YAMAHA

PORTATONE

PSR-225GM

Owner's Manual

YAMAHA EDUCATION SUITE

TOUCH RESPONSE   STEREO SAMPLED PIANO   GENERAL MIDI

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.

WARNING: Do not place this product in a position where anyone could walk on, trip over ,or roll anything over power or connecting cords of any kind. The use of an extension cord is not recommended! IF you must use an extension cord, the minimum wire size for a 25' cord (or less) is 18 AWG. NOTE: The smaller the AWG number ,the larger the current handling capacity. For longer extension cords, consult a local electrician.

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.

Some Yamaha products may have benches and / or accessory mounting fixtures that are either supplied with the product or as optional accessories. Some of these items are designed to be dealer assembled or installed. Please make sure that benches are stable and any optional fixtures (where applicable) are well secured BEFORE using.
Benches supplied by Yamaha are designed for seating only. No other uses are recommended.

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

92-BP (bottom)

PRECAUTIONS

PLEASE READ CAREFULLY BEFORE PROCEEDING

* Please keep these precautions in a safe place for future reference.

⚠ WARNING

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, short-circuiting, damages, fire or other hazards. These precautions include, but are not limited to, the following:

- Do not open the instrument or attempt to disassemble the internal parts or modify them in any way. The instrument contains no user-serviceable parts. If it should appear to be malfunctioning, discontinue use immediately and have it inspected by qualified Yamaha service personnel.

- Do not expose the instrument to rain, use it near water or in damp or wet conditions, or place containers on it containing liquids which might spill into any openings.

- If the AC adaptor cord or plug becomes frayed or damaged, or if there is a sudden loss of sound during use of the instrument, or if any unusual smells or smoke should appear to be caused by it, immediately turn off the power switch, disconnect the adaptor plug from the outlet, and have the instrument inspected by qualified Yamaha service personnel.

- Use the specified adaptor (PA-3B or an equivalent recommended by Yamaha) only. Using the wrong adaptor can result in damage to the instrument or overheating.

- Before cleaning the instrument, always remove the electric plug from the outlet. Never insert or remove an electric plug with wet hands.

- Do not put burning items, such as candles, on the unit. A burning item may fall over and cause a fire.

- Check the electric plug periodically and remove any dirt or dust which may have accumulated on it.

⚠ CAUTION

Always follow the basic precautions listed below to avoid the possibility of physical injury to you or others, or damage to the instrument or other property. These precautions include, but are not limited to, the following:

- Do not place the AC adaptor cord near heat sources such as heaters or radiators, and do not excessively bend or otherwise damage the cord, place heavy objects on it, or place it in a position where anyone could walk on, trip over, or roll anything over it.

- When removing the electric plug from the instrument or an outlet, always hold the plug itself and not the cord.

- Do not connect the instrument to an electrical outlet using a multiple-connector. Doing so can result in lower sound quality, or possibly cause overheating in the outlet.

- Unplug the AC power adaptor when not using the instrument, or during electrical storms.

- Always make sure all batteries are inserted in conformity with the +/- polarity markings. Failure to do so might result in overheating, fire, or battery fluid leakage.

- Always replace all batteries at the same time. Do not use new batteries together with old ones. Also, do not mix battery types, such as alkaline batteries with manganese batteries, or batteries from different makers, or different types of batteries from the same maker, since this can cause overheating, fire, or battery fluid leakage.

- Do not dispose of batteries in fire.

- Do not attempt to recharge batteries that are not intended to be charged.

- When the batteries run out, or if the instrument is not to be used for a long time, remove the batteries from the instrument to prevent possible leakage of the battery fluid.

- Keep batteries away from children.

- If the batteries do leak, avoid contact with the leaked fluid. If the battery fluid should come in contact with your eyes, mouth, or skin, wash immediately with water and consult a doctor. Battery fluid is corrosive and may possibly cause loss of sight or chemical burns.

- Before connecting the instrument to other electronic components, turn off the power for all components. Before turning the power on or off for all components, set all volume levels to minimum. Also, be sure to set the volumes of all components at their minimum levels and gradually raise the volume controls while playing the instrument to set the desired listening level.

- Do not expose the instrument to excessive dust or vibrations, or extreme cold or heat (such as in direct sunlight, near a heater, or in a car during the day) to prevent the possibility of panel disfiguration or damage to the internal components.

- Do not use the instrument near other electrical products such as televisions, radios, or speakers, since this might cause interference which can affect proper operation of the other products.

- Do not place the instrument in an unstable position where it might accidentally fall over.

- Before moving the instrument, remove all connected adaptor and other cables.

- When cleaning the instrument, use a soft, dry cloth. Do not use paint thinners, solvents, cleaning fluids, or chemical-impregnated wiping cloths. Also, do not place vinyl, plastic or rubber objects on the instrument, since this might discolor the panel or keyboard.

- Do not rest your weight on, or place heavy objects on the instrument, and do not use excessive force on the buttons, switches or connectors.

- Use only the stand specified for the instrument. When attaching the stand or rack, use the provided screws only. Failure to do so could cause damage to the internal components or result in the instrument falling over.

- Do not operate the instrument for a long period of time at a high or uncomfortable volume level, since this can cause permanent hearing loss. If you experience any hearing loss or ringing in the ears, consult a physician.

■ SAVING USER DATA

- As long as dry cell batteries are installed or the power adaptor is connected, the instrument retains the internal data when the power is turned off. If you remove the batteries and disconnect the adaptor, the data will be lost. Save important data to external media such as the Yamaha MDF3 MIDI data filer. Keep the power adaptor connected while you replace the batteries to prevent loss of data.

> Yamaha cannot be held responsible for damage caused by improper use or modifications to the instrument, or data that is lost or destroyed.

Always turn the power off when the instrument is not in use.

When using a power adaptor, even when the power switch is in the "STANDBY" position, electricity is still flowing to the instrument at the minimum level. When you are not using the instrument for a long time, make sure you unplug the AC power adaptor from the wall AC outlet.

Make sure to discard used batteries according to local regulations.

> * The illustrations and LCD screens as shown in this owner's manual are for instructional purposes only, and may be different from the ones on your instrument.

Congratulations on your purchase of the Yamaha PSR-225 PortaTone!

You now own a portable keyboard that combines advanced functions, great sound and exceptional ease-of-use in a highly compact package. Its outstanding features also make it a remarkably 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 PSR-225 is a sophisticated yet easy-to-use keyboard with the following features and functions:

Yamaha Education Suite
.... **Pages 60-71**

The PortaTone features the new Yamaha Education Suite — a set of learning tools that utilize the latest technology to make studying and practicing music more fun and fulfilling than ever before!

The Yamaha Education Suite includes:
Chord Guide functions in the Style mode — Smart and Dictionary — that make it exceptionally easy to learn chords and chord relationships. There's also a powerful EZ Chord function that lets you easily record and play back chord progressions.
• Smart lets you easily play harmonically "correct" chord progressions for whatever key you specify. It's great for learning — and performing!
• Dictionary is a built-in "chord encyclopedia" that teaches you how to play specific chords. You type in the chord name, and the PortaTone shows you which notes to play!
• EZ Chord is a powerful and simple way to program and play chord progressions. Record all the chord changes you need for a song, then play back the chords one after another by simply playing a single key!

Portable Grand .... Page 24

The PortaTone also has a **Portable Grand** function for realistic piano performance. Pressing the PORTABLE GRAND button instantly calls up the stunningly authentic "Stereo Sampled Piano" voice and configures the entire PortaTone for optimum piano play. Special Pianist styles — with piano-only accompaniment — are also provided.

Other powerful features include:
• Exceptionally realistic and dynamic sounds with 100 voices, utilizing digital recordings of actual instruments.
• Dual voice and Split voice modes that let you layer two voices together or assign two voices to separate sections of the keyboard
• Four high-quality effects — Reverb, Chorus, DSP, and Harmony — each with a variety of different types.
• 100 auto accompaniment styles, each with different Intro, Main A and B, and Ending sections. All styles (except for the Pianist styles) also have their own four Fill-in patterns. The PortaTone also gives you convenient control over accompaniment Styles — including Tempo and independent Accompaniment Volume.
• Powerful song recording operations for recording and playing back complete compositions (three User songs are available). Up to six tracks can be recorded to a song, including a special chord track for style accompaniment.
• One Touch Setting (OTS), for automatically calling up an appropriate voice for playing with the selected style. Plus, there are 16 User OTS memory spaces that let you save your custom panel settings for instant recall.
• Touch response (with front panel on/off switch) for maximum expressive level control over the voices.
• Convenient footswitch control over various functions — including sustain, start/stop, and more.
• GM (General MIDI) compatibility and full GM voice set.
• Large custom LCD gives you easy, at-a-glance confirmation of all important settings, as well as chord and note indications.
• Comprehensive MIDI functions that let you integrate the PortaTone into a MIDI music system, for sequence recording and other advanced applications.
• Built-in, high-quality stereo amplifier/speaker system.

Contents

Front Panel

STYLE

1~10	8BEAT	51~55	TRADITIONAL JAZZ
11~17	16BEAT	56~60	AMERICAS
18~20	6/8 BALLAD	61~66	COUNTRY & WESTERN
21~27	DANCE	67~70	BALLROOM LATIN
28~30	DISCO	71~72	BALLROOM STANDARD
31~36	ROCK	73~80	MARCH & WALTZ
37~40	ROCK & ROLL	81~88	LATIN
41~46	RHYTHM & BLUES	89~90	CARIBBEAN
47~50	CONTEMPORARY JAZZ	91~100	PIANIST

FUNCTION

0	1~6 MAIN VOICE	5	1 STYLE
1	1~8 DUAL VOICE	6	1~3 SONG
2	1~9 SPLIT VOICE	7	1~3 UTILITY
3	1~9 EFFECT	8	1~7 MIDI
4	1 ONE TOUCH SETTING		

VOICE

1~12	PIANO	66~75	BRASS
13~19	MALLET	76~84	REED
20~32	ORGAN	85~89	PIPE
33~41	GUITAR	90~95	SYNTH LEAD
42~49	BASS	96~100	SYNTH PAD
50~60	ENSEMBLE	101~110	DRUM KITS
61~65	STRINGS	111~238	GM

PSR-225GM

❶ MASTER VOLUME dial
This determines the overall volume of the PortaTone.

❷ OVERALL, DEMO START buttons (▲, ▼, +, -)
These are for selecting the various "overall" functions and setting their values. (See pages 22, 24.) They are also used to play the Demo songs. (See page 16.)

❸ FUNCTION button
This selects the Function mode. (See page 18.)

❹ SONG button
This selects the Song mode. (See pages 16, 75.)

❺ STYLE button
This selects the Style mode. (See pages 12, 47.)

❻ VOICE button
This selects the Voice mode. (See pages 10, 27.)

❼ Numeric keypad, +/- buttons
These are for selecting songs, voices, and styles. (See pages 28, 47, and 76.) They are also used for making various settings, such as:
- Selecting and changing the Function parameters (page 18)
- Setting note values and other settings for the Step Record function (page 85)

- Setting the time signature for the Metronome (page 25)
- Setting the key signature for the Smart Chord function (page 64)

❽ PORTABLE GRAND button
This instantly changes to the Voice mode and calls up the Grand Piano voice. (See page 24.)

❾ METRONOME button
This turns the metronome on and off. (See page 24.)

❿ ACMP ON/OFF button
When the Style mode is selected, this turns the auto accompaniment on and off. (See page 52.) This button has no function in the Song Play mode.

⓫ SYNC-START button
This turns the Sync-Start function on and off. (See page 48.)

⓬ START/STOP button
When the Style mode is selected, this alternately starts and stops the auto accompaniment. (See page 48.) In the Song mode, this alternately starts and stops song playback. (See page 76.)

⓭ INTRO/ENDING button

When the Style mode is selected, this is used to control the Intro and Ending functions. (See pages 49, 51.)

⓮ MAIN A/B (AUTO FILL) buttons

When the Style mode is selected, these are used to change auto accompaniment sections and control the Auto Fill function. (See page 54.)

⓯ CHORD GUIDE button

When the Style mode is selected, this is used to control the Chord Guide functions. (See page 62.)

⓰ RECORD button

This is used for selecting and enabling the recording functions: Song (pages 80, 84), EZ Chord (page 68), and One Touch Setting (page 72).

⓱ ONE TOUCH SETTING / SONG MEMORY buttons

When the Style mode is selected, these are used

to select the One Touch Setting registrations (page 73). When the Song mode is selected, these are used to select specific tracks (pages 81, 85).

⓲ HARMONY button

This turns the Harmony effect on and off. (See page 43.)

⓳ REVERB button

This turns the Reverb effect on and off. (See page 40.)

⓴ DUAL button

This turns the Dual mode on and off. (See page 34.)

㉑ TOUCH button

This turns the Touch function on and off. (See page 38.)

㉒ Power switch (STANDBY/ON)

Rear Panel
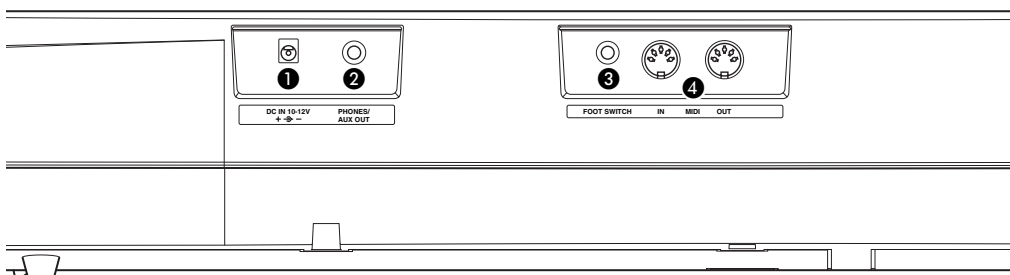
❶ DC IN 10-12V jack

This is for connection to a PA-3B AC power adaptor. (See page 8.)

❷ PHONES/AUX OUT jack

This is for connection to a set of stereo headphones or to an external amplifier/speaker system. (See page 9.)

❸ FOOT SWITCH jack

This is for connection to an optional FC4 or FC5 Footswitch. The footswitch is generally used to control sustain, but it can conveniently be set to control one of a variety of functions instead. (See pages 9, 91.)

❹ MIDI IN, OUT terminals

These are for connection to other MIDI instruments and devices. (See page 94.)

SETTING UP

This section contains information about setting up your PortaTone for playing. Make sure to read this section carefully before using the instrument.

POWER REQUIREMENTS

Although the PSR-225 will run either from an optional AC adaptor or batteries, Yamaha recommends use of an AC adaptor whenever possible. An AC adaptor is more environmentally friendly than batteries and does not deplete resources.

⚠️ *CAUTION*

Never interrupt the power supply (e.g. remove the batteries or unplug the AC adaptor) during any PSR-225 record operation! Doing so can result in a loss of data.

Using an AC Power Adaptor

To connect your PortaTone to a wall socket, you will need the optionally available Yamaha PA-3B Power Adaptor. Use of other AC adaptors could result in damage to the instrument, so be sure to ask for the right kind. Connect one end of the adaptor to the DC IN 10-12V jack on the rear panel of your PortaTone, and the other end to a suitable electrical outlet.

⚠️ *WARNING*

• Use ONLY a Yamaha PA-3B AC Power Adaptor (or other adaptor specifically recommended by Yamaha) to power your instrument from the AC mains. The use of other adaptors may result in irreparable damage to both the adaptor and the PSR-225.

• Unplug the AC Power Adaptor when not using the PSR-225, or during electrical storms.

Using Batteries

■ Inserting Batteries

Turn the instrument upside-down and remove the battery compartment lid. Insert six 1.5-volt size "D", R20P (LR20) or equivalent batteries as indicated in the battery case, making sure that the positive and negative terminals are properly aligned, and 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.

⚠️ *CAUTION*

• Never mix old and new batteries or different types of batteries (e.g., alkaline and manganese).
• To prevent possible damage from battery leakage, remove the batteries from the instrument if it is not to be used for a long time.

TURNING ON THE POWER

With the AC power adaptor connected or with batteries installed, simply press the power switch until it locks in the ON position. When the instrument is not in use, be sure to turn the power off. (Press the switch again so that it pops up.)
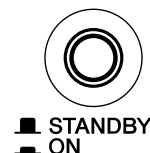
STANDBY
ON

⚠️ *CAUTION*

Even when the switch is in the "STANDBY" position, electricity is still flowing to the instrument at the minimum level. When you are not using the PSR-225 for a long time, make sure you unplug the AC power adaptor from the wall AC outlet, and/or remove the batteries from the instrument.

ACCESSORY JACKS

■ Using Headphones

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

PHONES/
AUX OUT
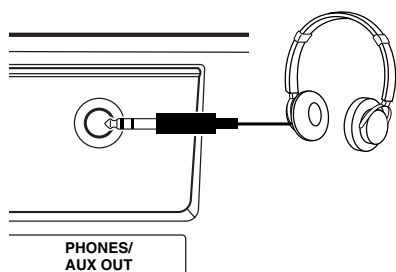
■ Connecting a Keyboard Amplifier or Stereo System

Though the PortaTone is equipped with a built-in speaker system, you can also play it through an external amplifier/speaker system. First, make sure the PortaTone and any external devices are turned off, then 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 rear panel PHONES/AUX OUT jack on the PortaTone.

PHONES/
AUX OUT

Stereo system
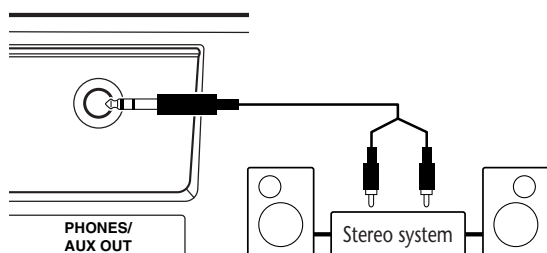
⚠ CAUTION

To prevent damage to the speakers, set the volume of the external devices at the minimum setting before connecting them. Failure to observe these cautions may result in electric shock or equipment damage.

■ Using a Footswitch

This feature lets you use an optional footswitch (Yamaha FC4 or FC5) to sustain the sound of the voices, or control a variety of other functions. (See page 91.) When this is used for sustain, the footswitch functions the same way as a damper pedal on an acoustic piano — press and hold down the footswitch as you play the keyboard to sustain the sound.
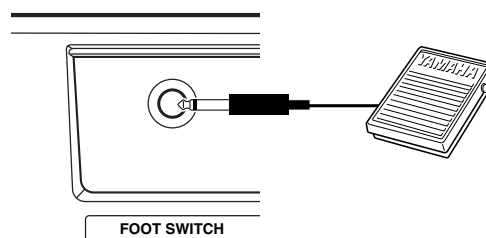
FOOT SWITCH

NOTE

• Make sure that the footswitch plug is properly connected to the FOOT SWITCH jack before turning on the power.
• Do not press the footswitch while turning the power on. Doing this changes the recognized polarity of the footswitch, resulting in reversed footswitch operation.

■ Using the MIDI Terminals

The PortaTone also features MIDI terminals, allowing you to interface the PortaTone with other MIDI instruments and devices. (For more information, see pages 20, 93.)

MIDI instrument

IN   MIDI   OUT

Quick Guide – How to Use Your New PSR-225 PortaTone

This brief, easy-to-follow section shows you how to use the basic features and functions of your new PSR-225 PortaTone. If you've never touched an electronic keyboard before, reading and going through the steps in this section will make you familiar with the PortaTone in a very short time. It will also give you the tools you need to explore the advanced capabilities of the instrument and use them effectively in your own music. Good luck...and enjoy!

Step 1 — Voices

Playing the Piano Voice

Portable Grand

1 Press the PORTABLE GRAND button.

The Grand Piano voice is automatically selected.

2 Play the keyboard.

Selecting other voices

The PSR-225 features a total of 238 high-quality voices. Let's try a few of them out...

> Panel voices .... 1 - 100 (100 voices)
> 101 - 110 (10 drum kit voices)
> GM voices .... 111 - 238 (128 voices)

1 Enter the Voice mode.

2 Select a voice.

3 Play the keyboard.

Playing along with the Metronome

❶ **Press the METRONOME button.**

PORTABLE GRAND

METRONOME

Want to find out more?

Changing the time signature of the Metronome

① **Simultaneously hold down the METRONOME button and one of the number buttons (1 - 9) on the numeric keypad.**
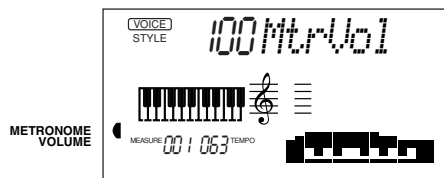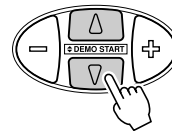
PORTABLE GRAND
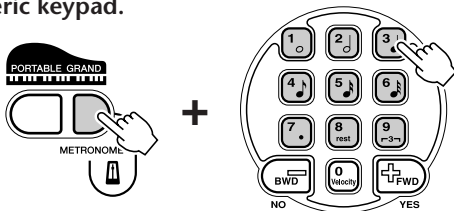
METRONOME

Normally, the Metronome is set to play in 4/4 time. To change this to 2/4, press number button "2." To change it to 3/4 time, press number button "3."
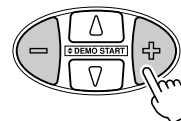
Changing the Metronome Volume

1 Press one of the OVERALL ▲/▼ buttons until "MtrVol" is shown in the display.

2 Press the OVERALL + or - button to raise or lower the value.

Panel Voice List

| No.	Voice Name	No.	Voice Name	No.	Voice Name	No.	Voice Name	No.	Voice Name
	PIANO	023	Full Organ	046	Slap Bass	068	Trombone		**SYNTH LEAD**
001	Grand Piano	024	Rock Organ 1	047	Synth Bass	069	Trombone Section	090	Square Lead
002	Bright Piano	025	Rock Organ 2	048	Techno Bass	070	French Horn	091	Sawtooth Lead
003	Honky-tonk Piano	026	16'+2' Organ	049	Dance Bass	071	Tuba	092	Voice Lead
004	Funky Electric Piano	027	16'+4' Organ		**ENSEMBLE**	072	Brass Section	093	Crystal
005	DX Electric Piano	028	Church Organ	050	Strings	073	Synth Brass	094	Brightness
006	MIDI Grand Piano	029	Reed Organ	051	Chamber Strings	074	Jump Brass	095	Analog Lead
007	CP 80	030	Musette Accordion	052	Synth Strings	075	Techno Brass		**SYNTH PAD**
008	Hyper Electric Piano	031	Traditional Accordion	053	Slow Strings		**REED**	096	Fantasia
009	Bell Electric Piano	032	Bandoneon	054	Tremolo Strings	076	Soprano Sax	097	Bell Pad
010	Harpsichord		**GUITAR**	055	Pizzicato Strings	077	Alto Sax	098	Xenon Pad
011	Clavi	033	Classical Guitar	056	Choir	078	Tenor Sax	099	Angels
012	Celesta	034	Folk Guitar	057	Choir Aahs	079	Baritone Sax	100	Dark Moon
	MALLET	035	12Strings Guitar	058	Choir Oohs	080	Oboe		**DRUM KITS**
013	Vibraphone	036	Jazz Guitar	059	Synth Choir	081	English Horn	101	Standard Kit 1
014	Marimba	037	Octave Guitar	060	Orchestra Hit	082	Bassoon	102	Standard Kit 2
015	Xylophone	038	Clean Guitar		**STRINGS**	083	Clarinet	103	Room Kit
016	Tubular Bells	039	Muted Guitar	061	Violin	084	Harmonica	104	Rock Kit
017	Timpani	040	Overdriven Guitar	062	Cello		**PIPE**	105	Electronic Kit
018	Steel Drums	041	Distortion Guitar	063	Contrabass	085	Piccolo	106	Analog Kit
019	Music Box		**BASS**	064	Banjo	086	Flute	107	Dance Kit
	ORGAN	042	Acoustic Bass	065	Harp	087	Pan Flute	108	Jazz Kit
020	Jazz Organ 1	043	Finger Bass		**BRASS**	088	Recorder	109	Brush Kit
021	Jazz Organ 2	044	Pick Bass	066	Trumpet	089	Ocarina	110	Symphony Kit
022	Jazz Organ 3	045	Fretless Bass	067	Muted Trumpet				

Step 2 Auto Accompaniment

Using the auto accompaniment

The PSR-225 has powerful and easy-to-use auto accompaniment features. All you have to do is play chords with your left hand — and the PortaTone automatically produces appropriate bass, chord, and rhythm backing for your performance. Use your right hand to play melodies, and you'll sound like an entire band!

