEQ L.SHELF 6dB/Oct L.SHELF 12dB/Oct H.SHELF 6dB/Oct H.SHELF 12dB/Oct HPF LPF APF[*1] 1st APF[*1] 2nd Horn EQ[*2]	Select a filter type from the menu.
❹	B/W	0.090 to 6.672	Sets the octave bandwidth for each band.
❺	Q	0.1 to 16.0	Sets the Q for each band.
❻	Frequency	20 Hz to 20 kHz	Sets the frequency for each band.
❼	Gain	-18 dB to +18 dB	Sets the gain for each band.
❽	Bypass	ON/OFF	Bypasses the PEQ for each band.
❾	PEQ On	ON/OFF	Turns PEQ ON.

*1 APF: The APF (All Pass Filter) is a filter that passes all frequency bands while affecting only the phase. Used to match the phase of the crossover bands.
APF 1st shifts the phase from 0° to 180°, while APF 2nd shifts the phase from 0° to 360°. APF 2nd also allows Q adjustment.
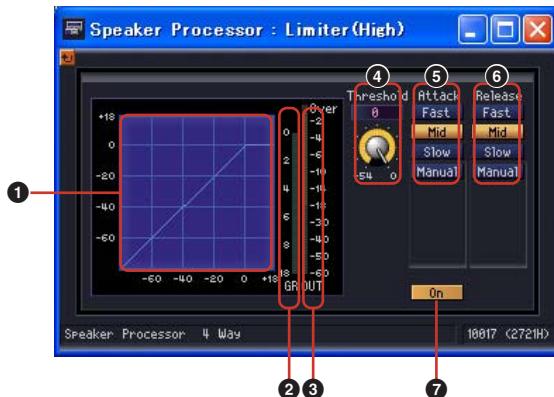
*2 Horn EQ: CD (Constant Directivity) horn speakers exhibit a roll-off in high-frequency level.
Horn EQ is provided to compensate for this roll-off. For this reason the gain can only be set to higher than 0dB, and the frequency higher than 500Hz.

■ Limiter

Click the Speaker Processor [Limiter] button to open the window. Limiter settings are provided for each output channel.

[Speaker Processor - Limiter] Editor Window
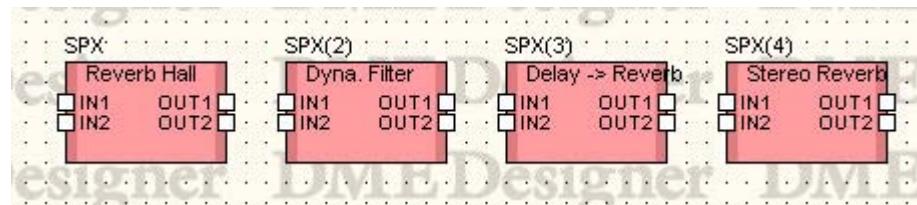
	Name		Function
❶	Limiter Curve		A graphic representation of limiter response. The horizontal axis represents input level, and the vertical axis represents output level.
❷	Gain Reduction Meter		Displays the amount of gain reduction.
❸	Output Meter		Displays the output level.
	Parameter	**Range**	**Function**
❹	Threshold	-54 dB to ±0 dB	Sets the threshold level.
❺	Attack	Fast Mid Slow Manual (0 to 120ms)	Sets the attack time.
❻	Release	Fast Mid Slow Manual (44.1kHz: 6ms to46s 48kHz: 5ms to 42.3s 88.2kHz: 3ms to 23s 96kHz: 3ms to 21.1s)	Sets the release time. With the [Fast], [Mid], or [Slow] settings the optimum value is automatically set based on the longest wavelength audio signal received by the limiter. Three settings are available: [Fast], [Mid], and [Slow].
❼	On	ON/OFF	Turns the limiter ON. The limiter is bypassed when the button is turned OFF.

SPX

SPX is an effect component that supports many different effect applications, such as reverb, delay, and modulation effects, along with complex combinations of multiple effects. Although the SPX component is a single component, it encompasses 43 effect types.
When you change the effect type, right-click the SPX component to display the context menu, click [Recall Component Library], then select the effect type from the [Effect Type] submenu.

Double-click this component to display the component editor for it.

SPX component editor

	Name	Function
❶	Input Meter	Displays the input signal level.
❷	[Mix Balance] Control	Adjusts the balance between the fundamental tone and the effect tone.
❸	[Bypass] button	When turned ON, the input signal is output without change.
❹	Output Meter	Displays the output signal level.
❺	Other Parameters	Other parameters vary according to the effect type.

Other effect parameters vary according to the selected effect type, as shown below.

Effect Type	Parameter	Setting Range	Function
Reverb Hall Reverb Room Reverb Stage Reverb Plate One input, two output hall, room, stage, and plate reverb simulations, all with gates.	Rev Time	0.3 to 99.0 s	Reverb time
	Ini.Dly	0.0 to 500.0 ms	Initial delay before reverb begins
	Hi.Ratio	0.1 to 1.0	High-frequency reverb time ratio
	Lo.Ratio	0.1 to 2.4	Low-frequency reverb time ratio
	Diff.	0 to 10	Reverb diffusion (left-right reverb spread)
	Density	0 to 100%	Reverb density
	E/R Dly	0.0 to 100.0 ms	Delay between early reflections and reverb
	E/R Bal.	0 to 100%	Balance of early reflections and reverb (0% = all reverb, 100% = all early reflections)
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency
	Gate Lvl	OFF, -60 to 0 dB	Level at which gate kicks in
	Attack	0 to 120 ms	Gate opening speed
	Hold	44.1kHz: 0.02ms to 2.13s 48kHz: 0.02 ms to 1.96s 88.2kHz: 0.01ms to 1.06s 96kHz: 0.01ms to 981ms	Gate open time
	Decay	44.1kHz: 6.0ms to 46.0s 48kHz: 5.0ms to 42.3s 88.2kHz: 3ms to 23.0s 96kHz: 3ms to 21.1s	Gate closing speed
Early Ref. One input, two output early reflections.	Type	S-Hall, L-Hall, Random, Revers, Plate, Spring	Type of early reflection simulation
	RoomSize	0.1 to 20.0	Reflection spacing
	Liveness	0 to 10	Early reflections decay characteristics (0 = dead, 10 = live)
	Ini.Dly	0.0 to 500.0 ms	Initial delay before reverb begins
	Diff.	0 to 10	Reflection diffusion (left-right reflection spread)
	Density	0 to 100%	Reflection density
	ER Num.	1 to 19	Number of early reflections
	FB.Gain	-99 to +99%	Feedback gain
	Hi.Ratio	0.1 to 1.0	High-frequency feedback ratio
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency
Gate Reverb Reverse Gate One input, two output early reflections with gate, and early reflections with reverse gate.	Type	Type-A, Type-B	Type of early reflection simulation
	RoomSize	0.1 to 20.0	Reflection spacing
	Liveness	0 to 10	Early reflections decay characteristics (0 = dead, 10 = live)
	Ini.Dly	0.0 to 500.0 ms	Initial delay before reverb begins
	Diff.	0 to 10	Reflection diffusion (left-right reflection spread)
	Density	0 to 100%	Reflection density
	ER Num.	1 to 19	Number of early reflections
	FB.Gain	-99 to +99%	Feedback gain
	Hi.Ratio	0.1 to 1.0	High-frequency feedback ratio
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency
Mono Delay One input, one output basic repeat delay.	Delay	0.0 to 2730.0 ms	Delay time
	FB.Gain	-99 to +99%	Feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	Hi.Ratio	0.1 to 1.0	High-frequency feedback ratio
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency

