

**YAMAHA**  
**PORTATONE**  
**PSR-62**

**YAMAHA**

YAMAHA CORPORATION  
PO Box 1, Hamamatsu, Japan

## **Congratulations!**

Thank you for purchasing a Yamaha PortaTone. This PortaTone is an ultra-modern keyboard with a design based on the latest digital electronics technology. One very noteworthy aspect of this keyboard is its Arabic Scale feature, which allows you to introduce authentic Arabian music characteristics to your playing. There is also a selection of Arabic instrument sounds and rhythms to choose from.

To be sure you get maximum satisfaction, we suggest you follow the steps in this manual carefully while actually playing the instrument.

# **Before Playing**

## **Inserting batteries**

Remove the battery compartment cover on the bottom of the instrument and insert six 1.5V SUM-1, "D" size, R-20, or equivalent *alkaline* batteries (sold separately), making sure that the polarities are placed as directed inside the compartment. Replace the cover, ensuring that it locks securely in place.

## **Optional power adaptors**

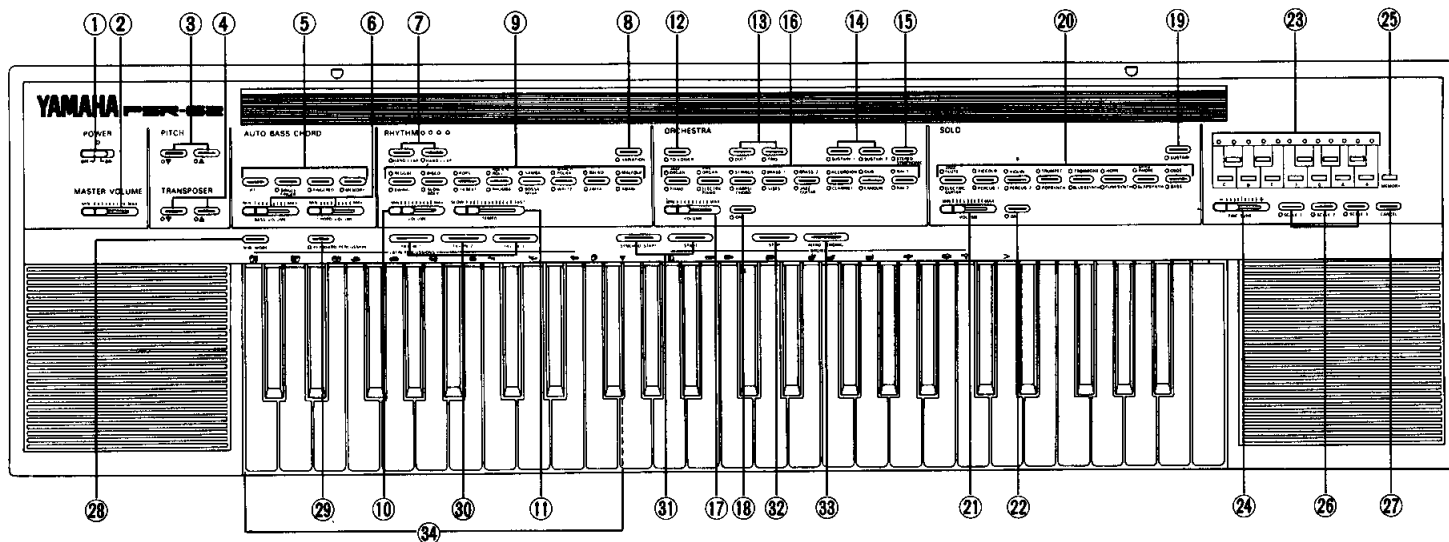
**Household current:** Power Adaptor PA-4 is available for household current. No other adaptor is usable, so when you purchase a power adaptor please ensure that it is model PA-4.