Accompaniment
section

Left hand + **Right hand**

Auto accompaniment   Melody
(for example, bass + guitar + drums)

1 Enter the Style mode.

STYLE 001 8BtPop1

MEASURE 001 116 TEMPO

2 Select a style.
For a list of styles, see page 13.

STYLE 002 8BtPop2

3 Turn the auto accompaniment on.

ACMP
ON/OFF SYNC-START START/STOP INTRO/ENDING rit. MAIN A MAIN B AUTO FILL

4 Turn the Sync-Start function on.

ACMP
ON/OFF SYNC
START START/STOP INTRO/ENDING rit. MAIN A MAIN B AUTO FILL

5 Play a chord with your left hand.

For help in learning how to play chords, refer to "Using the Chord Guide function" on page 14.

Accompaniment
section

6 Select a section.

Try playing with the Intro, Main A/B, and Ending sections.

INTRO/ENDING rit. MAIN A MAIN B AUTO FILL

7 Stop the auto accompaniment.

SYNC-START START/STOP INTRO/ENDING rit.

YAMAHA

TEMPO
TRANSPOSE
TUNING
ACMP/SONG VOLUME
METRONOME VOLUME
OVERALL

VOICE/STYLE 001 GrandPno

MEASURE 001 116 TEMPO

GENERAL MIDI
PORTABLE GRAND
METRONOME

FUNCTION SONG STYLE VOICE

MIN MAX
MASTER VOLUME

ACMP ON/OFF SYNC-START START/STOP INTRO/ENDING rit. MAIN A MAIN B AUTO FILL CHORD GUIDE DICTIONARY RECORD

ONE TOUCH SETTING
USER   PRESET
1 2 3 4 5 A B

SONG MEMORY
1 2 3 4 5 6/CHORD

HARMONY REVERB

DUAL TOUCH STANDBY ON

Selecting a complete music style with ideal voice and other settings – One Touch Setting
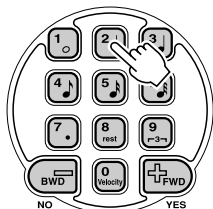
The PortaTone features 100 different styles in various music genres. With the One Touch Setting function, you can call up voice and other settings that best match the selected style. Each style has been programmed with two Preset One Touch Settings.
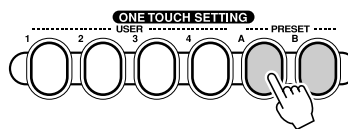
1 **Enter the Style mode.**
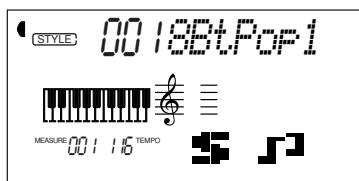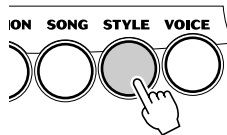
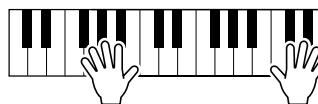3 **Press one of the One Touch Setting buttons: Preset A or B.**

2 **Select a style.**
For a list of styles, see below.

4 **Play the keyboard.**

Style List

No.	Style Name	No.	Style Name	No.	Style Name	No.	Style Name	No.	Style Name
	8BEAT		**DANCE**		**RHYTHM & BLUES**		**COUNTRY & WESTERN**		**LATIN**
1	8Beat Pop 1	21	Dance Pop 1	41	R&B	61	Bluegrass	81	Bossa Nova 1
2	8Beat Pop 2	22	Dance Pop 2	42	Funk 2	62	Country 2/4	82	Bossa Nova 2
3	8Beat Uptempo	23	Techno	43	Soul	63	Country Rock	83	Salsa
4	8Beat Standard	24	Eurobeat	44	Gospel Shuffle	64	Country Ballad	84	Samba
5	Folkrock	25	Euro House	45	6/8 Gospel	65	Country Shuffle	85	Mambo
6	Pop Rock	26	Hip Hop	46	4/4 Blues	66	Country Waltz	86	Beguine
7	8Beat Medium	27	Synth Boogie		**CONTEMPORARY JAZZ**		**BALLROOM LATIN**	87	Merengue
8	8Beat Ballad		**DISCO**	47	Cool Jazz	67	Cha Cha	88	Bolero Lento
9	Epic Ballad	28	70s Disco	48	Jazz Ballad	68	Rhumba		**CARIBBEAN**
10	Piano Ballad	29	Disco Tropical	49	Jazz Waltz	69	Pasodoble	89	Reggae 12
	16BEAT	30	Polka Pop	50	Fusion	70	Tango Continental	90	Pop Reggae
11	16Beat Shuffle 1		**ROCK**		**TRADITIONAL JAZZ**		**BALLROOM STANDARD**		**PIANIST**
12	16Beat Shuffle 2	31	8Beat Rock Ballad	51	Swing	71	Foxtrot	91	Rock-A-Ballad
13	16Beat Pop	32	16Beat Rock Ballad	52	Big Band Swing	72	Jive	92	8Beat
14	Funk 1	33	Hard Rock	53	Big Band Ballad		**MARCH & WALTZ**	93	Swing
15	16Beat Ballad 1	34	Rock Shuffle	54	Jazz Quartet	73	March 1	94	Jazz Ballad
16	16Beat Ballad 2	35	6/8 Heavy Rock	55	Dixieland	74	March 2	95	2Beat
17	Soul Ballad	36	US Rock		**AMERICAS**	75	6/8 March	96	Boogie
	6/8 BALLAD		**ROCK & ROLL**	56	Cajun	76	Polka	97	Ragtime
18	Slow Rock 1	37	Rock & Roll 1	57	Banda	77	Standard Waltz	98	Arpeggio
19	Slow Rock 2	38	Rock & Roll 2	58	Mariachi	78	German Waltz	99	Waltz
20	6/8 Ballad	39	Boogie	59	Tejano	79	Viennese Waltz	100	Happy
		40	Twist	60	Cumbia	80	Musette Waltz		

Step 3 **Chord Guide**

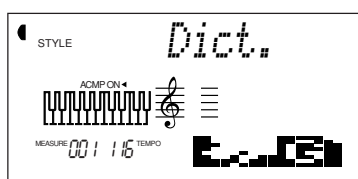## Using the Chord Guide function

Learning how to play specific chords

Here, you'll learn how to use the Chord Guide functions to show the individual notes of chords.
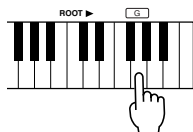
Example:

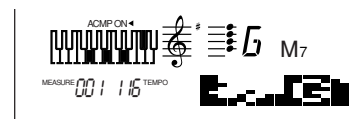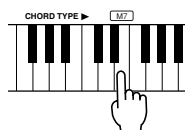<u>G</u> <u>M7</u>
Root note   Chord type

**1** **Enter the Style mode, then press the CHORD GUIDE button until "Dict." is shown in the display.**

STYLE   *Dict.*
ACMP ON◄
MEASURE *001 116* TEMPO

CHORD GUIDE
○ DICTIONA
○ SMART
○ EZ
○ OFF

2 **Specify the root note of the chord.**

ROOT ▶   G

STYLE   *Dict.*
ACMP ON◄

3 **Specify the chord type of the chord.**

CHORD TYPE ▶   M7

ACMP ON◄   ♯   *G*   M7
MEASURE *001 116* TEMPO

4 **Play the notes of the chord as indicated in the keyboard diagram in the display.**
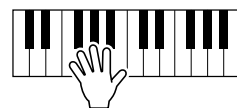
The notes in the keyboard diagram flash when the chord is played properly.

Playing appropriate chords with just one finger

The PortaTone also lets you easily create appropriate chords for a given scale by simply playing single notes in the scale.

1 **Enter the Style mode, then press the CHORD GUIDE button until "Smart" is shown in the display.**

STYLE   *Smart*
ACMP ON◄
MEASURE *001 116* TEMPO

CHORD GUIDE
○ DICTIONA
○ SMART
○ EZ
○ OFF
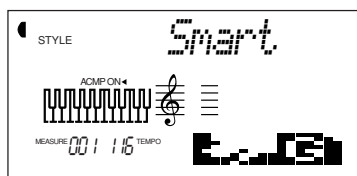
2 **Set the key to match that of the song you wish to play.**
Enter the number of sharps or flats of the corresponding key.

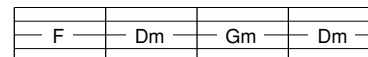STYLE   *15 b-1*

3 **Start the auto accompaniment.**

SYNC-START   START/STOP   RO/ING rit.
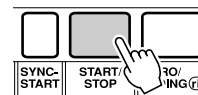
4 **Play single note chords (root note) on the keyboard.**

To play these chords....

| F | Dm | Gm | Dm |

.....press these keys (root notes)

Playing chord progressions (songs) with just one finger

The EZ Chord function gives you an exceptionally easy way to play the chords of a song. Simply press single keys in succession, and the PortaTone automatically plays the proper chords for you!

❶ **Enter the Style mode, then press the CHORD GUIDE button until "EZ. is shown in the display.**

❷ **Select an EZ Chord bank.**

❸ **Start the auto accompaniment.**

❹ **Press and release a single note on the keyboard to play a chord.**

Continue pressing the same key each time you want a new chord to be played.

Accompaniment section

❺ **Play the melody with your right hand as the auto accompaniment plays.**

Recording your own EZ Chord banks

You can also create your own custom chord progressions, and play along with those if you like.

⊛YAMAHA

Use these keys for the Chord Guide Dictionary function.

Keys for playing the accompaniment
(C1 — F♯2)

Keys for entering the chord type
(C3 — B4)

Keys for entering the chord root
(C5 — B5)

Step 4 Songs

Playing a song

Playing back all three songs

The PSR-225 has three Demo songs that show-case the authentic voices and dynamic accompaniment of the instrument.

1 **Simultaneously press both OVERALL ▲/▼ buttons.**

ALL TakeOff!
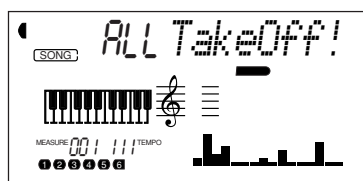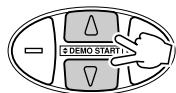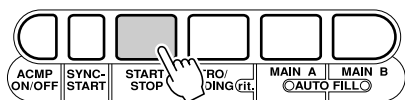
2 **Stop the song.**

Playing back a single song

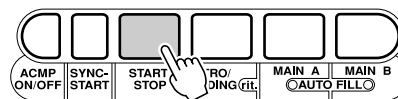Naturally, you can also individually select and play back any of the PortaTone's songs.
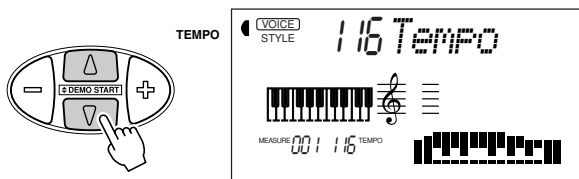
1 **Enter the song mode.**

ALL TakeOff!

2 **Select a song.**

002 PF_Grand
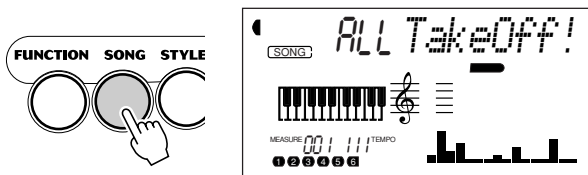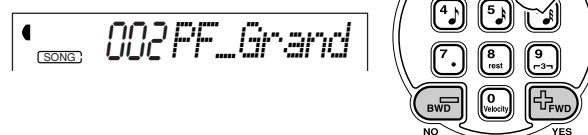
3 **Start (and stop) the song.**

Changing the tempo (speed) of the song

❶ **Press one of the OVERALL ▲/▼ buttons until "Tempo" is shown in the display.**

116 Tempo

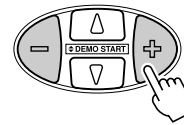❷ **Press the OVERALL + or - button to speed up or slow down the tempo.**
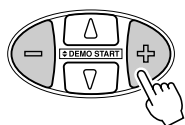
Changing the volume of the song

❶ **Press one of the OVERALL ▲/▼ buttons until "SongVol" is shown in the display.**

100 SongVol
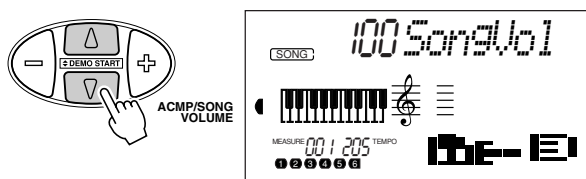
❷ **Press the OVERALL + or - button to raise or lower the volume of the song.**

Recording your own song

The PSR-225 lets you record your own songs by using two different methods — Realtime and Step. Try out both of these recording methods yourself...

**1 Select the desired recording mode by pressing the RECORD button.**

Realtime recording

This method is much like using a conventional tape recorder, letting you play and record the parts of the song in real time.

Step recording

This method is similar to using a pencil and paper to write down each note, entering the parts of the song step by step.

Want to find out more? See pages 79-90.
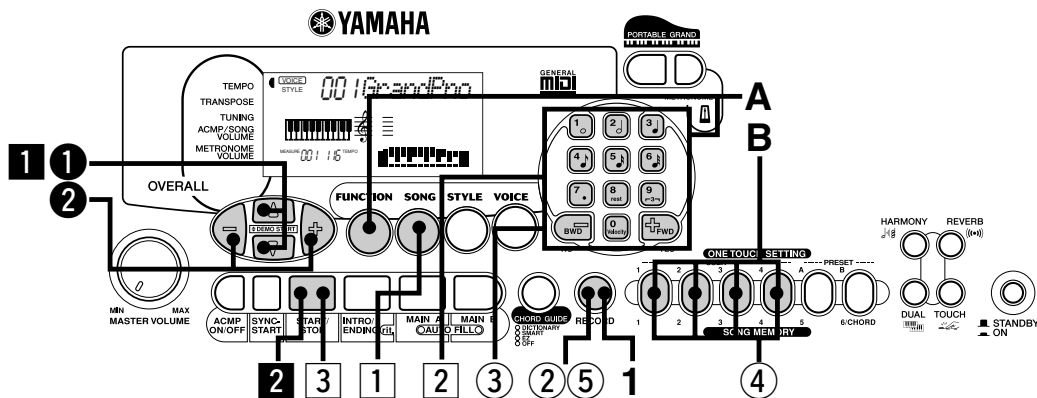
Creating your own custom One Touch Settings

You can also create your own One Touch Settings — letting you completely reconfigure virtually all PortaTone settings at the touch of a button! Up to 16 settings can be saved (4 User banks x 4 User buttons).
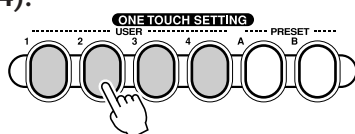
① **Make all desired settings on the PortaTone.**

② **Select the User One Touch Setting record mode.**

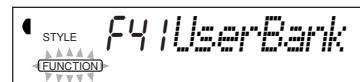③ **Select the desired User bank (1 - 4).**
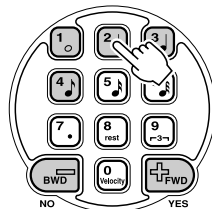
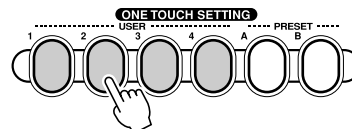④ **Select the desired User button (USER 1 - 4).**

⑤ **Turn off the User One Touch Setting record mode.**

Calling up a User One Touch Setting

A Select Function #41, and select the desired bank (1 - 4).

B Press the appropriate USER button (1 - 4) to instantly call up your custom panel settings.

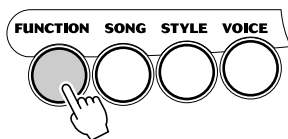Want to find out more? See page 72.

17

Step 5 — Function Parameters
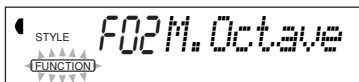
Using the Function parameters

The PSR-225 has a variety of settings in the Function parameters.
These give you detailed control over many of the PSR-225's features.
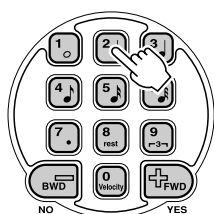
1 Press the FUNCTION button.

FUNCTION SONG STYLE VOICE
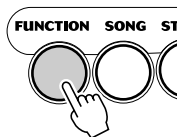
2 Select a Function number.

For a list of functions, see page 19.

STYLE *F02M.Octave*
FUNCTION

The Function number can be selected while the "FUNCTION" indication is flashing.

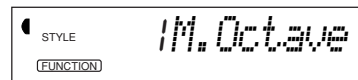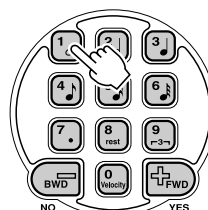Enter the Function number on the numeric keypad.

Press the FUNCTION button; each press advances through the numbers. Hold down the button to continuously advance through the numbers.

3 After "FUNCTION" in the display stops flashing, change the value or setting.

After a couple of seconds, the "FUNCTION" indication stops flashing and remains lit. At the same time, the Function number ("F02" in the example above) changes automatically to the current value of the Function parameter.

STYLE *0M.Octave*
FUNCTION

Current value of the selected Function parameter.

4 Use the numeric keypad to change the value or setting. For on/off settings, use the +/- buttons.

STYLE *1M.Octave*
FUNCTION

⨁YAMAHA

PORTABLE GRAND

VOICE
STYLE *001GrandPno*

GENERAL
midi

METRONOME

TEMPO
TRANSPOSE
TUNING
ACMP/SONG VOLUME
METRONOME VOLUME

MEASURE *001 116* TEMPO

OVERALL

FUNCTION SONG STYLE VOICE

DEMO START

MIN   MAX
MASTER VOLUME

ACMP ON/OFF SYNC-START START/STOP INTRO/ENDING/rit. MAIN A MAIN B AUTO FILL CHORD GUIDE DICTIONARY START ON OFF RECORD

ONE TOUCH SETTING
USER   PRESET

SONG MEMORY

HARMONY REVERB

DUAL TOUCH

STANDBY ON

1 2 4
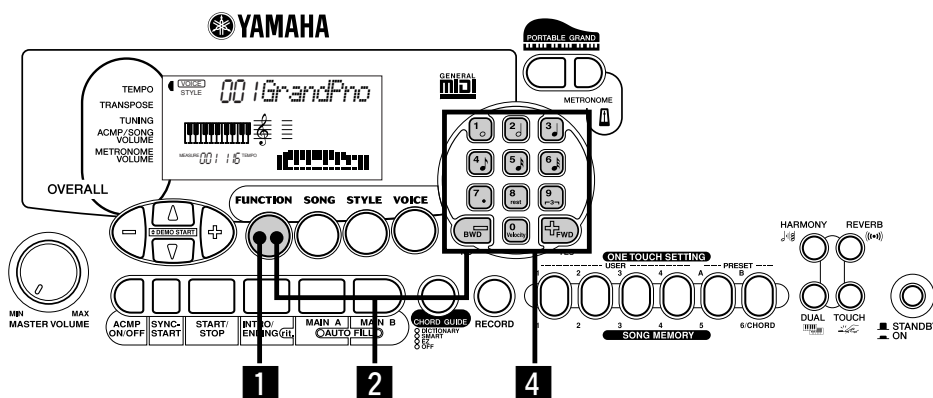
Function Parameters List

	Function		page
F01	M.Volume	Main Voice Volume	31
F02	M.Octave	Main Voice Octave	31
F03	M.Pan	Main Voice Pan	31
F04	M.RevLvl	Main Voice Reverb Send Level	31
F05	M.ChoLvl	Main Voice Chorus Send Level	31
F06	M.DspLvl	Main Voice DSP Effect Send Level	31
F11	D.Volume	Dual Voice Volume	35
F12	D.Octave	Dual Voice Octave	35
F13	D.Pan	Dual Voice Pan	35
F14	D.RevLvl	Dual Voice Reverb Send Level	35
F15	D.ChoLvl	Dual Voice Chorus Send Level	35
F16	D.DspLvl	Dual Voice DSP Effect Send Level	35
F17	D.Voice	Dual Voice	35
F18	Dual	Dual On/Off	35
F21	S.Volume	Split Voice Volume	37
F22	S.Octave	Split Voice Octave	37
F23	S.Pan	Split Voice Pan	37
F24	S.RevLvl	Split Voice Reverb Send Level	37
F25	S.ChoLvl	Split Voice Chorus Send Level	37
F26	S.DspLvl	Split Voice DSP Effect Send Level	37
F27	S.Voice	Split Voice	37
F28	Split	Split On/Off	37
F29	SplitPnt	Split Point	37

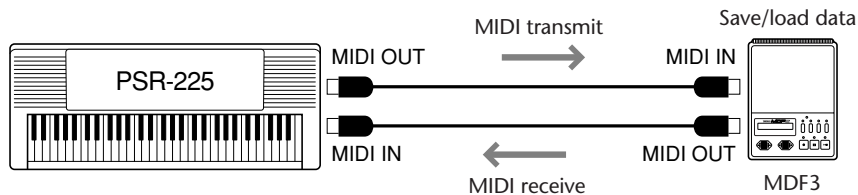|	Function		page
F31	Reverb	Reverb On/Off	44
F32	RevType	Reverb Type	44
F33	Chorus	Chorus On/Off	44
F34	ChoType	Chorus Type	44
F35	Dsp	DSP On/Off	44
F36	DspType	DSP Type	44
F37	Harmony	Harmony On/Off	44
F38	HarmType	Harmony Type	44
F39	HarmVol	Harmony Volume	44
F41	UserBank	One Touch Setting User Bank	73
F51	AcmpSPnt	Accompaniment Split Point	59
F61	USng1Clr	User Song 1 Clear	90
F62	USng2Clr	User Song 2 Clear	90
F63	USng3Clr	User Song 3 Clear	90
F71	FootSw	Footswitch	92
F72	VoiceSet	Voice Set	39
F73	TouchSns	Touch Sensitivity	39
F81	RemoteCh	Remote Channel	97
F82	KbdOut	Keyboard Out	97
F83	AcmpOut	Accompaniment Out	97
F84	Local	Local On/Off	97
F85	ExtClock	External Clock	98
F86	BulkSend	Bulk Data Send	98,99
F87	InitSend	Initial Data Send	98,102

19

Step 6 MIDI

Using MIDI

The PSR-225 also features rear panel MIDI terminals (MIDI IN and MIDI OUT) as well as a comprehensive set of MIDI functions, that let you use the instrument in a variety of recording and performance applications.

● **Sending original song and One Touch Setting data to another PSR-225.**

PSR-225   MIDI OUT   MIDI transmit →   MIDI IN   PSR-225
           MIDI IN   ← MIDI receive   MIDI OUT
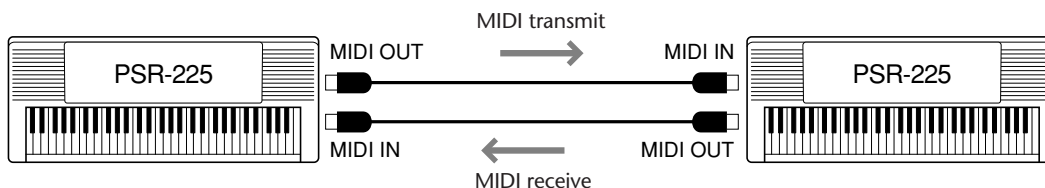
→ See "Using Bulk Dump Send to Save Data" on pages 99 - 102.

● **Using the MDF3 MIDI Data Filer to store and recall original PSR-225 data.**

Save/load data

PSR-225   MIDI OUT   MIDI transmit →   MIDI IN
           MIDI IN   ← MIDI receive   MIDI OUT   MDF3

→ See "Using Bulk Dump Send to Save Data" on pages 99 - 102.

● **Playing back multi-track song data (up to 16 channels) on the PSR-225.**

Set Remote Channel (page 97) to "off."

