YAMAHA
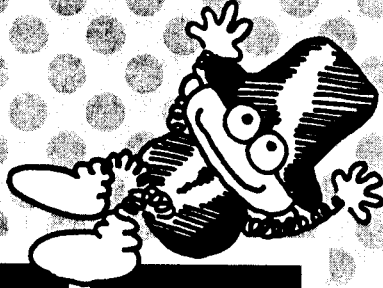## PortaSound

PSS-6
OWNER'S MANUAL

Congratulations on your purchase of the Yamaha PortaSound. You now own a portable keyboard that packs advanced functions and great sound in a highly compact size. Read this Owner's Manual carefully while playing your new PortaSound in order to take full advantage of its various features.

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 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.

Model _____

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.

Main Features

Your PortaSound has the following features and functions:

- Authentic instrument sounds with 100 AWM (Advanced Wave Memory) Voices, utilizing digital recordings of actual instruments.
- 15 Songs, for listening enjoyment or for playing along with when using the Minus One function.
- 15 Jam Track patterns, providing specially programmed rhythms and chord progressions for playing along with.
- Built-in amplifier/speaker system.

Taking Care of Your PortaSound

Your PortaSound will give you years of playing pleasure, provided you follow the simple precautions given below.

- 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.
- Do not use your PortaSound close to television sets, radios or similar equipment since this may cause interference noise in the other appliance.
- Protect your PortaSound from strong impact. Be careful not to drop it or place heavy objects on it. Avoid applying excessive force to the controls and keys.
- After use, always turn off the POWER switch. When not using your PortaSound for long periods, be sure to remove the batteries to avoid damage through battery leakage.
- 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 PortaSound for a long time, since it may adhere to the exterior.

**NOTE** Yamaha is not responsible for damage caused by improper usage.

Power Requirements

Your PortaSound runs on conventional batteries (five size "AA" 1.5-volt; sold separately).

Inserting Batteries

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

OPEN

DC:7.5V SUM-3, "AA"SIZE, R-6 OR EQUIV.
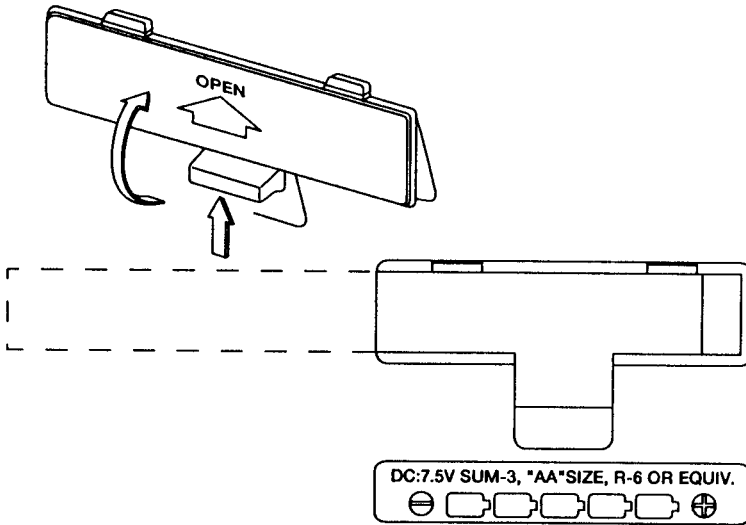
When the Batteries Run Down