**Car battery:** Car Battery Adaptor CA-1 plugs into a car cigarette lighter socket.

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# Nomenclature



- ① Power Switch
- ② Master Volume
- ③ Pitch Control
- ④ Transposer

- Auto Bass Chord Section**
- ⑤ Auto Bass Chord Mode Selectors
  - ⑥ Bass & Chord Volume Controls

- PCM Rhythm Section**
- ⑦ Handclap Selectors

- ⑧ Variation
  - ⑨ Rhythm Selectors
  - ⑩ Rhythm Volume
  - ⑪ Tempo Control
- Orchestra Section**
- ⑫ Orchestra To Lower
  - ⑬ Melody Plus (Duet/Trio)
  - ⑭ Orchestra Sustain
  - ⑮ Stereo Symphonic
  - ⑯ Orchestra Voice Selectors
  - ⑰ Orchestra Volume
  - ⑱ Orchestra On/Off

- Solo Section**
- ⑲ Solo Sustain
  - ⑳ Solo Voice Selectors
  - ㉑ Solo Volume
  - ㉒ Solo On/Off

- Arabic Scale Section**
- ㉓ Quarter Tone Selectors
  - ㉔ Quarter Tone Finè Tune
  - ㉕ Scale Memory
  - ㉖ Scale Selectors
  - ㉗ Cancel

- ㉘ MIDI Mode Selector
- ㉙ Keyboard Percussion
- ㉚ Fill-in Selectors
- ㉛ Synchro Start & Start
- ㉜ Stop
- ㉝ Intro/Ending
- ㉞ Lower Keyboard Section

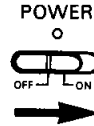
# 2 Starting to play

## Orchestra section

First, try the sounds in the Orchestra section, which is a fundamental part of this keyboard.

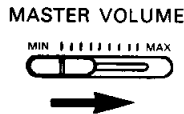
### 1. Switch on

Slide the POWER switch ① to the "ON" position. The Power-on light will then illuminate. If the light flickers when you are using batteries, this indicates that the batteries need replacing.



### 2. Adjust the volume

Adjust the overall volume using the MASTER VOLUME control ②. Also adjust the level by sliding the ORCHESTRA VOLUME control ⑦ towards MAX.



### 3. Play a melody

When you turn the keyboard on, the JAZZ ORGAN voice is automatically selected. Try playing a melody you know.

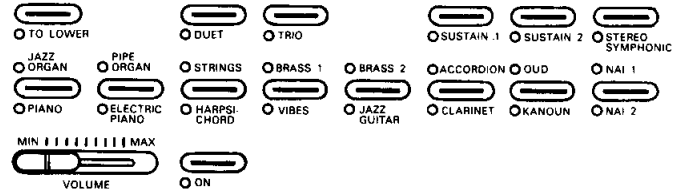
#### Notes:

1. Be sure to press the OFF selector ⑤ in the AUTO BASS CHORD section because the keys in the Lower Keyboard section ④ cannot be used for playing melodies if Single Finger Chord or Fingered Chord is engaged.
2. When the ON/OFF selector ⑧ in the Orchestra section is off and the ON/OFF selector ② in the Solo section is on, you cannot obtain the Orchestra voices.

### 4. Try other voices

To play in a different voice, press the selector for the desired instrument from among those in the ORCHESTRA voice selector group ⑩. The lamps indicate which voice is selected. A different voice name is indicated on each side of the selectors. To change the voice from one side to the other (e.g., from JAZZ ORGAN to PIANO), press the selector next to an illuminated lamp again.

#### ORCHESTRA



### 5. Adding sustain

The Sustain effect, which makes notes linger after you lift your fingers from the keys, can be added to each of the voices. Press SUSTAIN selector 1 ⑭ for a concert hall-like sustain and SUSTAIN selector 2 for an effect similar to that provided by a piano's damper pedal.



### 6. Stereo effect

If you press the STEREO SYMPHONIC selector ⑮, you will obtain a more expansive sound.