PSR-225   MIDI IN   ← MIDI receive   MIDI OUT   MDF3, QY700, or computer with sequencing software.
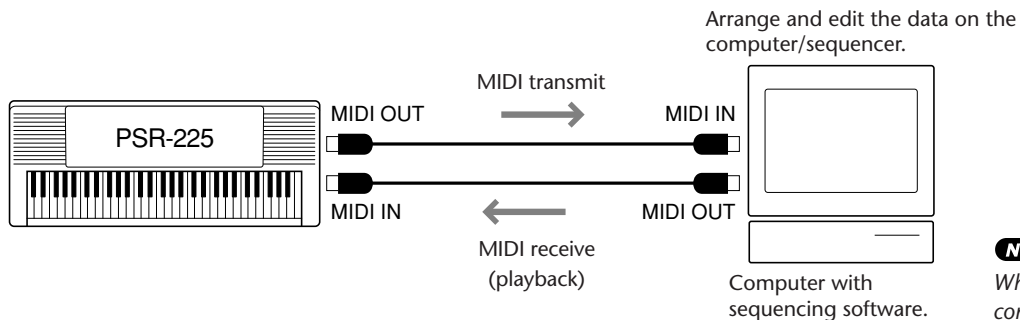
Available disks

Floppy disk with GM song data.
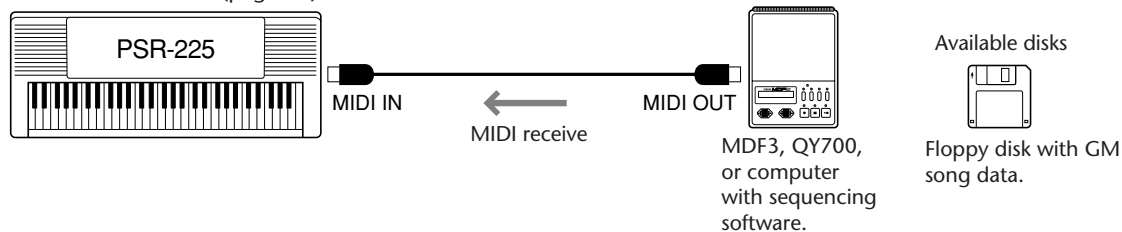
→ See page 97.

● **Controlling the PSR-225 with a MIDI keyboard controller (not having a tone generator) (Auto accompaniment can also be used in this setup.)**

MIDI receive

| PSR-225 | MIDI IN | ← | MIDI OUT | MIDI keyboard with no tone generator |

● **In this setup you can record your PSR-225 performance, including the auto accompaniment, to a connected computer or sequencer. (Up to 16 channels can be used.) You can then edit the recorded data on the computer or sequencer, and play it back using the sounds of the PSR-225.**

Arrange and edit the data on the computer/sequencer.

MIDI transmit

| PSR-225 | MIDI OUT | → | MIDI IN |
| | MIDI IN | ← | MIDI OUT |

MIDI receive (playback)

Computer with sequencing software.

NOTE

When using a personal computer, special software (sequencer software) is needed.

GENERAL MIDI GM System Level 1

"GM System Level 1" is an addition to the MIDI standard which ensures that any GM-compatible music data can be accurately played by any GM-compatible tone generator, regardless of manufacturer. The GM mark is affixed to all software and hardware products that support GM System Level 1. The PSR-225 supports GM System Level 1.

PANEL DISPLAY INDICATIONS

The PortaTone features a large multi-function display that shows all important settings for the instrument. The section below briefly explains the various icons and indications in the display.

❶ Mode indicators
❷ Overall functions bar indicator
❿ Accompaniment On indicator
❽ Song/Voice/Style name and number

TEMPO
TRANSPOSE
TUNING
ACMP/SONG VOLUME
METRONOME VOLUME

VOICE
STYLE

ACMP ON◄

MEASURE   TEMPO

❶ ❷ ❸   CHORD

❻ Beat indicators
❼ Chord
❾ Icon window

OVERALL

❺ Measure and Tempo
❸ Notation
❹ Keyboard
⓫ Song track indicators
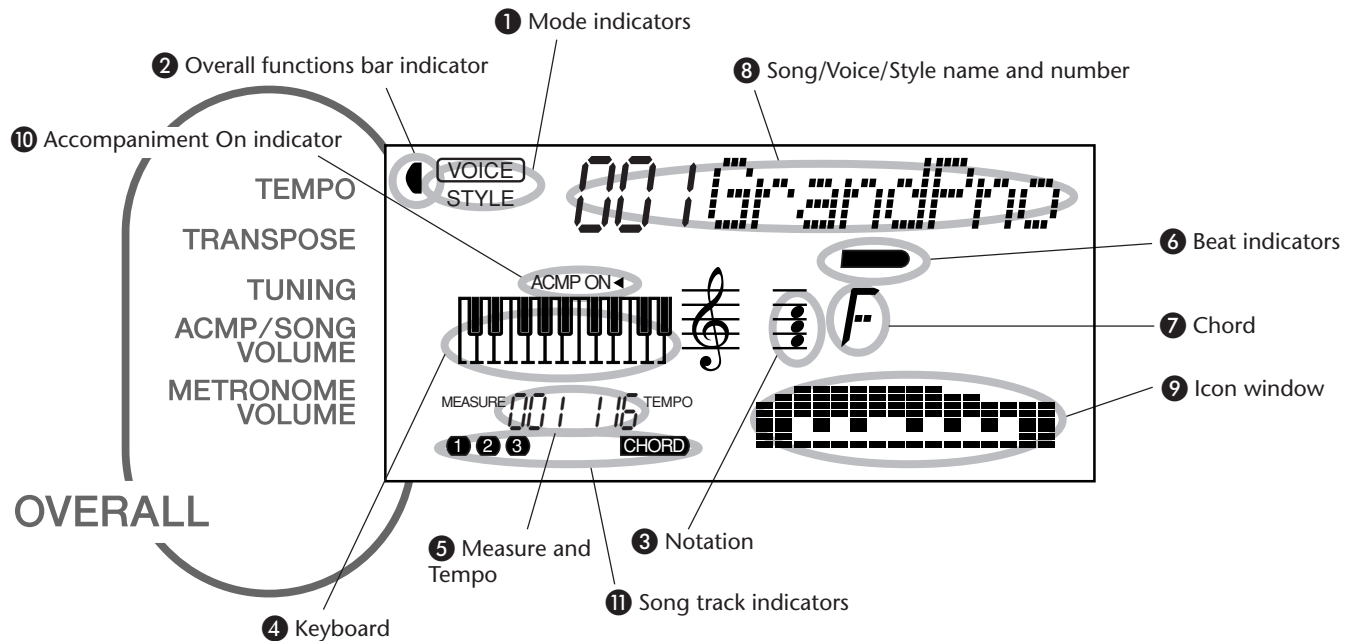
❶ Mode indicators
These indicate the currently selected mode —
Voice, Style, Song, or Function — with the mode
name encircled in a rounded rectangle. When
"STYLE" or "SONG" appear without the rect-
angle, the corresponding mode is active in the
background.

In the first example, the Style mode is selected.

STYLE   01

In the second example, the Voice mode has
been selected, but the Style mode is still active
in the background. (This means that the style
controls are active and can be used to play the
currently selected style.)

VOICE
STYLE   01

❷ Overall functions bar indicator
The PortaTone has five Overall functions or
controls. The currently selected function is
indicated by a dark bar that appears next to its
name (printed on the panel).

❸ Notation
❹ Keyboard
These two portions of the display conveniently
indicate notes. When a user song (with chords)
is being played back, they show the chord notes
in succession. When the Style mode and auto
accompaniment are active, the display also
shows the specific notes of the current chord.

NOTE
*For a few specific chords, not all notes may be shown in the
notation section of the display. This is due to space limitations
in the display.*

5 Measure and Tempo
These show the current measure during play-back of a song or style, and the currently set Tempo value for the song or style.

6 Beat indicators
These dark bars (one large, three small) flash in sequence and in time with the song or style. The large bar indicates the first beat of the measure. (See page 77.)

7 Chord
When a user song (with chords) is being played back, this indicates the current chord root and type. It also indicates chords played in the ACMP section of the keyboard when the Style mode and auto accompaniment are on.

8 Song/Voice/Style name and number
This portion of the display indicates the name and number of the currently selected song, voice, or style. It also displays the name and current value or setting of the Overall functions and the Function parameters, as well as other important operation messages.

9 Icon window
Depending on the mode or function selected, this displays various symbols (icons) and other messages to provide convenient, at-a-glance information about the PortaTone operation. For example, when a song or style accompaniment is playing, this displays the level of each instrumental track.
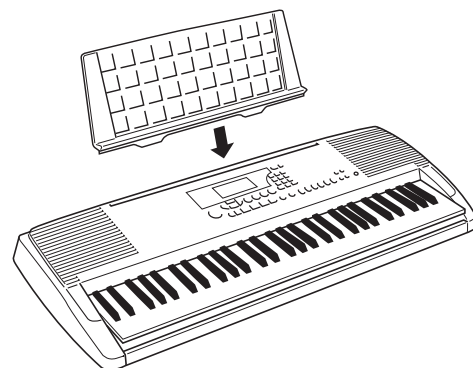
10 Accompaniment On indicator
This appears when the auto accompaniment has been turned on. (See page 52.)

11 Song track indicators
In song recording and playback, these indicate the status of the tracks. (See pages 75, 83.)

Music Stand
Insert the bottom edge of the included music stand into the slot located at the top rear of the PortaTone control panel.

PORTABLE GRAND

This convenient function lets you automatically exit from any other mode or function and instantly call up the Grand Piano voice.

"STEREO SAMPLED PIANO"

PLAYING THE PORTABLE GRAND

Press the PORTABLE GRAND button.

Doing this automatically cancels any other mode or function, and resets the entire instrument for playing the special "Stereo Sampled Piano" Grand Piano voice (voice 001). It automatically selects the Voice mode (with the Style mode active), and calls up style #91 (Rock Ballad). It also resets the footswitch to Sustain operation.

The Portable Grand setting is designed also for playing with the special Pianist styles (#91 - #100). When auto accompaniment is turned on, these provide piano-only accompaniment in a variety of music styles. (See page 52.)
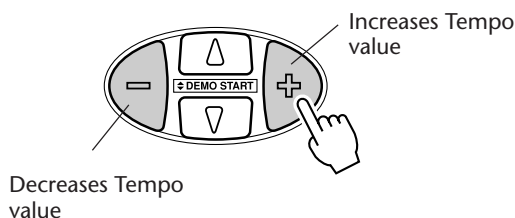
USING THE METRONOME

1 Set the desired tempo with the Tempo function in the Overall menu.

Press one of the OVERALL ▲/▼ buttons, repeatedly if necessary, until "Tempo" appears in the display.

Indicates Tempo is selected
Current Tempo value

TEMPO VOICE STYLE *116 Tempo*

24
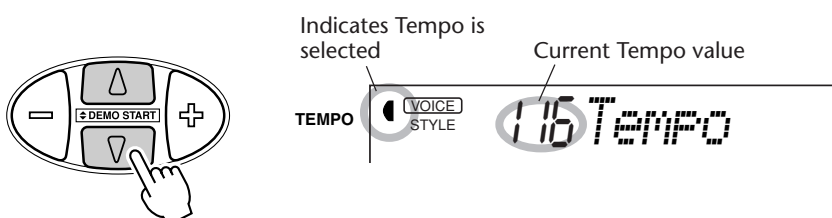
2 *Change the value.*

Use the OVERALL +/- buttons to increase or decrease the Tempo value.
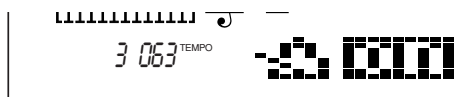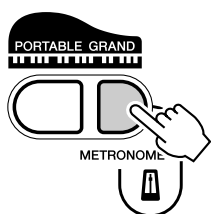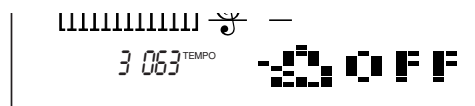Holding down either button continuously increases or decreases the value.

Increases Tempo
value

Decreases Tempo
value

3 *Turn on the Metronome.*

Press the METRONOME button.

PORTABLE GRAND

METRONOME

3 063 TEMPO

To turn the Metronome off, press the METRONOME button again.

3 063 TEMPO   OFF

Setting the Metronome Time Signature

The time signature of the Metronome can be set to
various quarter-note based meters.

NOTE
*The time signature changes automatically when a style or
song is selected.*

***Simultaneously hold down the METRONOME
button and press the button on the numeric
keypad that corresponds to the desired time
signature (see chart at right).***

Number button	Time signature
1	1/4 — Plays only "1" beats (all high clicks)
2	2/4
3	3/4
4	4/4
5	5/4
6	6/4
7	7/4
8	8/4
9	9/4
0	Plays no "1" beats (all low clicks)

3 063 TEMPO
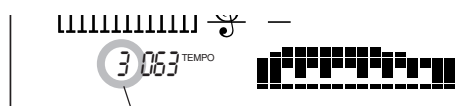
Indicates current beat
number

Adjusting the Metronome Volume

You can adjust the volume of the Metronome sound independently of the other PortaTone sounds. The volume range is 000 - 127.

1 *Select the Metronome Volume function in the Overall menu.*
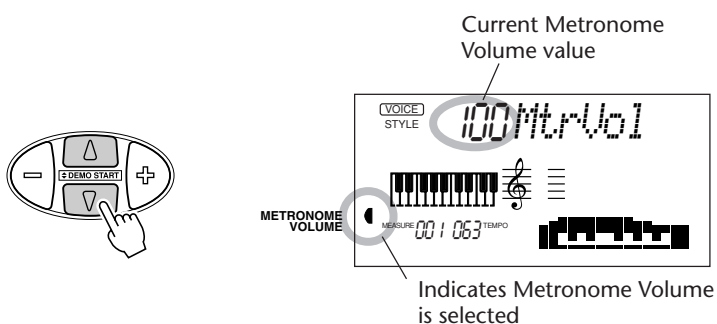Press one of the OVERALL ▲/▼ buttons, repeatedly if necessary, until "MtrVol" appears in the display.

Current Metronome
Volume value

VOICE
STYLE

100MtrVol

METRONOME
VOLUME

MEASURE 001 063 TEMPO

Indicates Metronome Volume
is selected

2 *Change the value.*
Use the OVERALL +/- buttons to increase or decrease the Metronome Volume value. Holding down either button continuously increases or decreases the value.

Increases Metronome
Volume value

Decreases Metronome
Volume value
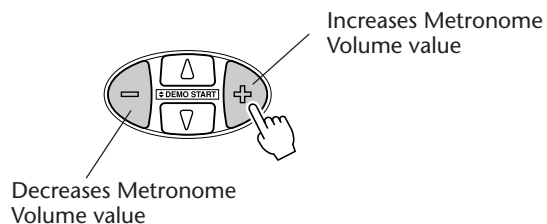
Restoring the Default
Metronome Volume
Value
To restore the default
Metronome Volume
value (100), press both
OVERALL +/- buttons
simultaneously (when
Metronome Volume is
selected in the Overall
menu).

PLAYING VOICES — THE VOICE MODE

The Voice mode features 228 authentic voices (including 128 General MIDI voices), plus 10 special drum kits — all of which have been created with Yamaha's sophisticated AWM (Advanced Wave Memory) tone generation system. The Voice mode gives you many powerful and versatile tools for playing and enhancing these Voices.

The voices are divided into various instrument categories, all of which are printed on the panel for convenience. For a complete list of the available voices, see page 109.

The Voice mode is actually divided into three separate modes: Main, Dual and Split. In the **Main Voice** mode (see below), you can play a single voice over the entire range of the keyboard. The **Dual Voice** mode (page 34) allows you to "layer" two different voices together for rich, complex sounds. The **Split Voice** mode (page 36) lets you set up two different voices for playing from separate sections of the keyboard. Moreover, each mode features special effect sections that let you enhance the sound of the Voice or Voices. These include Reverb, Chorus,

and Harmony, as well as a "DSP" section that provides miscellaneous effects such as tremolo, echo, delay, distortion, equalization, and wah. (See page 40.)
Other voice-related functions include Voice Set (page 38), which lets you automatically call up the ideal settings for each voice, and Touch Sensitivity (page 38), which determines how the voices respond to your playing technique.

The PortaTone includes special Drum Kit voices — #101 - #110 — that let you play various drum and percussion sounds from the keyboard. (Refer to the Drum Kit Voice chart on page 30.) Symbols are also printed above the keyboard, conveniently indicating which sounds are played from which keys.

PLAYING A VOICE — MAIN VOICE

1 Select the Voice mode.

Press the VOICE button.

FUNCTION   SONG   STYLE   VOICE
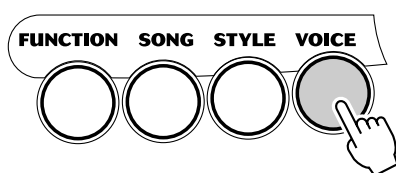
Indicates Voice mode is selected

VOICE
STYLE

001 GrandPno

2 *Select the desired voice number.*

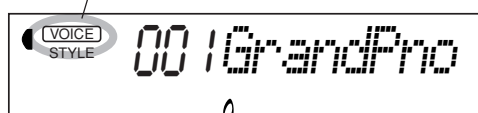Use the numeric keypad. The basic categories of voices and their numbers are shown at the right side of the panel. A complete list of the available voices is given on page 109.
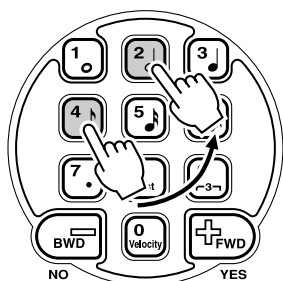
VOICE

1~12	PIANO	66~75	BRASS
13~19	MALLET	76~84	REED
20~32	ORGAN	85~89	PIPE
33~41	GUITAR	90~95	SYNTH LEAD
42~49	BASS	96~100	SYNTH PAD
50~60	ENSEMBLE	101~110	DRUM KITS
61~65	STRINGS	111~238	GM

There are three ways to select voices: 1) directly entering the voice number with the numeric keypad, 2) using the +/- keys to step up and down through the voices, or 3) pressing the VOICE button to advance through the voice numbers.

Using the numeric keypad

Enter the digits of the voice number as indicated on the panel. For example, to select voice #42, press "4" on the numeric keypad, then "2."

NOTE

All two-digit voice numbers can be selected without entering an initial "0." However, when selecting voice numbers 1 - 23, the PortaTone pauses briefly before actually calling up the voice. (This pause allows for entering three-digit voice numbers, such as "235." Entering the numbers "2" then "4" immediately calls up voice #24, since there are no voices #240 or higher.)

If you want to immediately call up voices #1 - #23, enter one or two zeros before the number; for example, select voice #9 by pressing "0," "0," then "9." Pressing only "0" does not change the voice.

Using the +/- keys

Press the + key to select the next voice number, and press the - key to select the previous voice. Holding down either key continuously scrolls up or down through the numbers. The +/- keys have a "wrap around" feature. For example, pressing the + key from voice #238 returns to voice #1.
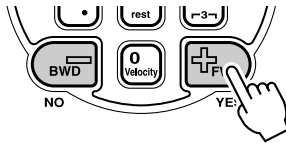
Using the VOICE button

Press the VOICE button to select the next voice number. (This functions exactly the same as the + button.)
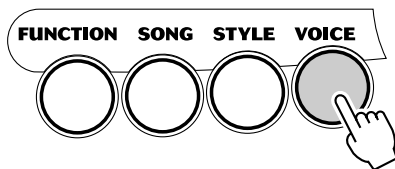
3 *Play the selected voice.*

To change to another voice, repeat step 2 above.

Since either the Style or Song mode is active in the background (as indicated by the mode name in the display, without the rectangle), you can also play styles or songs, respectively, in the Voice mode by simply pressing the START/STOP button. The last selected style or song will be played.

About Panel Voices and GM Voices

Keep in mind that the PortaTone has two separate sets of voices: 100 Panel voices and 128 GM (General MIDI) Voices. The GM Voices can also be used for optimum playback of GM-compatible song data. This means that any GM song data (played from a sequencer or other MIDI device) will sound just as the composer or programmer intended.
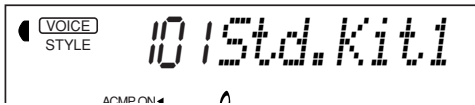When a GM voice is selected, the General MIDI icon appears at the top left of the display.

GENERAL MIDI

Drum Kit Voice Chart (voices 101 - 110)

When one of the 10 panel Drum Kit voices are selected you can play different drums and percussion instruments on the keyboard. The drums and percussion instruments played by the various keys are marked by symbols above the keys.

No.	Name	LCD
101	Standard Kit 1	Std.Kit1
102	Standard Kit 2	Std.Kit2
103	Room Kit	Room Kit
104	Rock Kit	Rock Kit
105	Electronic Kit	Elct.Kit
106	Analog Kit	AnlogKit
107	Dance Kit	DanceKit
108	Jazz Kit	Jazz Kit
109	Brush Kit	BrushKit
110	Symphony Kit	SymphKit

VOICE STYLE

101Std.Kit1

ACMP ON

Function Parameters — Main Voice

The Function parameters provide additional settings for the Main voice. These settings are especially useful when using a second voice in the Dual or Split modes, since they let you change or enhance the sound of the Main voice separate from the Dual or Split voice. These settings include:

- *Volume*
- *Octave*
- *Pan*
- *Reverb Send Level*
- *Chorus Send Level*
- *DSP Effect Send Level*

1 *Select the Function mode.*
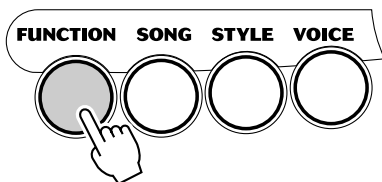
Press the FUNCTION button.

Flashes to indicate Function parameter can be selected.
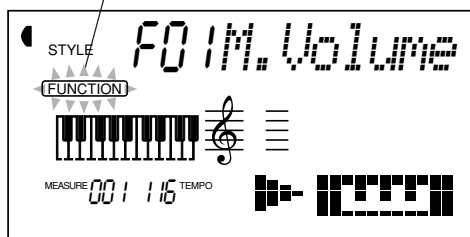
FUNCTION   SONG   STYLE   VOICE

STYLE   *F01M.Volume*

FUNCTION

MEASURE *001 116* TEMPO

2 *Select the desired Function parameter number.*

While the "FUNCTION" indication is flashing, use the numeric keypad to select the desired Main Voice Function parameter number (1 - 6). (See the "Parameters" list below for details.)

Function parameter numbers can be selected in the same way as with the voices (see page 28). You can use the numeric keypad to directly enter the number, use the +/- keys to step up and down through the parameters, or press the FUNCTION button to advance through the parameter numbers.

IMPORTANT

Since the "FUNCTION" indication flashes for only a couple of seconds, make sure to select the parameter quickly after step 1 above.

3 Change the parameter setting or value.

After the "FUNCTION" indication stops flashing, use the numeric keypad or +/- buttons to change the value or setting. (The value/setting is shown to the left of the parameter name.)

Parameter value or setting

Parameter name

STYLE

FUNCTION

4 Set other parameters as needed.

To select and set other parameters, repeat steps 1 - 3 above.

5 Exit the Function mode.

Once you've made all desired settings, press one of the other mode buttons (SONG, STYLE, or VOICE).

Restoring the Default Value
If you've changed the parameter setting, you can instantly restore the default setting by pressing both +/- buttons simultaneously.
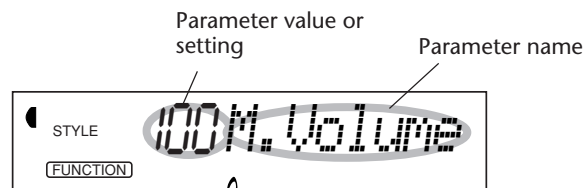
Negative values
To directly enter negative values (for those parameters that have negative values), simultaneously hold down the - button and press the desired number button.

NOTE

These settings are not saved when you turn off the power. If you wish to save them, save them to a User bank in the One Touch Setting feature (page 72).