When the batteries run low and the battery voltage drops below a certain level, the PortaSound may not sound or function properly. As soon as this happens, replace them with a complete set of five new batteries. Never mix old and new or different types of batteries (e.g., alkaline and manganese).
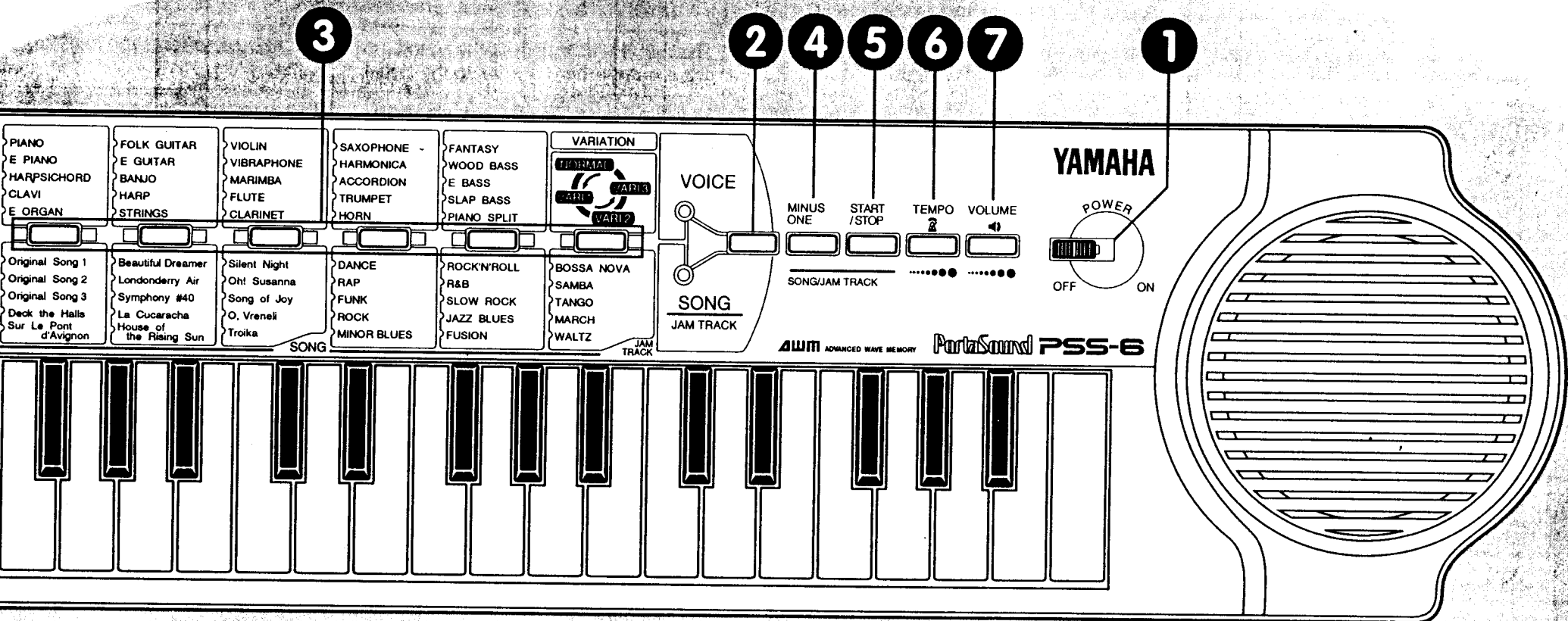
PIANO	FOLK GUITAR	VIOLIN	SAXOPHONE	FANTASY	VARIATION
E PIANO	E GUITAR	VIBRAPHONE	HARMONICA	WOOD BASS	NORMAL
HARPSICHORD	BANJO	MARIMBA	ACCORDION	E BASS	VARI1 VARI3
CLAVI	HARP	FLUTE	TRUMPET	SLAP BASS	
E ORGAN	STRINGS	CLARINET	HORN	PIANO SPLIT	VARI2

VOICE

MINUS ONE START /STOP TEMPO VOLUME

YAMAHA

POWER

Original Song 1	Beautiful Dreamer	Silent Night	DANCE	ROCK'N'ROLL	BOSSA NOVA
Original Song 2	Londonderry Air	Oh! Susanna	RAP	R&B	SAMBA
Original Song 3	Symphony #40	Song of Joy	FUNK	SLOW ROCK	TANGO
Deck the Halls	La Cucaracha	O, Vreneli	ROCK	JAZZ BLUES	MARCH
Sur Le Pont d'Avignon	House of the Rising Sun	Troika	MINOR BLUES	FUSION	WALTZ

SONG

SONG

JAM TRACK

JAM TRACK

SONG/JAM TRACK

OFF ON

AWM ADVANCED WAVE MEMORY PortaSound PSS-6

Playing Your PortaSound

Turning on the Power

Set the *POWER ON/OFF switch* ❶ to ON, to turn on the power of the PortaSound. When the power is on, the Voice mode is automatically selected and the PIANO Voice is called up.

To conserve battery power, always turn the PortaSound off when not in use. "❚"

Selecting a Mode

Your PortaSound has two different operating modes: Voice and Song. Switch between the two modes by pressing the *VOICE/SONG Mode button* ❷. (The LED of the selected mode lights.)