#### Notes:

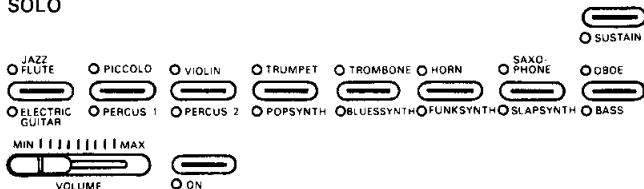
1. The effect has already been preset for certain voices.
2. If you switch from a voice with preset Stereo Symphonic to one without, this effect will automatically be cancelled.

# Obtaining more voice variety

## Solo section

In addition to and separate from the Orchestra voices described so far, there are 16 types of Solo voices, which include natural musical instrument sounds such as Jazz Flute and Piccolo, and contemporary voices.

SOLO



- The ORCHESTRA ON/OFF (18) and SOLO ON/OFF (22) selectors enable you to play an Orchestra voice either on its own or together with a Solo voice. To play only a Solo voice, first depress the SOLO ON/OFF selector (the ORCHESTRA ON/OFF lamp should be off). If both these voice sections are switched off, an Orchestra voice is produced.
- Select the desired voice by pressing one of the SOLO voice selectors (21).
- Adjust the volume level using the sliding SOLO VOLUME control (21).

**Note:**  
Because the Solo voices are monophonic, if two or more keys are pressed only the highest one will produce a sound.

## Sustain

Press the SUSTAIN selector (19), and the sound decays more slowly.

## Advanced class 1:

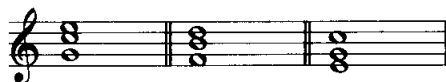
Time for a more accomplished performance.

Here's how to enjoy an ensemble performance featuring a combination of Solo and Orchestra voices:

- Press the ORCHESTRA ON/OFF (18) and SOLO ON/OFF (22) selectors.
- Set the ORCHESTRA VOLUME control (17) at MAX and the SOLO VOLUME control (21) at about the three-quarters position.
- Decide on your combination of Orchestra and Solo voices. Some examples are shown below:  
STRINGS+VIOLIN  
BRASS+TRUMPET  
HARPSICHORD+TRUMPET
- Now, if a chord is played a Solo voice is added to the highest note of the chord, resulting in a beautiful ensemble effect.

### (Example)

(Orchestra) STRINGS+(Solo) VIOLIN



## Advanced class 2:

### Keyboard Split

Here is an explanation of how to use the TO LOWER selector (12) in the Orchestra section.

When this selector is pressed, the keyboard is divided into two sections at the split mark ▼.

Orchestra voices can be played to the left of this mark, Solo voices to the right.

### Notes:

- Since Solo voices are monophonic, only one note at a time can be played by your right hand.
- There are many ways to effectively use Keyboard Split. For example, try using Strings or Brass for your left hand playing when you use Auto Bass Chord (described later).

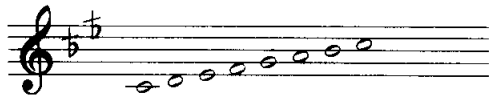
## Arabic Scale and its setting



The PSR-62's new Arabic Scale feature allows you to simply and easily lower certain notes (one or several) in the regular scale by a quarter tone and thereby set your own Arabic scale. You can change the scale setting at any time—even while playing—fine-tune the pitch of the lowered note, and independently store three types of “customized” Arabic scales in the keyboard’s memory for use whenever you want.

### Setting the Arabic Scale of your own

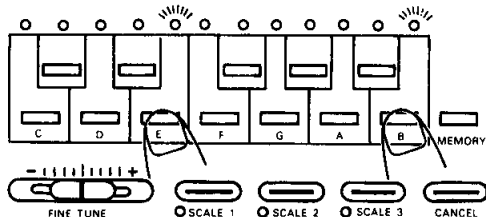
1. First, set the Quarter Tone FINE TUNE control ⑳ to the center position.
2. Press the relevant QUARTER TONE selector ㉑ which you wish to be lowered by a quarter tone from the normal setting.