Function Parameters

No.	Parameter Name	Display Name	Range/Settings	Description
F01	Main Voice Volume	M.Volume	0 — 127	This determines the volume of the Main voice, letting you create an optimum mix with the Dual or Split voice.
F02	Main Voice Octave	M.Octave	-2 — 2 (octaves)	This determines the octave range for the Main voice. Use this to set the most suitable range for the Main voice when using the Split mode, or use it to create an octave layer in the Dual mode.
F03	Main Voice Pan	M.Pan	-7 (full left) — 0 (center) — 7 (full right)	This determines the pan position of the Main voice in the stereo image.
F04	Main Voice Reverb Send Level	M.RevLvl	0 — 127	This determines how much of the Main voice's signal is sent to the Reverb effect. (See page 40.) Higher values result in a louder Reverb effect.
F05	Main Voice Chorus Send Level	M.ChoLvl	0 — 127	This determines how much of the Main voice's signal is sent to the Chorus effect. (See page 41.) Higher values result in a louder Chorus effect.
F06	Main Voice DSP Effect Send Level	M.DspLvl	0 — 127	This determines how much of the Main voice's signal is sent to the DSP effect. (See page 42.) Higher values result in a louder DSP effect.

TRANSPOSE AND TUNING

You can also adjust the tuning and change the transposition (key) of the entire PortaTone sound with the Transpose and Tuning functions.

NOTE

The Transpose and Tuning settings have no effect on the Drum Kit voices (#101 - #110).

Transpose

Transpose determines the key of both the main voice and the bass/chord accompaniment of the selected style. It also determines the pitch of the songs. This allows you to easily match the pitch of the PortaTone to other instruments or singers, or play in a different key without changing your fingering. The Transpose settings can be adjusted over a range of ± 12 semitones (± 1 octave).

1 Select the Transpose function in the Overall menu.

Press one of the OVERALL ▲/▼ buttons, repeatedly if necessary, until "Transpos" appears in the display.

Indicates Transpose is selected   Current Transpose value

2 Change the value.

Use the OVERALL +/- buttons to increase or decrease the Transpose value. Holding down either button continuously increases or decreases the value.

Increases Transpose value

Decreases Transpose value

Restoring the Default Transpose Value
If you've changed the Transpose setting, you can instantly restore the default setting of "00" by pressing both OVERALL +/- buttons simultaneously (when Transpose is selected in the Overall menu).

Tuning

Tuning determines the fine pitch setting of both the main voice and the bass/chord accompaniment of the selected style. It also determines the pitch of the songs. This allows you to accurately match the tuning with that of other instruments. The Tuning settings can be adjusted over a range of ± 100 (approx. ± 1 semitone).

1 *Select the Tuning function in the Overall menu.*

Press one of the OVERALL ▲/▼ buttons, repeatedly if necessary, until "Tuning" appears in the display.

Indicates Tuning is selected   Current Tuning value

VOICE
STYLE

TUNING

2 *Change the value.*

Use the OVERALL +/- buttons to increase or decrease the Tuning value. Holding down either button continuously increases or decreases the value.

Increases Tuning value
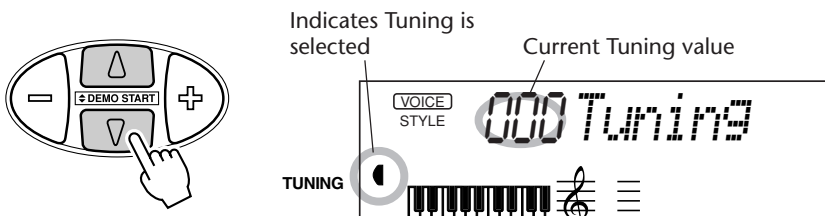
Decreases Tuning value
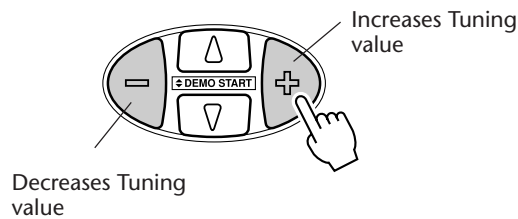
Restoring the Default Tuning Value
If you've changed the Tuning setting, you can instantly restore the default setting of "00" by pressing both OVERALL +/- buttons simultaneously (when Tuning is selected in the Overall menu).

PLAYING TWO VOICES — DUAL VOICE

The Dual Voice mode lets you create richly textured sounds by "layering" two different voices together — one voice being the Main voice selected in the normal way (page 27), and the other a Dual voice selected as described below.

1 Turn on the Dual Voice mode.
Press the DUAL button.

HARMONY   REVERB

DUAL   UCH

MEASURE 001 116 TEMPO
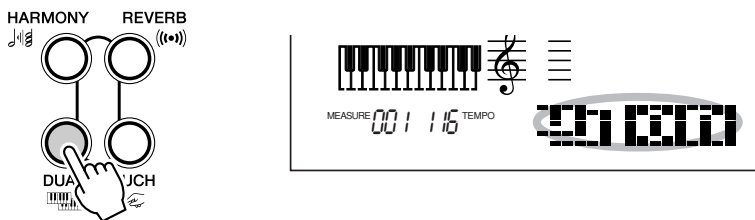
When you play the keyboard, both the currently selected Main and Dual voices will be heard.

To turn the Dual mode off, press the DUAL button again.

OFF

2 Select the desired Dual voice and make other settings for the voice (if desired) in the Function mode.
To do this, first call up the Function mode by pressing the FUNCTION button.
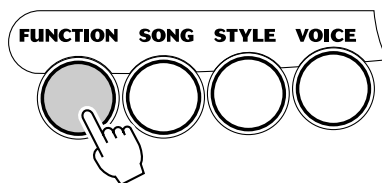
FUNCTION   SONG   STYLE   VOICE

3 Select the desired Function parameter number.
While the "FUNCTION" indication is flashing, use the numeric keypad to select the desired Dual Voice Function parameter number (11 - 18). Actual selection of the Dual voice is made from parameter #17. (See the "Parameters" list below for details.)
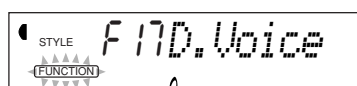
STYLE F17D.Voice
FUNCTION

Function parameter numbers can be selected in the same way as with the voices (see page 28) — with the numeric keypad, +/- keys, or the FUNCTION button.

IMPORTANT
• Since the "FUNCTION" indication flashes for only a couple of seconds, make sure to select the parameter quickly after step 2 above.

• For the Dual voice to be heard properly, make sure to:
* Select a different voice (#17, Dual Voice).
* Set the volume to an appropriate level (#11, Dual Volume).

4 Change the parameter setting or value.

After the "FUNCTION" indication stops flashing, use the numeric keypad to change the value or setting. For on/off settings, use the +/- buttons.

```
STYLE   050 Strings
FUNCTION
```

Restoring the Default Value
If you've changed the parameter setting, you can instantly restore the default setting by pressing both +/- buttons simultaneously.

Negative values
To directly enter negative values (for those parameters that have negative values), simultaneously hold down the - button and press the desired number button.

5 Set other parameters as needed.

To select and set other parameters, repeat steps 2 - 4 above.

6 Exit the Function mode.

Once you've made all desired settings, press one of the other mode buttons (SONG, STYLE, or VOICE).

Function Parameters — Dual Voice

The Function parameters provide all settings for the Dual voice. Like the similar settings in the Main Voice mode, these settings let you change or enhance the sound of the Dual voice separate from the Main voice. These settings include:

- • Volume
- • Octave
- • Pan
- • Reverb Send Level
- • Chorus Send Level
- • DSP Effect Send Level
- • Dual Voice
- • Dual On/Off

Function Parameters

No.	Parameter Name	Display Name	Range/Settings	Description
F11	Dual Voice Volume	D.Volume	0 — 127	This determines the volume of the Dual voice, letting you create an optimum mix with the Main voice.
F12	Dual Voice Octave	D.Octave	-2 — 2 (octaves)	This determines the octave range for the Dual voice. Use this to create an octave layer with the Main voice.
F13	Dual Voice Pan	D.Pan	-7 (full left) — 0 (center) — 7 (full right)	This determines the pan position of the Dual voice in the stereo image. For a spacious sounding effect, set this value at or near -7, and set the Main Voice Pan (page 31) at the opposite positive value.
F14	Dual Voice Reverb Send Level	D.RevLvl	0 — 127	This determines how much of the Dual voice's signal is sent to the Reverb effect. (See page 40.) Higher values result in a louder Reverb effect for the Dual voice.
F15	Dual Voice Chorus Send Level	D.ChoLvl	0 — 127	This determines how much of the Dual voice's signal is sent to the Chorus effect. (See page 41.) Higher values result in a louder Chorus effect for the Dual voice.
F16	Dual Voice DSP Effect Send Level	D.DspLvl	0 — 127	This determines how much of the Dual voice's signal is sent to the DSP effect. (See page 42.) Higher values result in a louder DSP effect for the Dual voice.
F17	Dual Voice	D.Voice	1 — 238	This determines the Dual voice. (See list on page 109.)
F18	Dual On/Off	Dual	on, off	This turns the Dual Voice mode on/off. (This is the same function as that of the DUAL button. It can also be controlled by a connected footswitch; see page 91.)

PLAYING TWO VOICES — SPLIT VOICE

In the Split Voice mode, you can assign two different Voices to opposite sections of the keyboard, and play one Voice with your left hand while your right plays another. For example, you could play bass with the left hand and play piano with the right. The right-hand (or upper) Voice is selected in the Main Voice mode (page 27), and the left-hand (or lower) Voice is selected in the Split Voice mode, as described below.

Split point

Split voice   Main voice
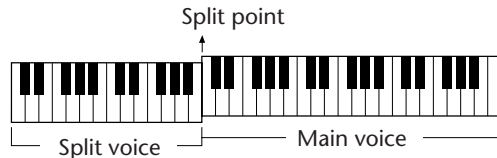
1   Call up the Function mode.
Press the FUNCTION button.

2   Select the Split On/Off parameter number.
While the "FUNCTION" indication is flashing, use the numeric keypad to select parameter #28 (Split On/Off).
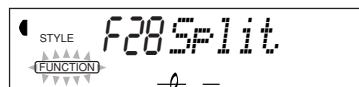
STYLE   F28 Split
FUNCTION

Function parameter numbers can be selected in the same way as with the voices (see page 28) — with the numeric keypad, +/- keys, or the FUNC-TION button.

3   Set Split to "on."
After the "FUNCTION" indication stops flashing, press the + button to turn the Split Voice mode on. (Pressing the - button turns the Split Voice mode off.)

STYLE   on Split
FUNCTION
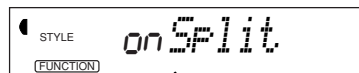
4   Make other settings for the Split voice (if desired).
Do this in the normal way:
     1) Press the FUNCTION button.
     2) Select the desired parameter (with the numeric keypad).
     3) After "FUNCTION" stops flashing, change the value/setting (with the numeric keypad). For on/off settings, use the +/- buttons.

Restoring the Default Value
If you've changed the parameter setting, you can instantly restore the default setting by pressing both +/- buttons simultaneously.

Negative values
To directly enter negative values (for those parameters that have negative values), simultaneously hold down the - button and press the desired number button.

IMPORTANT
Since the "FUNCTION" indication flashes for only a couple of seconds, make sure to select the parameter quickly after step 1 above.

IMPORTANT
For the Split voice to be heard properly, make sure to:
* Set the volume to an appropriate level (#21, Split Volume).
* Set the octave to a musically appropriate setting (#22 Split Octave). For example, a bass voice might best be played with a "-1" setting, while a strings voice might sound best at "1."
* Set the desired Split Point (#29). For most purposes, however, the default Split Point of "059" (Main voice starts at middle C) is suitable. (See the "Parameters" list below for details.)

NOTE
These settings are not saved when you turn off the power. If you wish to save them, save them to a User bank in the One Touch Setting feature (page 72).

5 *Exit the Function mode.*

Once you've made all desired settings, press one of the other mode buttons (SONG, STYLE, or VOICE).

Function Parameters — Split Voice

The Function parameters provide all settings for the Split voice. Like the similar settings in the Main Voice mode, these settings let you change or enhance the sound of the Split voice separate from the Main voice. These settings include:

- *Volume*
- *Octave*
- *Pan*
- *Reverb Send Level*
- *Chorus Send Level*
- *DSP Effect Send Level*
- *Split Voice*
- *Split On/Off*
- *Split Point*

Function Parameters

No.	Parameter Name	Display Name	Range/Settings	Description
F21	Split Voice Volume	S.Volume	0 — 127	This determines the volume of the Split voice, letting you create an optimum mix with the Main voice.
F22	Split Voice Octave	S.Octave	-2 — 2 (octaves)	This determines the octave range for the Split voice. Use this to set the most suitable range for the Split (lower) voice.
F23	Split Voice Pan	S.Pan	-7 (full left) — 0 (center) — 7 (full right)	This determines the pan position of the Split voice in the stereo image. For a spacious sounding effect, set this value at or near -7, and set the Main Voice Pan (page 31) at the opposite positive value.
F24	Split Voice Reverb Send Level	S.RevLvl	0 — 127	This determines how much of the Split voice's signal is sent to the Reverb effect. (See page 40.) Higher values result in a louder Reverb effect for the Split voice.
F25	Split Voice Chorus Send Level	S.ChoLvl	0 — 127	This determines how much of the Split voice's signal is sent to the Chorus effect. (See page 41.) Higher values result in a louder Chorus effect for the Split voice.
F26	Split Voice DSP Effect Send Level	S.DspLvl	0 — 127	This determines how much of the Split voice's signal is sent to the DSP effect. (See page 42.) Higher values result in a louder DSP effect for the Split voice.
F27	Split Voice	S.Voice	1 — 238	This determines the Split voice. (See list on page 109.)
F28	Split On/Off	Split	on, off	This turns the Split Voice mode on/off. This can also be controlled by a connected footswitch. (See page 91.)
F29	Split Point	SplitPnt	000 — 127	This determines the highest key for the Split voice and sets the Split "point" — in other words, the key that separates the Split (lower) and Main (upper) voices. (The Split voice sounds up to and including the Split Point key.) The default Split Point is 059 (B2). The value can also be set directly by pressing the desired key while this parameter is selected. While this is being set, the keyboard does not produce any sound. After setting this, make sure to select a different parameter or exit the Function mode before playing the keyboard.

NOTE
The Split Point setting is related to and affected by the Accompaniment Split Point setting. (See page 58.) |

ADDITIONAL VOICE FUNCTIONS — VOICE SET AND TOUCH SENSITIVITY

Voice Set and Touch Sensitivity are two important voice-related parameters, and are found in the Utility section of the Function parameters.

When Voice Set (described in greater detail below) is set to on, you can automatically call up a variety of voice-related settings that best suit the selected voice.

Touch Sensitivity (also described below) gives you dynamic, expressive control over the voices by letting you set how the volume of the PortaTone responds to your playing strength.

Once the Touch Sensitivity parameter is set below, Touch response of the keyboard can be turned on or off by pressing the TOUCH button.
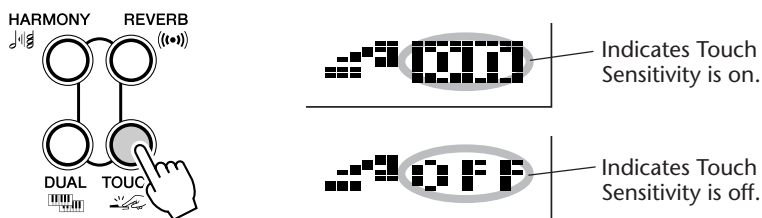
HARMONY   REVERB

DUAL   TOUCH

Indicates Touch Sensitivity is on.

Indicates Touch Sensitivity is off.

1 Call up the Function mode.
Press the FUNCTION button.

2 Select the desired Function parameter number.
While the "FUNCTION" indication is flashing, use the numeric keypad to select the Voice Set parameter (#72), or Touch Sensitivity (#73). (For details on these parameters, see below.)

STYLE   *F72VoiceSet*
FUNCTION

STYLE   *F73TouchSns*
FUNCTION

Function parameter numbers can be selected in the same way as with the voices (see page 28) — with the numeric keypad, +/- keys, or the FUNC-TION button.

3 Change the parameter setting or value.
After the "FUNCTION" indication stops flashing, use the numeric keypad to change the value or setting.

STYLE   *onVoiceSet*
FUNCTION

STYLE   *3TouchSns*
FUNCTION

IMPORTANT
Since the "FUNCTION" indication flashes for only a couple of seconds, make sure to select the parameter quickly after step 1 above.

Function Parameters — Voice Set and Touch Sensitivity

Function Parameters

No.	Parameter Name	Display Name	Range/Settings	Description
F72	Voice Set	VoiceSet	oFF, on	When this is set to on, selecting a voice also automatically calls up special voice-related parameters and values that best suit the voice. The parameters included in Voice Set are: • Main Voice — Volume, Octave, Pan • Dual Voice — Number, Volume, Octave, Pan, Reverb Send Level, Chorus Send Level, DSP Send Level • Harmony — Type, On/Off, Volume Use the panel HARMONY and DUAL buttons to turn the respective functions on or off.
F73	Touch Sensitivity	TouchSns	1 — 3	A setting of "1" results in limited touch response; this setting produces a relatively narrow dynamic range, no matter how lightly or strongly you play the keys. "2" lets you play over a normal dynamic range (soft to loud), while "3" is designed for playing very soft passages, giving you slightly more detailed control in the soft volume range. When Touch is turned off (page 38), a constant velocity value of 80 is produced (total velocity range = 0 - 127).

39

EFFECTS

The PortaTone is equipped with a wide variety of effects that can be used to enhance the sound of the voices. Four general categories of effects are provided — Reverb, Chorus, DSP, and Harmony — and each category has many effect types to choose from.

Application of the effects is also exceptionally flexible. All four effects can be used simultaneously, and the degree of the Reverb, Chorus, and DSP effects can be adjusted independently for each of the voices: Main, Dual, and Split.

REVERB

The Reverb effect reproduces the natural ambient "wash" of sound that occurs when a instrument is played in a room or concert hall. A total of eight different Reverb types simulating various different performance environments are available.

1 Turn on the Reverb effect.

Press the REVERB button.
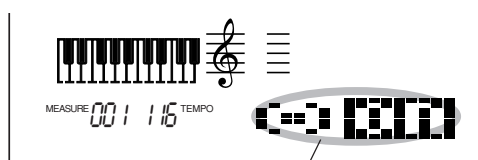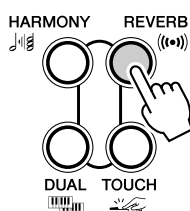
Indicates that Reverb is on

2 Set the desired Reverb Type in the Function mode.

Do this in the normal way:

1) Press the FUNCTION button.
2) Select the desired Function parameter number (#31, #32) with the numeric keypad. (For a list of the Reverb Types, see page 45.)

3) After "FUNCTION" stops flashing, change the value (with the numeric keypad). For on/off settings, use the +/- buttons.

> Restoring the Default Value
> If you've changed the parameter setting, you can instantly restore the default setting by pressing both +/- buttons simultaneously.

3 Set the Reverb Send Level for the desired voice(s).

The Main, Dual, and Split voices can each be set to have different amounts of Reverb. Use the corresponding Reverb Send Level parameters in the Function mode (Main: #04, Dual: #14, Split: #24) to control this. (See pages 31, 35, 37.)

HINT

Reverb can also be turned on and off with a connected footswitch (page 91), or from Function parameter #31 (page 44).

NOTE

• The panel REVERB on/off button affects only the keyboard played voices. If you want to turn off the Reverb effect for the overall PortaTone sound (including accompaniment and songs), set the Reverb Type (#9, page 45) to "off."

• These settings are not saved when you turn off the power. If you wish to save them, save them to a User bank in the One Touch Setting feature (page 72).

• Three additional Reverb Types are available when controlling the PortaTone from a MIDI device. (For details, see page 116.)

NOTE

If the Reverb Send Level is set to a value near or at "000," the Reverb effect may not be heard.

4 Exit the Function mode.

Once you've made all desired settings, press one of the other mode buttons (SONG, STYLE, or VOICE).

CHORUS

The Chorus effect lets you enhance the sound of a voice with through the use of pitch modulation. Two basic types are provided: Chorus and Flanger. Chorus produces a thicker, warmer, and more animated sound, whereas Flanger creates a swirling, metallic effect. A total of four Chorus types are available.

1 Turn on the Chorus effect and set the Chorus Type in the Function mode.

Do this in the normal way:

1) Press the FUNCTION button.
2) Select the desired Function parameter number (#33, #34) with the numeric keypad. (For a list of the Chorus Types, see page 45.)

STYLE F33Chorus	STYLE F34ChoType
FUNCTION	FUNCTION

3) After "FUNCTION" stops flashing, change the value/setting (with the numeric keypad). For on/off settings, use the +/- buttons.

> Restoring the Default Value
> If you've changed the parameter setting, you can instantly restore the default setting by pressing both +/- buttons simultaneously.

2 Set the Chorus Send Level for the desired voice(s).

The Main, Dual, and Split voices can each be set to have different amounts of Chorus. Use the corresponding Chorus Send Level parameters in the Function mode (Main: #05, Dual: #15, Split: #25) to control this. (See pages 31, 35, 37.)

3 Exit the Function mode.

Once you've made all desired settings, press one of the other mode buttons (SONG, STYLE, or VOICE).

HINT
The Chorus effect can also be turned on and off with a connected footswitch. (See page 91.)

NOTE
• The Chorus effect is applied only to the keyboard-played voices.

• These settings are not saved when you turn off the power. If you wish to save them, save them to a User bank in the One Touch Setting feature (page 72).

• Three additional Chorus Types are available when controlling the PortaTone from a MIDI device. (For details, see page 116.)

NOTE
If the Chorus Send Level is set to a value near or at "000," the Chorus effect may not be heard.

DSP

The DSP effect section provides many reverb and chorus effects, plus a wealth of other useful and dynamic effects for enhancing and changing the sound of the voices. Included among these miscellaneous effects are reverse gate reverb, phaser, rotary speaker, tremolo, echo, delay, distortion, equalization, and wah. A total of thirty-three DSP types are available.

1 Turn on the DSP effect and set the DSP Type in the Function mode.

Do this in the normal way:

1) Press the FUNCTION button.

2) Select the desired Function parameter number (#35, #36) with the numeric keypad. (For a list of the DSP Types, see page 45.)

```
 STYLE   F35Dsp        STYLE   F36DspType
 FUNCTION                FUNCTION
```

3) After "FUNCTION" stops flashing, change the value/setting (with the numeric keypad). For on/off settings, use the +/- buttons.

Restoring the Default Value
If you've changed the parameter setting, you can instantly restore the default setting by pressing both +/- buttons simultaneously.

2 Set the DSP Send Level for the desired voice(s).

The Main, Dual, and Split voices can each be set to have different amounts of DSP. Use the corresponding DSP Send Level parameters in the Function mode (Main: #06, Dual: #16, Split: #26) to control this. (See pages 31, 35, 37.)

3 Exit the Function mode.

Once you've made all desired settings, press one of the other mode buttons (SONG, STYLE, or VOICE).

HINT
The DSP effect can also be turned on and off with a connected footswitch. (See page 91.)

NOTE
• The DSP effect is applied only to the keyboard-played voices.

• These settings are not saved when you turn off the power. If you wish to save them, save them to a User bank in the One Touch Setting feature (page 72).

• Eighteen additional DSP Types are available when controlling the PortaTone from a MIDI device. (For details, see page 116.)

NOTE
If the DSP Send Level is set to a value near or at "000," the DSP effect may not be heard.
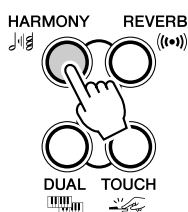
HARMONY

The Harmony section features a variety of performance effects that enhance the melodies you play when using the accompaniment styles of the PortaTone. A total of twenty-six Harmony types are available.

Tremolo, Trill and Echo effects can be used even if accompaniment is off. There are five different Harmony Types that automatically create harmony parts (for notes played in the upper section of the keyboard) to match the accompaniment chords.

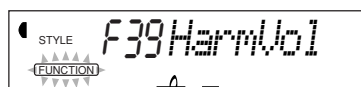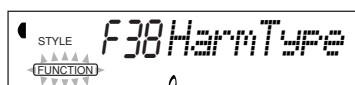## 1 Turn on the Harmony effect.

Press the HARMONY button.

Indicates that Harmony is on

2 Set the Harmony Type and desired Harmony Volume in the Function mode.

Do this in the normal way:

1) Press the FUNCTION button.
2) Select the desired Function parameter number (#37, #38, #39) with the numeric keypad. (For a list of the Harmony Types, see page 46.)
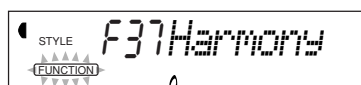
3) After "FUNCTION" stops flashing, change the value (with the numeric keypad). For on/off settings, use the +/- buttons.

