

YAMAHA PORTATONE

PSR-110

Owner's Manual

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Congratulations on your purchase of the Yamaha PortaTone!

You now own a portable keyboard that packs advanced functions and great sound in a highly compact size. Its outstanding features also make it an exceptionally expressive and versatile instrument.

Read this Owner's Manual carefully while playing your new PortaTone, and you will soon be able to make full use of its various features.

Main Features

The PortaTone is a sophisticated musical instrument with the following features and functions:

- **100 AWM (Advanced Wave Memory) Voices, utilizing digital recordings of actual instruments.** (See VOICE, p.4.)
- **50 versatile music styles.** (See STYLE, p.5.)
- **20 demonstration Songs** (Songs for playing along with when using the Minus-one function). (See SONG, p.8.)
- **20 specially programmed rhythms and chord progressions.** (See JAM TRACK, p.8.)
- **Percussion sounds and sound effects for playing.** (See PADS, p.9.)
- **High-quality stereo amplifier/speaker system.**

Precautions—Taking Care of Your PortaTone

Your new PortaTone is a fine musical instrument – and should be treated as such.

Handle it with care and common sense, and it will give you years of enjoyment.

Location

- Avoid exposure to direct sunlight or other sources of heat. Never leave it inside a car where it can get very hot. Also avoid highly humid or dusty places.

Interference from Electromagnetic Fields

- Do not use your PortaTone close to television sets, radios or similar equipment since this may cause interference noise in the other appliance.

Handling

- Protect your PortaTone from strong impact. Be careful not to drop it or place heavy objects on it.

Avoid applying excessive force to the controls, keys and connections.

When Not Using the PortaTone

- After use, always turn off the POWER switch. When not using your PortaTone for long periods, be sure to remove the batteries to avoid damage through battery leakage.

Cleaning

- Clean the exterior with a soft, dry cloth. To remove stubborn stains, use a slightly moistened cloth.
- Never use alcohol, thinner, or other chemical solvents, since they will damage the finish. Also, do not leave vinyl chloride material on the PortaTone for a long time, since it may adhere to the exterior.

Note:

Yamaha is not responsible for damage caused by improper usage.

Getting Started



Power Requirements

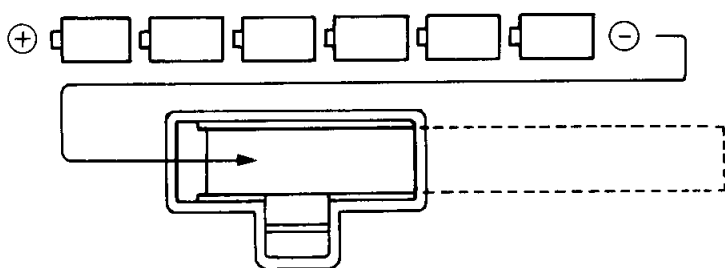
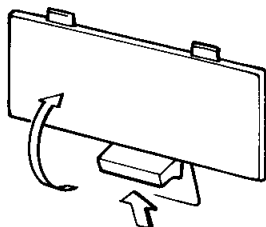
Your PortaTone can run either on batteries (sold separately) or on normal household current by using one of the optional Yamaha PA-3/4/40 Power Adaptors.

Using an AC Power Adaptor

To connect your PortaTone to a wall socket, you will need the optionally available Yamaha PA-3/4/40 Power Adaptors. **Use of other AC adaptors could result in damage to the PortaTone and/or Power Adaptor, so be sure to ask for the right kind.** Plug the adaptor into a convenient wall socket and its connector into the DC IN 10-12V jack on the back of your PortaTone.

Inserting Batteries

Turn the instrument upside-down and remove the battery compartment lid. Insert six 1.5-volt size "D" batteries as shown in the illustration, making sure that the positive and negative terminals are properly aligned. Replace the lid.



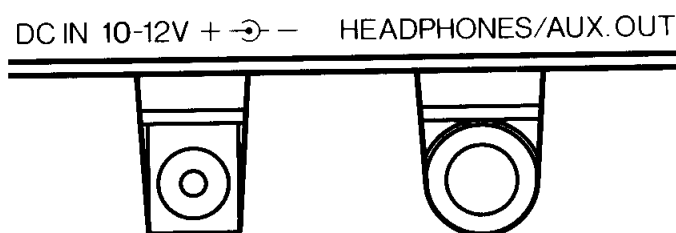
When the Batteries Run Down

When the batteries run low and the battery voltage drops below a certain level, the PortaTone may not sound or function properly. As soon as this happens, replace them with a complete set of six new batteries. **NEVER** mix old and new batteries.

Accessory Jacks

Using Headphones

For private practicing and playing without disturbing others, connect a set of stereo headphones to the rear panel HEADPHONES/AUX. OUT jack. Sound from the built-in speaker system is automatically cut off when you insert a headphone plug into this jack.



Connecting a Keyboard Amplifier or Stereo System

After making sure the PortaTone and any external devices are turned off, connect one end of a stereo audio cable to the LINE IN or AUX. IN jack(s) of the other device and the other end to the HEADPHONES/AUX. OUT jack of the PortaTone. Also, make sure that the volume of the connected equipment is set to minimum before turning the power on.

Playing Your New PortaTone

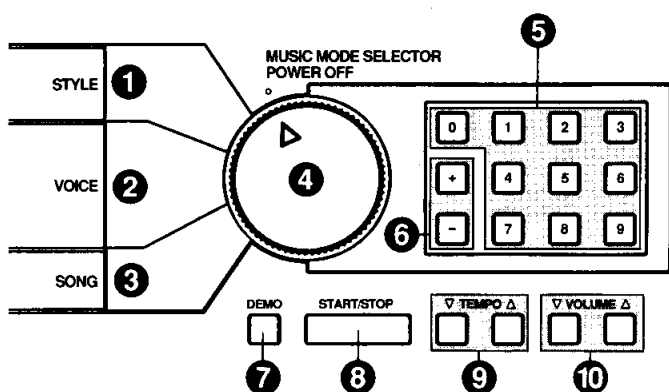
This section briefly shows you how to select from among the various Voices and Styles by using the Numeric Keypad.