(Example)



( “ ” represents a note 1/4 tone lower than “ ” )

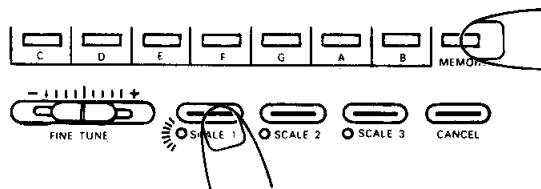
To set the above scale, press both E and B in the QUARTER TONE selector group. The relevant indication lamps by each selector will illuminate and these notes will be lowered by a quarter tone.



3. Adjust the pitch of the note to your taste by using the Quarter Tone FINE TUNE control ⑳.
4. Try other scales using the QUARTER TONE selectors.
5. To return an individual lowered note to the preset pitch, press the relevant QUARTER TONE selector again, then the lamp will go out and the note will return to its preset pitch. To return all the lowered notes of the Arabic Scale to the Western Scale, press the CANCEL selector ㉒.

### Memorizing your customized Arabic scale

1. Set the Arabic Scale as you like, following the procedure described above.
2. Then, press the SCALE 1 selector ㉑ together with the MEMORY selector ㉒ (red indication). Your customized Arabic Scale is now stored in the memory-bank of this keyboard.



3. The memorized scale can be called up for use at any time by pressing the SCALE 1 selector, even if you change or cancel the scale setting after entering it into the memory.
4. Try to store two other customized Arabic Scales in the keyboard’s memory using the SCALE 2 and SCALE 3 selectors, following the same procedure.

#### Note:

A scale will remain stored in the keyboard’s memory for up to seven days—even if the power is turned off. To keep a scale stored in the memory for longer than seven days, turn the power on every seven days or so.

# Using the built-in drummer

## PCM rhythm section

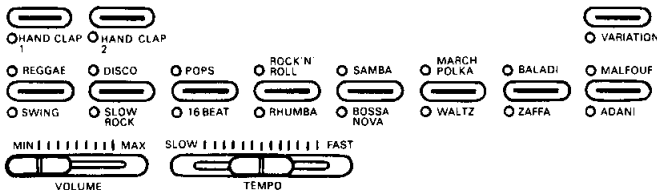
Now it's time to add a dynamic rhythm accompaniment to your melody.

### 1. Choose a rhythm

Pick the rhythm that best suits the music you're going to play and press the relevant selector from the RHYTHM selector group ⑨. To change the rhythm from one side to the other (e.g. from REGGAE to SWING), press the selector next to an illuminated lamp again.

- When you turn the keyboard on, the REGGAE rhythm is automatically selected.

RHYTHM ○ ○ ○ ○



### 2. Start the rhythm

After selecting a rhythm, press the START selector ⑩.

#### ● Intro/Ending

Instead of using START, you can have the rhythm begin by using INTRO/ENDING ⑪. When this selector is pressed, the rhythm will start after a two-bar drum count.

#### ● Synchro Start

Use the SYNCHRO START selector ⑫ if you want the



rhythm to begin from the moment you first press a key. Any of the 19 keys (up to F#<sub>2</sub>) beginning at the left of the keyboard will activate the rhythm sounds.

### 3. Adjustments

#### ● Volume

The RHYTHM VOLUME control ⑩ lets you adjust the rhythm volume in relation to the melody volume.

#### ● Tempo

Use the TEMPO control ⑪ to adjust the speed of the rhythm.

### 4. Making use of the Tempo Light

The Tempo Light functions as a visual metronome, making it simple for you to confirm the rhythm tempo. When the SYNCHRO START selector ⑫ has been pressed but you have not yet started the rhythm by pressing a key, the Tempo Light flashes at every quarter note.

RHYTHM ○ ○ ○ ○

### 5. Adding a handclap to the rhythm

A handclap effect that keeps perfect time with the beat can be added to any of the rhythms. There are two HANDCLAP selectors ⑬, and if they are depressed simultaneously a third handclap effect can be enjoyed.

### 6. Getting more realism with drum fill-ins

If you tap the FILL IN selector ⑭ the rhythm being played will be interrupted by a 1-bar drum solo. Hold the FILL IN selector down, and the drum solo continues.