Effect Type	Parameter	Setting Range	Function
Stereo Delay Two input, two output basic stereo delay.	Delay L	0.0 to 1350.0 ms	Left channel delay time
	Delay R	0.0 to 1350.0 ms	Right channel delay time
	FB.Gain L	-99 to +99%	Left channel feedback (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	FB.Gain R	-99 to +99%	Right channel feedback (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	Hi.Ratio	0.1 to 1.0	High-frequency feedback ratio
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency
Mod.Delay One input, two output basic repeat delay with modulation.	Delay	0.0 to 2725.0 ms	Delay time
	FB.Gain	-99 to +99%	Feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	Hi.Ratio	0.1 to 1.0	High-frequency feedback ratio
	Freq.	0.05 to 40.00 Hz	Modulation speed
	Depth	0 to 100%	Modulation depth
	Wave	Sine, Tri	Modulation waveform
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency
Delay LCR One input, two output 3-tap delay (left, center, right).	Delay L	0.0 to 2730.0 ms	Left channel delay time
	Delay C	0.0 to 2730.0 ms	Center channel delay time
	Delay R	0.0 to 2730.0 ms	Right channel delay time
	Delay FB	0.0 to 2730.0 ms	Feedback delay time
	Level L	-100 to +100%	Left channel delay level
	Level C	-100 to +100%	Center channel delay level
	Level R	-100 to +100%	Right channel delay level
	FB.Gain	-99 to +99%	Feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	Hi.Ratio	0.1 to 1.0	High-frequency feedback ratio
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency
Echo Two input, two output stereo delay with crossed feedback loop.	Delay L	0.0 to 1350.0 ms	Left channel delay time
	Delay R	0.0 to 1350.0 ms	Right channel delay time
	FB.Dly L	0.0 to 1350.0 ms	Left channel feedback delay time
	FB.Dly R	0.0 to 1350.0 ms	Right channel feedback delay time
	FB.Gain L	-99 to +99%	Left channel feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	FB.Gain R	-99 to +99%	Right channel feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	L->R FBG	-99 to +99%	Left to right channel feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	R->L FBG	-99 to +99%	Right to left channel feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	Hi.Ratio	0.1 to 1.0	High-frequency feedback ratio
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency
Chorus Two input, two output chorus effect.	Freq.	0.05 to 40.00 Hz	Modulation speed
	AM.Depth	0 to 100%	Amplitude modulation depth
	PM.Depth	0 to 100%	Pitch modulation depth
	Mod.Dly	0.0 to 500.0 ms	Modulation delay time
	Wave	Sine, Tri	Modulation waveform
	LSH F	21.2 Hz to 8.00 kHz	Low shelving filter frequency
	LSH G	-12 to +12 dB	Low shelving filter gain
	EQ F	100 Hz to 8.00 kHz	EQ (peaking type) frequency
	EQ G	-12 to +12 dB	EQ (peaking type) gain
	EQ Q	10.0 to 0.10	EQ (peaking type) bandwidth
	HSH F	50.0 Hz to 16.0 kHz	High shelving filter frequency
	HSH G	-12 to +12 dB	High shelving filter gain

Effect Type	Parameter	Setting Range	Function
Flange Two input, two output flange effect.	Freq.	0.05 to 40.00 Hz	Modulation speed
	Depth	0 to 100%	Modulation depth
	Mod.Dly	0.0 to 500.0 ms	Modulation delay time
	FB.Gain	-99 to +99%	Feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	Wave	Sine, Tri	Modulation waveform
	LSH F	21.2 Hz to 8.00 kHz	Low shelving filter frequency
	LSH G	-12 to +12 dB	Low shelving filter gain
	EQ F	100 Hz to 8.00 kHz	EQ (peaking type) frequency
	EQ G	-12 to +12 dB	EQ (peaking type) gain
	EQ Q	10.0 to 0.10	EQ (peaking type) bandwidth
	HSH F	50.0 Hz to 16.0 kHz	High shelving filter frequency
	HSH G	-12 to +12 dB	High shelving filter gain
Symphonic Two input, two output symphonic effect.	Freq.	0.05 to 40.00 Hz	Modulation speed
	Depth	0 to 100%	Modulation depth
	Mod.Dly	0.0 to 500.0 ms	Modulation delay time
	Wave	Sine, Tri	Modulation waveform
	LSH F	21.2 Hz to 8.00 kHz	Low shelving filter frequency
	LSH G	-12 to +12 dB	Low shelving filter gain
	EQ F	100 Hz to 8.00 kHz	EQ (peaking type) frequency
	EQ G	-12 to +12 dB	EQ (peaking type) gain
	EQ Q	10.0 to 0.10	EQ (peaking type) bandwidth
	HSH F	50.0 Hz to 16.0 kHz	High shelving filter frequency
	HSH G	-12 to +12 dB	High shelving filter gain
Phaser Two input, two output 16-stage phaser.	Freq.	0.05 to 40.00 Hz	Modulation speed
	Depth	0 to 100%	Modulation depth
	FB.Gain	-99 to +99%	Feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	Offset	0 to 100	Lowest phase-shifted frequency offset
	PHASE	0.00 to 354.38 degrees	Left and right modulation phase balance
	Stage	2, 4, 6, 8, 10, 12, 14, 16	Number of phase shift stages
	LSH F	21.2 Hz to 8.00 kHz	Low shelving filter frequency
	LSH G	-12 to +12 dB	Low shelving filter gain
	HSH F	50.0 Hz to 16.0 kHz	High shelving filter frequency
	HSH G	-12 to +12 dB	High shelving filter gain
Auto Pan Two input, two output autopanner.	Freq.	0.05 to 40.00 Hz	Modulation speed
	Depth	0 to 100%	Modulation depth
	Direction	L<->R, L->R, L<-R, Turn L, Turn R	Panning direction
	Wave	Sine, Tri, Square	Modulation waveform
	LSH F	21.2 Hz to 8.00 kHz	Low shelving filter frequency
	LSH G	-12 to +12 dB	Low shelving filter gain
	EQ F	100 Hz to 8.00 kHz	EQ (peaking type) frequency
	EQ G	-12 to +12 dB	EQ (peaking type) gain
	EQ Q	10.0 to 0.10	EQ (peaking type) bandwidth
	HSH F	50.0 Hz to 16.0 kHz	High shelving filter frequency
	HSH G	-12 to +12 dB	High shelving filter gain
Tremolo Two input, two output tremolo effect.	Freq.	0.05 to 40.00 Hz	Modulation speed
	Depth	0 to 100%	Modulation depth
	Wave	Sine, Tri, Square	Modulation waveform
	LSH F	21.2 Hz to 8.00 kHz	Low shelving filter frequency
	LSH G	-12 to +12 dB	Low shelving filter gain
	EQ F	100 Hz to 8.00 kHz	EQ (peaking type) frequency
	EQ G	-12 to +12 dB	EQ (peaking type) gain
	EQ Q	10.0 to 0.10	EQ (peaking type) bandwidth
	HSH F	50.0 Hz to 16.0 kHz	High shelving filter frequency
	HSH G	-12 to +12 dB	High shelving filter gain