Restoring the Default Value
If you've changed the parameter setting, you can instantly restore the default setting by pressing both +/- buttons simultaneously.

IMPORTANT
• For the first five Harmony Types (Duet, Trio, Block, Country, and Octave), chords must be played in the Accompaniment section of the keyboard.

• The speed of the Trill, Tremolo, and Echo effects depends on the Tempo setting (page 76).

NOTE
If the Harmony Volume is set to a value near or at "000," the Harmony effect may not be heard.

NOTE
These settings are not saved when you turn off the power. If you wish to save them, save them to a User bank in the One Touch Setting feature (page 72).

3 Exit the Function mode.

Once you've made all desired settings, press one of the other mode buttons (SONG, STYLE, or VOICE).

Function Parameters — Effects

The Effect Function parameters provide all effect-related settings (with the exception of the Send parameters in the Main, Dual, and Split sections). These settings include:

- *Reverb On/Off*
- *Reverb Type*
- *Chorus On/Off*
- *Chorus Type*
- *DSP On/Off*
- *DSP Type*
- *Harmony On/Off*
- *Harmony Type*
- *Harmony Volume*

Function Parameters

No.	Parameter Name	Display Name	Range/Settings	Description
F31	Reverb On/Off	Reverb	on, off	This turns the Reverb effect on/off. (This is the same function as that of the REVERB button. It can also be controlled by a connected footswitch; see page 91.)
F32	Reverb Type	RevType	(See "Reverb Type" list below.)	(See "Reverb Type" list below.)
F33	Chorus On/Off	Chorus	on, off	This turns the Chorus effect on/off. This can also be controlled by a connected footswitch. (See page 91.)
F34	Chorus Type	ChoType	(See "Chorus Type" list below.)	(See "Chorus Type" list below.)
F35	DSP On/Off	Dsp	on, off	This turns the DSP effect on/off. This can also be controlled by a connected footswitch. (See page 91.)
F36	DSP Type	DspType	(See "DSP Type" list below.)	(See "DSP Type" list below.)
F37	Harmony On/Off	Harmony	on, off	This turns the Harmony effect on/off. (This is the same function as that of the HARMONY button. It can also be controlled by a connected footswitch; see page 91.)
F38	Harmony Type	HarmType	(See "Harmony Type" list below.)	(See "Harmony Type" list below.)
F39	Harmony Volume	HarmVol	000 — 127	This determines the level of the Harmony effect, letting you create the optimum mix with the original melody note.

■ Effect Types

Reverb Types

No.	Reverb Type	Display Name	Description
1	Hall 1	Hall1	Concert hall reverb.
2	Hall 2	Hall2	
3	Room 1	Room1	Small room reverb.
4	Room 2	Room2	
5	Stage 1	Stage1	Reverb for solo instruments.
6	Stage 2	Stage2	
7	Plate 1	Plate1	Simulated steel plate reverb.
8	Plate 2	Plate2	
9	Off	Off	No effect.

Chorus Types

No.	Chorus Type	Display Name	Description
1	Chorus 1	Chorus1	Conventional chorus program with rich, warm chorusing.
2	Chorus 2	Chorus2	
3	Flanger 1	Flanger1	Pronounced three-phase modulation with a slight metallic sound.
4	Flanger 2	Flanger2	
5	Off	Off	No effect.

DSP Types

No.	DSP Type	Display Name	Description
1	Hall 1	Hall1	Concert hall reverb.
2	Hall 2	Hall2	
3	Room 1	Room1	Small room reverb.
4	Room 2	Room2	
5	Stage 1	Stage1	Reverb for solo instruments.
6	Stage 2	Stage2	
7	Plate 1	Plate1	Simulated steel plate reverb.
8	Plate 2	Plate2	
9	Early Reflection 1	ER1	Early reflections only.
10	Early Reflection 2	ER2	
11	Gate Reverb	Gate1	Gated reverb effect, in which the reverberation is quickly cut off for special effects.
12	Reverse Gate	Gate2	Similar to Gate Reverb, but with a reverse increase in reverb.
13	Chorus 1	Chorus1	Conventional chorus effect with rich, warm chorusing.
14	Chorus 2	Chorus2	
15	Flanger 1	Flanger1	Pronounced three-phase modulation with slight metallic sound.
16	Flanger 2	Flanger2	
17	Symphonic	Symphony	Exceptionally rich & deep chorusing.
18	Phaser	Phaser	Pronounced, metallic modulation with periodic phase change.
19	Rotary Speaker 1	Rotary1	Rotary speaker simulation.
20	Rotary Speaker 2	Rotary2	
21	Tremolo 1	Tremolo1	Rich Tremolo effect with both volume and pitch modulation.
22	Tremolo 2	Tremolo2	
23	Guitar Tremolo	Tremolo3	Simulated electric guitar tremolo.
24	Auto Pan	AutoPan	Several panning effects that automatically shift the sound position (left, right, front, back).
25	Auto Wah	AutoWah	Repeating filter sweep "wah" effect.
26	Delay Left - Center - Right	DelayLCR	Three independent delays, for the left, right and center stereo positions.
27	Delay Left - Right	DelayLR	Initial delay for each stereo channel, and two separate feedback delays.
28	Echo	Echo	Stereo delay, with independent feedback level settings for each channel.
29	Cross Delay	CrossDly	Complex effect that sends the delayed repeats "bouncing" between the left and right channels.
30	Distortion Hard	D Hard	Hard-edge distortion.
31	Distortion Soft	D Soft	Soft, warm distortion.
32	EQ Disco	EQ Disco	Equalizer effect that boosts both high and low frequencies, as is typical in most disco music.
33	EQ Telephone	EQ Tel	Equalizer effect that cuts both high and low frequencies, to simulate the sound heard through a telephone receiver.
34	Off	Off	No effect.

Harmony Types

No.	Harmony Type	Display Name		Description
1	Duet	Duet		Harmony types 1 - 5 are pitch-based and add one-, two- or three-note harmonies to the single-note melody played in the right hand. These types only sound when chords are played in the auto accompaniment section of the keyboard.
2	Trio	Trio		
3	Block	Block		
4	Country	Country		
5	Octave	Octave		
6	Trill 1/4 note	Tril1/4	♩	Types 6 - 26 are rhythm-based effects and add embellishments or delayed repeats in time with the auto accompaniment. These types sound whether the auto accompaniment is on or not; however, the actual speed of the effect depends on the Tempo setting (page 76). The individual note values in each type let you synchronize the effect precisely to the rhythm. Triplet settings are also available: 1/6 = quarter-note triplets, 1/12 = eighth-note triplets, 1/24 = sixteenth-note triplets.
7	Trill 1/6 note	Tril1/6	𝅘𝅥𝅘𝅥𝅘𝅥 ³	
8	Trill 1/8 note	Tril1/8	♪	
9	Trill 1/12 note	Tril1/12	𝅘𝅥𝅮𝅘𝅥𝅮𝅘𝅥𝅮 ³	
10	Trill 1/16 note	Tril1/16	♬	
11	Trill 1/24 note	Tril1/24	𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯 ³	
12	Trill 1/32 note	Tril1/32	𝅘𝅥𝅯	
13	Tremolo 1/4 note	Trem1/4	♩	• The Trill effect Types (6 - 12) create two-note trills (alternating notes) when two notes are held.
14	Tremolo 1/6 note	Trem1/6	𝅘𝅥𝅘𝅥𝅘𝅥 ³	
15	Tremolo 1/8 note	Trem1/8	♪	• The Tremolo effect Types (13 - 19) repeat all held notes (up to four).
16	Tremolo 1/12 note	Trem1/12	𝅘𝅥𝅮𝅘𝅥𝅮𝅘𝅥𝅮 ³	
17	Tremolo 1/16 note	Trem1/16	♬	• The Echo effect Types (20 - 26) create delayed repeats of each note played.
18	Tremolo 1/24 note	Trem1/24	𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯 ³	
19	Tremolo 1/32 note	Trem1/32	𝅘𝅥𝅯	
20	Echo 1/4 note	Echo1/4	♩	
21	Echo 1/6 note	Echo1/6	𝅘𝅥𝅘𝅥𝅘𝅥 ³	
22	Echo 1/8 note	Echo1/8	♪	
23	Echo 1/12 note	Echo1/12	𝅘𝅥𝅮𝅘𝅥𝅮𝅘𝅥𝅮 ³	
24	Echo 1/16 note	Echo1/16	♬	
25	Echo 1/24 note	Echo1/24	𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯 ³	
26	Echo 1/32 note	Echo1/32	𝅘𝅥𝅯	

AUTO ACCOMPANIMENT — THE STYLE MODE

The Style mode provides dynamic rhythm/accompaniment patterns — as well as voice settings appropriate for each pattern — for various popular music styles.

A total of 100 different styles are available, in several different categories. Each style is made up of separate "sections" — Intro, Main A and B (with 4 Fill-ins), and Ending — letting you call up different accompaniment sections as you perform.

The auto accompaniment features that are 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 (set by default to keys F♯2 and lower) is for the auto accompaniment function.

The Style mode also has the powerful Chord Guide features, which include three sophisticated learning and performance tools: Dictionary, Smart, and EZ Chord. The Dictionary and Smart functions (pages 62, 64) provide powerful, easy-to-use tools for learning chords and chord relationships. EZ Chord (page 66) lets you record chord progressions for an entire song, and then step through the chords by simply pressing a single key in the auto accompaniment section of the keyboard.

SELECTING A STYLE AND PLAYING THE ACCOMPANIMENT

1 Select the Style mode.
Press the STYLE button.

Indicates Style mode is selected   Style name and number
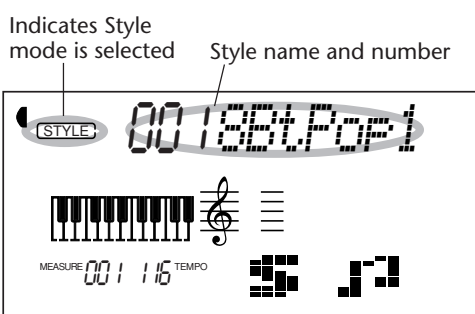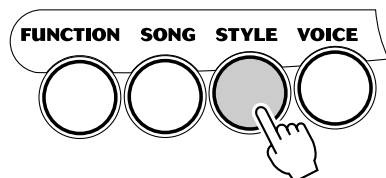
2 Select the desired style number.
Use the numeric keypad. The basic categories of styles and their numbers are shown at the left of the panel. A complete list of the available styles is given on page 111.

47
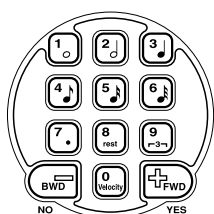
Style numbers can be selected in the same way as with the voices (see page 28). You can use the numeric keypad to directly enter the style number, use the +/- keys to step up and down through the styles, or press the STYLE button to advance through the style numbers.

3 Start the accompaniment.

You can do this in one of the following ways:

Pressing the START/STOP button

The rhythm starts playing immediately without bass and chord accompaniment. The currently selected Main A or B section will play.
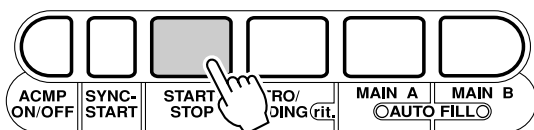
You can select the Main A or B section by pressing the appropriate button — MAIN A or MAIN B — before pressing the START/STOP button. (The icon section of the display briefly shows the letter of the selected section: "A" or "B.")
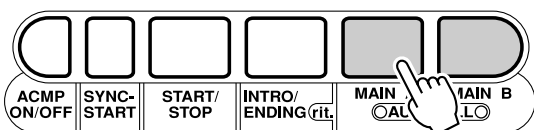
Indicates selected section (Main A or B).

Using Sync-Start

The PortaTone also has a Sync-Start function that allows you to start the rhythm/accompaniment by simply pressing a key on the keyboard. To use Sync-Start, first press the SYNC-START button (the beat bars below the style name all flash to indicate Sync-Start standby), then press any key on the keyboard. (When auto accompaniment is on, play a key or chord in the auto accompaniment section of the keyboard.)

Auto accompaniment section
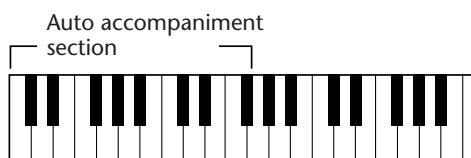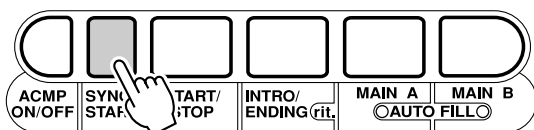
Starting with an Intro section

Each style has its own two- or four-measure Intro section. When used with the auto accompaniment, many of the Intro sections also include special chord changes and embellishments to enhance your performance.

To start with an Intro section:
1) Press the MAIN A or MAIN B button — to select which section (A or B) is to follow the Intro.

Indicates selected section (Main A or B).

2) Press the INTRO button.

Indicates Intro standby.
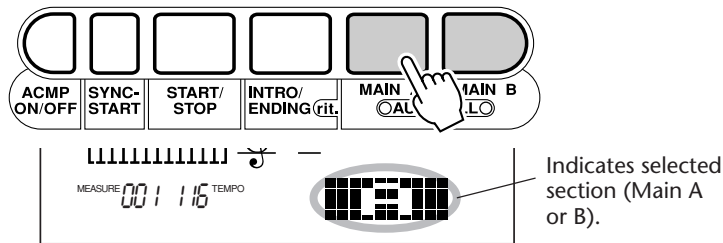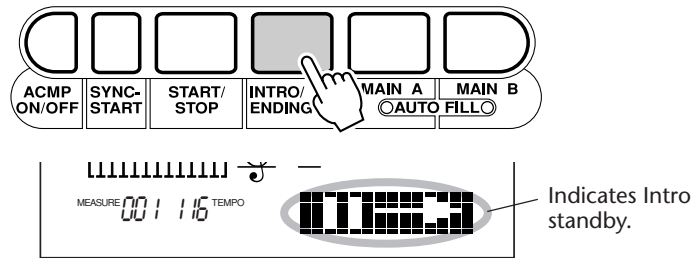
To actually start the Intro section and accompaniment, press the START/STOP button.

Once the Intro section is finished, the icon section of the display briefly shows the letter "A" or "B" to indicate that the selected Main section is currently playing.

Using Sync-Start with an Intro section

You can also use the Sync-Start function with the special Intro section of the selected style.

To use Sync-Start with an Intro section:
1) Press the MAIN A or MAIN B button — to select which section (A or B) is to follow the Intro.

Indicates selected section (Main A or B).
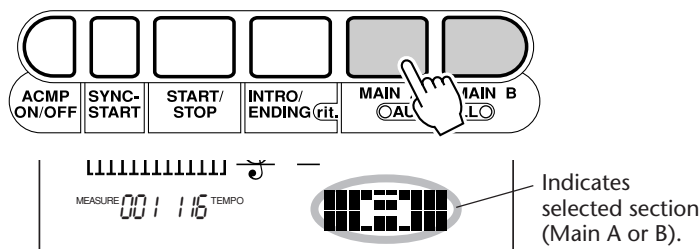
NOTE

This function can also be controlled by using a connected footswitch. (See page 91.)

2) Press the INTRO button.

Indicates Intro standby.
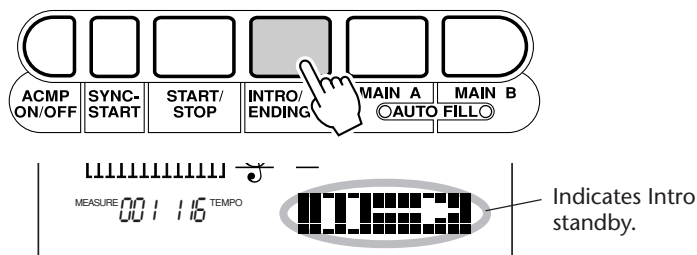
3) Press the SYNC-START button to enable Sync-Start, and start the Intro section and accompaniment by playing any key on the keyboard. (When auto accompaniment is on, play a key or chord in the auto accompaniment section of the keyboard.)

Auto accompaniment section
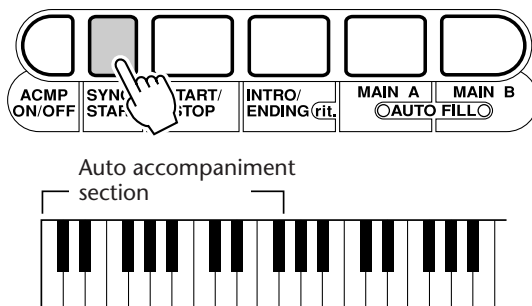
Once the Intro section is finished, the icon section of the display briefly shows the letter "A" or "B" to indicate that the selected Main section is currently playing.

About Auto Accompaniment

Auto accompaniment can be used with any of the above methods. Simply press the ACMP ON/OFF button to turn on the auto accompaniment. (This can be done at any point in the operation.)

Indicates that auto accompaniment is on.
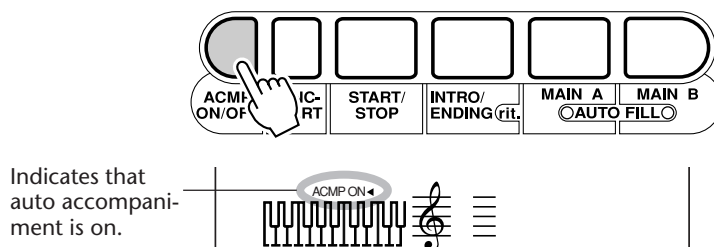
When using Sync-Start with the auto accompaniment, only keys in the auto accompaniment section can be used to start the accompaniment. (For more information on auto accompaniment, see page 52.)

About the Beat Display
The dark bars underneath the style name in the display flash in time with the current tempo during playback (or Sync-Start standby) of the accompaniment. The flashing bars provide a visual indication of both the tempo and time signature of the accompaniment. (For more information, see page 77.)

4 *Stop the accompaniment.*

You can do this in one of three ways:

Pressing the START/STOP button
The rhythm/accompaniment stops playing immediately.

Using an Ending section
Press the INTRO/ENDING button. The accompaniment stops after the Ending section is finished.

Pressing the SYNC-START button
This immediately stops the accompaniment and automatically enables Sync-Start, letting you re-start the accompaniment by simply playing a chord or key in the auto accompaniment section of the keyboard.

NOTE

• *This function can also be controlled by using a connected footswitch. (See page 91.)*

• *To have the Ending section gradually slow down as it is playing, press the INTRO/ENDING button twice quickly.*

ACCOMPANIMENT CONTROLS

When the Style mode is active, the panel buttons below the display function as accompaniment controls.

Pressing this button alternately enables and cancels the bass and chord accompaniment. (See below.)

Pressing this button alternately starts and stops accompaniment playback.

Pressing this button selects the Main A section, or adds a Fill-in A section. (See page 54.)

This controls the Chord Guide functions. (See page 62.)

ACMP ON/OFF | **SYNC-START** | **START/STOP** | **INTRO/ENDING** (rit.) | **MAIN A** ◯AUTO FILL◯ **MAIN B** | **CHORD GUIDE**
DICTIONARY
SMART
EZ
OFF

Pressing this button alternately enables and cancels the Sync-Start function. (See page 48.)

This controls the Intro and Ending sections. (See pages 49, 51.)

Pressing this button selects the Main B section, or adds a Fill-in B section. (See page 54.)

USING THE AUTO ACCOMPANIMENT FEATURES

1 Turn on the auto accompaniment.

Press the ACMP ON/OFF button to turn on (enable) the auto accompaniment.

ACMP ON/OFF | **IC-RT** | **START/STOP** | **INTRO/ENDING** (rit.) | **MAIN A** ◯AUTO FILL◯ **MAIN B**
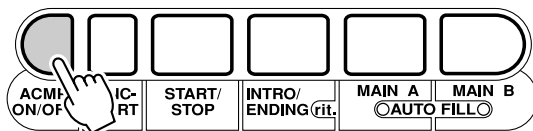
Indicates that auto accompaniment is on. — ACMP ON ◀
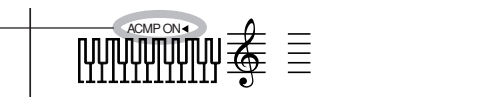
2 Select a style and play the accompaniment.

Select one of the styles and start playback, as described in steps 1 - 3 on page 47.

3 *Change chords using the auto accompaniment feature.*

Try playing a few successive single notes with your left hand, and notice how the bass and chord accompaniment change with each key you play. You can also play full chords to control the auto accompaniment. (Refer to page 56 for more information on how to use auto accompaniment.)

HINT

• *The ACMP ON/OFF button can also be used to turn off and on the bass/chord accompaniment while playing — allowing you to create dynamic rhythmic breaks in your performance.*

• *You can use the Sync-Start function to create a similar, yet even more dramatic break. While the accompaniment is playing, pressing the SYNC-START button immediately stops the accompaniment and enables Sync-Start. This lets you play unaccompanied until you press a key in the auto accompaniment section to start the accompaniment again. This is especially effective when you press the SYNC-START button at the end of a musical phrase.*

NOTE

Chords played in the auto accompaniment section of the keyboard are also detected and played when the accompaniment is stopped. In effect, this gives you a "split keyboard," with bass and chords in the left hand and the normally selected voice in the right.

CHANGING THE TEMPO

The Tempo of song (and accompaniment) playback can be adjusted over a range of 32 - 280 bpm (beats per minute). For instructions on changing the Tempo, see page 76.

NOTE

Each style has been given a default or standard tempo. (For instructions on restoring the default tempo, see page 77.) When accompaniment playback is stopped and a different style is selected, the tempo returns to the default setting of the new style. When switching styles during playback, the last tempo setting is maintained. (This allows you to keep the same tempo, even when changing styles.)

ACCOMPANIMENT SECTIONS (MAIN A, MAIN B AND FILL-INS)

While the accompaniment is playing, you can add variation in the rhythm/accompaniment by pressing the MAIN/AUTO FILL A or B button. This automatically plays one of four Fill-in sections, and smoothly leads into the next section — even if it is the same section.
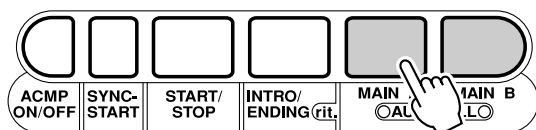
This appears while the Fill-in section is playing.

Each style has four different Fill-in sections that play in the following conditions:

- *Main A → Main A (Fill-in "AA")*
- *Main A → Main B (Fill-in "AB")*
- *Main B → Main A (Fill-in "BA")*
- *Main B → Main B (Fill-in "BB")*

NOTE

• *This function can also be controlled by using a connected footswitch. (See page 91.)*

• *If you press the MAIN A or B button, the Fill-in will begin immediately, and the newly selected section (A or B) will actually begin playing from the top of the next measure, unless the MAIN A or B button is pressed during the last beat of the measure — in which case the Fill-in will begin from the first beat of the next measure.*

• *Rhythm sounds and Fill-in sections are not available when one of the Pianist styles (#91 - #100) are selected.*

ADJUSTING THE ACCOMPANIMENT VOLUME

The playback volume of the accompaniment can be adjusted. This volume control affects only the accompaniment volume. The volume range is 000 - 127.

1 Select the Accompaniment Volume function in the Overall menu.

Press one of the OVERALL ▲/▼ buttons, repeatedly if necessary, until "AcmpVol" appears in the display.

Current Accompaniment Volume value

ACMP/SONG VOLUME

Indicates Accompaniment Volume is selected
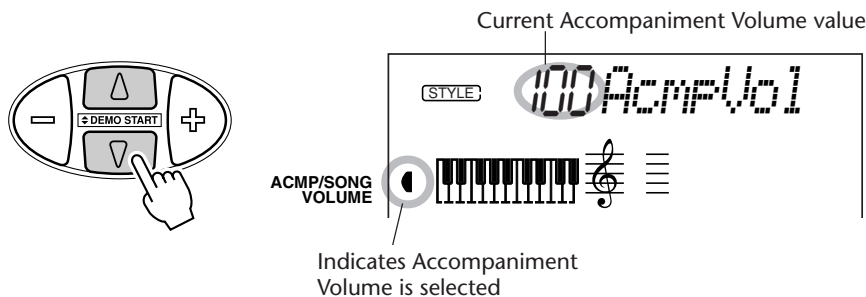
2 Change the value.

Use the OVERALL +/- buttons to increase or decrease the Accompaniment Volume value. Holding down either button continuously increases or decreases the value.

