YAMAHA

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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 in order to take full advantage of its various features.

Main Features

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

- Exceptionally realistic sounds with 100 AWM (Advanced Wave Memory) Voices, utilizing digital recordings
 of actual instruments.
- Dynamic, versatile rhythms and accompaniment with 100 music Styles.
- 20 Songs, for listening enjoyment or for playing along with when using the Minus One function.
- 20 Jam Track patterns, providing specially programmed rhythms and chord progressions for playing along with
- One Touch Setting, for automatically calling up an appropriate Voice for playing with the Style, Song or Jam Track you select.
- High-quality 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 gevery 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 and keys.

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.



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 the optional Yamaha PA-3/4/40 Power Adaptor.

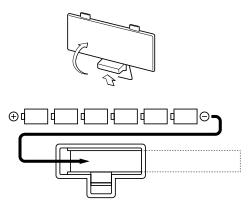
Using an AC Power Adaptor

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

Using Batteries

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 or different types of batteries (e.g., alkaline and manganese).

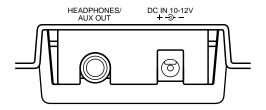
Auto Power OFF

The PSR-73 features an Auto Power OFF function that automatically turns the power OFF if the instrument is not used for approximately 30 minutes. This functions whether batteries or the AC power adaptor is used.

AccessoryJacks

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

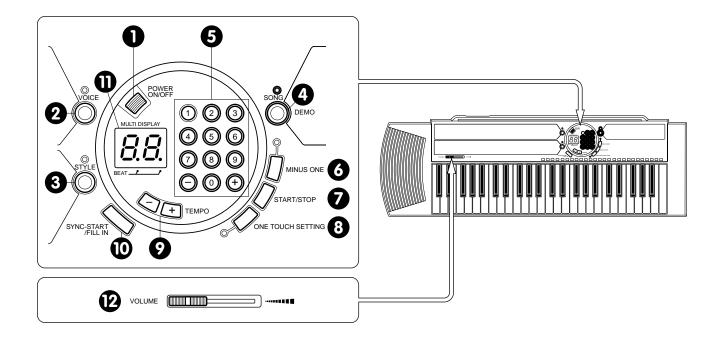
After making sure the PortaTone and any external devices are turned off, connect one end of a stereo audio cable to the LINE IN or AUX. IN jack(s) of the other device and the other end to the HEADPHONES/AUX OUT jack of the PortaTone.

The Music Stand

Insert the bottom edge of the music stand into the slot located at the top rear of the PSR-73 control panel.

Playing Your New PortaTone

This section briefly shows you how to use the various controls on the panel of the PortaTone.



Turning on the Power

Press the POWER ON/OFF button **①** to turn on the power of the PortaTone. Whenever the power is turned on, Voice 01 (PIANO) is automatically selected.

Selecting a Mode

Your PortaTone has three different operating modes: Voice, Style and Song — each selected from the corresponding panel buttons. VOICE ② lets you select and play a Voice. STYLE ③ lets you select and play a setting that includes a rhythm/accompaniment pattern. SONG ④ lets you select and play either a Song or a Jam Track pattern.

To select one of the modes:

Press the button corresponding to the desired mode. For now, press SONG 4 to select the Song mode.

Playing a Song in the Song Mode

A variety of Songs and special Jam Tracks have been recorded to your PortaTone to give you a taste of what you can do with the instrument, and to provide music and patterns for you to play along with.

To select and play one of the Songs:

on.)

With the Song mode selected, use the Numeric Keypad to enter the desired Song or Jam Track 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 also use the +/− buttons on the Numeric Keypad to step up or down through the preset numbers; holding down the appropriate button continuously changes the number. Note that the +/− buttons have a "wrap around" feature. For example, pressing the + button from the last number returns to Song 01. (Song 01 is also automatically selected when you turn the power

3

2. To play the selected Song, press the START/ STOP button ②.

Note that the dots in the MULTI DISPLAY ⑤ flash in time with the music. The left dot flashes at the first beat of every measure, and the right dot.

first beat of every measure, and the right dot flashes at the other beats. (For more information on the MULTI DISPLAY, see box at right.)