#### Note:

The Fill In feature is most effective when used with the Auto Bass Chord section (described later).

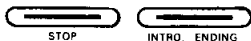


## 7. Using the INTRO/ENDING selector for your musical finale

If you press the INTRO/ENDING selector ⑳ when the rhythm is on, the rhythm will stop automatically after playing a 2-bar ending phrase. If you wish to stop the rhythm immediately, press the STOP selector ㉑.

### Note:

When you press the INTRO/ENDING selector twice when a rhythm is playing, the music gradually slows and stops. The speed differs according to the rhythm selected.



## Keyboard Percussion

Press the KEYBOARD PERCUSSION selector ㉒, and you can enjoy playing like a drummer by tapping the keys with your fingers. Twenty-one PCM digital percussion sounds are assigned to the white keys. The kinds of percussion instrument sounds are indicated by symbols next to the relevant keys.

### Note:

When Accent key > or any black key from C<sup>2</sup> to C<sup>4</sup>, is pressed together with a white percussion key, the percussion note will be accentuated.

# 6

## Adding accompaniments

### Auto Bass Chord section

The Auto Bass Chord section is an automatic accompaniment feature.

If the OFF selector is depressed, the Auto Bass Chord system does not function.

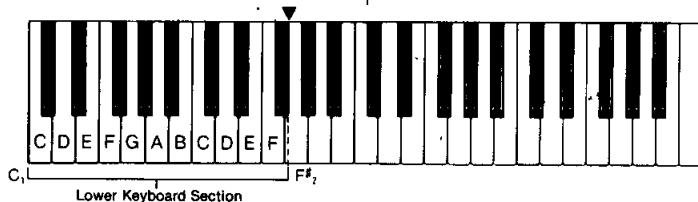
With the SINGLE FINGER CHORD selector depressed, you can play three-note chords and bass notes using a single finger

if you press any of the keys in the Lower Keyboard section.

The FINGERED CHORD selector allows more experienced players to play their own chords and continue getting the bass and rhythm backup.

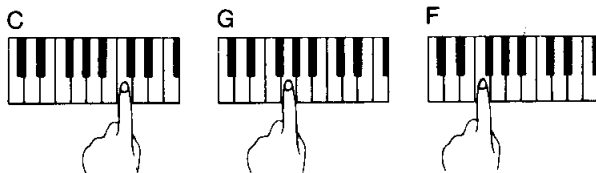
### Note:

When using Auto Bass Chord function with an Arabic rhythm, no chords will be played leaving only BASS notes.



## For one-finger accompaniment

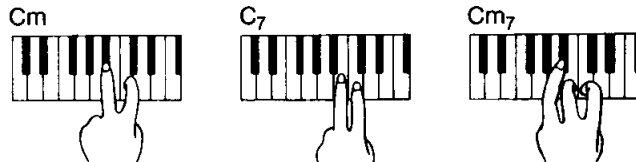
1. Press the **SINGLE FINGER CHORD** selector.
2. **Select a rhythm**  
Choose the rhythm you want then press the **SYNCHRO START** or **START** selector ③. (Don't forget to do this whenever you use the Auto Bass Chord feature).
3. **Press a key**  
Press one of the keys in the Lower Keyboard section ④. You will hear the corresponding chord with bass plus rhythm accompaniment. For instance, when you press "C", you'll obtain a C major chord that strums with the bass and rhythm.



4. **Set the volume**  
Adjust the volume to suit the overall level using independent **BASS VOLUME** and **CHORD VOLUME** controls ⑥ in the Auto Bass Chord section.
5. **Set the tempo**  
Select the tempo you want using the **TEMPO** control ⑪ in the Rhythm section.