Selecting Modes

Your PortaTone can be made to operate in three different ways or "Modes": STYLE, VOICE and SONG. You should select the Mode according to how you want to use your PortaTone. STYLE ① lets you select and play a setting that includes a rhythm/accompaniment pattern plus a suitable Voice for that pattern. VOICE ② lets you select and play a Voice. SONG ③ lets you select and play either a Song or a Jam Track pattern.

To select one of the Modes:

Turn the MUSIC MODE SELECTOR ④ to the desired Mode. For now, select SONG ③.



Playing a Demonstration Song

A variety of Demonstration Songs have been recorded to your PortaTone to give you a taste of what you can do with the instrument.

To select and play one of the Songs:

1. With the MUSIC MODE SELECTOR set to SONG ③, use the Numeric Keypad ⑤ to enter the desired Song number. Be sure to enter a two-digit number, as is printed next

to each song on the panel. For example, to select Song 09, first press "0" on the Numeric Keypad, then "9."

You can skip this step and go on to step 2 below if you wish to play all songs continuously in succession, starting with Song 00.

Using the +/- Buttons

You can also use the +/- buttons ⑥ on the Numeric Keypad to step up or down through the preset numbers. (Number 00 is automatically selected in all of the Modes when you turn the power on.)

Note that the +/- buttons have a "wrap around" feature. For example, pressing the + button from the last number in SONG returns to Song 00.

2. To play the selected Song, press the DEMO button ⑦.
3. You can adjust the volume of the Song by using the VOLUME buttons ⑩.

If you want to set the volume back to its original default setting, press both VOLUME buttons simultaneously.

4. To stop the Song, press the DEMO button again. (The START/STOP button ⑧ can also be used.)

More About the Numeric Keypad

1. A "click" sound comes from the speaker each time you enter a number from the Numeric Keypad. Actually, there are two click sounds: one low pitched sound for the first number you enter, then a high pitched sound for the second and final number. Since you must enter two digits, the high pitched sound is a clear indication that the entire number has been properly entered. (The VOLUME buttons, TEMPO buttons and PADS SELECT buttons also produce a "click" sound.)
2. You should enter numbers on the Numeric Keypad relatively quickly. If you don't enter the second digit of a number within about ten seconds after entering the first digit, the first digit will be cancelled. Entry of a first digit is also automatically cancelled if any other button on the panel (except for those on the Numeric Keypad ⑤) is pressed before entering the second digit.
3. The PortaTone also automatically ignores invalid numbers — numbers that are higher than each range of Styles or Songs shown on the panel.

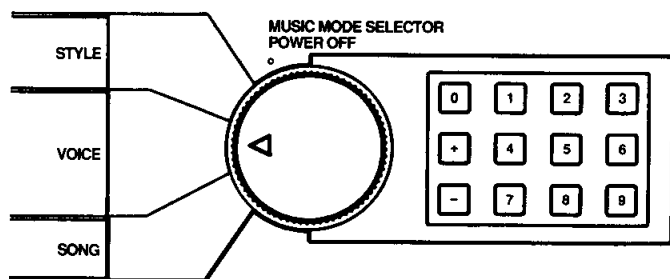
The **VOICE Mode** features 100 authentic Voices. Many of these Voices have special preset characteristics or embellishments.

DUAL Voices (#40~#55) have two Voices layered together for ensemble sounds. As with **DUAL**, **SPLIT Voices (#56~66)** have two Voices, but rather than being layered, each is played from a different range of the keyboard. **SUSTAIN Voices (#67~71)** extend the sound by adding a natural, slow release. **HARMONY Voices (#72~#84)** have an additional one-, two- or three-note harmony added to the original monophonic Voice. Finally, **ECHO Voices (#85~#99)** have an echo effect that adds delayed repeats to the original Voice.

Included in the Voices are special **PERCUSSION Voices (#39/#99)** that let you play various drum and percussion sounds from the keyboard. (Refer to the Percussion Assign Chart, page 9.)

Selecting a Voice

1. Turn the **MUSIC MODE SELECTOR** to select **VOICE**.



2. Use the Numeric Keypad to select the desired Voice number.

Each Voice is automatically called up with the most suitable octave range setting. Thus, playing middle C with one Voice may sound higher or lower than another Voice at the same key.

3. Play the newly selected Voice. If you want to change to another Voice, repeat step 2 above.

You can also play rhythm Styles in the **VOICE Mode** by simply pressing the **START/STOP** button. The Style last selected when in the **STYLE Mode** will be played.

About the HARMONY Voices

1. A single note can be played when several notes are pressed for the **HARMONY Voice**. If several notes are played together, only the last note played will determine the harmony notes.
2. The type of harmony depends on the type of Voice selected. When the **VOICE Mode** is selected, **HARMONY**'s basic chord is always C. when in the **STYLE Mode**, changing the chord played in the left hand also changes the harmony, when in the **SONG Mode**, **HARMONY** notes change according to the chord of the Song/Jam Track.

Note:

The **PortaTone** is polyphonic up to a maximum of 12 notes. (Depending on the Voice selected, fewer notes may be available.) This includes not only the Voices played from the Keyboard, but also the notes in a Style pattern, and so on. Thus, if you play too many notes at one time, some may not sound and/or others may be cancelled.

STYLE

The **STYLE Mode** provides an ideal combination of a **Voice** and rhythm/accompaniment pattern for various popular music styles, as listed on the panel. The **Auto Accomp.** function adds excitement to your performance, and it effectively splits the keyboard into two sections: the upper for playing a melody line, and the lower for using the **Auto Accomp.** function. The split point is indicated on the panel, above the keyboard.

About BASS CHORD HOLD

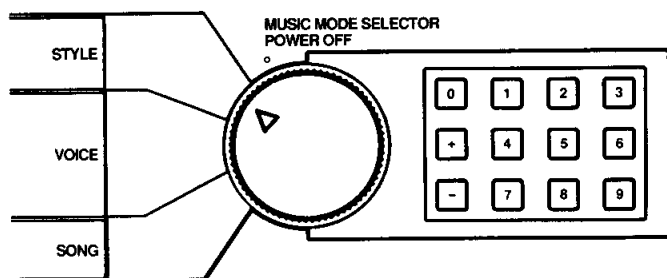
STYLE also includes a **BASS CHORD HOLD** setting (STYLE #49) which works without a rhythm pattern. **BASS CHORD HOLD** does as its name implies: it generates a chord and bass based on the note or notes you play in the lower part of the keyboard and "holds" it while the chord is being played.