- **3.** Adjust the volume of the Song by using the VOLUME control **2**.
- 4. Although the Song is automatically set to play at a default tempo, you can change the speed of the Song by using the TEMPO buttons ●. Press TEMPO + to increase the speed and TEMPO to decrease it; holding down the appropriate button continuously increases/decreases the speed. (Note that the tempo value is briefly shown in the MULTI DISPLAY.) If you want to set the tempo back to its original default setting, press both TEMPO buttons simultaneously. (For more information on the Tempo functions, see box at right.)
- **5.** To stop the Song, press the START/STOP button **2** again.

NOTE

You should enter numbers on the Numeric Keypad relatively quickly. If you do not 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) is pressed before entering the second digit. Also, keep in mind that entry of numbers higher than 40 in the Song mode are ignored.

About the MULTIDISPLAY

As mentioned above, the dots in the MULTI DISPLAY flash in time with the rhythm, and the indication is used when a Song or Style plays back. This flashing provides a visual indication of both the tempo and the time signature of the rhythm.

For Songs and Styles in 4/4 time, the dots flash like this:



For Songs and Styles in 3/4 time, the dots flash like this:



About the Tempo Functions

Tempo Values

As mentioned above, the tempo value is shown briefly in the MULTI DISPLAY when one of the TEMPO buttons is pressed. The displayed tempo range is from 10 to 60; in actual tempo values, the range is from 40 to 240 beats per minute. (Each step in the tempo adjustment corresponds to 4 beats per minute.)

Default Tempos

Each Song and Style has been given a default or standard tempo. If you change the tempo, you can set it back to the original default setting, by pressing both TEMPO buttons simultaneously. Also, the tempo of a Song or Style returns to the default setting when selecting a different Song or Style. (The set tempo remains, however, when switching Styles during playback.) When you turn on the power of the PortaTone, the tempo is automatically set to the default setting of Style 01.

Voice Mode

The Voice mode features 100 authentic Voices. Many of these Voices have special preset characteristics or embellishments. The Voices are divided into various categories depending on their characteristics or the effects used.

Dual Voices (#41 - #56) feature two Voices mixed together in a layer for rich ensemble sounds. Split Voices (#57 - #67) also have two Voices, but rather than being layered, each is played from a different range of the keyboard. Sustain Voices (#68 - #72) extend the sound by adding a natural, slow release. Harmony Voices (#73 - #85) have an additional one-, two- or three-note harmony added to the original monophonic Voice. Finally, Echo Voices (#86 - #00) have an echo effect that adds delayed repeats to the original Voice.

Included in the Voices are special PERCUSSION Voices (#40 and #00) that lets you play various drum and percussion sounds from the keyboard. (Refer to the Percussion Assign List page 10.)

Selecting a Voice

1. Press the VOICE button to select the Voice mode.



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. 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 from the Style mode will be played.

About the Harmony Voices

Since Harmony Voices are designed to automatically play two or more notes with the notes you play on the keyboard, only one note can be played on the keyboard at a time. If several notes are played together, only the last note or highest note played will be heard.

The type of harmony used depends on the Voice that is selected. When a Style or Song/Jam Track is not being played back, the basic key for the harmony is always C. When a Style is played or the Stopped Accompaniment function is active, the harmony changes according to the chord played with the left hand. When a Song is played back, the harmony changes according to the chord progression of the Song or Jam Track.



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 Mode

The Style mode provides dynamic rhythm/accompaniment patterns — as well as Voice settings appropriate for each pattern — for various popular music styles, as listed on the panel. A total of 100 different Styles are available, and are divided into ten different categories. Each rhythm pattern also has a specially created companion Fill In pattern, which can be played by using the SYNC-START/FILL IN button.

Auto Accompaniment features built into the rhythms add the excitement of instrumental backing to your performance, letting you control the accompaniment by the chords you play. Auto Accompaniment effectively splits the keyboard into two sections: The upper is used for playing a melody line, and the lower (labeled "AUTO ACCOMP. SECTION" on the keyboard, including keys C1 through F2) is for the Auto Accompaniment function.