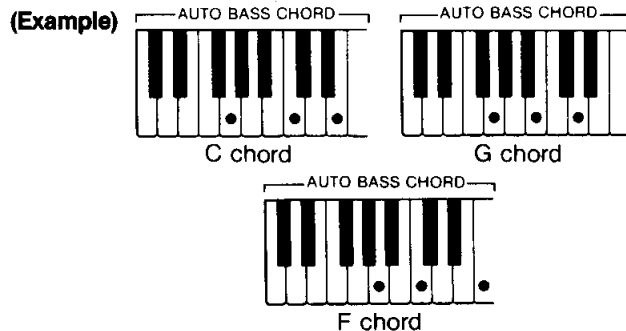
## Obtaining minor, seventh and minor seventh chords in Single Finger Chord mode

- To get a C minor chord depress the C key together with the next black key to the left.
- To get a C seventh chord depress the C key together with the next white key to the left.
- To get a C minor seventh chord, simply press the C key together with the next black key and white key to the left.



## For automatic accompaniment based on three-note or four-note chords

1. Press the **FINGERED CHORD** selector.
2. When a combination of keys located in the Lower Keyboard section ④ are pressed, the resulting chord will be played together with the automatic accompaniment consisting of the bass line and the selected rhythm.



## Memory

When either Single Finger Chord or Fingered Chord is on, the Memory lamp automatically illuminates.

If a rhythm is on, when you lift your finger(s) from the keys after playing a chord the accompaniment continues to sound. Thus, you don't have to hold down the keys, so it is easy to change from one chord to another. Press the **MEMORY** selector in the Auto Bass Chord section to cancel this effect.

## Variation

Press the VARIATION selector ⑧ in the Rhythm section if you want a different bass line and rhythm accompaniment. Different patterns are provided for each of the rhythm patterns.

## Melody Plus (Duet/Trio)

This function works together with the Auto Bass Chord feature.

- Press the DUET selector ⑬, then play a melody with your right hand and chords with your left; a harmonizing note will be added to every melody note you play.
- Press the TRIO selector ⑭, and two harmonizing notes will be added to each melody note you play.

# ?

## Using the Transposer and Pitch Control

### Transposer

The TRANSPOSER ④ lets you adjust the PortaTone's pitch to suit either a singing voice—so anyone can sing along as you play—or an instrument such as B<sup>b</sup> trumpet, clarinet or E<sup>b</sup> saxophone. Whenever ▲ is pressed, the pitch rises by a semi-tone. When ▼ is pressed, the pitch decreases by a semi-tone. And when both ▲ ▼ selectors are simultaneously pressed, preset pitch is obtained.

TRANSPOSER



### Pitch Control

The PITCH controls ③ differ from the Transposer in that its function is to fine-tune the keyboard. Each time ▲ is pressed, the pitch increases very slightly, by 1.6 cents, up to a maximum of 50 cents. Whenever ▼ is pressed, the pitch falls by 1.6 cents.

PITCH

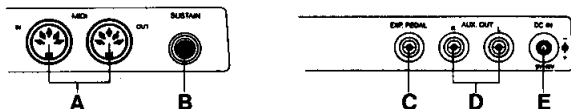


#### Note:

1. If you hold down one of the PITCH controls, you will obtain the same result as you would by pressing the control repeatedly.
2. If you press both of the PITCH controls together, the pitch will return to the preset level (A<sub>3</sub> = 440Hz).

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## External jacks



Several jacks are provided at the back of the keyboard for connecting a variety of optional accessories. There is also a headphone jack at the front.

### A. MIDI In/Out jacks

For details concerning MIDI jacks, refer to page 11.

### B. Foot switch jack (Sustain)

This jack allows connection of the optional Sustain Pedal FC-5, allowing ON/OFF foot-control.

### C. Expression pedal jack

The EXP. PEDAL jack is for connecting the Expression Pedal

EP-1, which lets you control the overall volume level using your foot.

### D. Aux Out jacks (L/R)

You can channel sound through your stereo system using these jacks. Use the optional connecting cord PSC-3.

- Impedance: 600Ω

- Output level:  $-7 \pm 2\text{dB}$  (7 notes sounding simultaneously at maximum volume with Jazz Organ voice)

### E. External power source jack (DC IN)

- AC power

Connect the optional AC Power Adaptor PA-4 to the DC IN jack.