Note:

When **BASS CHORD HOLD** is selected, the **Synchro Start** function does not work, nor does the rhythm run, even if the **START/STOP** button is pressed. If you select **BASS CHORD HOLD** while a rhythm pattern is playing, the rhythm will stop.

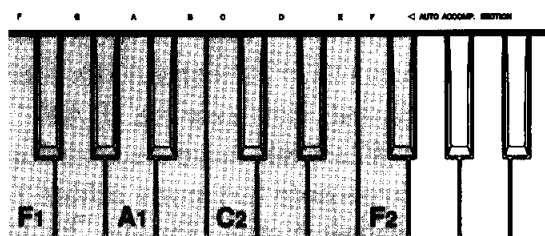
Selecting a Style

1. Turn the **MUSIC MODE SELECTOR** to select **STYLE**.



2. Use the **Numeric Keypad** to select the desired **Style number**.

3. Your **PortaTone** has a **Synchro Start** function that allows you to start the rhythm by simply pressing a key in the **AUTO ACCOMP. SECTION** to the left of the split point. (Selecting **STYLE** sets the **PortaTone** to stand-by status.)



- You can also start the rhythm by pressing the **START/STOP** Button.



A rhythm pattern of the **Style** you've selected will begin playing. Try playing along with this rhythm.

4. With the rhythm running, you're ready to try out the **Auto Accomp.** function. Try playing a few single notes with your left hand, and notice how the bass and chord accompaniment change with each key you play.
5. Use the **TEMPO** buttons to change the tempo of the **Style** as it's playing.



6. To stop the rhythm, press the **START/STOP** button again.
Pressing the **START/STOP** button again produces a simple ending phrase. This also applies to playing **Jam Track** patterns in the **SONG Mode**.

Using the Auto Accomp. Function/Multi Fingering

The Auto Accomp. function automatically generates bass and chord accompaniment for you to play along with, by using Multi Fingering operation. You can change the chords of the accompaniment by either using a "Single Finger" technique in the AUTO ACCOMP. SECTION of the keyboard – simply by playing a one-, two- or three-finger chord indication – or by playing conventional full "Fingered" chords. The PortaTone automatically "understands" what chord you indicate and then generates the accompaniment.

Though this operation is automatic, you can set Auto Accomp. to function exclusively in either the Single Finger or Fingered mode.

To set Auto Accomp. to "Single Finger," turn the power off, then hold down the "1" key on the Numeric Keypad and simultaneously turn the power on.

Note:

In Single Finger, the AUTO ACCOMP. SECTION is set between the C1 key (the lowest key) and the C#2 key.

To set Auto Accomp. to "Fingered," follow the same steps, holding down the "0" key instead.

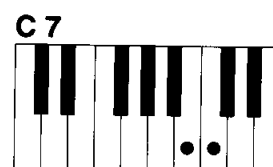
To switch back to Multi Fingering operation, simply turn the power off and on again.

Single Finger Chords

Chords that can be produced in Single Finger operation are major, minor, seventh and minor seventh. The illustration below shows how to produce the four chord types. (The key of C is used as an example; other keys follow the same rules.)



Press the root note of the chord.



Press the root note together with any white key to the left of it.



Press the root note together with any black key to the left of it.



Press the root note together with any white and black key to the left of it (three keys altogether).

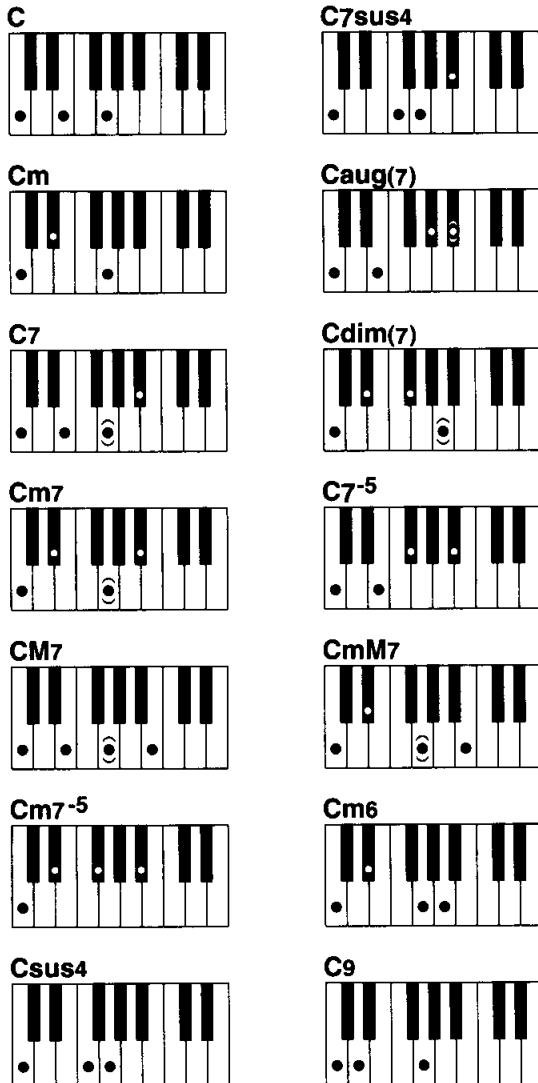
Note:

The "black key" keys follow the same rules; for example, Bb7 could be played as Bb and A (the white key to the left of it).

Fingered Chords

Using the key of C as an example, the chart below shows the types of chords that can be recognized in the Fingered mode.

Examples for "C" Chords



Notes enclosed in parentheses are optional; the chords will be recognized without them.

Note:

If the chord is inverted (i.e., C-E-G is played as G-C-E), the PortaTone will recognize it as a C chord. However, if augmented and diminished 7th chords are inverted, the lowest note will be recognized as the root. 7th flatted 5th chords may be played with the lowest note as the root or the flatted 7th. Minor 6th and 9th chords must be played with the lowest note as the root.

Note:

The following chords can not be detected: B augmented, A#m6 and Bm6.

Note:

For certain chords in some of the music Styles, the accompaniment chord may remain the same even though different chord indications are played.