Increases Accompaniment Volume value

Decreases Accompaniment Volume value
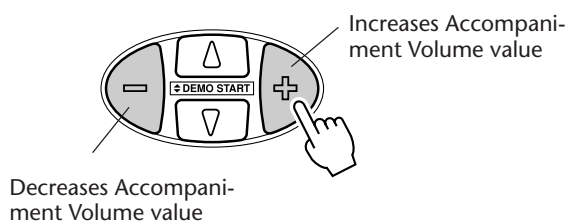
Restoring the Default Value
To restore the default Accompaniment Volume value (100), press both OVERALL +/- buttons simultaneously (when Accompaniment Volume is selected in the Overall menu).

NOTE
Accompaniment Volume cannot be changed unless the Style mode is active.

55

USING AUTO ACCOMPANIMENT — MULTI FINGERING

When it is set to on (page 52), 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 accompaniment 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.

Single Finger Chords

Chords that can be produced in Single Finger operation are major, minor, seventh and minor seventh. The illustration 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.)

C

To play a major chord: Press the root note of the chord.

Cm

To play a minor chord: Press the root note together with the nearest black key to the left of it.

C₇

To play a seventh chord: Press the root note together with the nearest white key to the left of it.

Cm₇

To play a minor seventh chord: Press the root note together with the nearest white and black keys 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.

Example for "C" chords

C   C(9)   C₆   C₆(9)   CM₇   CM₇(9)   CM₇(♯11)   C(♭5)   CM₇♭5

Csus₄   Caug   CM₇aug   Cm   Cm(9)   Cm₆   Cm₇   Cm₇(9)   Cm₇(11)

CmM₇   CmM₇(9)   Cm₇♭5   CmM₇♭5   Cdim   Cdim₇   C₇   C₇(♭9)   C₇(♭13)

C₇(9)   C₇(♯11)   C₇(13)   C₇(♯9)   C₇♭5   C₇aug   C₇sus₄   C₁₊₂₊₅

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

Chord Name/[Abbreviation]	Normal Voicing	Chord (C)	Display
Major [M]	1 - 3 - 5	C	C
Add ninth [(9)]	1 - 2 - 3 - 5	C(9)	C(9)
Sixth [6]	1 - (3) - 5 - 6	C6	C6
Sixth ninth [6(9)]	1 - 2 - 3 - (5) - 6	C6(9)	C6(9)
Major seventh [M7]	1 - 3 - (5) - 7 or 1 - (3) - 5 - 7	CM7	CM7
Major seventh ninth [M7(9)]	1 - 2 - 3 - (5) - 7	CM7(9)	CM7(9)
Major seventh add sharp eleventh [M7(#11)]	1 - (2) - 3 - #4 - 5 - 7 or 1 - 2 - 3 - #4 - (5) - 7	CM7(#11)	CM7(#11)
Flatted fifth [(♭5)]	1 - 3 - ♭5	C(♭5)	C♭5
Major seventh flatted fifth [M7♭5]	1 - 3 - ♭5 - 7	CM7♭5	CM7♭5
Suspended fourth [sus4]	1 - 4 - 5	Csus4	Csus4
Augmented [aug]	1 - 3 - #5	Caug	Caug
Major seventh augmented [M7aug]	1 - (3) - #5 - 7	CM7aug	CM7aug
Minor [m]	1 - ♭3 - 5	Cm	Cm
Minor add ninth [m(9)]	1 - 2 - ♭3 - 5	Cm(9)	Cm(9)
Minor sixth [m6]	1 - ♭3 - 5 - 6	Cm6	Cm6
Minor seventh [m7]	1 - ♭3 - (5) - ♭7	Cm7	Cm7
Minor seventh ninth [m7(9)]	1 - 2 - ♭3 - (5) - ♭7	Cm7(9)	Cm7(9)
Minor seventh add eleventh [m7(11)]	1 - (2) - ♭3 - 4 - 5 - (♭7)	Cm7(11)	Cm7(11)
Minor major seventh [mM7]	1 - ♭3 - (5) - 7	CmM7	CmM7
Minor major seventh ninth [mM7(9)]	1 - 2 - ♭3 - (5) - 7	CmM7(9)	CmM7(9)
Minor seventh flatted fifth [m7♭5]	1 - ♭3 - ♭5 - ♭7	Cm7♭5	Cm7♭5
Minor major seventh flatted fifth [mM7♭5]	1 - ♭3 - ♭5 - 7	CmM7♭5	CmM7♭5
Diminished [dim]	1 - ♭3 - ♭5	Cdim	Cdim
Diminished seventh [dim7]	1 - ♭3 - ♭5 - 6	Cdim7	Cdim7
Seventh [7]	1 - 3 - (5) - ♭7 or 1 - (3) - 5 - ♭7	C7	C7
Seventh flatted ninth [7(♭9)]	1 - ♭2 - 3 - (5) - ♭7	C7(♭9)	C7(♭9)
Seventh add flatted thirteenth [7(♭13)]	1 - 3 - 5 - ♭6 - ♭7	C7(♭13)	C7(♭13)
Seventh ninth [7(9)]	1 - 2 - 3 - (5) - ♭7	C7(9)	C7(9)
Seventh add sharp eleventh [7(#11)]	1 - (2) - 3 - #4 - 5 - ♭7 or 1 - 2 - 3 - #4 - (5) - ♭7	C7(#11)	C7(#11)
Seventh add thirteenth [7(13)]	1 - 3 - (5) - 6 - ♭7	C7(13)	C7(13)
Seventh sharp ninth [7(#9)]	1 - #2 - 3 - (5) - ♭7	C7(#9)	C7(#9)
Seventh flatted fifth [7♭5]	1 - 3 - ♭5 - ♭7	C7♭5	C7♭5
Seventh augmented [7aug]	1 - 3 - #5 - ♭7	C7aug	C7aug
Seventh suspended fourth [7sus4]	1 - 4 - (5) - ♭7	C7sus4	C7sus4
One plus two plus five [1+2+5]	1 - 2 - 5	C1+2+5	C

NOTE

• *Notes in parentheses can be omitted.*

• *Playing two same root keys in the adjacent octaves produces accompaniment based only on the root.*

• *A perfect fifth (1 + 5) produces accompaniment based only on the root and fifth which can be used with both major and minor chords.*

• *The chord fingerings listed are all in "root" position, but other inversions can be used — with the following exceptions:*

    m7, m7♭5, 6, m6, sus4, aug, dim7, 7♭5, 6(9), m7(11), 1+2+5.

• *Inversion of the 7sus4 chord are not recognized if the 5th is omitted.*

• *The AUTO ACCOMPANI-MENT will sometimes not change when related chords are played in sequence (e.g. some minor chords followed by the minor seventh).*

• *Two-note fingerings will produce a chord based on the previously played chord.*

SETTING THE ACCOMPANIMENT SPLIT POINT

The Accompaniment Split Point determines the highest key for the accompaniment section. The accompaniment can be played with the keys up to and including the Accompaniment Split Point key.

This parameter can be set lower (but not higher) than the Split Point in the Split mode. When set to different values, the two settings affect one another in the following way:

• *When the Split mode Split Point is set higher than the Accompaniment Split Point:*

Accompaniment   Split   Main
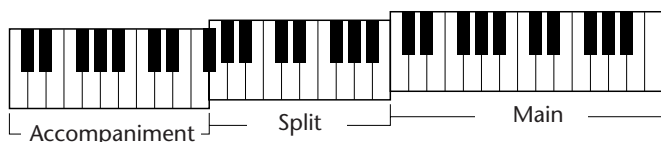
• *When the Split mode Split Point is set to the same key as the Accompaniment Split Point:*

Split voice +
Accompaniment section   Main

1 Call up the Function mode.
Press the FUNCTION button.

FUNCTION   SONG   STYLE   VOICE
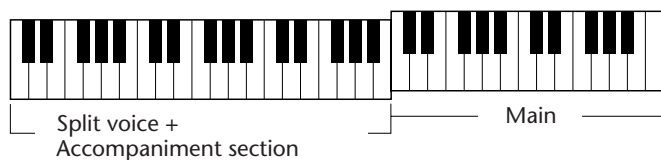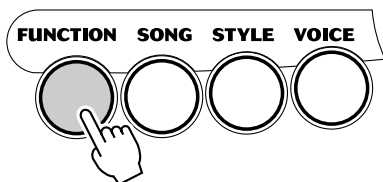
2 Select the Accompaniment Split Point parameter.
While the "FUNCTION" indication is flashing, use the numeric keypad to select the Accompaniment Split Point parameter (#51). (For details on the parameter, see below.)

The Function parameter number can be selected in the same way as with the voices (see page 28) — with the numeric keypad, +/- keys, or the FUNCTION button.

IMPORTANT
Since the "FUNCTION" indication flashes for only a couple of seconds, make sure to select the parameter quickly after step 1 above.

STYLE F51AcmpSPnt
FUNCTION

3 *Change the parameter setting or value.*

After the "FUNCTION" indication stops flashing, use the numeric keypad to change the value or setting.

```
  ( ))                  ___  ___         ___
   STYLE      /  /  /-/ /--/ /    /-/-/ /--/ |-
  [FUNCTION]
```
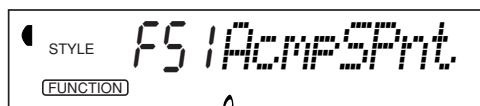
The value can also be set directly by pressing the desired key while this parameter is selected. After setting this, make sure to select a different parameter or exit the Function mode before playing the keyboard.

Function Parameter — Accompaniment Split Point

Function Parameters

No.	Parameter Name	Display Name	Range/Settings	Description
F51	Accompaniment Split Point	AcmpSPnt	000 — 127	This determines the highest key for the accompaniment section and sets the accompaniment split "point" — in other words, the key that separates the accompaniment section and the Main voice. (When accompaniment is turned on, the accompaniment section sounds up to and including the Accompaniment Split Point key.) This cannot be set higher than the Split Point in the Split mode (page 37). While this is being set, the keyboard does not produce any sound. After setting this, make sure to select a different parameter or exit the Function mode before playing the keyboard.

WHAT IS A CHORD?

The simple answer: Three or more notes played simultaneously is a chord. (Two notes played together is an "interval" — an interval being the distance between two different notes. This is also referred to as a "harmony.") Depending on the intervals between the three or more notes, a chord can sound beautiful or muddy and dissonant.
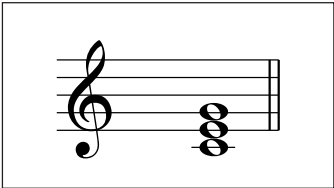
The organization of notes in the example at left — a triad chord — produces a pleasant, harmonious sound. Triads are made up of three notes and are the most basic and common chords in most music.

In this triad, the lowest note is the "root." The root (also called the "tonic") is the most important note in the chord, because it anchors the sound harmonically by determining its "key" and forms the basis for how we hear the other notes of the chord.

The second note of this chord is four semitones higher than the first, and the third is three semitones higher than the second. Keeping our root note fixed and changing these notes by a semitone up or down (sharp or flat), we can create four different chords.

Major chord (ex. C)	Minor chord (ex. Cm)	Augmented chord (ex. Caug)	Diminished chord (ex. Cdim)
Minor 3rd Major 3rd	Major 3rd Minor 3rd	Major 3rd Major 3rd	Minor 3rd Minor 3rd

Keep in mind that we can also change the "voicing" of a chord — for example, change the order of the notes (called "inversions"), or play the same notes in different octaves — without changing the basic nature of the chord itself.

Inversion examples for the key of C

Beautiful sounding harmonies can be built in this manner. The use of intervals and chords is one of the most important elements in music. A wide variety of emotions and feelings can be created depending on the types of chords used and the order in which they are arranged.

WRITING CHORD NAMES

Knowing how to read and write chord names is an easy yet invaluable skill. Chords are often written in a kind of shorthand that makes them instantly recognizable (and gives you the freedom to play them with the voicing or inversion that you prefer). Once you understand the basic principles of harmony and chords, it's very simple to use this shorthand to write out the chords of a song.

First, write the root note of the chord in an uppercase letter. If you need to specify sharp or flat, indicate that to the right of the root. The chord type should be indicated to the right as well. Examples for the key of C are shown below.

Major chord	Minor chord	Augmented chord	Diminished chord
C	Cm	Caug	Cdim

For simple major chords, the type is omitted.

One important point: Chords are made up of notes "stacked" on top of each other, and the stacked notes are indicated in the chord name of the chord type as a number — the number being the distance of the note from the root. (See the keyboard diagram below.) For example, the minor 6th chord includes the 6th note of the scale, the major 7th chord has the 7th note of the scale, etc.

The Intervals of the Scale

To better understand the intervals and the numbers used to represent them in the chord name, study this diagram of the C major scale:
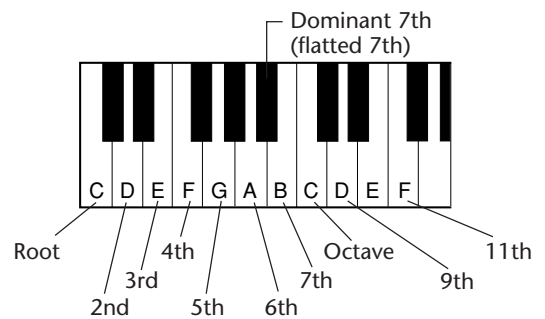
Other Chords

* B♭♭ = A

CHORD GUIDE

The Chord Guide functions of the PortaTone provide powerful, easy-to-use tools for learning chords and chord relationships. Chord Guide features three different types of operation: Dictionary, Smart, and EZ Chord.

IMPORTANT

• Pressing the CHORD GUIDE button automatically turns on the auto accompaniment.

• When you wish to use the Style mode normally without the Chord Guide functions, make sure that OFF is selected. To do this:
 1) Press the STYLE button to select the Style mode.
 2) Press the CHORD GUIDE button so that a style name is shown in the display (instead of "Dict.," "Smart," or "EZ").

Dictionary

The Dictionary type is essentially a built-in "chord book" that shows you the individual notes of chords. It is ideal when you know the name of a certain chord and want to quickly learn how to play it.

1 With the Style mode active, select the Dictionary Chord Guide.

Press the CHORD GUIDE button so that "Dict." appears in the display.
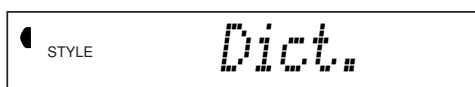
2 Specify the root of the chord.

Press the key on the keyboard that corresponds to the desired chord root (as printed on the panel).
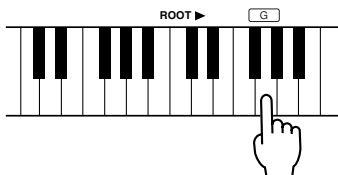
Pressing this key selects the root G.

3 Specify the type of the chord (major, minor, seventh, etc.).

Press the key on the keyboard that corresponds to the desired chord type (as printed on the panel).
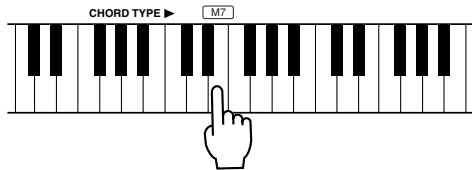
CHORD TYPE ▶   M7

Pressing this key selects the major seventh chord type (M7). The display shows the name of the chord, and the individual notes — both in notation and on the keyboard diagram.
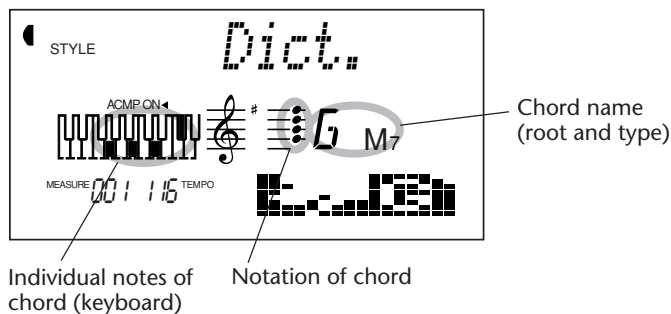
Chord name (root and type)

Individual notes of chord (keyboard)   Notation of chord

4 Play the chord.

Play the chord (as indicated in the display) in the auto accompaniment section of the keyboard. The chord name flashes when the correct notes are held down. (Inversions for many of the chords are also recognized.)
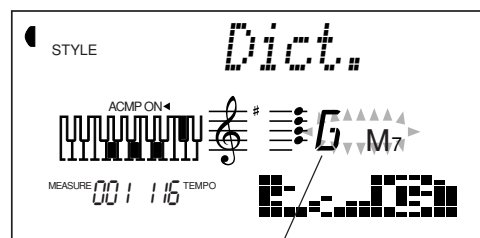
Indicates notes to be played.
Flashes when correct notes are held.

Smart

The Smart type allows you to set the basic key for the chord accompaniment. Once this is set, you can simply press single keys in the scale and have harmonically appropriate chords played automatically. For example, with the key set to C, playing an D will result in an D minor chord (rather than a harmonically inappropriate D major).

The Smart type is not only a convenient feature for easily playing various chord progressions in a specified key, it's also an excellent learning tool to find out how chords relate to each other harmonically in a given key.

1 Select a style.
Select one of the styles, as described in steps 1 - 2 on page 47.

2 Select the Smart Chord Guide.
Press the CHORD GUIDE button so that "Smart" appears briefly in the display.
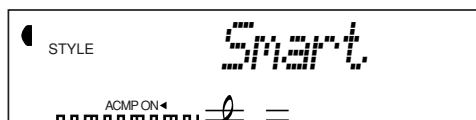
3 Set the desired key.
Use the +/- buttons on the numeric keypad to step through the available keys, or use the numeric keypad to directly enter the number corresponding to the desired key (see chart below).
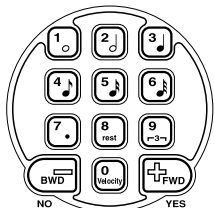
Indicates selected key signature (shows number of sharps or flats in key).

Number	Key (display indication, actual key)		Number	Key (display indication, actual key)
01	#/♭=0	(C, or Am)	09	♭=7	(C♭, or A♭m)
02	#=1	(G, or Em)	10	♭=6	(G♭, or E♭m)
03	#=2	(D, or Bm)	11	♭=5	(D♭, or B♭m)
04	#=3	(A, or F#m)	12	♭=4	(A♭, or Fm)
05	#=4	(E, or C#m)	13	♭=3	(E♭, or Cm)
06	#=5	(B, or G#m)	14	♭=2	(B♭, or Gm)
07	#=6	(F#, or D#m)	15	♭=1	(F, or Dm)
08	#=7	(C#, or A#m)			

For example, to play the following music score, select number 15 so that the key is set to ♭=1 (F, or Dm).

Key of F

STYLE
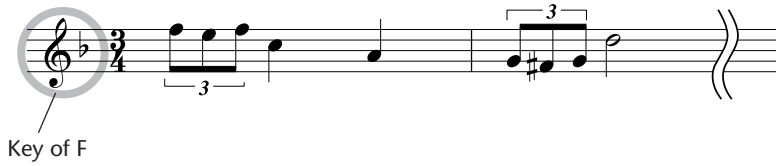
4 Play the accompaniment, and play single note chords (root notes) in the auto accompaniment section.

Start accompaniment playback in the desired way. (For specific instructions on starting the accompaniment, see page 48.)

For example, when the key has been set to F major, you can play the following chords by pressing the single root notes indicated below:

To play these chords...

| F | Dm | Gm | Dm |

...press these root notes.
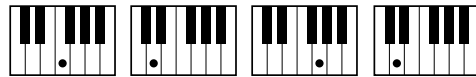
Notice that the minor chords appropriate to the key of F major are automatically converted.

Smart Chord List

| No. | Display indication | Root note | | | | | | | | | | | |
		C	C# (D♭)	D	Eb (D#)	E	F	F# (G♭)	G	Ab (G#)	A	Bb (A#)	B
01	#/♭=0	C	C#dim	Dm	E♭	Em	F	F#dim	G	A♭	Am	B♭	Bm
02	#=1	C	C#dim	D	E♭	Em	F	F#m	G	A♭dim	Am	B♭	Bm
03	#=2	C	C#m	D	E♭dim	Em	F	F#m	G	A♭dim	A	B♭	Bm
04	#=3	C	C#m	D	E♭dim	E	F	F#m	G	A♭m	A	B♭dim	Bm
05	#=4	C	C#m	D	E♭m	E	Fdim	F#m	G	A♭m	A	B♭dim	B
06	#=5	Cdim	C#m	D	E♭m	E	Fdim	F#	G	A♭m	A	B♭m	B
07	#=6	Cdim	C#	D	E♭m	E	Fm	F#	Gdim	A♭m	A	B♭m	B
08	#=7	Cm	C#	Ddim	E♭m	E	Fm	F#	Gdim	A♭	A	B♭m	B
09	♭=7	Cdim	C#m	D	E♭m	E	Fdim	F#	G	A♭m	A	B♭m	B
10	♭=6	Cdim	C#	D	E♭m	E	Fm	F#	Gdim	A♭m	A	B♭m	B
11	♭=5	Cm	C#	Ddim	E♭m	E	Fm	F#	Gdim	A♭	A	B♭m	B
12	♭=4	Cm	C#	Ddim	E♭	E	Fm	F#	Gm	A♭	Adim	B♭m	B
13	♭=3	Cm	C#	Dm	E♭	Edim	Fm	F#	Gm	A♭	Adim	B♭	B
14	♭=2	Cm	C#	Dm	E♭	Edim	F	F#	Gm	A♭	Am	B♭	Bdim
15	♭=1	C	C#	Dm	E♭	Em	F	F#dim	Gm	A♭	Am	B♭	Bdim

EZ Chord

The EZ Chord function is an exceptionally flexible and easy way to program semi-automatic backing for your performances. It lets you record all necessary chord changes for an entire song, and then allows you to "play" each chord in the sequence you programmed by simply pressing a single key in the auto accompaniment section of the keyboard.

Besides being a convenient performance tool, EZ Chord is also ideal for practicing right hand melodies and soloing techniques, since it lets you easily produce the chord accompaniment with your left hand — allowing you to concentrate on your right hand.

EZ Chord gives you eight separate banks (each of which contains up to 128 chord spaces) to which you can record chords. A special bank chain function allows you to connect all banks, letting you switch automatically from one bank to the next, without breaking up your chord progression.

EZ Chord — Playback

Once you've recorded your own EZ Chord bank (page 68), you can play it back using the operation steps below.

However, you can try out EZ Chord on your own right now, without having to record your own EZ Chord bank. Several chord progressions have already been recorded to EZ Chord banks 1 and 2, letting you try out this convenient feature and get some ideas on how to best use EZ Chord in your own performances. (For your convenience, the scores for factory-programmed banks 1 and 2 are given on page 107.)

1 **Call up the Style mode and select a style. Also select an OTS setting, if desired.**

Press the STYLE button and select the desired style with the numeric keypad. (For more information on OTS, see page 72.)

2 **Select the EZ Chord function.**

Press the CHORD GUIDE button, repeatedly if necessary, until "EZ" appears. The auto accompaniment is automatically turned on when EZ Chord is selected.

CHORD G
○ DICTIONA
○ SMART
○ EZ
○ OFF

STYLE   *1EZ*

3 *Select the desired EZ Chord bank.*

Use the numeric keypad. Buttons 1 - 8 select EZ Chord banks #1 - #8, respectively. Button 9 selects the bank chain "A-1" bank (see box below).

4 *Start the accompaniment.*

Use any one of the methods described on page 48 to start the accompaniment.

The EZ Chord chords can also be played back without the full (bass and rhythm) accompaniment. To do this, simply skip step #4.

5 *Play the chords.*

To play a chord, press any one key in the auto accompaniment section of the keyboard.

Auto accompaniment
section

Chord name

Each dark "block" indicates
a recorded chord. Currently
selected block flashes.