In the Voice mode, you can select and play a Voice. In the Song mode, you can select and play either a Song or a Jam Track pattern.

Selecting and Playing Voices in the Voice Mode

The PortaSound features 25 different instrument Voices, each of them with three additional Variations. Depending on the Voice selected, the Variations apply special harmonies, sustain or echo effects to the Voice.
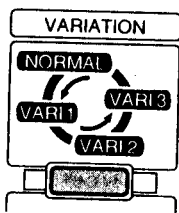
1 **Make sure that the Voice mode is selected. Press the _VOICE/SONG Mode button_ ❷ until the green VOICE LED lights.**

2 **Select the desired Voice with the _VOICE/SONG Select buttons_ ❸ .**

Press the button corresponding to the appropriate section of Voices. For example, to select the FOLK GUITAR Voice, press VOICE/SONG Select button below the section containing "FOLK GUITAR" (the second button from the left).

To select other Voices in the same section, press the VOICE/SONG Select button of that section repeatedly until you hear the sound of the desired Voice. (Each press of the button plays a single note of the selected Voice, so that you can "audition" the Voice.)

3 **To select a Variation of the Voice, press the _VARIATION button_ (the VOICE/SONG Select button on the far right, in the VARIATION section).**

```
┌─────────────────┐
│    VARIATION     │
│ ┌──────────────┐ │
│ │   NORMAL     │ │
│ │ ┌──────┐ ┌──────┐
│ │ │VARI1 │ │VARI3 │
│ │ └──────┘ └──────┘
│ │   ┌──────┐    │ │
│ │   │VARI2 │    │ │
│ │   └──────┘    │ │
│ └──────────────┘ │
│  ┌─────────────┐ │
└──┴─────────────┴─┘
```

Each press of the button cycles through the Normal Voice and its Variations (1, 2 and 3). As with Voice selection, each press of the button plays a note, letting you "audition" the Variations.

Adjusting the Volume

Adjust the volume of the Voice by using the VOLUME button ❼.

Each press of the button increases the volume or decreases it. (A high-pitched "click" indicates an increase, while a low-pitched "click" indicates a decrease.)

To quickly set the volume to maximum (or minimum), press and hold down the VOLUME button to step rapidly through the "clicks." (If the "click" pitch is high, the volume is being increased toward the maximum; a low pitch means it is being decreased toward the minimum.) When the click sound stops, the volume is at the maximum (or minimum).

When the power is turned on, the volume is automatically set to maximum.

> **⚠ NOTE** The PortaSound is polyphonic up to a maximum of twelve notes (including the sounds of a Song or Jam Track pattern). However, only two notes can be played at a time from the keyboard. (The amount of sounding notes may be even less if you play the keyboard while pressing one of the panel switches.) Thus, if you play too many notes at one time, some may not sound and/or others may be cancelled.

Selecting and Playing Songs or Jam Tracks in the Song Mode

A variety of Songs and special Jam Tracks have been recorded to your PortaSound to give you a taste of what you can do with the instrument. 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.

To select and play one of the Songs or Jam Tracks:

1 **Make sure that the Song mode is selected. Press the VOICE/SONG Mode button ❷ until the red SONG LED lights.**

2 **Select the desired Song or Jam Track with the VOICE/SONG Select buttons ❸.**
Press the button corresponding to the appropriate section. For example, to select the Song "Beautiful Dreamer," press VOICE/SONG Select button below the section containing "Beautiful Dreamer" (the second button from the left).

Playback of the Song or Jam Track starts as soon as the button is pressed. Select other Songs/Jam Tracks in the same section by pressing the VOICE/SONG Select button of that section repeatedly until you hear the desired selection. (Refer also to the list "Jam Track Mode — Chord Progressions" at the end of this manual.)

Note that the SONG LED flashes in time with the music.

3 **Adjust the Volume of the Song or Jam Track by using the VOLUME buttons ❼.**
(See "Adjusting the Volume" above for more information.)

4 **You can also adjust the playback speed with the TEMPO button ❻. Each press of the button increases the tempo or decreases it.**
(As with the VOLUME button, a high-pitched "click" indicates an increase, while a low-pitched "click" indicates a decrease.)