Note:

If CHORD CANCEL (pressing of any three consecutive notes; for example, C-C#-D) is played, the chord accompaniment will stop, but the rhythm will continue playing.

More About the STYLE Mode

1. Although the Voice is automatically selected for each Style, you can change the Voice for the upper part while the rhythm is running by switching to the VOICE Mode and selecting the desired Voice. (As for each default Voice in the STYLE Mode, refer to the list on page 10.)
2. If you change to another Style while one Style is playing, the newly selected Style changes at the beginning of the next measure and the Voice of the newly selected Style automatically changes as well. The tempo setting of the previous Style is kept, however. (When the rhythm is off, changing the Style changes the tempo to the default setting.)

About the Tempo Controls

The tempo can be adjusted by using the TEMPO buttons. Turning the power on automatically sets the tempo to the default setting of Style 00. You can restore the default setting of the currently selected pattern at any time by pressing both TEMPO buttons simultaneously.

SONG

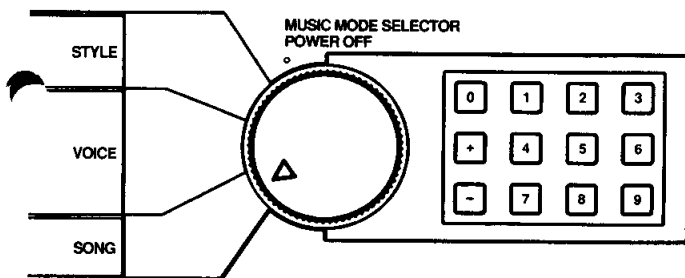
The SONG Mode features Demonstration Songs and Jam Track patterns that have been specially created using the rich sounds and sophisticated accompaniment functions of the PortaTone.

The Songs in the SONG Mode (selected from 0-19) are generally for your listening enjoyment; however, you can also play along with them by using the Minus-one function. Minus-one, as its name implies, takes away the melody part of the song, allowing you to play that part yourself.

The Jam Track patterns in this Mode (selected from 20-39) let you "jam" or play along with a variety of dynamic rhythm styles and chord changes.

Selecting a Song or Jam Track Pattern

1. Turn the MUSIC MODE SELECTOR to select SONG.



2. Use the Numeric Keypad to select the desired Song (0-19) or Jam Track pattern (20-39) number.
3. To playback the complete Song, including the melody part, press the DEMO button. To use the Minus-one function with the selected Song or to playback a Jam Track pattern, press the START/STOP button. (Scores for the Songs have been provided for you to play along with. See pages 11–20.)



- 1 Press DEMO to playback entire Song. (Songs repeat in order indefinitely until DEMO or START/STOP is pressed.)
- 2 Press START/STOP for the selected Song/Pattern when using Minus-one or Jam Track. (Selected Jam Track pattern repeats until START/STOP is pressed.)

You can also start the selected Song (Minus-one) or Jam Track pattern with the Synchro Start function (as in STYLE) by simply pressing any key on the keyboard.

Note:

The DEMO button cannot be used to start a Jam Track pattern. If you press the DEMO button while a Jam Track is selected, the number will automatically change to 00 and begin playback.

4. If you want to change to another Song or Jam Track pattern, repeat step 2 above.
5. To stop the Song or pattern, press the START/STOP button again. (The DEMO button can also be used to stop Songs, but not patterns or Songs used with Minus-one.)

More About the SONG Mode

The Voice for the melody of each Song is automatically selected and you can play the keyboard using the same Voice as the one used for the melody. You can also change the Voice while the Song/Jam Track is playing by switching to the VOICE Mode and selecting the desired Voice. (Voice changes of the preset Song will automatically affect both the melody of that Song and the Voice you play on the keyboard. You can start each Song/Jam Track pattern [except Demonstrations] with your selected Voice by selecting the Voice in the VOICE Mode and switching back to the SONG Mode.) However, changing to another Song/Jam Track automatically switches to that new one's default preset Voice and the preset tempo.

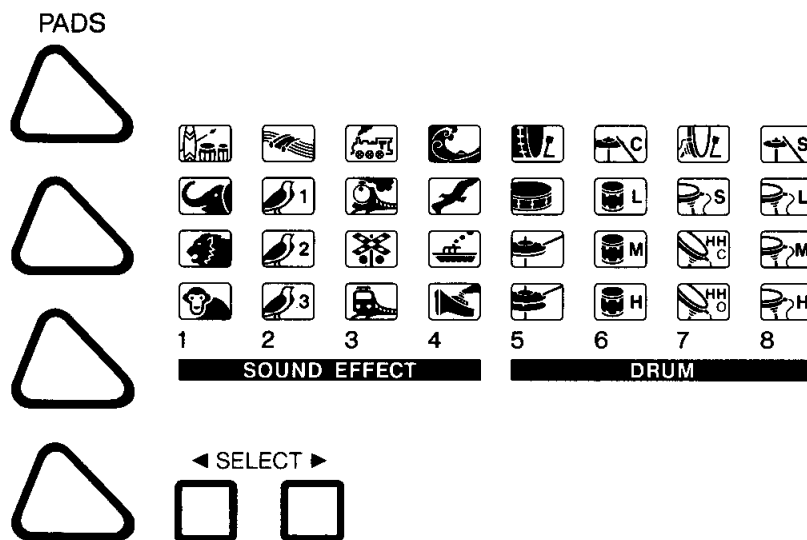
Note:

Starting a Song also automatically changes the Style number.

PADS

The PADS let you play selected sound effects and percussion sounds. The Pads can be played in any of the Modes. You can play them alone to try out your own rhythms, or play them along with the rhythm patterns. Eight different sounds or Sets are available for each Pad, represented by the graphic symbols printed above each Pad.