Selecting a Style

- **1.** Press the STYLE button to select the Style mode.
- 2. Use the Numeric land to select the desired Style number.
 - 7 8 9
 - \bigcirc \bigcirc \bigcirc
- **3.** You can start the selected rhythm by pressing the START/STOP button.

The PortaTone also has a Synchro Start function that allows you to start the rhythm by simply pressing a key on the keyboard. To use Synchro Start, first press the SYNC-START/FILL IN

button, then press one of the keys in the AUTO

ACCOMP. SECTION.

Synchro Start is automatically set to stand-by when you s

Synchro Start is automatically set to stand-by when you select the Style mode. (The dots in the MULTI DISPLAY flash to indicate stand-by status.)

- 4. With the rhythm running, you're ready to try out the Auto Accompaniment feature. Try playing a few single notes with your left hand, and notice how the bass and chord accompaniment change with each key you play. (Refer to the boxed sections on pages 7 and 8 for more information on how to use Auto Accompaniment.)
- **5.** Use the TEMPO buttons to change the tempo of the Style as it's playing. (For more information on the Tempo functions, see page 4.)
- **6.** While the Style is playing, you can add variation to the rhythm by playing special Fill In patterns. To play a Fill In pattern, press the SYNC-START/FILL IN button.

NOTE

The Fill In pattern may not play precisely when you press the SYNC-START/FILL IN button, but instead starts on the beat immediately following your press of the button. Also, depending on when you press the button, only a portion of the Fill In might be played. Both of these situations are normal and are done to ensure that the Fill In pattern complements the basic rhythm, rather than disrupting it.

7. To stop the rhythm, press the START/STOP button again.

Pressing the START/STOP button while the rhythm is playing produces a simple ending phrase. This also applies to playing Jam Track patterns in the Song mode.

Using the Auto Accompaniment Function/Multi Fingering

The Auto Accompaniment 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 playing keys in the AUTO ACCOMP. SECTION of the keyboard using either the "Single Finger" or "Fingered" method. With Single Finger you can simply play a one-, two- or three-finger chord indication (see Single Finger Chords below). The Fingered technique is that of conventionally playing all the notes of the chord. Whichever method you use, the PortaTone "understands" what chord you indicate and then automatically generates the accompaniment.



Chords played in the AUTO ACCOMP. SECTION of the keyboard are also detected and played when the accompaniment is stopped (Stopped Accompaniment function). In this condition, the Voices used for the bass and chords are automatically selected.



To use the Minus One function with one of the Styles, press the MINUS ONE button. (The LED next to the button lights.) Minus One cancels all chord accompaniment, leaving only the bass and basic rhythm of the Style.

Setting Auto Accompaniment to Single Finger or Fingered

Though detection of the Single Finger and Fingered methods is automatic, you can set Auto Accompaniment to function exclusively in either the Single Finger or Fingered mode.

To set Auto Accompaniment to Single Finger, turn the power off, then hold down the "–" button on the Numeric Keypad and simultaneously turn the power on. "SF" (Single Finger) briefly appears in the MULTI DISPLAY.



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

To set Auto Accompaniment to Fingered, follow the same steps, holding down the "+" button instead. "F" (Fingered) briefly appears in the MULTI DISPLAY. 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 here as an example; other keys follow the same rules. For example, B 7 is played as B and A.)



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.

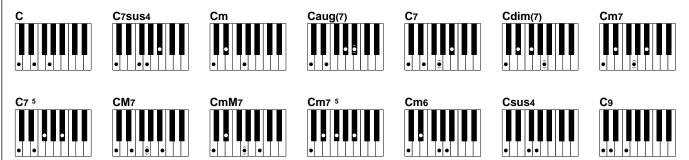


Press the root note together with any white and black key to the left of it (three keys altogether).

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.