Effect Type	Parameter	Setting Range	Function
HQ.Pitch One input, two output high-quality pitch shifter.	Pitch	-12 to +12 semitones	Pitch shift
	Fine	-50 to +50 cents	Pitch shift fine
	Delay	0.0 to 1000.0 ms	Delay time
	FB.Gain	-99 to +99%	Feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	Mode	1 to 10	Pitch shift precision
Dual Pitch Two input, two output pitch shifter.	Pitch 1	-24 to +24 semitones	Channel #1 pitch shift
	Fine 1	-50 to +50 cents	Channel #1 pitch shift fine
	Pitch 2	-24 to +24 semitones	Channel #2 pitch shift
	Fine 2	-50 to +50 cents	Channel #2 pitch shift fine
	Level 1	-100 to +100%	Channel #1 level (plus values for normal phase, minus values for reverse phase)
	Pan 1	L63 to R63	Channel #1 pan
	Level 2	-100 to +100%	Channel #2 level (plus values for normal phase, minus values for reverse phase)
	Pan 2	L63 to R63	Channel #2 pan
	Delay 1	0.0 to 1000.0 ms	Channel #1 delay time
	FB.Gain 1	-99 to +99%	Channel #1 feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	Delay 2	0.0 to 1000.0 ms	Channel #2 delay time
	FB.Gain 2	-99 to +99%	Channel #2 feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	Mode	1 to 10	Pitch shift precision
Rotary One input, two output rotary speaker simulator.	Rotate	STOP, START	Rotation stop, start
	Speed	SLOW, FAST	Rotation speed (see SLOW and FAST parameters)
	Slow	0.05 to 10.00 Hz	SLOW rotation speed
	Fast	0.05 to 10.00 Hz	FAST rotation speed
	Drive	0 to 100	Overdrive level
	Accel	0 to 10	Acceleration at speed changes
	Low	0 to 100	Low-frequency filter
	High	0 to 100	High-frequency filter
Ring Mod. Two input, two output ring modulator.	Source	OSC, SELF	Modulation source: oscillator or input signal
	Osc.Freq.	0.0 to 5000.0 Hz	Oscillator frequency
	FM Freq.	0.05 to 40.00 Hz	Oscillator frequency modulation speed
	FM Depth	0 to 100%	Oscillator frequency modulation depth
Mod.Filter Two input, two output modulation filter.	Freq.	0.05 to 40.00 Hz	Modulation speed
	Depth	0 to 100%	Modulation depth
	Phase	0.00 to 354.38 degrees	Left-channel modulation and right-channel modulation phase difference
	Type	LPF, HPF, BPF	Filter type: low pass, high pass, band pass
	Offset	0 to 100	Filter frequency offset
	Reso.	0 to 20	Filter resonance
	Level	0 to 100	Output level
Distortion One input, two output distortion effect.	DST.Type	DST1, DST2, OVD1, OVD2, CRUNCH	Distortion type (DST = distortion, OVD = overdrive)
	Drive	0 to 100	Distortion drive
	Master	0 to 100	Master volume
	Tone	-10 to +10	Tone
	N.Gate	0 to 20	Noise reduction

Effect Type	Parameter	Setting Range	Function
Amp Simulate One input, two output guitar amp simulator.	AMP.Type	STK-M1, STK-M2, THRASH, MIDBST, CMB-PG, CMB-VR, CMB-DX, CMB-TW, MINI, FLAT	Guitar amp simulation type
	DST.Type	DST1, DST2, OVD1, OVD2, CRUNCH	Distortion type (DST = distortion, OVD = overdrive)
	Drive	0 to 100	Distortion drive
	Master	0 to 100	Master volume
	Bass	0 to 100	Bass tone control
	Middle	0 to 100	Middle tone control
	Treble	0 to 100	High tone control
	Cab Dep	0 to 100%	Speaker cabinet simulation depth
	EQ F	100 to 8.0 kHz	EQ (peaking type) frequency
	EQ G	-12 to +12 dB	EQ (peaking type) gain
	EQ Q	10.0 to 0.10	EQ (peaking type) bandwidth
	N.Gate	0 to 20	Noise reduction
Dyna.Filter Two input, two output dynamically controlled filter.	Sense	0 to 100	Sensitivity
	Direction	UP, DOWN	Upward or downward frequency change
	Decay	44.1kHz: 6.0ms to 46.0s 48kHz: 5.0ms to 42.3s 88.2kHz: 3ms to 23.0s 96kHz: 3ms to 21.1s	Filter frequency change decay speed
	Type	LPF, HPF, BPF	Filter type
	Offset	0 to 100	Filter frequency offset
	Reso.	0 to 20	Filter resonance
	Level	0 to 100	Output Level
Dyna.Flange Two input, two output dynamically controlled flanger.	Sense	0 to 100	Sensitivity
	Direction	UP, DOWN	Upward or downward frequency change
	Decay	44.1kHz: 6.0ms to 46.0s 48kHz: 5.0ms to 42.3s 88.2kHz: 3ms to 23.0s 96kHz: 3ms to 21.1s	Decay speed
	Offset	0 to 100	Delay time offset
	FB.Gain	-99 to +99%	Feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	LSH F	21.2 Hz to 8.00 kHz	Low shelving filter frequency
	LSH G	-12 to +12 dB	Low shelving filter gain
	EQ F	100 Hz to 8.00 kHz	EQ (peaking type) frequency
	EQ G	-12 to +12 dB	EQ (peaking type) gain
	EQ Q	10.0 to 0.10	EQ (peaking type) bandwidth
	HSH F	50.0 Hz to 16.0 kHz	High shelving filter frequency
	HSH G	-12 to +12 dB	High shelving filter gain
Dyna.Phaser Two input, two output dynamically controlled phaser.	Sense	0 to 100	Sensitivity
	Direction	UP, DOWN	Upward or downward frequency change
	Decay	44.1kHz: 6.0ms to 46.0s 48kHz: 5.0ms to 42.3s 88.2kHz: 3ms to 23.0s 96kHz: 3ms to 21.1s	Decay speed
	Offset	0 to 100	Lowest phase-shifted frequency offset
	FB.Gain	-99 to +99%	Feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	Stage	2, 4, 6, 8, 10, 12, 14, 16	Number of phase shift stages
	LSH F	21.2 Hz to 8.00 kHz	Low shelving filter frequency
	LSH G	-12 to +12 dB	Low shelving filter gain
	HSH F	50.0 Hz to 16.0 kHz	High shelving filter frequency
	HSH G	-12 to +12 dB	High shelving filter gain