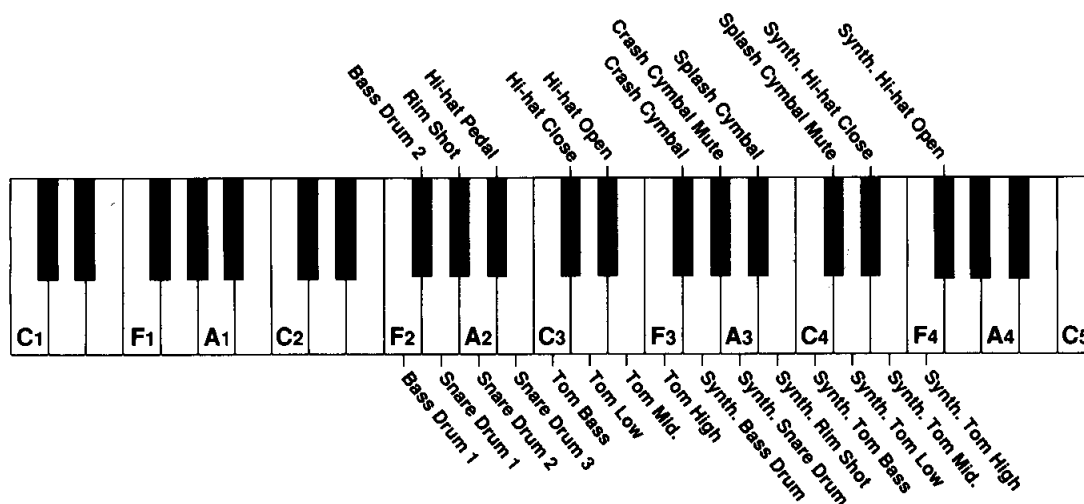
When the power is turned on, the first Set (represented by the leftmost symbol above each pad) is automatically selected. Use the SELECT buttons in the PADS section to change the Set. Changing the Set changes the sounds of all the PADS at the same time.



Note:

Up to two Pads can be played simultaneously. Three or more Pads can be played successively; however, the limit on total simultaneous notes may result in cancellation of some sounds or notes played in the VOICE/STYLE/SONG Mode. (Refer to the Note regarding polyphony on page 4.)

Percussion Assign Chart



Voice List for the STYLE/JAM TRACK Mode

STYLE

Style No.	Voice No.	Voice Name
00	00	PIANO
01	49	E. PIANO PAD
02	48	PIANO & VIBES
03	23	BRASS ENS.
04	50	E. PNO & VIBES
05	51	FOLK GTR PAD
06	17	ORCHESTRA HIT
07	23	BRASS ENS.
08	54	FANTASY 1
09	29	PANFLUTE
10	41	CHORUS E. PNO
11	51	FOLK GTR PAD
12	49	E. PIANO PAD
13	03	CLAVI
14	41	CHORUS E. PNO
15	47	PIANO PAD
16	53	BRASS ENS.
17	04	E. ORGAN
18	21	TROMBONE
19	29	PANFLUTE
20	51	FOLK GTR PAD
21	23	BRASS ENS.
22	28	TENOR SAX
23	12	DIST. GUITAR
24	40	HONKY-TONK
25	04	E. ORGAN
26	71	VIBRAPHONE
27	47	PIANO PAD
28	49	E. PIANO PAD
29	83	FLUTE DUET
30	32	SY. LEAD
31	84	CLARINET TRIO
32	21	TROMBONE
33	52	JAZZ GTR PAD
34	81	TRUMPET DUET
35	47	PIANO PAD
36	21	TROMBONE
37	53	BRASS ENS.
38	06	ACCORDION
39	47	PIANO PAD

Style No.	Voice No.	Voice Name
40	81	TRUMPET DUET
41	21	TROMBONE
42	77	VIOLIN CNTRY
43	81	TRUMPET DUET
44	26	CLARINET
45	54	FANTASY 1
46	16	STRINGS
47	82	HORN DUET
48	47	PIANO PAD
49		

JAM TRACK

Jam Track No.	Voice No.	Voice Name
20	47	PIANO PAD
21	17	ORCHESTRA HIT*
22	48	PIANO & VIBES*
23	28	TENOR SAX
24	00	PIANO
25	12	DIST. GUITAR
26	00	PIANO
27	04	E. ORGAN
28	53	BRASS ENS.
29	49	E. PIANO PAD
30	65	PNO/VIBES*
31	28	TENOR SAX*
32	41	CHORUS E. PNO*
33	25	FLUTE*
34	81	TRUMPET DUET*
35	06	ACCORDION*
36	21	TROMBONE
37	77	VIOLIN CNTRY*
38	20	TRUMPET*
39	49	PIANO PAD

* The default voices change to other voices during the chord progressions.

Troubleshooting

Problem	Cause	Solution
When the PortaTone is turned on or off, a buzzing sound is temporarily produced.	Power current is flowing into the PortaTone.	This is not a malfunction.
The rhythm suddenly stops or the selected Voice is suddenly changed to the Piano Voice.	The battery power is too low.	Replace the batteries.
Not all notes are heard when playing a number of notes simultaneously.	Too many keys are pressed at the same time.	The PortaTone is polyphonic up to a maximum of 12 notes. (See the note on page 4.)

ORIGINAL SONG 1

Song Number 00

$\text{♩} = 104$ $\text{♩} = \text{♩}$

Dm7

G7 Dm7 G7 Dm7 G7 Dm7

V32 V76 (2nd time)

Dm7 $\frac{1}{G7}$ $\frac{2}{G7}$ B^bM7 A7aug Dm7

V48

B^bM7 A7aug Dm7 B^bM7 A7aug Dm7 F7 B^b7 A7aug

Dm7 to Coda

V39 6 6 6 6

$\frac{1}{6}$ $\frac{2}{6}$ D.S.

V47 D.S.

Coda Dm7

ORIGINAL SONG 2

Song Number 01

$\text{♩} = 128$

Am7 Bm7 E7 Am7 Bm7 E7 $\text{D.S. time straight}$ Am7

V00

Bm7 E7 Am7 Bm7 E7

Dm7 G7 C F $\frac{1}{Bm7^5}$ B7 E7sus4 E7 $\frac{2}{Bm7^5}$ E7 to Coda Am E7

V29

Am7 Bm7 E7 Am7

Bm7 E7 Dm7 G7 Cm7 Fm7 Bm7⁵ B7 E7

Coda Am Bm7⁵ E7 Am Bm7⁵ E7 Am

V47 D.S.