Fingered Chords in the Key of C



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



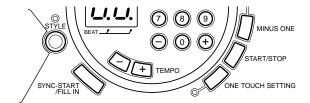
- If the chord is inverted (i.e., C-E-G is played as G-C-E), the PortaTone will still recognize it as a C chord.
- Minor 6th chords are recognized only in root position, however; all other inversions are interpreted as minor 7th/flatted 5th.
- If augmented and diminished 7th chords are inverted, the lowest note will be recognized as the root.
- 7th flatted 5th chords may be played with the lowest note as the root or the 7th.
- 9th chords are recognized only in root position; all other inversions are interpreted as suspended 4th.
- Augmented 7th and diminished 7th chords are interpreted as simple augmented and diminished.
- The PortaTone also has a Chord Cancel function to stop the chord accompaniment but allow the rhythm pattern to continue playing. To use Chord Cancel, simultaneously press any three consecutive notes in the AUTO ACCOMP. SECTION; for example, C, C and D.

One Touch Setting in the Style Mode

The One Touch Setting function automatically selects an appropriate Voice for playing with the Style you select. In other words, when One Touch Setting is on, the Voice automatically changes when you change the Style.

To turn on the One Touch Setting function, press the ONE TOUCH SETTING button. (The LED next to the button lights.)

To turn the function off, press the button again.



NOTE

When the One Touch Setting is on, selecting another Style will automatically reset the tempo to the default of the selected Style.

Song Mode

The Song mode features special Songs and Jam Track patterns that have been created using the rich sounds and sophisticated accompaniment functions of the PortaTone.

The Songs are generally for your listening enjoyment; however, you can also play along with them on the keyboard. Also, by using the Minus One function, you can "mute" the original melody and play it manually on the keyboard yourself. The Jam Track patterns in this mode let you "jam" or play along with a variety of dynamic rhythm styles and chord changes.

Selecting and Playing a Song or Jam Track Pattern

1. Press the SONG button to select the Song mode.



2. Use the Numeric Keypad to select the desired Song or Jam Track number.

- \bigcirc
- **4 6 6**
- 7 8 9
- \bigcirc \bigcirc \bigcirc

3. Start the selected Song or Jam Track by pressing the START/STOP button.

You can also start the selected Song or Jam Track pattern with the Synchro Start function (as in the Style mode) by simply pressing any key of the keyboard.

- **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.

If playback is not stopped, all Songs play back repeatedly in succession, indefinitely. (However, if Minus One is on, only the selected Song repeatedly plays back.) If a Jam Track pattern is selected, only the selected pattern repeats indefinitely.

About 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. You can turn Minus One on before starting a Song, or do it even while a Song is playing. To help you play the "missing" melody, scores for all Songs have been provided; see pages 13-22.

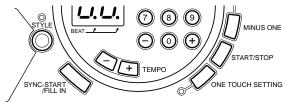
To use the Minus One function with the selected Song, press the MINUS ONE button (either before starting the Song or while it is playing). (The LED next to the button lights.)

One Touch Setting in the Song Mode

The One Touch Setting function works with the Minus One function and automatically selects an appropriate Voice for playing the melody along with the Song you select. Though the Minus One function is not used with the Jam Track patterns, One Touch Setting works the same way with Jam Track, automatically selecting an appropriate Voice.

To turn on the One Touch Setting function, press the ONE TOUCH SETTING button. (The LED next to the button lights.)

To turn the function off, press the button again.



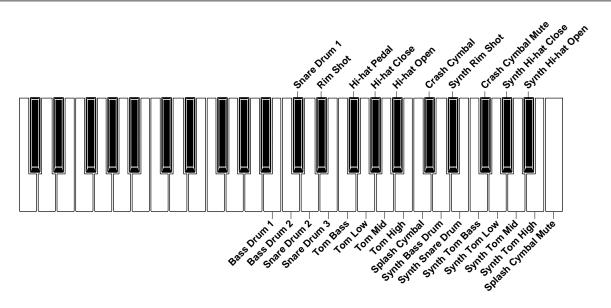


Keep in mind that even with the One Touch Setting function on, there are some Songs and Jam Track patterns which change the selected Voice in the middle of the Song or pattern.