Effect Type	Parameter	Setting Range	Function
Rev+Chorus One input, two output reverb and chorus effects in parallel.	Rev Time	0.3 to 99.0 s	Reverb time
	Ini.Dly	0.0 to 500.0 ms	Initial delay before reverb begins
	Hi.Ratio	0.1 to 1.0	High-frequency reverb time ratio
	Diff.	0 to 10	Spread
	Density	0 to 100%	Reverb density
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency
	Rev/Cho	0 to 100%	Reverb and chorus balance (0% = all reverb, 100% = all chorus)
	Freq.	0.05 to 40.00 Hz	Modulation speed
	AM.Depth	0 to 100%	Amplitude modulation depth
	PM.Depth	0 to 100%	Pitch modulation depth
	Mod.Dly	0.0 to 500.0 ms	Modulation delay time
	Wave	Sine, Tri	Modulation waveform
Rev->Chorus One input, two output reverb and chorus effects in series.	Rev Time	0.3 to 99.0 s	Reverb time
	Ini.Dly	0.0 to 500.0 ms	Initial delay before reverb begins
	Hi.Ratio	0.1 to 1.0	High-frequency reverb time ratio
	Diff.	0 to 10	Spread
	Density	0 to 100%	Reverb density
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency
	Rev Bal.	0 to 100%	Reverb and chorused reverb balance (0% = all chorused reverb, 100% = all reverb)
	Freq.	0.05 to 40.00 Hz	Modulation speed
	AM.Depth	0 to 100%	Amplitude modulation depth
	PM.Depth	0 to 100%	Pitch modulation depth
	Mod.Dly	0.0 to 500.0 ms	Modulation delay time
	Wave	Sine, Tri	Modulation waveform
Rev+Flange One input, two output reverb and flanger effects in parallel.	Rev Time	0.3 to 99.0 s	Reverb time
	Ini.Dly	0.0 to 500.0 ms	Initial delay before reverb begins
	Hi.Ratio	0.1 to 1.0	High-frequency reverb time ratio
	Diff.	0 to 10	Spread
	Density	0 to 100%	Reverb density
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency
	Rev/Flg	0 to 100%	Reverb and flange balance (0% = all reverb, 100% = all flange)
	Freq.	0.05 to 40.00 Hz	Modulation speed
	Depth	0 to 100%	Modulation depth
	Mod.Dly	0.0 to 500.0 ms	Modulation delay time
	FB.Gain	-99 to +99%	Feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	Wave	Sine, Tri	Modulation waveform
Rev->Flange One input, two output reverb and flanger effects in series.	Rev Time	0.3 to 99.0 s	Reverb time
	Ini.Dly	0.0 to 500.0 ms	Initial delay before reverb begins
	Hi.Ratio	0.1 to 1.0	High-frequency reverb time ratio
	Diff.	0 to 10	Spread
	Density	0 to 100%	Reverb density
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency
	Rev Bal.	0 to 100%	Reverb and flanged reverb balance (0% = all flanged reverb, 100% = all reverb)
	Freq.	0.05 to 40.00 Hz	Modulation speed
	Depth	0 to 100%	Modulation depth
	Mod.Dly	0.0 to 500.0 ms	Modulation delay time
	FB.Gain	-99 to +99%	Feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	Wave	Sine, Tri	Modulation waveform

Effect Type	Parameter	Setting Range	Function
Rev+Sympho. One input, two output reverb and symphonic effects in parallel.	Rev Time	0.3 to 99.0 s	Reverb time
	Ini.Dly	0.0 to 500.0 ms	Initial delay before reverb begins
	Hi.Ratio	0.1 to 1.0	High-frequency reverb time ratio
	Diff.	0 to 10	Spread
	Density	0 to 100%	Reverb density
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency
	Rev/Sym	0 to 100%	Reverb and symphonic balance (0% = all reverb, 100% = all symphonic)
	Freq.	0.05 to 40.00 Hz	Modulation speed
	Depth	0 to 100%	Modulation depth
	Mod.Dly	0.0 to 500.0 ms	Modulation delay time
	Wave	Sine, Tri	Modulation waveform
Rev->Sympho. One input, two output reverb and symphonic effects in series.	Rev Time	0.3 to 99.0 s	Reverb time
	Ini.Dly	0.0 to 500.0 ms	Initial delay before reverb begins
	Hi.Ratio	0.1 to 1.0	High-frequency reverb time ratio
	Diff.	0 to 10	Spread
	Density	0 to 100%	Reverb density
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency
	Rev Bal.	0 to 100%	Reverb and symphonic reverb balance (0% = all symphonic reverb, 100% = all reverb)
	Freq.	0.05 to 40.00 Hz	Modulation speed
	Depth	0 to 100%	Modulation depth
	Mod.Dly	0.0 to 500.0 ms	Modulation delay time
	Wave	Sine, Tri	Modulation waveform
Rev->Pan One input, two output reverb and autopan effects in parallel.	Rev Time	0.3 to 99.0 s	Reverb time
	Ini.Dly	0.0 to 500.0 ms	Initial delay before reverb begins
	Hi.Ratio	0.1 to 1.0	High-frequency reverb time ratio
	Diff.	0 to 10	Spread
	Density	0 to 100%	Reverb density
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency
	Rev Bal.	0 to 100%	Reverb and panned reverb balance (0% = all panned reverb, 100% = all reverb)
	Freq.	0.05 to 40.00 Hz	Modulation speed
	Depth	0 to 100%	Modulation depth
	Direction	L<->R, L->R, L<-R, Turn L, Turn R	Panning direction
	Wave	Sine, Tri, Square	Modulation waveform
Delay+ER. One input, two output delay and early reflections effects in parallel.	Delay L	0.0 to 1000.0 ms	Left channel delay time
	Delay R	0.0 to 1000.0 ms	Right channel delay time
	FB.Dly	0.0 to 1000.0 ms	Feedback delay time
	FB.Gain	-99 to +99%	Feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	Hi.Ratio	0.1 to 1.0	High-frequency feedback ratio
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency
	Dly/ER	0 to 100%	Delay and early reflections balance (0% = all delay, 100% = all early reflections)
	Type	S-Hall, L-Hall, Random, Revers, Plate, Spring	Type of early reflection simulation
	RoomSize	0.1 to 20.0	Reflection spacing
	Liveness	0 to 10	Early reflections decay characteristics (0 = dead, 10 = live)
	Ini.Dly	0.0 to 500.0 ms	Initial delay before reverb begins
	Diff.	0 to 10	Spread
	Density	0 to 100%	Reverb density
	ER Num.	1 to 19	Number of early reflections