ORIGINAL SONG 3

Song Number 02

♩=132

Chords: Dm7, G7, C, A7, Dm7, G7, Em7, E^b7, Dm7, G7, Cm7, Am7, Dm7, G7, Cm7, Am7, Bm7, E7, Fm7, B^b7, Em7, A7, F[#]m7⁵, B7, Em7, E^b7, Dm7, G7, Cm7, Am7, Dm7, G7, Cm7, Am7, Gm7, C7, Fm7, B^b7, Em7, A7, Dm7, to C G7, C, Dm7, G7, Cm7, Am7, Dm7, G7, V72, Am7, Dm7, G7, Cm7, Am7, Dm7, G7, V72, Coda, G7, Em7⁵, A7, Dm7, G7, D^bm7, Cm7.

HOUSE OF THE RISING SUN

American Folk Song

Song Number 03

♩=124 ♩=♩♩

Chords: Fm7, Em7, Am, E7, Am, C, D, F, Am, C, Esus4, E7, Am, V47, C, D, E, F, Am, E7, Am, E7, Am, C, D, F, Am, C, Esus4, E7, Am, C, D, F, Am, E7, Am, Fm7, Em7, Am.

T. Moore

04

SUR LE PONT D'AVIGNON

French Folk Song

04

WALTZ OF THE FLOWERS

Tchaikovsky

Song Number 06

$\text{♩} = 144$

D

D

Gdim

D

V74

D

Gdim

D

A7

C7

Em

G

Em

V29

B^b7aug

A7

(D.S.time repeat)

D

V74

Gdim

D

Gdim

D

D7

V25

F[#]m

C[#]7

F[#]m

C[#]7

F[#]m

D7

C[#]7

F[#]m

D

Em7

A7

Em7

A7

D

D

V78

Em7

A7

B^b

B^b5

C

A7

V47

F[#]m

F7

to E7

A7

D.S.

Coda

A7

D

AIR ON THE G STRING

J. S. Bach

Song Number 07

$\text{♩} = 72$

G

A

D

D

DM7⁺

Bm

Bm7

G

E7

A

A7

F[#]dim

B7

V25

Em

Em7

A7

D

A

Bm

E7

A

D

E7

A

A7

A

A7

F[#]dim

B7

Em

Em7

F[#]7

Bm

F[#]7

Bm

G

Em7

F[#]7

Bm

Bm7

E

D

E

E7

A

Bm7

E7

A

A7

D

G

E

A

F[#]

B7

Em

Em7

A

D

D7

G

D7

G

Gm7

Em

Em7

A

D

Em7

D

A7

D

BEAUTIFUL DREAMER

S. C. Foster

Song Number **08**

J=172

Chord progression for Beautiful Dreamer:

- Line 1: F, Gm, C7
- Line 2: F, F (VI6), Gm
- Line 3: C7, to 1, F
- Line 4: C7, F, C7, F
- Line 5: G7, C7
- Line 6: Coda C7, F, A7, Dm, B^b, F, C7, F
- Line 7: Gm, C7, F

Other markings: D.S.

LONDONDERRY AIR

Irish Folk Song

Song Number **09**

J=160

Chord progression for Londonderry Air:

- Line 1: CM7, Dm7, Em7, Dm7, CM7, Dm7, Em7, Dm7
- Line 2: CM7, C7, FM7, Fm, CM7, Am7, Dm7, G7
- Line 3: CM7, C7, FM7, Fm, CM7, Am7, Dm7, G7, CM7, G7
- Line 4: CM7, FM7, CM7, G, Am7, D7, Dm7, G7
- Line 5: CM7, FM7, CM7, G, CM7, Am7, Dm7, G7, CM7, G7
- Line 6: CM7, Dm7, Em7, Dm7, CM7, Dm7, Em7, Dm7, CM7

Other markings: V00, V20, V48 (2nd time), V26

SYMPHONY NO. 40

Mozart

Song Number 10

$\text{♩} = 68$

Chords: Gm, E^bM7, Cm7, D7, Gm, V25, Gm, Cm, D7, D7, Gm, Cdim, Gm, Cdim, Gm, Em7⁵, E^b7, D7, C[#]dim, D7, C[#]dim, D7, C[#]dim, D, D, Gm, E^b, Cm, F7, B^b, F7, E^b, B^b, Cm, B^b, C7, D^b7, C7, D^b7, C7, D^b7, C7, D^b7, C7, F, B^bdim, C7, F, B^bdim, C7, F, D7, Gm, E^bM7, Cm7, D7, Gm.

DECK THE HALLS

Sacred Song

Song Number 11

$\text{♩} = 112$

Chords: CM7, Am7, Fm7, Dm, G7, CM7, Am7, Dm7, G7, C, CM7, Am7, Dm7, G7, C, G7, C, Am7, D7, G, G7, CM7, Am7, Dm7, G7, C, A^bM7, B^bM7, CM7.

AULD LANG SYNE

Scottish Folk Song

Song Number 12

$\text{♩} = 92$

Chords: F, Dm7, Gm7, C7, Dm7, G7, Gm7, C7, 2nd time (F, Dm7), C7, Gm7, C7,) F, (F7), B^b, (F), V00 (F), V47 (2nd time) Dm7, C7, Gm7, C7,) B^b, C7, F, B^b, (Fdim), (F), Dm7, C7, Gm7, C7,) B^b, C7, F, B^b, (Bdim), (F), Dm7, Gm7, C7, B^b, B^bm, F.

SILENT NIGHT

F. Gruber

Song Number 13

$\text{♩} = 84$

Chords: C, C7, F, Fm, C, G7, C, C, V49 (C), V50 (2nd time) C7, F, C, C, C7, F, C, G7, E7, Am, F^bm⁵, C, G7, C, A^b, A^b, E^b, B^b7, E^b, G7, C, F, Fm, C.

German Folk Song

Song Number **14**

Mexican Folk Song

Song Number **15**[illegible]

S. C. Foster

16

Beethoven

17

O, VRENELI

Swiss Folk Song

Song Number 18

♩=120

TROIKA

Russian Folk Song

Song Number 19

♩=120

SPECIAL MESSAGE SECTION

This product utilizes batteries or an external power supply (adapter). DO NOT connect this product to any power supply or adapter other than one described in the manual, on the name plate, or specifically recommended by Yamaha.

This product should be used only with the components supplied or; a cart, rack, or stand that is recommended by Yamaha. If a cart, etc., is used, please observe all safety markings and instructions that accompany the accessory product.