To quickly set the tempo to maximum (or minimum), press and hold down the TEMPO button to step rapidly through the "clicks." (If the "click" pitch is high, the tempo is being increased toward the maximum; a low pitch means it is being decreased toward the minimum.) When the click sound stops, the tempo is at the maximum (or minimum). The tempo range is from 40 to 180 bpm (beats per minute), and is adjustable in steps of 20 bpm.

5 **To stop playback, press the START/STOP button ❺.**
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.
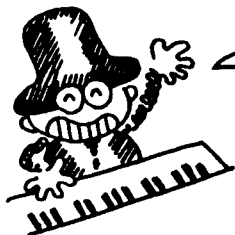
Using the Minus One Feature

Minus One, as its name implies, takes away the melody part of the Song, allowing you to play that part yourself.

To start the Minus One function with the selected Song, press the *MINUS ONE button* ❹ (either before starting playback or during playback). As soon as the MINUS ONE button is pressed, Song playback starts immediately, with the melody part left out. You can restore the melody part by pressing the MINUS ONE button while the Song is playing.

When used with one of the Jam Track patterns, Minus One cancels all bass and chord accompaniment, leaving only the basic rhythm of the Jam Track.

Voice List

PIANO		STRINGS		TRUMPET	
NORMAL	Piano	NORMAL	Strings	NORMAL	Trumpet
VARI1	Honky-tonk Piano	VARI1	Piano & Strings	VARI1	Trumpet & Strings
VARI2	Piano Country	VARI2	Electric Piano & Strings	VARI2	Trumpet Duet
VARI3	Piano Block	VARI3	Strings Trio	VARI3	Trumpet Trio
E PIANO		**VIOLIN**		**HORN**	
NORMAL	Electric Piano	NORMAL	Violin	NORMAL	Horn
VARI1	Chorused Electric Piano	VARI1	Violin Country	VARI1	Horn & Strings
VARI2	Electric Acoustic Piano	VARI2	Violin Duet	VARI2	Horn Duet
VARI3	Electric Piano Trio	VARI3	Violin Trio	VARI3	Horn Trio
HARPSICHORD		**VIBRAPHONE**		**FANTASY**	
NORMAL	Harpsichord	NORMAL	Vibraphone	NORMAL	Fantasy
VARI1	Harpsichord Echo	VARI1	Piano & Vibraphone	VARI1	Synth Brass
VARI2	Harpsichord Octave	VARI2	Electric Piano & Vibraphone	VARI2	Synth Lead
VARI3	Harpsichord Trio	VARI3	Vibraphone Block	VARI3	Synth Celesta
CLAVI		**MARIMBA**		**WOOD BASS**	
NORMAL	Clavi	NORMAL	Marimba	NORMAL	Wood Bass
VARI1	Clavi Echo	VARI1	Marimba Echo	VARI1	Wood Bass/Piano
VARI2	Sustained Clavi	VARI2	Marimba Trio	VARI2	Wood Bass/Electric Organ
VARI3	Clavi Block	VARI3	Marimba Block	VARI3	Wood Bass/Vibraphone
E ORGAN		**FLUTE**		**E BASS**	
NORMAL	Electric Organ	NORMAL	Flute	NORMAL	Electric Bass
VARI1	Rotary Electric Organ	VARI1	Flute Duet	VARI1	Electric Bass/Electric Piano
VARI2	Electric Organ Trio	VARI2	Panflute	VARI2	Electric Bass/Clavi
VARI3	Electric Organ Block	VARI3	Panflute Duet	VARI3	Electric Bass/Vibraphone
FOLK GUITAR		**CLARINET**		**SLAP BASS**	
NORMAL	Folk Guitar	NORMAL	Clarinet	NORMAL	Slap Bass
VARI1	12String Guitar	VARI1	Clarinet & Strings	VARI1	Slap Bass/Electric Piano 1
VARI2	Folk Guitar & Strings	VARI2	Clarinet Trio	VARI2	Slap Bass/Electric Piano 2
VARI3	Folk Guitar Echo	VARI3	Clarinet Block	VARI3	Slap Bass/Synth Brass
E GUITAR		**SAXOPHONE**		**PIANO SPLIT**	
NORMAL	Electric Guitar	NORMAL	Saxophone	NORMAL	Piano/Vibraphone
VARI1	Mute Guitar	VARI1	Sax Ensemble	VARI1	Piano/Flute
VARI2	12 Strings Electric Guitar	VARI2	Sax & Strings	VARI2	Piano/Harmonica
VARI3	Electric Guitar Echo	VARI3	Sax Block	VARI3	Piano/Violin
BANJO		**HARMONICA**			
NORMAL	Banjo	NORMAL	Harmonica		
VARI1	Banjo Echo	VARI1	Harmonica & Strings		
VARI2	Banjo Duet	VARI2	Harmonica Duet		
VARI3	Banjo Trio	VARI3	Harmonica Trio		
HARP		**ACCORDION**			
NORMAL	Harp	NORMAL	Accordion		
VARI1	Sustained Harp	VARI1	Accordion Octave		
VARI2	Harp Echo	VARI2	Accordion Trio		
VARI3	Harp Duet	VARI3	Accordion Block		