Indicates the chord position
(128 are available in a bank).
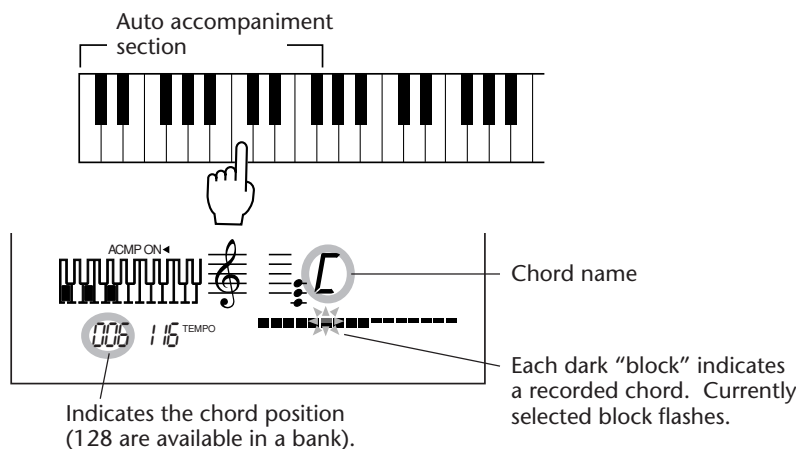
Each time you press a single key in the accompaniment section of the keyboard, EZ Chord plays the recorded chord and automatically advances to the next one. (Unrecorded "empty" blocks are skipped.) In this way, you can control the timing of chords with just a single finger of your left hand, and still use the powerful auto accompaniment features to create full backing — while you play melodies or solo with your right hand.

HINT

• *To reset the position to the first chord in the bank, simply select the same bank again by pressing the corresponding number button of the numeric keypad.*

• *The accompaniment Split Point can be freely set, letting you determine what keys comprise the auto accompaniment section of the keyboard. (See page 59.)*

• *You can use the footswitch to select successive chords, letting you play the full keyboard while still being able to use EZ Chord. (See page 91.)*

Bank Chain

A special bank chain function allows you to connect all banks, letting you go automatically from one bank to the next, without breaking up your chord progression. This, for example, lets you program chord changes for an entire set of songs, and not have to interrupt your performance by changing banks.

To use this, go to step #3 above (in "EZ Chord Playback") and press the "9" button of the numeric keypad.

Indicates that bank chain is selected.
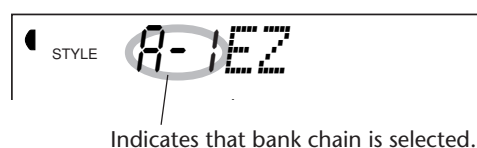
EZ Chord — Recording

1 Enable recording.

Press the RECORD button, repeatedly if necessary, until EZ Chord recording is selected. ("EZ" appears in the display and the "RECORD" indication flashes for a couple of seconds.)

RECORD indication flashes briefly.
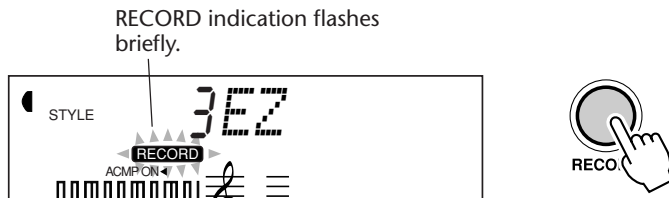
2 Select the desired EZ Chord bank.

Use the numeric keypad. Buttons 1 - 8 select EZ Chord banks #1 - #8, respectively.

3 Start recording.

When the "RECORD" indication stops flashing (and is lit continuously), you can start recording. Recording chords in EZ Chord is essentially a three-step operation:

1) Select the desired block with the +/- buttons.

1 — 16 Block
17 — 32 Block
33 — 48 Block
49 — 64 Block
65 — 80 Block
81 — 96 Block
97 — 112 Block
113 — 128 Block

Indicates the chord position.

Currently selected block flashes.

2) At the selected block, record the desired chord.
You can do this in one of two ways:
    • Play Multi Fingering chords in the auto accompaniment section. (See page 56.)
    • Enter the chord root and name manually from the ROOT and CHORD TYPE section of the keyboard.
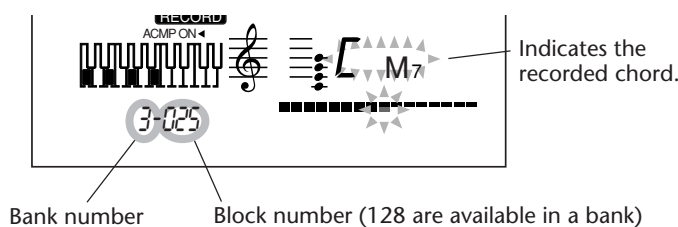
Indicates the recorded chord.

Bank number

Block number (128 are available in a bank)

3) Press the + button in the numeric keypad.

This actually records the chord to the selected block and automatically moves to the next block.

This step is necessary; the chord is not actually recorded until you press the + button. (Pressing the - button will select the previous block without recording the chord.)

To record a sequence of chords, repeat steps 2) and 3) above (play a chord, select the next step, play a different chord, select the next step, etc.).

4 Stop recording and exit from the record mode.

When finished recording the chords, press the RECORD button. This exits from the record mode and lets you playback your newly recorded chords. (See page 66.)

Recording a Space

To leave a block empty (creating a space between blocks), simply select the next block without entering a chord.   To leave the rest of a row empty and start at the next row, use the + button to move to the first block in the next row and start recording from that position. (For more infomation, see the hint "Using Spaces" on page 70.)

Playing the Accompaniment During EZ Chord Recording

It may be helpful for you to hear the style and auto accompaniment as you are recording chords in the EZ Chord function. To do this:

1) Press the STYLE button.
This briefly calls up the Style mode, while keeping EZ Chord recording active.

2) Select the desired style.
Before the display reverts back to EZ Chord (a couple of seconds after pressing the STYLE button), use the numeric keypad to select a style.

3) Start accompaniment playback.
Press the START/STOP button.

4) Record the chord.
Play the desired chord in the auto accompaniment section of the keyboard. Remember that the chord is not actually recorded until you press the + button to move to the next block.

NOTE

If you manually enter the chord root and type (as described on page 68), the chord and bass accompaniment will not sound.

HINT — Using Spaces

If your chord progressions are not long and the maximum memory space for chords isn't very important to you, you can use the spaces between recorded blocks to good advantage. (Keep in mind that spaces have no effect during playback; the EZ Chord function automatically skips the space or spaces and plays the next chord.)

To record a space:

Press the + button without recording a chord.

Some advantages to using spaces:

• *Put one or two spaces between recorded chord blocks — for example, between the different sections (verse, chorus, bridge, etc.) of your song. This gives you a clear visual indication of where you are in a song, and makes it easier to perform the chord changes.*

• *Regardless of the musical genre — rock, pop, country, jazz, and even much contemporary music — the structure of most songs and music, in terms of length in measures, is based on the number four and its multiples. Examples of this include four- and eight-measure melodic phrases, the popular "twelve-bar" blues, and the sixteen-measure length of verses and choruses in many pop songs and jazz standards.*
What does this have to do with "spaces"? If your chord progression follows this kind of structure closely, you may want to group the chord changes for each section in four-, eight, twelve- or sixteen-block groups. For example, the first song in the illustration below shows a sixteen-block group, followed by a group of twelve, then one of eight.
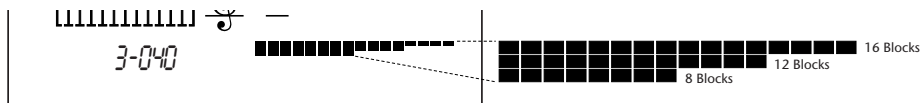
Clearing an EZ Chord Bank

This operation lets you erase (clear) all recorded chords for the selected EZ Chord bank.

1 *Enable the EZ Chord Record mode.*

Press the RECORD button, repeatedly if necessary, until EZ Chord recording is selected. ("EZ" appears in the display and the "RECORD" indication flashes for a couple of seconds.)
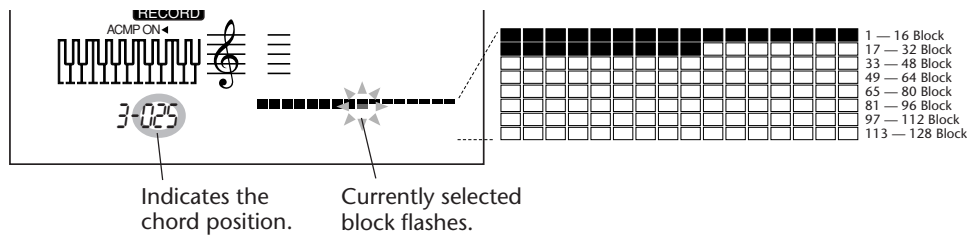
2 *Select the desired point from which chords will be cleared.*

Use the +/- buttons. All chords following the selected point will be erased.

3 *Call up the EZ Chord Clear function.*

Wait for a couple of seconds until the "RECORD" indication stops flashing and "EZ" appears in the display. Then, hold down the "0" button until the "Clear?" prompt appears.

4 *Execute the Clear function.*

At the "Clear?" prompt, press the + button ("YES") to actually clear the bank, or press the - button to cancel.

5 *Continue recording, or exit the Record mode.*

Operation returns to EZ Chord Record, letting you record a new bank of chords. To exit, simply press the RECORD button.

Erasing a Single Chord

To erase (clear) a single recorded chord in an EZ Chord bank:

1) Enable the EZ Chord Record mode.
Press the RECORD button, repeatedly if necessary, until EZ Chord recording is selected.

2) Select the desired point at which the chord will be cleared.
Use the +/- buttons.

3) Execute the Clear function.
Press the C6 key (highest key on the keyboard) to actually clear the chord data.

ONE TOUCH SETTING (OTS)

One Touch Setting is a powerful and convenient Style mode function that lets you instantly reconfigure virtually all settings of the PortaTone — with the touch of a single button. Two types of One Touch Settings are available: User and Preset.

ONE TOUCH SETTING — USER

Four User banks each with four different settings — a total of sixteen — are available for your custom settings. Each of the sixteen User One Touch Settings can have different settings for the following parameters:

- *Main voice number*
- *All Main voice settings (Volume, Octave, Pan, Reverb Level, Chorus Level, and DSP Level)*
- *Dual voice number*
- *All Dual voice settings (On/Off, Volume, Octave, Pan, Reverb Level, Chorus Level, and DSP Level)*
- *Split voice number*
- *All Split voice settings (On/Off, Split Point, Volume, Octave, Pan, Reverb Level, Chorus Level, and DSP Level)*
- *Reverb Type and On/Off*
- *Chorus Type and On/Off*
- *DSP Type and On/Off*
- *Harmony Type, On/Off, and Volume*
- *Style number, and style-related settings: Accompaniment On/Off, Section (Main A or B), and Accompaniment Split Point*
- *Overall menu settings: Tempo, Transpose, Tuning, and Accompaniment Volume*
- *Footswitch assignment*
- *Touch Sensitivity setting*

Recording a User One Touch Setting

1 Make all desired settings for the PortaTone.
Virtually all PortaTone settings can be saved to a User button. Refer to the list above for details.

2 Select the OTS Record mode.
Press the RECORD button, repeatedly if necessary, until "OTS User" appears at the top of the display.

RECORD indication flashes briefly.
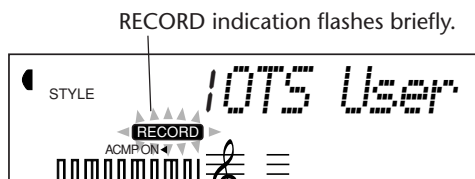
3 Select the desired bank.
Use the +/- buttons or the numeric keypad to select the desired User bank number (1 - 4).

4 Select the desired User number.

Press the corresponding USER ONE TOUCH SETTING button (1 - 4).
Doing this records the settings to the selected button.
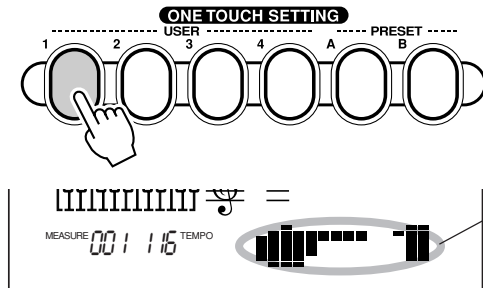
Briefly appears to indicate that settings have been saved to OTS User button 1.

5 Exit from the Record mode.

Press the RECORD button.

Recalling a User One Touch Setting

Once you've recorded your settings to a User button, you can instantly recall those settings any time you want.

1 Call up the Style mode.

Press the STYLE button.

2 Press the appropriate ONE TOUCH SETTING USER button.

Press the USER button (1 - 4) corresponding to the desired settings.
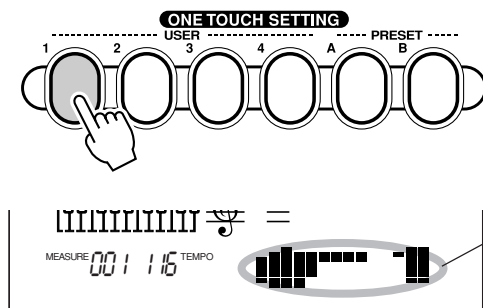
Briefly appears to indicate that OTS User 1 is active.

Selecting a User Bank
Before selecting a User One Touch Setting (in step #2), you may want to select a different bank. To do this:

1) Select Function #41. (Press the FUNCTION button, then use the +/- buttons or the numeric keypad to select #41.)
2) After the "FUNCTION" indication stops flashing, select the desired bank number with the +/- buttons or the numeric keypad.

ONE TOUCH SETTING — PRESET

Preset One Touch Settings are used in a slightly different way than the User settings. First, select a style, then select a Preset OTS. The Preset A and B settings have been specially programmed at the factory to match the selected style. This means that you can select the style you want, then choose a Preset that has the best suited voice, effect, and other settings for that style.

- *Main voice number*
- *All Main voice settings (Volume, Octave, Pan, Reverb Level, Chorus Level, and DSP Level)*
- *Dual voice number*
- *All Dual voice settings (On/Off, Volume, Octave, Pan, Reverb Level, Chorus Level, and DSP Level)*
- *Split voice number*
- *All Split voice settings (Volume, Octave, Pan, Reverb Level, Chorus Level, and DSP Level)*
- *Reverb Type and On/Off*
- *Chorus Type and On/Off*
- *DSP Type and On/Off*
- *Harmony Type, On/Off, and Volume*
- *Style-related settings: Accompaniment On/Off, Section (Main A or B), and Accompaniment Split Point*

Selecting a Preset One Touch Setting

1 Select a style.
Select one of the styles, as described in steps 1 - 2 on page 47.

2 Press the appropriate ONE TOUCH SETTING PRESET button.
Press the PRESET button (A, B) corresponding to the desired settings.
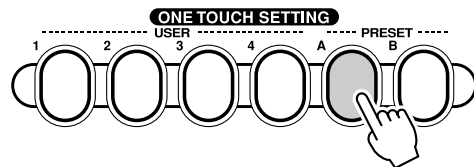
Briefly appears to indicate that OTS Preset A is active.

3 Play the accompaniment.
Since both Sync-Start and auto accompaniment are automatically set to On when One Touch Setting is on, playing a key or chord in the auto accompaniment section of the keyboard starts the accompaniment.

SELECTING AND PLAYING SONGS — THE SONG MODE

The Song mode features six songs — three demo songs that have been created using the rich and dynamic sounds of the PortaTone, and three User songs to which you can record your own performance.

The demo songs are generally for your listening enjoyment; however, you can also play along with them on the keyboard.

The User songs are "empty" and cannot be played until something has been recorded to them. (For instructions on recording your own songs, see page 79.)

Song Playback Display

Current measure number

When playing User songs using accompaniment, these display the notes and name of the current chord.

"Level meters" show performance data recorded to each track.

Indicates the tracks currently playing back. (These can be alternately muted and sounded during playback by pressing the corresponding SONG MEMORY buttons.)
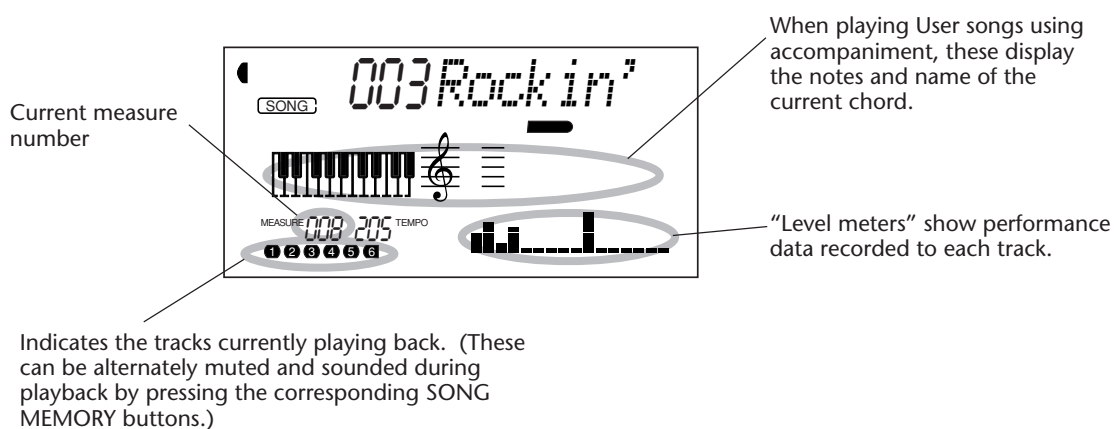
SELECTING AND PLAYING A SONG

1 Select the Song mode.

Press the SONG button.

Indicates Song mode is selected

Song name and number
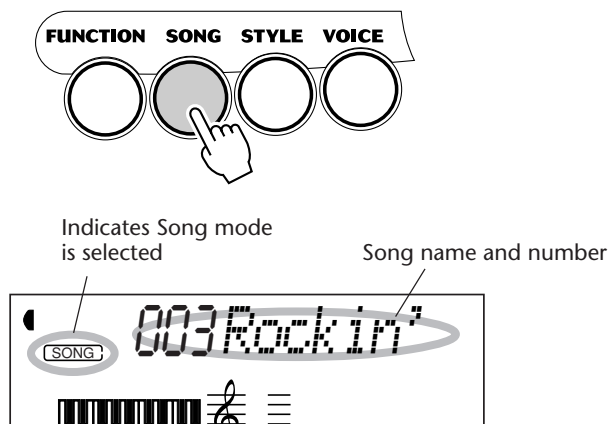
2 Select the desired song number.

Use the numeric keypad.

Song numbers can be selected in the same way as
with the voices (see page 28). You can use the
numeric keypad to directly enter the song number,
use the +/- keys to step up and down through the
songs, or press the SONG button to advance
through the song numbers.
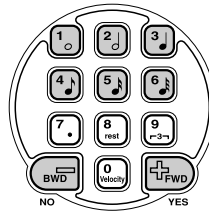
3 Start the selected song.

Press the START/STOP button. As the song plays back, the measure num-
ber and chords are shown in the display.
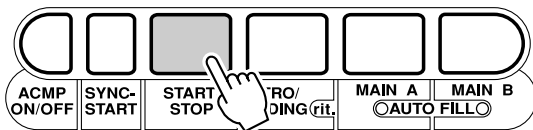
4 If you want to change to another song, repeat step 2 above.

5 Stop the song.

Press the START/STOP button. If playback was started by pressing the
START/STOP button, the selected song stops automatically.

NOTE

• *You can play along with
the song using the currently
selected voice, or even select
a different voice for playing
along. Simply call up the
Voice mode while the song
is playing back and select
the desired voice.*

• *This function can also be
controlled by using a
connected footswitch. (See
page 91.)*

CHANGING THE TEMPO

The tempo of song (and style) playback can be adjusted over a range of 32
- 280 bpm (beats per minute).

1 Select the Tempo function in the Overall menu.

Press one of the OVERALL ▲/▼ buttons, repeatedly if necessary, until
"Tempo" appears in the display.

Indicates Tempo is
selected

Current Tempo value

TEMPO

SONG

205 Tempo

2 *Change the value.*

Use the OVERALL +/- buttons to increase or decrease the Tempo value.
Holding down either button continuously increases or decreases the value.
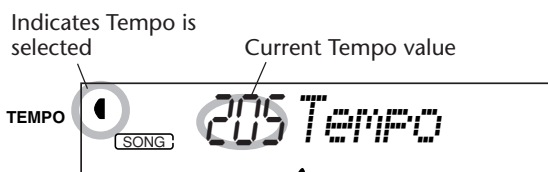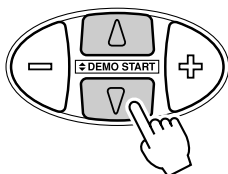
Increases Tempo
value

Decreases Tempo
value
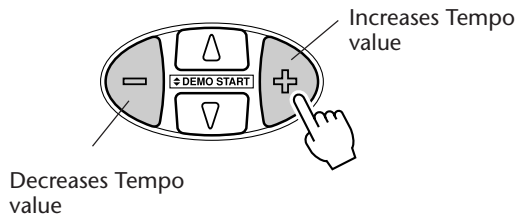
Restoring the Default Tempo Value
Each song and style has been given a default or standard tempo. If you've
changed the tempo, you can restore the original default setting by pressing
both OVERALL +/- buttons simultaneously (when Tempo is selected in the
Overall menu).

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 116 bpm.

ABOUT THE BEAT DISPLAY

This section of the display provides a convenient, easy-to-understand
indication of the rhythm for song and style playback. The dark bars below
the name section in the display flash in time with the beat. The first dark
bar indicates the first beat of the measure, and the other bars flash in
sequence to indicate subsequent beats.

003 Rockin'
SONG

Fourth beat
Third beat
Second beat
First beat of measure
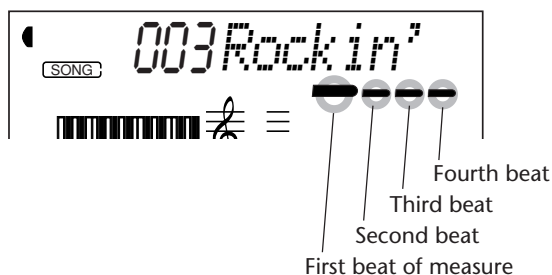
ADJUSTING THE SONG VOLUME

The playback volume of the song can be adjusted. This volume control affects only the song volume. The volume range is 000 - 127.

1 Select the Song Volume function in the Overall menu.

Press one of the OVERALL ▲/▼ buttons, repeatedly if necessary, until "SongVol" appears in the display.

Indicates Song
Volume is selected

Current Song Volume
value
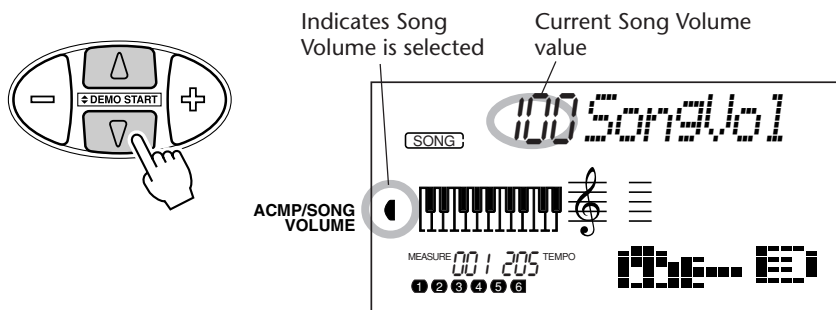
2 Change the value.

Use the OVERALL +/- buttons to increase or decrease the Song Volume value. Holding down either button continuously increases or decreases the value.

Increases Song
Volume value

Decreases Song
Volume value
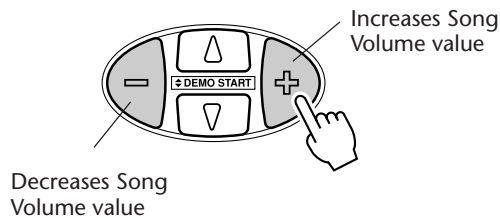
Restoring the Default Value
To restore the default Song Volume value (100), press both OVERALL +/- buttons simultaneously (when Song Volume is selected in the Overall menu).

NOTE
Song Volume cannot be changed unless the Song mode is active. (This function becomes Accompaniment Volume when the Style mode is active.)