Effect Type	Parameter	Setting Range	Function
Delay->ER. One input, two output delay and early reflections effects in series.	Delay L	0.0 to 1000.0 ms	Left channel delay time
	Delay R	0.0 to 1000.0 ms	Right channel delay time
	FB.Dly	0.0 to 1000.0 ms	Feedback delay time
	FB.Gain	-99 to +99%	Feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	Hi.Ratio	0.1 to 1.0	High-frequency feedback ratio
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency
	DLY.BAL	0 to 100%	Delay and early reflected delay balance (0% = all early reflected delay, 100% = all delay)
	Type	S-Hall, L-Hall, Random, Revers, Plate, Spring	Type of early reflection simulation
	RoomSize	0.1 to 20.0	Reflection spacing
	Liveness	0 to 10	Early reflections decay characteristics (0 = dead, 10 = live)
	Ini.Dly	0.0 to 500.0 ms	Initial delay before reverb begins
	Diff.	0 to 10	Spread
	Density	0 to 100%	Reverb density
	ER Num.	1 to 19	Number of early reflections
Delay+Reverb One input, two output delay and reverb effects in parallel.	Delay L	0.0 to 1000.0 ms	Left channel delay time
	Delay R	0.0 to 1000.0 ms	Right channel delay time
	FB.Dly	0.0 to 1000.0 ms	Feedback delay time
	FB.Gain	-99 to +99%	Feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	Delay Hi	0.1 to 1.0	Delay high-frequency feedback ratio
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency
	Dly/Rev	0 to 100%	Delay and reverb balance (0% = all delay, 100% = all reverb)
	Rev Time	0.3 to 99.0 s	Reverb time
	Ini.Dly	0.0 to 500.0 ms	Initial delay before reverb begins
	Rev Hi	0.1 to 1.0	High-frequency reverb time ratio
	Diff.	0 to 10	Spread
	Density	0 to 100%	Reverb density
Delay->Reverb One input, two output delay and reverb effects in series.	Delay L	0.0 to 1000.0 ms	Left channel delay time
	Delay R	0.0 to 1000.0 ms	Right channel delay time
	FB.Dly	0.0 to 1000.0 ms	Feedback delay time
	FB.Gain	-99 to +99%	Feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	Delay Hi	0.1 to 1.0	Delay high-frequency feedback ratio
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency
	Dly.Bal	0 to 100%	Delay and delayed reverb balance (0% = all delayed reverb, 100% = all delay)
	Rev Time	0.3 to 99.0 s	Reverb time
	Ini.Dly	0.0 to 500.0 ms	Initial delay before reverb begins
	Rev Hi	0.1 to 1.0	High-frequency reverb time ratio
	Diff.	0 to 10	Spread
	Density	0 to 100%	Reverb density
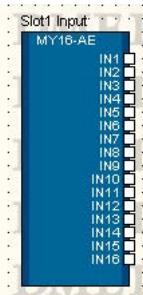
Effect Type	Parameter	Setting Range	Function
Dist->Delay One input, two output distortion and delay effects in series.	DST.Type	DST1, DST2, OVD1, OVD2, CRUNCH	Distortion type (DST = distortion, OVD = overdrive)
	Drive	0 to 100	Distortion drive
	Master	0 to 100	Master volume
	Tone	-10 to +10	Tone control
	N.Gate	0 to 20	Noise reduction
	Delay	0.0 to 2725.0 ms	Delay time
	FB.Gain	-99 to +99%	Feedback gain (plus values for normal-phase feedback, minus values for reverse-phase feedback)
	Hi.Ratio	0.1 to 1.0	High-frequency feedback ratio
	Freq.	0.05 to 40.00 Hz	Modulation speed
	Depth	0 to 100%	Modulation depth
	Dly.Bal	0 to 100%	Distortion and delay balance (0% = all distortion, 100% = all delayed distortion)
Multi.Filter Two input, two output 3-band multi-filter (24 dB/ octave).	Type 1	HPF, LPF, BPF	Filter 1 type: high pass, low pass, band pass
	Type 2	HPF, LPF, BPF	Filter 2 type: high pass, low pass, band pass
	Type 3	HPF, LPF, BPF	Filter 3 type: high pass, low pass, band pass
	Freq. 1	28.0 Hz to 16.0 kHz	Filter 1 frequency
	Freq. 2	28.0 Hz to 16.0 kHz	Filter 2 frequency
	Freq. 3	28.0 Hz to 16.0 kHz	Filter 3 frequency
	Level 1	0 to 100	Filter 1 level
	Level 2	0 to 100	Filter 2 level
	Level 3	0 to 100	Filter 3 level
	Reso. 1	0 to 20	Filter 1 resonance
	Reso. 2	0 to 20	Filter 2 resonance
	Reso. 3	0 to 20	Filter 3 resonance
Stereo Reverb Two input, two output stereo reverb.	Rev Time	0.3 to 99.0 s	Reverb time
	Rev Type	Hall, Room, Stage, Plate	Reverb type
	Ini.Dly	0.0 to 100.0 ms	Initial delay before reverb begins
	Hi.Ratio	0.1 to 1.0	High-frequency reverb time ratio
	Lo.Ratio	0.1 to 2.4	Low-frequency reverb time ratio
	Diff.	0 to 10	Reverb diffusion (left-right reverb spread)
	Density	0 to 100%	Reverb density
	E/R Bal.	0 to 100%	Balance of early reflections and reverb (0% = all reverb, 100% = all early reflections)
	HPF	THRU, 21.2 Hz to 8.00 kHz	High-pass filter cutoff frequency
	LPF	50.0 Hz to 16.0 kHz, THRU	Low-pass filter cutoff frequency

Effect Type	Parameter	Setting Range	Function
M.Band Dyna. Two input, two output 3-band dynamics processor, with individual solo and gain reduction metering for each band.	Low Gain	-96.0 to +12.0 dB	Low band level
	Mid Gain	-96.0 to +12.0 dB	Mid band level
	Hi. Gain	-96.0 to +12.0 dB	High band level
	Presence	-10 to +10	For positive values, the threshold of the high band is lowered and the threshold of the low band is increased. For negative values, the opposite will occur. When set to 0, all three bands are affected the same.
	Cmp.Thre	-24.0 dB to 0.0 dB	Compressor threshold
	Cmp.Rat	1:1 to 20:1	Compressor ratio
	Cmp.Atk	0 to 120 ms	Compressor attack
	Cmp.Rel	44.1kHz: 6.0ms to 46.0s 48kHz: 5.0ms to 42.3s 88.2kHz: 3ms to 23.0s 96kHz: 3ms to 21.1s	Compressor release time
	Cmp.Knee	0 to 5	Compressor knee
	Lookup	0.0 to 100.0 ms	Lookup delay
	Cmp.Byp	ON/OFF	Compressor bypass
	L-M XOver	21.2 Hz to 8.00 kHz	Low/mid crossover frequency
	M-H XOver	21.2 Hz to 8.00 kHz	Mid/high crossover frequency
	Slope	-6 dB, -12 dB	Filter slope
	Ceiling	-6.0 dB to 0.0 dB, OFF	Specifies the maximum output level
	Exp.Thre	-54.0 dB to -24.0 dB	Expander threshold
	Exp.Rat	1:1 to ∞:1	Expander ratio
	Exp.Rel	44.1kHz: 6.0ms to 46.0s 48kHz: 5.0ms to 42.3s 88.2kHz: 3ms to 23.0s 96kHz: 3ms to 21.1s	Expander release time
	Exp.Byp	ON/OFF	Expander bypass
	Lim.Thre	-12.0 dB to 0.0 dB	Limiter threshold
	Lim.Atk	0 to 120 ms	Limiter attack
	Lim.Rel	44.1kHz: 6.0ms to 46.0s 48kHz: 5.0ms to 42.3s 88.2kHz: 3ms to 23.0s 96kHz: 3ms to 21.1s	Limiter release time
	Lim.Byp	ON/OFF	Limiter bypass
	Lim.Knee	0 to 5	Limiter knee
	Low	ON/OFF	Low band solo
	Mid	ON/OFF	Mid band solo
	High	ON/OFF	High band solo
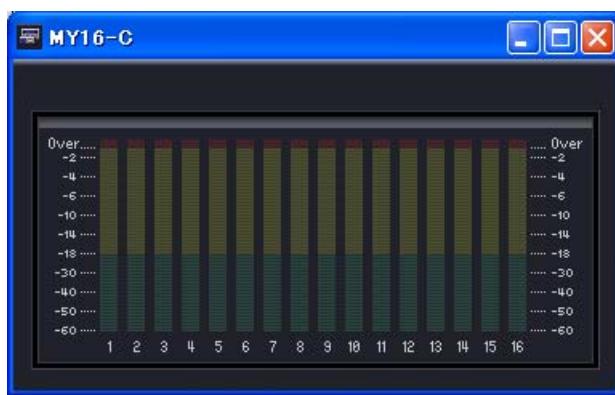
Slot

■ Slot In

The Slot In Component only has outputs. 4, 8, and 16 channel types are provided.
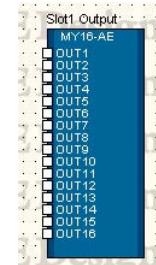
Right-click the component and select [Open Slot In Component] from the contextual menu to open the component editor. The component editor is the same for all types.

	Name	Function
❶	Meter	Shows the signal level for each channel.

■ Slot Out

The Slot Out component has only an input. There are three types of Slot In components: four-channel, eight-channel, and 16 channel types.

The component editor can be displayed by right-clicking the component, then clicking [Open Slot Out Component Editor] on the displayed context menu.

Slot Out component editor
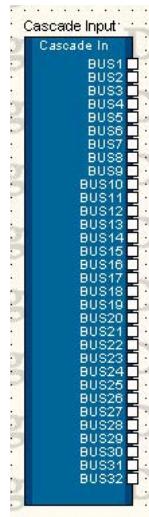
	Parameter	Setting Range	Function
❶	Phase	ON/OFF	Reverses the phase of the output signal for each channel.
❷	On	ON/OFF	Turns ON each channel's output.
❸	Delay	0 to 24 Samples	Sets the delay time.
❹	Level	-∞ to ±0 dB	Sets the output level.
❺	Dither	Off 16 20 24	Sets the quantization bit rate for conversion.