Troubleshooting

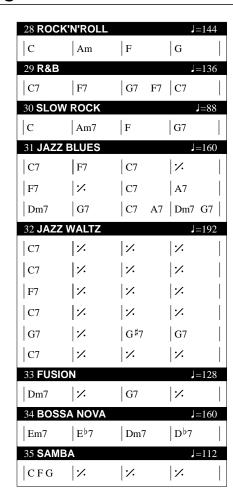
Problem	Possible Cause and Solution
When the PortaTone is turned on or off, a buzzing sound is temporarily produced.	This is normal and indicates that power is flowing into the PortaTone.
The sound of the voices or rhythms seems unusual or strange.	The battery power is too low. Replace the batteries.
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 5.)
The sound of the Voice changes from note to note.	The AWM tone generation method uses multiple recordings (samples) of an instrument across the range of the keyboard; thus, the actual sound of the Voice may be slightly different from note to note.
The power cannot be turned on.	Quick, successive pressing of the POWER ON/OFF button may fail to turn the power on. When using the POWER ON/OFF button, wait a short time between successive presses.

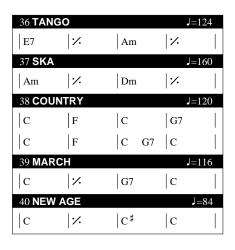
Percussion Assign List (Voices 40 and 00)



Jam Track Chord Progression List







One Touch Setting List

Turning on the One Touch Setting function, the following voice and tempo is automatically selected.

Jam Track List

NO.	l	
	VOICE	TEMPO
21	48 PIANO PAD	120
22	18 ORCHESTRA HIT	116
23	49 PIANO & VIBES	92
24	29 TENOR SAX	104
25	01 PIANO	144
26	13 DIST GUITAR	120
27	01 PIANO	136
28	05 E ORGAN	144
29	54 BRASS ENS	136
30	50 E PIANO PAD	88
31	66 PNO/VIBES	160
32	29 TENOR SAX	192
33	42 CHORUS E PNO	128
34	26 FLUTE	160
35	82 TRUMPET DUET	112
36	07 ACCORDION	124
37	22 TROMBONE	160
38	78 VIOLIN CNTRY	120
39	21 TRUMPET	116
40	50 E PIANO PAD	84

Keep in mind that even with the One Touch Setting function on, there are some Jam Track patterns which change the selected voice in the middle of the pattern.

Style List

Diyle		TEMPO
NO.	VOICE	ТЕМРО
01	32 SY BRASS	152
02	33 SY LEAD	188
03	42 CHORUS E PNO	104
04	56 FANTASY2	200
05	50 E PIANO PAD	120
06	52 FOLK GTR PAD	92
07	01 PIANO	92
08	26 FLUTE	92
09	19 VIBRAPHONE	80
10	05 E ORGAN	68
11	50 E PIANO PAD	112
12	53 JAZZ GUITAR PAD	116
13	55 FANTASY 1	112
14	51 E PNO & VIBES	112
15	52 FOLK GTR PAD	112
16	49 PIANO & VIBES	96
17	24 BRASS ENS	104
18	18 ORCHESTRA HIT	116
19	04 CLAVI	112
20	30 PANFLUTE	108
21	50 E PIANO PAD	140
22	32 SY BRASS	120
23	54 BRASS ENS DUAL	120
24	50 E PIANO PAD	128
25	82 TRUMPET DUET	120
26	31 HARMONICA	96
27	22 TROMBONE	120
28	42 CHORUS E PNO	88
29	19 VIBRAPHONE	84
30	05 E ORGAN	104
31	05 E ORGAN	104
32	29 TENOR SAX	92
33	73 PIANO BLOCK	152
34	05 E ORGAN	144
35	44 12STR GUITAR	140
36	13 DIST GUITAR	120
37	52 FOLK GTR PAD	116
38	30 PANFLUTE	128
39	42 CHORUS E PNO	120
40	68 PIANO SUSTAIN	120
41	05 E ORGAN	176
42	29 TENOR SAX	176
43	41 HONKY-TONK	136
44	77 E ORGAN TRIO	156
45	24 BRASS ENS	136
46	22 TROMBONE	88
47	21 TRUMPET	148
48	19 VIBRAPHONE	108
49	54 BRASS ENS DUAL	152
50	22 TROMBONE	176