- Car battery

The Car Battery Adaptor CA-1 plugs into the DC IN jack and a cigarette lighter socket.

### F. Headphones

- Connect a set of headphones to this jack and you can practice without disturbing others.

## 9

## Optional Accessories

- AC Power Adaptor (PA-4)

Transforms AC voltage to DC voltage.

- Car Battery Adaptor (CA-1)

Enables you to provide power to the instrument from a car battery using the cigarette lighter socket.

- Soft Carrying Case (SCC-11)

For convenient transportation.

- Headphones (YH Series)

Specially designed lightweight dynamic headphones with extra-soft ear pads.

- Connecting Cord (PSC-3)

For connecting the keyboard to a stereo hi-fi system.

- Keyboard Stand (L-2)

- Expression Pedal (EP-1)

Lets you add more feeling to music by enabling subtle control of the overall volume level.

- Sustain Pedal (FC-5)

This pedal enables on/off control of the sustain effect by foot.

*Some optional accessories may not be available in every region.*

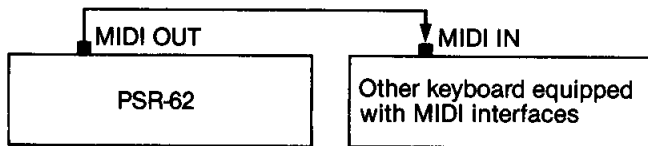
# 10

## About MIDI

MIDI is an acronym standing for Musical Instrument Digital Interface, which is a standard interface for connecting keyboards and other devices.


The PortaTone is equipped with MIDI jacks (IN and OUT), thus enabling connection of the PortaTone to another PortaTone or to some other keyboard equipped with MIDI jacks (e.g. the Yamaha DX Synthesizer) for synchronized performances.

(Example)



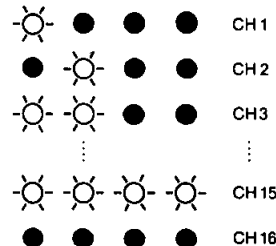
1. When the power is turned on, the mode is: LOCAL ON, OMNI ON, POLY
2. Contents of transmission/recognition in normal mode
  - Key ON/OFF
  - Orchestra voice change
  - Orchestra Volume
  - Orchestra Sustain
3. Assigning MIDI channels
 

The channel for receiving/sending can be assigned by the following operation.

  - Press the JAZZ ORGAN/PIANO selector in the Orchestra section while pressing the MIDI Mode selector . (JAZZ ORGAN is designated as the sending channel, and PIANO as the receiving channel.)
  - Depress one of the sixteen black and white keys from


the left side of the keyboard, which are assigned for the channels.

(Channels 1 to 16 from the left). The four Beat Lamps indicate the channel designations by binary method.



4. Receiving external MIDI Timing Clock
 

An external MIDI timing clock can be received and rhythms can therefore be synchronized.

  - Select NAI 1 in the Orchestra section while pressing the MIDI Mode selector .
  - If you cancel NAI 1 while pressing the MIDI Mode Selector, the external timing clock will not be received.

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# 11

## Taking care of your PortaTone

Your PortaTone will remain in excellent playing condition if care is taken concerning the following.

1. When you use AC power, be sure to use the optional PA-4 adaptor. Before use, read the adaptor instructions carefully. In particular, please note that in some cases the PA-4 is provided with a voltage selector, confirm that this selector is correctly set.
2. The optional Car Battery Adaptor CA-1 is only for use with a negative ground 12V battery. Ensure that this is the case before connecting the adaptor.
3. Connections made between the PortaTone and any other device should be made with both units turned off.
4. Do not set the MASTER VOLUME at MAX when you connect the PortaTone to a stereo system. Use the stereo systems volume control to adjust the sound level.
5. Avoid placing the instrument in excessively humid areas.
6. Do not subject the unit to physical shock, and placing anything heavy on it.
7. The PortaTone should not be placed in direct sunlight for a long time.
8. Do not place the instrument near any heating appliance, or leave it inside a car in direct sunlight for any length of time. Direct sunshine can raise the interior temperature of a car with closed door and windows to as high as 80°C (176°F). Temperatures in excess of 60°C (149°F) can cause physical and/or electrical damage not covered by warranty.
9. Use a dry or damp cloth for cleaning.
10. When you are not using the PortaTone, we recommend keeping it in the case to protect it.