Cascade
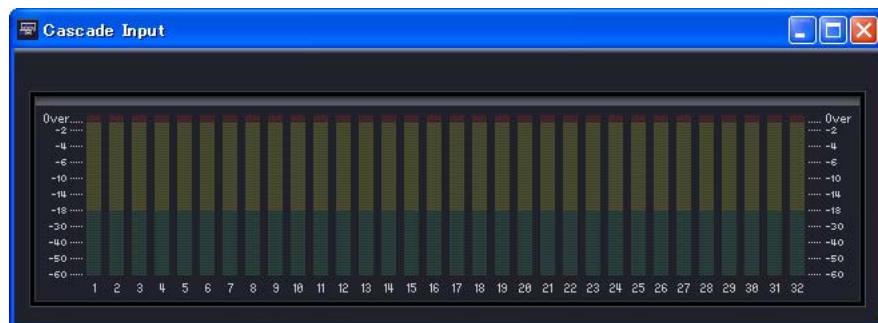
■ **Cascade In**

The Cascade In Component only has outputs.
Only the DME64N has a Cascade In component, which can be displayed by checking [Show Cascade Port] in the DME Device Properties dialog box.
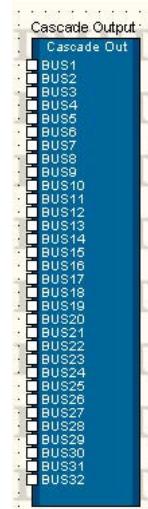
Right-click the component and select [Open Component Editor] from the contextual menu to open the component editor. The component editor is the same for all types.
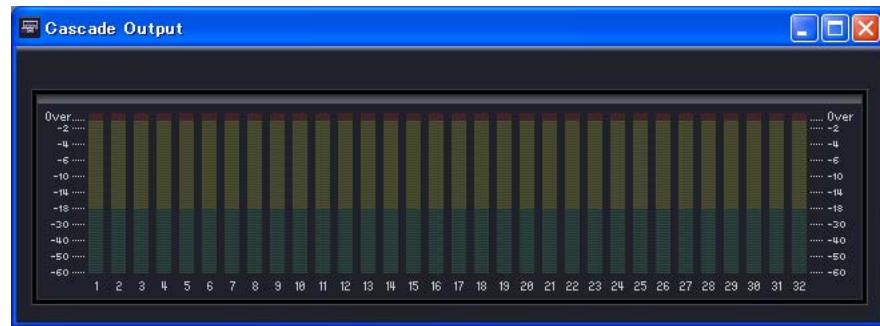
	Name	Function
❶	Meter	Shows the signal level for each channel.

■ **Cascade Out**

The Cascade Out Component only has inputs.
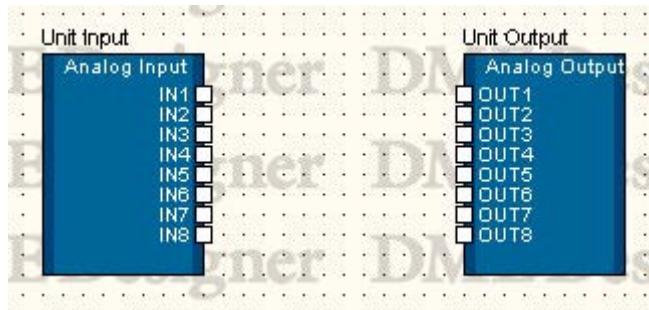
Right-click the component and select [Open Component Editor] from the contextual menu to open the component editor. The component editor is the same for all types.

	Name	Function
❶	Meter	Shows the signal level for each channel.

Internal Head Amp

In the DME24 configuration window, there are [Unit Input] and [Unit Output] blocks. They are the Analog In and Analog Out DME24 I/O ports.

■ Unit Input

Double-click [Unit Input] to display the component editor for it.

Internal Head Amp component editor
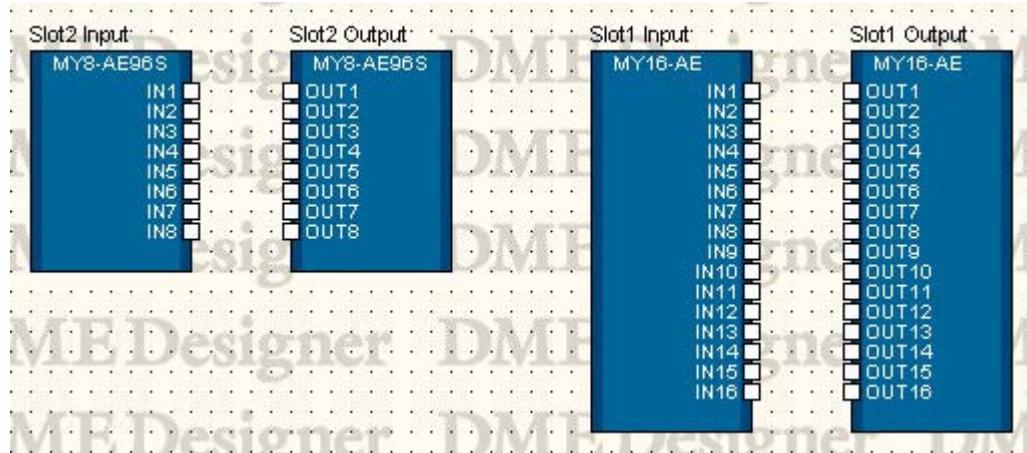
	Parameter	Setting Range	Function
❶	+48	ON/OFF	Turns ON phantom power (+48V).
❷	Gain	+10 to -60 dB	Sets the head amp gain.

■ Analog Out

Double-click [Unit Output] to display the component editor for it. The displayed parameters are the same as for Slot Out component editor.

MY-Card

This shows the input and output for the card inserted into the DME expansion slot. The following components are available, depending on the card types:

Input Format/Output Format

This is the I/O mode for high sample rate operation (88.2/96 kHz).
In the Double Channel Mode, high sampling rate data (88.2/96 kHz) is transmitted and received by two channels, each channel handling the digital audio data at half the sampling rate. For this reason the total number of available channels is halved, and even-numbered channels are unavailable.
In the Double Speed Mode digital audio data is transmitted and received at the current high sampling rate (88.2/96 kHz).
In the Single Mode digital audio data is transmitted and received at half the current high sampling rate (88.2/96 kHz).

Setting Examples

Operation clock of related equipment	The DME operation clock	Input Format/Output Format
88.2/96 kHz (Double Channel)	88.2/96 kHz	Double Channel
88.2/96 kHz (Double Speed)		Double Speed
44.1k/48k		Single

When the MY card word clock is used as the master word clock, Double FS determines whether the speed of that word clock is to be doubled and used as the DME clock. The Double Fs setting is only available the word clock from an MY Card is used.

■ MY-Others

Double-click the block to display the component editor for it.This editor can be used for generic MY card editing, but some parameters are not available. Use a card specific editor when available.

	Parameter	Setting Range	Function
❶	Input Format	Double Channel Double Speed Single	Selects the format for 88.2/96 kHz.
❷	Double Fs	ON/OFF	When ON the speed of the word clock from the MY Card is doubled.
❸	Output Format	Double Channel Double Speed Single	Selects the format for 88.2/96 kHz.

■ MY8-AE96S

Double-click the block to display the component editor for it.