SPECIFICATIONS SUBJECT TO CHANGE:

The information contained in this manual is believed to be correct at the time of printing. However, Yamaha reserves the right to change or modify any of the specifications without notice or obligation to update existing units.

This product, either alone or in combination with an amplifier and headphones or speaker/s, may be capable of producing sound levels that could cause permanent hearing loss. DO NOT operate for long periods of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist. **IMPORTANT:** The louder the sound, the shorter the time period before damage occurs.

NOTICE:

Service charges incurred due to lack of knowledge relating to how a function or effect works (when the unit is operating as designed) are not covered by the manufacturer's warranty, and are therefore the owners responsibility. Please study this manual carefully and consult your dealer before requesting service.

ENVIRONMENTAL ISSUES:

Yamaha strives to produce products that are both user safe and environmentally friendly. We sincerely believe that our products and the production methods used to produce them, meet these goals. In keeping with both the letter and the spirit of the law, we want you to be aware of the following:

Battery Notice:

This product MAY contain a small non-rechargeable battery which (if applicable) is soldered in place. The average life span of this type of 92-BP

battery is approximately five years. When replacement becomes necessary, contact a qualified service representative to perform the replacement.

This product may also use "household" type batteries. Some of these may be rechargeable. Make sure that the battery being charged is a rechargeable type and that the charger is intended for the battery being charged.

When installing batteries, do not mix old batteries with new, or with batteries of a different type. Batteries **MUST** be installed correctly. Mismatches or incorrect installation may result in overheating and battery case rupture.

Warning:

Do not attempt to disassemble, or incinerate any battery. Keep all batteries away from children. Dispose of used batteries promptly and as regulated by the laws in your area. Note: Check with any retailer of household type batteries in your area for battery disposal information.

Disposal Notice:

Should this product become damaged beyond repair, or for some reason its useful life is considered to be at an end, please observe all local, state, and federal regulations that relate to the disposal of products that contain lead, batteries, plastics, etc. If your dealer is unable to assist you, please contact Yamaha directly.

NAME PLATE LOCATION:

The name plate is located on the bottom of the product. The model number, serial number, power requirements, etc., are located on this plate. You should record the serial number, and the date of purchase in the spaces provided below and retain this manual as a permanent record of your purchase.

Model No. PSR-110

Serial No. _____

Purchase Date _____

PLEASE KEEP THIS MANUAL

FCC INFORMATION

IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!

This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Yamaha may void your authority, granted by the FCC, to use the product.

IMPORTANT:

When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product **MUST** be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

NOTE:

This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the user's manual, may cause interference

harmful to the operation of other electronic devices. Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

- Relocate either this product or the device that is being affected by the interference.
- Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.
- In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to co-axial type cable.

If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Corporation of America, Electronic Service Division, 6600 Orangethorpe Ave, Buena Park CA, 90620

● This applies only to products distributed by Yamaha Corporation of America.

Specifications

		PSR-110
KEYBOARD	Number of Keys	49
	Key Size	Regular
	Register	C ₁ ~ C ₅
VOICE	Tone Generation	AWM
	Number of Voices	100
	Polyphony (Maximum)	12
STYLE	Number of Styles	50
	Auto Accompaniment	○
	Chord Detection	Multi
	Bass Chord Hold	○
SONG (DEMONSTRATION)	Number of Songs	20
	Songs for Music Minus-one	20
	Jam Tracks	20
PERCUSSION	Pads	4×8 Sounds
CONTROL		MUSIC MODE SELECTOR (POWER OFF/STYLE/VOICE/SONG), Numeric Keypad (0~9), ± Buttons, START/STOP, TEMPO ▲, ▼, VOLUME ▲, ▼, DEMO, PADS SELECT ◀, ▶
OTHER FITTINGS		DC IN, HEADPHONES/AUX. OUT, Music Stand
OPTIONAL ACCESSORIES		HPE-3/5 Headphones, PA-3/PA-4/PA-40 (US only) Power Adaptors, L-2C Keyboard Stand
SOUND SYSTEM		Stereo
	Amplifiers	2.1W×2
	Speakers	10cm×2
RATED POWER SUPPLY		D/R-20/SUM-1 (1.5V)×6, DC 10-12V: PA-3/4/40 Power Adaptors
DIMENSIONS (W×D×H)		915×266×98mm (36"×10 ¹ / ₂ "×3 ⁷ / ₈ "), 915×329×279mm (36"×13"×11") with Music Stand
WEIGHT		3.40kg (7 lbs., 8 oz.); without Music Stand and batteries
CASING		Polystyrene

Specifications are subject to change without notice.

For details of products, please contact your nearest Yamaha or the authorized distributor listed below.

Pour plus de détails sur les produits, veuillez-vous adresser à Yamaha ou au distributeur le plus proche de vous figurant dans la liste suivante.

Die Einzelheiten zu Produkten sind bei Ihrer unten aufgeführten Niederlassung und bei Yamaha Vertragshändlern in den jeweiligen Bestimmungsländern erhältlich.

Para detalles sobre productos, contacte su tienda Yamaha más cercana o el distribuidor autorizado que se lista debajo.

NORTH AMERICA

CANADA

Yamaha Canada Music Ltd.
135 Milner Avenue, Scarborough, Ontario,
M1S 3R1, Canada
Tel: 416-298-1311

U.S.A.

Yamaha Corporation of America
6600 Orangethorpe Ave., Buena Park, Calif. 90620,
U.S.A.
Tel: 714-522-9011

MIDDLE & SOUTH AMERICA

MEXICO

**Yamaha De Mexico S.A. De C.V.,
Departamento de ventas**
Javier Rojo Gomez No.1149, Col. Gpe Del
Moral, Deleg. Iztapalapa, 09300 Mexico, D.F.
Tel: 686-00-33

BRASIL

Yamaha Musical Do Brasil LTDA.
Ave. Reboucas 2636, São Paulo, Brasil
Tel: 55-11 853-1377

PANAMA

Yamaha De Panama S.A.
Edificio Interseco, Calle Elvira Mendez no.10, Piso
3, Oficina #105, Ciudad de Panama, Panama
Tel: 507-69-5311