• Dual voices have two voices layered together for ensemble sounds.

• Split voices have two voices. Each is played from a different range of the keyboard(F#3 and below for the lower voice, G3 and above the upper).

• Harmony Voice (Country, Trio, Block, Duet) have an additional one-, two-, three- note harmony added to the original monophonic voice. If several notes are played together, only the last note played will be heard. When a Song or Jam Track does not play back, the basic key for the harmony is always C. When a Song or Jam Track plays back, the harmony changes according to the chord progression of the Song or Jam Track.

• Sustain voices extend the sound by adding a natural, slow release.

• Echo voices have an echo effect that adds delayed repeats to the original voice.

Jam Track Mode — Chord Progressions

When a Jam Track pattern is selected, Voice and Tempo settings appropriate to the pattern are also automatically selected. Some of the Jam Track patterns may also feature Voice changes that coincide with changes in the chord progression.

DANCE ♩=120
Am7	%	Em7	%	
Dm7	%	Am7	%	

RAP ♩=120
Am7	%	%	%	
Am7	%	%	%	

FUNK ♩=100
C7	F7	C7	F7	

ROCK ♩=120
C	%	%	%	
F	%	C	%	
G	F	C	G	

MINOR BLUES ♩=140
Am	%	%	%	
Dm	%	Am	%	
E	%	Am	%	

ROCK'N'ROLL ♩=140
C	Am	F	G	

R&B ♩=140
C7	F7	G7 F7	C7	

SLOW ROCK ♩=80
C	Am7	F	G7	

JAZZ BLUES ♩=160
C7	F7	C7	%	
F7	%	C7	A7	
Dm7	G7	C7 A7	Dm7 G7	

FUSION ♩=120
Dm7	%	G7	%	

BOSSA NOVA ♩=160
Em7	E♭7	Dm7	D♭7	

SAMBA ♩=100
C F G	%	%	%	

TANGO ♩=120
E7	%	Am	%	

MARCH ♩=120
C	%	G7	C	

WALTZ ♩=160
C	%	G7	%	
G7	%	C	%	

Specifications

KEYBOARD	Number of Keys: 32, Key Size: Ultra mini, Register: F2 - C5
VOICE	Tone Generation: AWM, Number of Voices: 100 (25 x 4 Variations) Polyphony (Maximum): 12 notes
SONG/JAM TRACK	Songs: 15, Jam Track Patterns: 15, Minus One: Yes
CONTROLS	POWER ON/OFF, VOICE, SONG, MINUS ONE, START/STOP, TEMPO, VOLUME
AMPLIFIER	2.0 W
SPEAKER	7.7 cm x 1 , 4Ω
RATED POWER SUPPLY	DC 7.5 V: 5 "AA" size/R-6/SUM-3 (1.5 V) batteries
DIMENSIONS (W x D x H)	417mm x 126mm x 43mm (16-3/8" x 5" x 1-3/4")
WEIGHT	0.52kg (1 lb., 2oz.)
CASING	Polystyrene

Specifications are subject to change without notice.

Troubleshooting

Problem	Possible Cause and Solution
When the PortaSound is turned on or off, a buzzing sound is temporarily produced.	This is normal and indicates that power is flowing into the PortaSound.
The sound is distorted, or the sound drops out, or there is noise in the signal.	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 PortaSound is polyphonic up to a maximum of twelve notes. (See the note about polyphony in the section "Selecting and Playing Voices in the Voice Mode".)
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 panel switches do not work.	If two or more keys on the keyboard are being held down at the same time you are pressing a panel switch, the panel switch will not function.