MY8-AE96S component editor
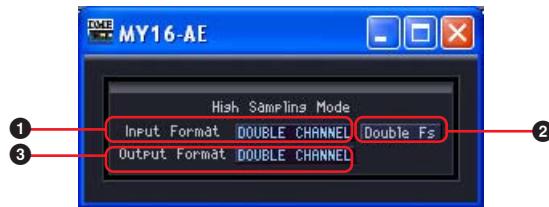
	Parameter	Setting Range	Function
❶	Input Format	Double Channel Double Speed	Selects the format for 88.2/96 kHz.
❷	Double Fs	ON/OFF	When ON the speed of the word clock from the MY Card is doubled.
❸	Output Format	Double Channel Double Speed	Selects the format for 88.2/96 kHz.
❹	Sampling Rate Converter	ON/OFF	Turns the sampling rate converter ON.

■ MY16-AE/MY8-AE96/MY8-AE/MY8-AT/MY8-TD/MY16-TD/MY16-AT

Double-click the block to display the component editor for it.

Example: MY16-AE component editor

	Parameter	Setting Range	Function
❶	Input Format	Double Channel Double Speed	Selects the format for 88.2/96 kHz. For MY8-AE96, the setting range is Double Channel/Double Speed. For other cards, it is Double Channel/Single.
❷	Double Fs	ON/OFF	When ON the speed of the word clock from the MY Card is doubled. Only for MY16-AE/MY8-AE96/MY16-TD. When On is set for the MY8-AE96, the Input Format is Double Channel. When Off is set, the input format is Double Speed.
❸	Output Format	Double Channel Double Speed Single	Selects the format for 88.2/96 kHz. For MY8-AE96, the setting range is Double Channel/Double Speed. For other cards, it is Double Channel/Single.

■ **MY16-C**

Double-click the block to display the component editor for it.

MY16-C component editor

	Section	Parameter	Setting Range	Function
❶	Setting Priority	Setting Priority	Hardware/ Software	The MY16-C switch settings take priority when "Hardware" is selected, and the DME Designer settings take priority when "Software" is selected.
❷	Bundle Number	Input	0 to 65279	Sets the input bundle number.
		Output	0 to 65279	Sets the output bundle number.
❸	Serial Channel	Rx	OFF, 1 - 16	Sets the serial channel for the receive side.
		Tx	OFF, 1 - 16	Sets the serial channel for the send side.
❹	Properties	Bit Length	Bit Off 16 bit 20 bit 24 bit	Sets the bit rate for output. Mutes the signal if [Bit Off] is set.
❺		Latency	5.33 ms 2.67 ms 1.33 ms	Sets the delay.

NOTE

The parameters will not link immediately when Setting Priority is switched.
Please edit another parameter after switching Setting Priority.

Remote Controlled Head Amp

There are AD824 and AD8HR components arranged in the zone window.

■ AD824

Controls the Yamaha A/D converter AD824. The AD824 is an eight channel analog to digital converter.

Double-click the component to display the component editor for it.

NOTE

If a DME is not selected in the properties dialog box, the component editor will not be displayed even if you double-click ().

AD824 component editor

	Parameter	Setting Range	Function
❶	+48	ON/OFF	Turns ON phantom power (+48V).
❷	Gain	+10 to -62 dBu	Sets the head amp gain.
❸	Word Clock	48 kHz 44.1 kHz BNC Slot	Sets the operating frequency for the Word Clock.

■ AD8HR

Controls the Yamaha A/D converter AD8HR. The AD8HR is an eight channel analog to digital converter.

Double-click this component to display the component editor for it.

NOTE

If a DME is not selected in the properties dialog box, the component editor will not be displayed even if you double-click (page 170).

AD8HR component editor

	Section	Parameter	Setting Range	Function
❶	Gain	+48	ON/OFF	Turns ON phantom power (+48V).
❷		HPF	ON/OFF	Turns output ON.
❸		Frequency	20 to 600Hz	Sets the cutoff frequency.
❹		Gain	+10 to -62 dBu	Sets the head amp gain.
❺	Word Clock	Word Clock	96 kHz 88.2 kHz 48 kHz 44.1 kHz Word Clock In Digital Out A	Sets the operating frequency for the Word Clock.
			Double Speed Double Channel	Selects the operation for 88.2/96 kHz.

Component Glossary

Adjustable Gc (AdjustGc)

One type of filter characteristic. With this setting, you can adjust Gc (gain on the cutoff frequency) between -6 dB and +6 dB. If you set -3 dB it becomes a Butterworth filter. If you set -6 dB, it becomes Linkwitz-Riley filter.
Components: Crossover, Crossover Processor, Crossover Processor II, Programmable BPF, Programmable HPF, Programmable LPF, Speaker Processor

Attack (Attack Time)

In dynamic components, sets the time period for compressing or expanding the signal after the component operates. As the attack time is made faster, compression or expansion becomes more instantaneous. As it is made slower, the initial attack part of the sound will not be compressed or expanded.
Components: Crossover Processor, Compander, Crossover Processor II, Compressor, De-Esser, Ducking, Expander, Gate, Limiter, Speaker Processor

Bessel

One type of filter characteristic. For curves where phase characteristics are important, Bessel has gentler attenuation then Butterworth, and there is little distortion of the waveform when square waves are passed through.
Components: Crossover, Crossover Processor, Crossover Processor II, Programmable BPF, Programmable HPF, Programmable LPF, Speaker Processor

Butterworth (Butrwrth)

One type of filter characteristics. This filter has the most general characteristics. The pass band is flat and the gain for the cutoff frequency is -3 dB.
Components: Crossover, Crossover Processor, Crossover Processor II, Programmable BPF, Programmable HPF, Programmable LPF, Speaker Processor

Bypass

Passes the signal without changing it. When you turn this ON, bypassed sound (unchanged sound) is output. When you turn this OFF, the sound is output with effects applied.
Components: Crossover Processor, Crossover Processor II, GEQ, PEQ, BPF, HPF, LPF, Notch, Programmable BPF, Programmable HPF, Programmable LPF, Speaker Processor, SPX

Decay (Decay Time)

Sets the time period until gain returns to normal after a trigger signal level falls below the threshold value.
Components: Ducking, Gate, Auto Mixer

Delay

Sets the time period by which a signal is delayed.
Components: Crossover Processor, Crossover Processor II, Delay Long, Delay Short, Delay Matrix, Speaker Processor, SPX, Slot Output, Unit Output

Delay Scale

Sets the units used for specifying the delay time.
Components: Crossover Processor, Crossover Processor II, Delay Long, Delay Short, Speaker Processor

Divergence

Sets the ratio for sending the center signal to LR. When 100 percent is set, the signal will be sent to LR only. When zero percent is set, the signal is sent to center only.
Components: LCR, Surround 3-1, Surround 5.1, Surround 6.1

Fade

Sets the action of the fader when there is a large change in its position during scene recall.
When you turn this ON, the fader moves gradually to the position after the jump. If you turn this OFF, it immediately jumps to the parameters saved in the recalled scene.
Component: Fader

Frequency

Sets a frequency. In the de-esser, this sets the lowest frequency of the signal to be compressed when the component is operating. In the BPF, HPF, and LPF filters, this sets the cutoff frequency. In the graphic equalizer, it is also used as the frequency band button.
Components: Crossover, Crossover Processor, Crossover Processor II, De-Esser, GEQ, PEQ, BPF, HPF, LPF, Notch, Programmable BPF, Programmable HPF, Programmable LPF, Oscillator, Speaker Processor, SPX, Remote HA