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# 12

## Specifications

### Keyboard

49 Keys (C<sub>1</sub>—C<sub>3</sub>)

### Solo Voices

Jazz Flute, Piccolo, Violin, Trumpet, Trombone, Horn, Saxophone, Oboe, Electric Guitar, Percus 1, Percus 2, Popsynth, Bluesynth, Funksynth, Slapsynth, Bass  
On/Off, Volume

### Orchestra Voices

Jazz Organ, Pipe Organ, Strings, Brass 1, Brass 2, Accordion, Oud, Nai 1, Piano, Electric Piano, Harpsichord, Vibes, Jazz Guitar, Clarinet, Kanoun, Nai 2  
On/Off, Volume

### Effects

Solo Sustain, Orchestra Sustain 1, 2, Stereo Symphonic, Orchestra To Lower

### Rhythm Section

Reggae, Disco, Pops, Rock'n'Roll, Samba, March/Polka, Baladi, Maifouf, Swing, Slow Rock, 16 Beat, Rhumba, Bossanova, Waltz, Zaffa, Adani, Variation, Handclap 1, 2, Fill-In 1, 2, 3, Start, Synchro Start, Stop, Intro/Ending, Tempo, volume  
Keyboard Percussion : 10 Latin Percussions, 10 Drum Percussions, Handclap, Accent

### Auto Bass Chord System

Single Finger Chord, Fingered Chord, Off, Memory, Bass Volume,

Chord Volume  
**Melody Plus**  
Duet, Trio  
**Arabic Scale**  
Quarter Tone Selectors, Fine Tune, Scale Memory, Scale Selectors  
**Transposer**  
1/2 octave high and low  
**Pitch Control**  
±50 cents  
**Other Controls**  
Power Switch, Power-on light, Master Volume, MIDI Mode  
**Auxiliary Jacks**  
Headphones, Expression Pedal, MIDI (Out/In), Aux Out (L / R),  
Sustain, DC In

**Amplifiers**  
5W × 2  
**Speakers**  
12cm (4 ohms) × 2  
**Rated Voltage**  
DC 9V (six 1.5V SUM-1, "D" size, R-20 or equivalent batteries), AC  
Power Adaptor (PA-4) or Car Battery Adaptor (CA-1)  
**Dimensions (W × D × H)**  
982mm × 281mm × 94mm  
(38-3/4" × 11" × 3-3/4")  
**Weight**  
6.7kg (14.8 lbs.)

*Specifications are subject to change without notice.*

# PSR-62 MIDI Implementation Chart

Version: 1.0

Function		Transmitted	Recognized	Remarks
Basic Channel	Default Change	1 ○	1 ○	
Mode	Default Messages Altered	Mode 3 X *****	Mode 1 Omni, Mono/Poly ○	
Note Number:	True voice	36-96 *****	36-96 36-96	
Velocity	Note on Note off	x 90H, v=64 x 90H, v=0	x x	
After Touch	Key's Ch's	x x	x x	
Pitch Bender		x	x	
Control Change	7 64	○ ○	○ ○	Volume Sustain
Program Change:	True #	0-15 *****	0-127 0-15	
System Exclusive		x	x	
System :	Song Pos	x	x	
	: Song Sel	x	x	
Common:	True	x	x	
System :	Clock	○	○	
Real Time:	Commands	○	○	
Aux :	Local ON/OFF	x	○	
	: All Notes OFF	x	○	
Messages:	Active Sense	○	○	
	: Reset	x	○	
Notes				
Mode 1: OMNI ON, POLY		Mode 2: OMNI ON, MONO		○: Yes
Mode 3: OMNI OFF, POLY		Mode 4: OMNI OFF, MONO		x: No