NO.	VOICE	TEMPO
51	09 JAZZ GTR	160
52	31 HARMONICA	140
53	19 VIBRAPHONE	120
54	22 TROMBONE	148
55	26 FLUTE	128
56	07 ACCORDION	124
57	82 TRUMPET DUET	104
58	22 TROMBONE	88
59	81 MARIMBA TRIO	68
60	22 TROMBONE	160
61	05 E ORGAN	124
62	24 BRASS ENS	136
63	20 MARIMBA	112
64	82 TRUMPET DUET	200
65	22 TROMBONE	116
66	81 MARIMBA TRIO	152
67	72 VIBRAPHONE SUSTAIN	84
68	26 FLUTE	96
69	72 VIBRAPHONE SUSTAIN	152
70	21 TRUMPET	104
71	29 TENOR SAX	208
72	80 VIBES BLOCK	140
73	26 FLUTE	140
74	33 SY LEAD	128
75	84 FLUTE DUET	112
76	33 SY LEAD	120
77	49 PIANO&VIBES	100
78	50 E PIANO PAD	192
79	31 HARMONICA	120
80	07 ACCORDION	112
81	74 PIANO CNTRY	120
82	05 E ORGAN	132
83	78 VIOLIN CNTRY	120
84	31 HARMONICA	76
85	80 VIBES BLOCK	88
86	09 J GUITAR	204
87	11 E GUITAR	176
88	27 CLARINET	116
89	14 VIOLIN	132
90	17 STRINGS	200
91	73 PIANO BLOCK	144
92	29 TENOR SAX	120
93	82 TRUMPET DUET	112
94	25 PICCOLO	124
95	07 ACCORDION	120
96	27 CLARINET	128
97	83 HORN DUET	72
98	55 FANTASY 1	180
99	17 STRINGS	148
100	48 PIANO PAD	84

SongScores

Not available

Specifications

		PSR-73	
KEYBOARD	Number of Keys	49	
	Key Size	Regular	
	Register	C1-C5	
	Tone Generation	AWM	
VOICE	Number of Voices	100	
	Polyphony (Maximum)	12 notes	
	Number of Styles	100	
STYLE	Auto Accompaniment	Yes	
	Chord Detection	Multi (Single Finger, Fingered)	
	Songs	20	
SONG/JAM TRACK	Jam Track Patterns	20	
SUNG/JAWI TRACK	Minus One	Yes	
	One Touch Setting	Yes	
CONTROLS		POWER ON/OFF, VOICE, STYLE, SONG, Numeric Keypad, MINUS ONE, START/STOP,	
		ONE TOUCH SETTING, TEMPO, SYNC-START/FILL IN, MULTI DISPLAY, VOLUME	
OTHER TERMINALS	, FITTINGS	DC IN, HEADPHONES/AUX OUT, Music Stand	
AMPLIEED(0)		using Power Adaptor: 3.8 W	
AMPLIFIER(S)		using batteries: 3.8 W	
SPEAKERS		10 cm, 4	
POWER CONSUMPT	TON	8.0 w (using Power Adaptor PA-3)	
RATED POWER SUPPLY		DC 10-12 V: 6 "D" size/R-20/SUM-1 (1.5 V) batteries, or PA-3/4/40 Power Adaptor	
DIMENSIONS (W x D x H)		964 × 287 × 113mm	
		$(38" \times 11^{-1}/4" \times 4^{-1}/2")$	
WEIGHT		3.6 kg (7 lbs., 15 oz.)	
CASING		Polystyrene	
OPTIONAL ACCESSORIES		HPE-3/150 Headphones, PA-3/4/40 Power Adaptors (PA-40 for use in U.S. only),	
		L-2C Keyboard Stand	

Specifications are subject to change without notice.

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

NOTICE:

Service charges incurred due to a 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 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 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 model number, serial number, and the date of purchase in the spaces provided below and retain this manual as a permanent record of your purchase.

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Serial No.

Purchase Date

PLEASE KEEP THIS MANUAL

FCC INFORMATION (U.S.A.)

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 users 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, CA90620

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