Gain

Sets the amplification factor for the entire signal level.
Components: Crossover Processor, Crossover Processor II, Compander, Compressor, De-Esser, Expander, GEQ, PEQ, Auto Mixer, Speaker Processor, Remote HA, DME24N HA-AD

Gain Correct

In the Auto-Mixer, automatically controls the output level for the number of open channels. In situations, where multiple microphones are used, feedback may occur because many channels are open at the same time. Feedback can be avoided by using gain correct.
Component: Auto Mixer

Hold (Hold Time)

Sets how long the gate stays open or the ducking remains active once the trigger signal has fallen below the threshold level.
Components: Ducking, Gate, Auto Mixer, SPX

KeyIn

Turns an input signal connected to a component's KeyIn port into a trigger that activates the component. You can select the trigger source in components that have KeyIn ports.
Components: Compander, Compressor, Ducking, Expander, Gate, Limiter

Knee

In compressors, de-essers, and expanders, sets the way in which compression or expansion will be applied after the signal exceeds the threshold. The following range of settings is available: HARD, 1, 2, 3, 4, 5.
If Hard is set, the signal level changes to a straight line following the specified slope when the trigger signal exceeds the threshold.
If a value between 1 and 5 (5 = softest) is specified, the curve gradually changes when the threshold is exceeded, producing a more natural sound.
Components: Compander, Compressor, Ducking, Expander, Gate, Limiter

LFE (Sub Woofer Speaker)

This is a special speaker for playing back low frequency sounds.
Component: Surround 5.1, Surround 6.1

Linkwitz-Riley (Linkwitz)

One type of filter characteristics. As second-order filters, the sum of the output voltages for LPF and HPF have a gain of 0bB across the entire band. The pass band is flat, but the cutoff frequency gain is -6 dB.
Components: Crossover, Crossover Processor, Crossover Processor II, Programmable BPF, Programmable HPF, Programmable LPF, Speaker Processor

Pan

Sets the distribution ratio of the input signal between right and left.
Components: LCR, LR, SPX

Pan Nominal Position

Sets the 0 dB reference for pan. There are two selections available, [Center] and [LR] (LR Nominal). Center nominal uses the center volume as a reference. The means the center volume is 0 dB, and the LR speakers are -3 dB.
LR nominal uses the LR speaker volume as the reference. The means the LR speaker volume is 0 dB, and the center is +3 dB.
Components: LCR, Surround 3-1, Surround 5.1, Surround 6.1

Phase

Reverses the phase of the signal. If you turn this ON, signal is inverted. If you turn this OFF, the signal is not inverted.
Components: Crossover, Crossover Processor, GEQ, PEQ, BPF, HPF, LPF, Notch, Programmable BPF, Programmable HPF, Programmable LPF, Fader, Auto Mixer, Delay Matrix, Matrix Mixer, Slot Output, Unit Output

Q

Sets the frequency bandwidth that will change the sound. As the value gets larger, the width gets narrower and the curve becomes steeper.
In the parametric equalizer, this sets the frequency width where the gain will be cut or boosted. When Q is widened, the gain is boosted or cut along a wide range centering on the frequency set by the frequency setting, resulting in a large change in the tone quality. When Q is narrowed, only a specific frequency is boosted or cut.
Components: Crossover Processor, Crossover Processor II, GEQ, PEQ, BPF, Notch, Speaker Processor, SPX

Range

Set for Ducking and Gate. Sets the amount by which the level is reduced when signal is ducked/gated. It can be set within the range of -70 to 0 dB. At -70 dB the entire signal above the threshold value is cut. At 0 dB, there is no effect.
Components: Ducking, Gate

Ratio

Sets the ratio of change in the output signal level with respect to the input signal level.
At 1:1, there is no compression.
At 2:1, when a trigger signal level that exceeds the threshold changes by 10 dB, the output level will change by 5 dB.
Components: Crossover Processor, Crossover Processor II, Compander, Compressor, De-Esser, Expander, SPX

Release (Release Time)

Sets the time period until gain returns to normal after a trigger signal level falls below the threshold value and operation of a component ceases.
If the release time is short, the sound will seem like it is jumping (the ear will notice the change) because the gain suddenly returns to normal. If the release is set too long, compression might not be applied properly because the next high level signal will be input before the gain returns to normal from the previous high. It's a good ideal to try an initial release time setting in the range of 0.11 to 0.5 milliseconds.
Components: Crossover Processor, Crossover Processor II, Compander, Compressor, De-Esser, Expander, Limiter, Speaker Processor, SPX

Slope

In a high pass filter (HPF) or low pass filter (LPF), this sets the attenuation amount for each octave. A large value results in rapid attenuation. Clicking the [Slope] button displays a menu.
You can select [6 dB/Oct] or [12 dB/Oct] in the HPF or LPF.
In the crossover that is part of the crossover processor, in the stand-alone crossover, the programmable BPF, the programmable LPF, and the programmable HPF, you can select from [6 dB/Oct], [12 dB/Oct], [18 dB/Oct], [24 dB/Oct], [36 dB/Oct], and [48 dB/Oct].
Component: HPF, LPF

Threshold

Sets the signal level that causes the component to operate.
Components: Crossover, Crossover Processor, Crossover Processor II, Compander, Compressor, De-Esser, Ducking, Expander, Gate, Limiter, Auto Mixer, Speaker Processor, SPX

Width

Sets how much lower the level must be than the threshold level for the expansion effect to begin.
When the trigger signal level changes by 2 dB with the expansion ratio of the expander set at 5:1, the output level will change by 10 dB.
In the compander, if the width is set at 90 dB, the expander effect will be essentially be turned OFF.
Component: Compander

Troubleshooting

For the latest information about DME Designer, visit the Yamaha pro audio site at
http://www.yamahaproaudio.com.

Symptom	Possible Causes	Corrective Actions
A compile error occurs during synchronization.	DSP total resource consumption has exceeded the upper limit.	Delete unneeded components. The Resource Meter window must read 100% or less.
	The wiring between components is connected from multiple output terminals to a single input.	Change the connections so that a single output is connected to a single input terminal. Using a matrix mixer or similar component, gather multiple outputs into one signal.
Cannot place component. Cannot place wiring.	You are in online status.	Execute [Go Off-line] on the synchronization screen to go into offline status.
	The Designer window in not in edit mode.	Place a checkmark next to [Edit] on the [Tool] menu.
	The currently logged on user is restricted from editing.	Logoff, then log in again as a new user, or as the Administrator. If edit restrictions are required for a user, place a check in the [Security] → [Edit] checkbox
A user module is not displayed on the list.	The [File] menu → [Preference] → [ContentsFolder] has been changed, or the "User Module" folder has been moved.	Check that there are user module files (.umf) in the "ContentsFolder" and "User Module" folders.
Cannot switch configurations in the Navigator Window.	While online, you cannot not switch to a configuration different from the current scene.	If you can switch between scenes, you will be able to switch configurations.
The user module window does not open, even when a user module is double-clicked.	This is a user module saved by selecting [Open] → [User Module Design Window].	Open the save dialog, select [Open] → [User Module Editor], and resave the user module.
No editor displays after right-clicking on a card component, and selecting [Open] from the context menu.	Some cards do not have editors.	No special corrective action.
The message "Reset Config…" is displayed for a long time in the message area of the "Synchronization" dialog box.	This is not abnormal. If many scenes are entered into the DME, processing takes time.	Wait until processing finishes.
Cannot set the monitor output.	This is because channels connected with wiring cannot be used as monitor output.	Select an unconnected channel.
The MIDI Setup toolbar will not be displayed.	Stored in the minimized task tray.	Right-click the MIDI Setup icon in the task tray then click [Show].

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