OTHER LATIN AMERICAN COUNTRIES AND CARIBBEAN COUNTRIES

Yamaha Music Latin America Corp.
6101 Blue Lagoon Drive, Miami, Florida 33126,
U.S.A.
Tel: 305-261-4111

EUROPE

THE UNITED KINGDOM

Yamaha-Kemble Music(U.K.) Ltd.
Sherbourne Drive, Tilbrook, Milton Keynes,
MK7 8BL England
Tel: 0908-366700

IRELAND

Danfay Ltd.
61D, Sallynoggin Road, Dun Laoghaire, Co. Dublin
Tel: 01-2859177

GERMANY/SWITZERLAND

Yamaha Europa GmbH.
Siemensstraße 22-34, D-2084 Rellingen, F.R. of
Germany
Tel: 04101-3030

AUSTRIA/HUNGARY/SLOVENIA/ ROMANIA/BULGARIA

Yamaha Music Austria GesmbH.
Schleiergasse 20, A-1100 Wien Austria
Tel: 0222-60203900

THE NETHERLANDS

**Yamaha Music Benelux B.V.,
Verkoop Administratie**
Kanaalweg 18G, 3526 KL Utrecht, The Netherlands
Tel: 030-828411

BELGIUM/LUXEMBOURG

**Yamaha Music Benelux B.V.,
Brussels-office**
Keiberg Imperiastraat 8, 1930 Zaventem, Belgium
Tel: 02-7258220

FRANCE

**Yamaha Musique France, Division
Instruments Electroniques et de Scène**
BP 70-77312 Marne-la-Vallée Cedex 2, France
Tel: 01-64-61-4000

ITALY

**Yamaha Musica Italia S.P.A.,
Home Keyboard Division**
Viale Italia 88, 20020 Lainate(Milano), Italy
Tel: 02-935-771

SPAIN

Yamaha-Hazen Electronica Musical, S.A.
Jorge Juan 30, 28001, Madrid, Spain
Tel: 91-577-7270

PORTUGAL

Valentim de Carvalho CI SA
Estrada de Porto Salvo, Paço de Arcos 2780 Oeiras,
Portugal
Tel: 01-443-3398/4030/1823

GREECE

Philippe Nakas S.A.
Navarinou Street 13, P.Code 10680, Athens, Greece
Tel: 01-364-7111

SWEDEN

Yamaha Scandinavia AB
J. A. Wettergrens gata 1, Box 30053, 400 43
Göteborg, Sweden
Tel: 031-496090

DENMARK

YS Copenhagen Liaison Office
Finsensvej 86, DK-2000 Frederiksberg, Denmark
Tel: 31-87 30 88

FINLAND

Fazer Music Inc.
Aleksanterinkatu 11, SF 00100 Helsinki, Finland
Tel: 0435 011

NORWAY

Narud Yamaha AS
Østerndalen 29, 1345 Østerås
Tel: 02-24 47 90

ICELAND

Páll H. Pálsson
P.O. Box 85, 121 Reykjavik, Iceland
Tel: 01-19440

OTHER EUROPEAN COUNTRIES

Yamaha Europa GmbH.
Siemensstraße 22-34, D-2084 Rellingen, F.R. of
Germany
Tel: 04101-3030

AFRICA

**Yamaha Corporation,
International Marketing Division**
Nakazawa-cho 10-1, Hamamatsu, Japan 430
Tel: 053-460-2311

MIDDLE EAST

TURKEY/CYPRUS

Yamaha Musique France, Division Export
BP70-77312 Marne-la-Vallée Cedex 2, France
Tel: 01-64-61-4000

OTHER COUNTRIES

**Yamaha Corporation,
International Marketing Division**
Nakazawa-cho 10-1, Hamamatsu, Japan 430
Tel: 053-460-2311

ASIA

HONG KONG

Tom Lee Music Co., Ltd.
11/F., Silvercord Tower 1, 30 Canton Road,
Tsimshatsui, Kowloon, Hong Kong
Tel: 730-1098

INDONESIA

**PT. Yamaha Music Indonesia (Distributor)
PT. Nusantara**
Gedung Yamaha Music Center, Jalan Jend. Gatot
Subroto Kav. 4, Jakarta 12930, Indonesia
Tel: 21-520-2577

KOREA

Cosmos Corporation
#131-31, Neung-Dong, Sungdong-Ku, Seoul
Korea
Tel: 02-466-0021 ~ 5

MALAYSIA

Yamaha Music Malaysia Sdn., Bhd.
16-28, Jalan SS 2/72, Petaling Jaya, Selangor,
Malaysia
Tel: 3-717-8977

PHILIPPINES

Yupango Music Corporation
339 Gil J. Puyat Avenue, P.O. Box 885 MCPO,
Makati, Metro Manila, Philippines
Tel: 819-7551

SINGAPORE

Yamaha Music Asia Pte., Ltd.
Blk 17A Toa Payoh #01-190 Lorong 7
Singapore 1231
Tel: 354-0133

TAIWAN

Kung Hsue She Trading Co., Ltd.
No. 322, Section 1, Fu Hsing S. Road,
Taipei 106, Taiwan. R.O.C.
Tel: 02-709-1266

THAILAND

Siam Music Yamaha Co., Ltd.
865 Phornprapha Building, Rama I Road,
Patumwan, Bangkok 10330, Thailand
Tel: 2-215-3443

THE PEOPLE'S REPUBLIC OF CHINA AND OTHER ASIAN COUNTRIES

**Yamaha Corporation,
International Marketing Division**
Nakazawa-cho 10-1, Hamamatsu, Japan 430
Tel: 053-460-2311

OCEANIA

AUSTRALIA

Yamaha Music Australia Pty. Ltd.
17-33 Market Street, South Melbourne, Vic. 3205,
Australia
Tel: 3-699-2388

NEW ZEALAND

Music Houses of N.Z. Ltd.
146/148 Captain Springs Road, Te Papapa,
Auckland, New Zealand
Tel: 9-634-0099

COUNTRIES AND TRUST TERRITORIES IN PACIFIC OCEAN

**Yamaha Corporation,
International Marketing Division**
Nakazawa-cho 10-1, Hamamatsu, Japan 430
Tel: 053-460-2311

HEAD OFFICE Yamaha Corporation, Electronic Musical Instrument Division
Nakazawa-cho 10-1, Hamamatsu, Japan 430
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