SONG RECORDING

The PortaTone features powerful and easy-to-use song recording features that let you record your keyboard performances — using up to six separate tracks — and create your own complete, fully orchestrated compositions. Up to three User songs can be recorded and saved. There are two record modes: Realtime and Step.
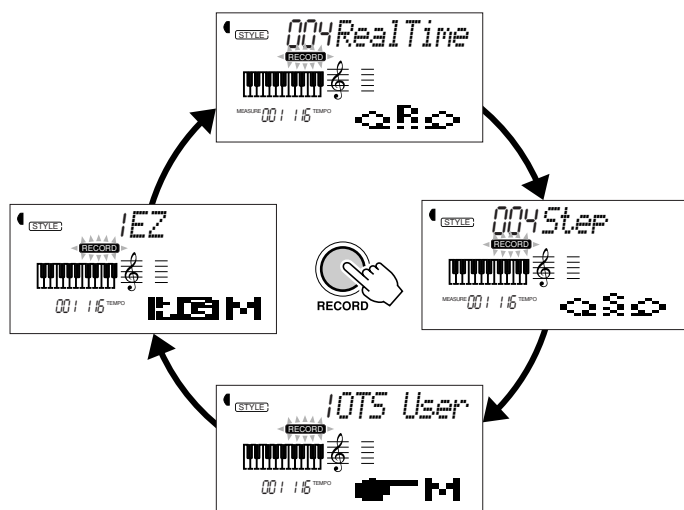
Each press of the RECORD button cycles through the four Record modes — Realtime, Step, OTS, and EZ Chord — before exiting back to normal operation. (The OTS and EZ Chord modes are unrelated to Song recording; they are described on pages 72 and 68, respectively.)

Realtime recording is similar to using a tape recorder; whatever you play on the keyboard is recorded in real time as you play it. Also, when you record subsequent parts to other tracks, you can hear the previously recorded parts as you record new ones.

Step recording allows you to enter notes individually. As such, it is very similar to writing down the notes on a sheet of music paper; each note is entered one at a time.

Each method has its own advantages and uses. Step recording is excellent for precision and for entering notes whose placement, rhythmic value, and velocity are fixed or consistent — such as individual drum parts in a rhythm pattern, or single notes in a syncopated bass part. It also gives you precise control in recording fast or complex passages that would be difficult or impossible to record in real time. Realtime

recording on the other hand, is best for capturing the natural "feel" of a performance, since it allows you to record as you are playing and simultaneously hear what you are recording.

Which method you use depends partly on the type of music you wish to create and partly on your own personal preference. You can even use both methods in tandem. For example, you could record a basic song guide to track 1 with Realtime, then use Step to record your "precision" parts to other tracks (and perhaps even re-record track 1, once all the other parts are in place). Or you could program basic riffs and patterns with Step first, then use Realtime to add melodies and embellishments.

NOTE

Keep in mind that all recording operations "replace" the data. In other words, if you record to a track that already has recorded data, all previous data in the track will be erased and replaced by the newly recorded data.

RECORDING A USER SONG — REALTIME RECORDING

In brief, the basic operation for recording is:

1) Make all desired PortaTone settings.
2) Select the Realtime Record mode.
3) Select a User song for recording.
4) Select a track number.
5) Start recording.
6) Stop recording.
7) Listen to your new recording.
8) Record to other tracks as desired.
9) Exit from the Record mode.

Data that can be recorded to the normal (melody) tracks:

• Note on/off
• Velocity
• Main voice settings (Voice Number*, Volume*, Octave, Pan*, Reverb Send Level, Chorus Send Level, DSP Send Level)
• Dual voice settings (Dual on/off, Voice Number*, Volume*, Octave, Pan*, Reverb Send Level, Chorus Send Level, DSP Send Level)
• Reverb on/off, Reverb Type*
• Chorus on/off, Chorus Type*
• DSP on/off, DSP Type*
• Harmony on/off, Harmony Type
• Sustain on/off
• Tempo*, Time Signature* (if there is no such data in the Chord track)

Data that can be recorded to the Chord track:

• Style number*
• Chord changes and timing
• Changing sections (Intro, Main A/B, etc.)
• Accompaniment Volume*
• Tempo*, Time Signature*

These settings can only be recorded once at the beginning of a song; other settings can be changed in the middle of a song.

1 Make all desired PortaTone settings.

Before you actually start recording, you'll need to make various settings for the song — such as selecting a style, setting the Tempo, and selecting a voice.

Selecting a style lets you use the sophisticated auto accompaniment features as part of your song. In this way, you can simply play the chords, and the PortaTone automatically creates the appropriate bass and chord backing.

If desired, also make other settings. Refer to the list above for settings that can be recorded to a song.

Using the Metronome
You can use the Metronome instead of a style if desired. This allows you to keep your performance "in time," even when recording without rhythmic accompaniment. To do this, press the METRONOME button before recording in step #5 below. After the song is completely recorded, simply play back the song with the Metronome turned off.

2 Select the Realtime Record mode.

Press the RECORD button, repeatedly if necessary, until "RealTime" appears at the top of the display.

NOTE
Realtime and Step recording methods can be mixed in the same song, but not the same track.

RECORD indication flashes briefly, then stays lit to indicate record standby.
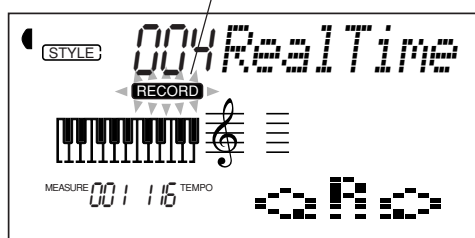
3 Select a User song for recording.

Use the numeric keypad to select the desired song: User 1 (004), User 2 (005), or User 3 (006).

User song numbers can be selected in the same way as with the voices (see page 28). You can use the numeric keypad to directly enter the song number, use the +/- keys to step up and down through the songs, or press the SONG button to advance through the song numbers.
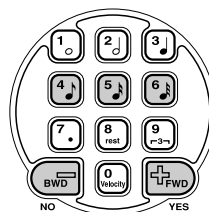
4 Select a track number.

Press the SONG MEMORY button corresponding to the desired track. (This step is optional; the PortaTone automatically selects the first available track. When there is no song data, track 1 is automatically selected.)

Recording to the Chord Track

A special Chord track is provided for recording accompaniment data. This is automatically recorded to the Chord track (track 6). To select the Chord track and turn on the accompaniment, press the ACMP ON/OFF button.

You can also simultaneously record one of the melody tracks (1 - 5) and the Chord track (6).

5 *Start recording.*

When the "RECORD" indication stops flashing and the beat bars and track number start flashing, you can start recording simply by playing the keyboard (or by pressing the START/STOP button).

Indicates Record standby.
Flashing beat bars indicate Sync-Start is on.

If you want to rehearse your part before recording, press the SYNC-START button to turn Sync-Start off. After rehearsing, press SYNC-START again to return to the above condition.

When recording the Chord track

With Sync-Start on, play the first chord of the song in the auto accompaniment section of the keyboard. The accompaniment starts automatically and you can continue recording, playing other chords in time with the accompaniment.

If you wish to cancel recording at this point, press the RECORD button again.

6 *Stop recording.*

After you've finished playing the part, press the START/STOP button.

7 Listen to your new recording.

To play back the song from the beginning, simply press the START/STOP button again. Playback stops automatically at the end of the song, or when the START/STOP button is pressed again.

8 Record to other tracks as desired.

To do this, simply repeat steps #4 - #7 above. Make sure that when you press the SONG MEMORY button corresponding to the desired track, the track number in the display flashes.

9 Exit from the Record mode.

Press the RECORD button.

■ Additional Operations

Muting Tracks During Playback

While recording is enabled, you can selectively mute different tracks. This is useful for when you want to clearly hear certain tracks, and not others, during recording. Muting can also be done "on the fly" during playback. To use muting, press the corresponding SONG MEMORY button, repeatedly if necessary, until the desired track number in the display is off.

Each press of a SONG MEMORY button (when playback is stopped) cycles through the following settings:

MEASURE TEMPO CHORD

Track number flashes — Track will record.*
* Cannot be selected during playback.

Track number off — Track is muted.

Track number on — Track will play back.
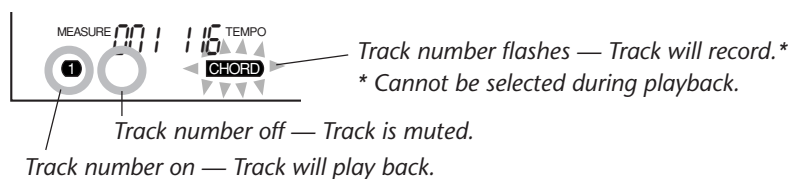
Re-recording a Track

If you've made a mistake and wish to record a track over again:

Press the corresponding SONG MEMORY button, repeatedly if necessary, until the desired track number in the display flashes (indicating record standby for that track). Since doing this turns Sync-Start off, press the SYNC-START button to turn Sync-Start on again, then start recording (as explained in step #5 above). Alternately, simply press the START/STOP button to start recording.

Clearing a Single Track

If you wish to erase a single track without clearing the entire song (in the Song Clear operation, page 90):

1) Press the RECORD button.
2) Select the desired track (with the corresponding SONG MEMORY button).
3) Press the START/STOP button once to start recording, and once again to stop (without playing any keys).
This erases previous data, and creates a blank track.

RECORDING A USER SONG — STEP RECORDING

The basic steps for Step recording are similar to those for Realtime recording. In brief, the basic operation is:

1) Make all desired PortaTone settings.
2) Select the Step Record mode.
3) Select a User song for recording.
4) Select a track number.
5) Start recording. Enter notes and rests individually, playing back the song occasionally to hear the results.
6) Listen to your new recording.
7) Record to other tracks as desired.
8) Exit from the Record mode.

Data that can be recorded to the normal (melody) tracks:

• Note on/off
• Velocity**
• Main voice settings (Voice Number*, Volume*, Octave, Pan*, Reverb Send Level*, Chorus Send Level*, DSP Send Level*)
• Dual voice settings (Dual on/off, Voice Number*, Volume*, Octave, Pan*, Reverb Send Level*, Chorus Send Level*, DSP Send Level*)
• Reverb on/off, Reverb Type*
• Chorus on/off, Chorus Type*
• DSP on/off, DSP Type*
• Tempo*, Time Signature* (if there is no such data in the Chord track)

Data that can be recorded to the Chord track:

• Style number*
• Chord changes and timing
• Changing sections (Intro, Main A/B, etc.)
• Accompaniment Volume*
• Tempo*, Time Signature*

These settings can only be recorded once at the beginning of a song; other settings can be changed in the middle of a song.
*** All notes are entered at the same velocity; however, this can be changed in various ways with the Velocity Curve function (page 89).*

1 Make all desired PortaTone settings.

This operation is the same as that of Realtime recording (page 80).

2 Select the Step Record mode.

Press the RECORD button, repeatedly if necessary, until "Step" appears at the top of the display.
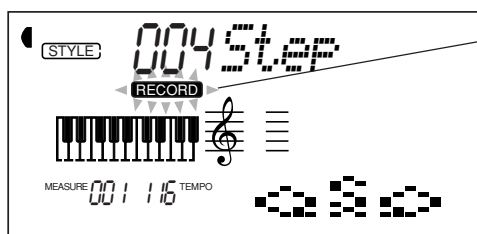
RECORD indication flashes briefly, then stays lit to indicate record standby.
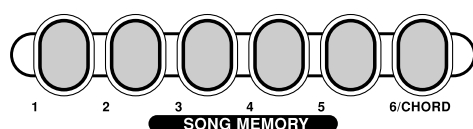
NOTE
Realtime and Step recording methods can be mixed in the same song, but not the same track.

3 *Select a User song for recording.*

This operation is the same as that of Realtime recording (page 81).

4 *Select a track number.*

Press the SONG MEMORY button corresponding to the desired track.

Recording to the Chord Track

A special Chord track is provided for recording accompaniment data. This is automatically recorded to the Chord track (track 6). To select the Chord track and turn on the accompaniment, press the ACMP ON/OFF button.
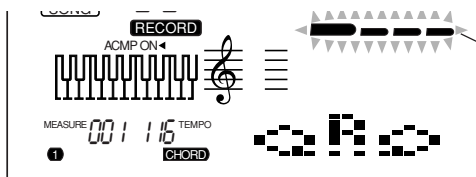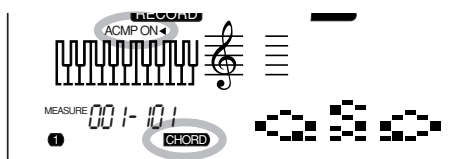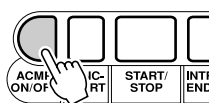
NOTE

Unlike Realtime Recording, Step Recording only allows you to record one track at a time; the Chord track cannot be recorded simultaneously with another track.

5 *Start recording.*

When the RECORD indication stops flashing and the track number starts flashing, you can start recording. Record each note (or chord) and rest individually, as described below:

Recording Notes

1) Select the desired position in the song (measure/beat) with the +/- buttons. (Each press of the button moves one beat forward or backward.)
2) Play the desired key or keys. (The note name is shown at the top of display.)
When recording chords to the Chord track, make sure the accompaniment is on, then play the desired chord in the accompaniment section of the keyboard.

NOTE

More than one note can be recorded at a time; however, only the last pressed note appears in the display.

3) Select the note (time) value with the numeric keypad. (The note value is shown as an icon in the display.)

For example, play middle C (C3), then press the "4" button (1/8 note).

Note name

Beat bars

Measure number   Clicks   Note value

Beat number

♩ (96 Clicks)	♩ (96 Clicks)	♩ (96 Clicks)	♩ (96 Clicks)
Beat	Beat	Beat	Beat

Measure (384 Clicks)
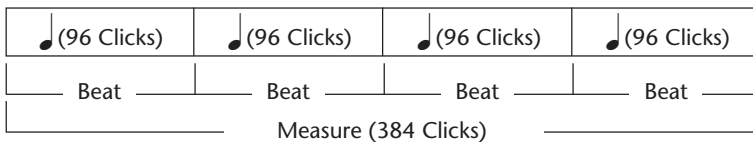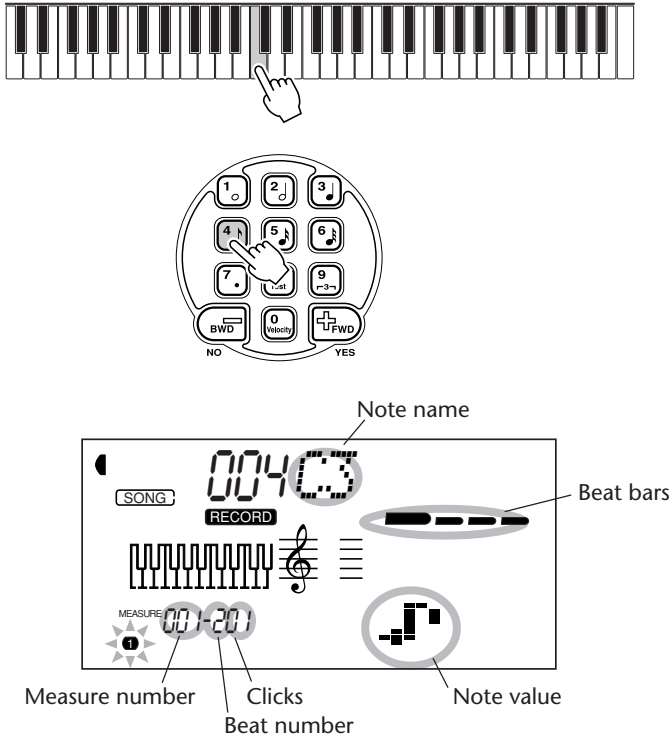
The beat bars also indicate the current recording position (as the beat of the measure).

The note is automatically entered and Step recording moves to the next available position. For example, if a whole note is entered at the beginning of measure 1, the next position is the beginning of measure 2.

As mentioned above, you can use the +/- keys to move backward and forward in the track. When material has been recorded, this steps through and sounds each note in succession.

■ Additional Operations
Recording Chords and Sections to the Chord Track:

1) Play a chord in the accompaniment section of the keyboard. ("Chord" and the chord name appears in the display.)

Chords can be entered manually (with the Dictionary function), or played with Multi Fingering. (See page 62, 56.)

2) Select a section by pressing the corresponding button.
When selecting an Intro or Ending section, the length is fixed, and need not be entered in step 3 below.

3) Select the note (time) value with the numeric keypad.

Recording Triplets and Dotted Notes:

1) At the desired position, press the corresponding numeric keypad button ("7" for dotted or "9" for triplets).
2) Press the numeric keypad button for the desired note value.

7. + 4 ➡ Dotted note
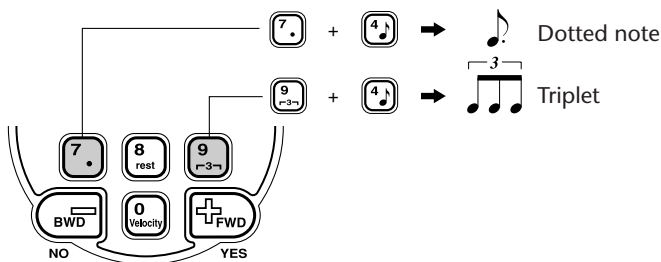
9 + 4 ➡ Triplet

Recording Rests:

1) Select the desired position in the song with the +/- buttons.
2) Press the "8" (rest) button in the numeric keypad.
3) If you want to record a dotted rest or triplet rest, press the appropriate numeric keypad button ("7" for dotted or "9" for triplets).
4) Press the numeric keypad button (1 - 6) corresponding to the desired rest value. (The specified rest value appears as an icon in the display.)

8 + 4 ➡ ?

MEASURE 001-201

Rest value icon (eighth-note rest)
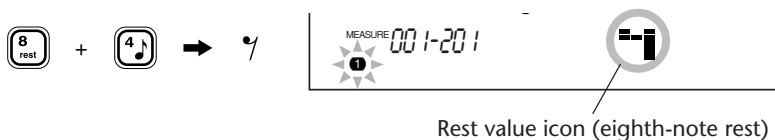
5) After recording the desired rest value(s), record the next note.

NOTE
• *The Intro section can only be recorded at the beginning of a song.*

• *When an Ending section is selected, no further notes can be recorded.*

NOTE
Triplets are three notes within a single beat — in other words, one beat is divided up into three equal units. Each note (or rest) of a triplet must be entered separately.
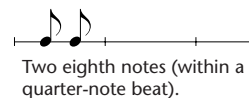
Two eighth notes (within a quarter-note beat).

Three eighth-note triplets (within a quarter-note beat).

NOTE
Dotted notes extend the length of a note by half — in other words, the length of a dotted eighth note is an eighth note plus a sixteenth note.

$$ \text{♪.} = \text{♪} + \text{♬} $$
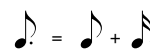
HINT
If you want to enter two or more consecutive beats of rest, you can simply use the + button to move forward in the track (for as many beats rest as desired). This saves you the trouble of repeatedly entering rests when there are several beats or measures of silence between notes.

6 Listen to your new recording.

You can listen to the entire step recorded track at any time by pressing the START/STOP button. The track you are working on plays back (until stopped), and returns to Step recording at the next position.

Keep in mind that this only plays the selected track. To hear all tracks of the song, exit from Step Rec (press the RECORD button), then press the START/STOP button to start song playback.

7 Record to other tracks as desired.

To do this, simply repeat steps #4 - #6 above. Make sure that when you press the SONG MEMORY button corresponding to the desired track, the track number in the display flashes.

8 Exit from the Record mode.

This operation is the same as step #9 of Realtime recording (page 83).

Replacing a Note or Rest

If you want to change a note or rest you've just recorded, you can easily replace it with a new one. To do this:

1) Select the desired position in the song with the +/- buttons.
2) Press the new note on the keyboard (or the appropriate rest value button on the numeric keypad).
3) Enter the new note value on the numeric keypad. (Enter dotted note or triplet first, if desired.)
4) At the "Delete?" prompt press the + button. To cancel, press the - button.

⚠ *CAUTION*

This operation deletes all previously recorded notes that follow the note to be replaced. Make sure you wish to delete any subsequent notes before actually replacing the selected note or rest.

Entering Velocity Curves

In Step recording, all notes are recorded at the same velocity or volume. To make a Step-recorded track sound more natural or to create some dynamic changes in the track, use the Velocity Curve function.

1) Select the first note to be affected by the Velocity Curve (by using the +/- buttons of the numeric keypad). All subsequent notes will be velocity-transformed.

2) Simultaneously hold down the VELOCITY button ("0" in the numeric keypad) and press + or - to select the desired Velocity Curve.
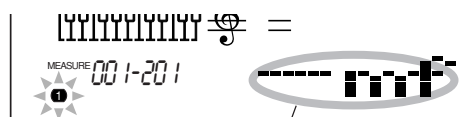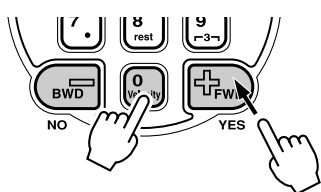
Selected Velocity Curve appears as icon in the display.

3) At the "Change?" prompt, press the + button ("YES") to actually enter the selected Velocity Curve, or press the - button to cancel the operation.
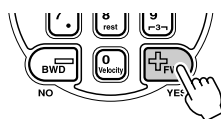
NOTE
You can specify a Velocity Curve in the middle of a track BEFORE recording the notes that the curve will affect. To do this, select the last note of the track (by using the +/- buttons), then enter the desired Velocity Curve. In this case, the Velocity Curve is NOT applied to that last note, but affects all subsequently entered notes.

Velocity Curve Chart

Display	Type/Description
	Mezzoforte This sets all subsequent notes to a velocity value of 80.
	Forte This sets all subsequent notes to a velocity value of 100.
	Fortissimo This sets all subsequent notes to a velocity value of 120.
	Mezzopiano This sets all subsequent notes to a velocity value of 60.
	Piano This sets all subsequent notes to a velocity value of 40.
	Pianissimo This sets all subsequent notes to a velocity value of 20.
	Crescendo 1 This creates a two-measure crescendo, starting with the current velocity at the selected note and ending with a velocity increase of 40.
	Crescendo 2 This creates a two-measure crescendo, starting with the current velocity at the selected note and ending with a velocity increase of 20.
	Crescendo 3 This creates a two-measure crescendo, starting with the current velocity at the selected note and ending with a velocity increase of 10.

Display	Type/Description
	Diminuendo 1 This creates a two-measure diminuendo, starting with the current velocity at the selected note and ending with a velocity decrease of 40.
	Diminuendo 2 This creates a two-measure diminuendo, starting with the current velocity at the selected note and ending with a velocity decrease of 20.
	Diminuendo 3 This creates a two-measure diminuendo, starting with the current velocity at the selected note and ending with a velocity decrease of 10.
	Accent 1 This increases the velocity of notes at the top (1st beat) of all measures by 30. (Display icon represents two measures.)
	Accent 2 This increases the velocity of notes at the top and halfway points of all measures by 30. (Display icon represents two measures.)
	Triangle wave This alternately and gradually increases and decreases the velocity by 30 in the pattern of a triangle wave. The wave repeats every two measures throughout the track. (Display icon represents two measures.)
	Square wave This alternately and abruptly increases and decreases the velocity by 30 in the pattern of a square wave. The wave repeats every two measures throughout the track. (Display icon represents two measures.)

CLEARING A SONG

The Song Clear operation (of the Function parameters) completely erases all recorded data on all tracks of a selected User song. Use this operation only when you're sure you want to erase a song and record a new one.

1 Select the Function mode.
Press the FUNCTION button.

FUNCTION   SONG   STYLE   VOICE

STYLE   F61USng1Clr
FUNCTION
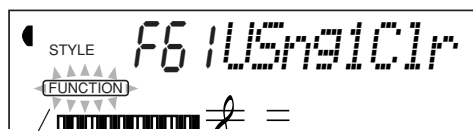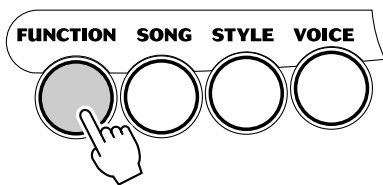
Flashes to indicate Function
parameter can be selected.

2 Select the Function parameter (61 - 63) corresponding to the song you wish to clear.
While the "FUNCTION" indication is flashing, use the numeric keypad to select the desired Function parameter number:

- 61 — Clear song #1 ("F61 USng1Clr")
- 62 — Clear song #2 ("F62 USng2Clr")
- 63 — Clear song #3 ("F63 USng3Clr")

3 Start the Song Clear operation.
After the "FUNCTION" indication stops flashing and the "Clr?" prompt appears, press the + button to start the Song Clear operation.

STYLE   YES#1 Clr?
FUNCTION
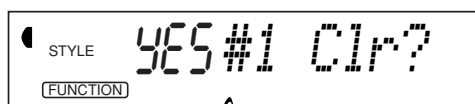
4 At the "Sure?" prompt, clear the selected song.
Press + to actually clear the corresponding song, or press - to cancel the operation and return to step 3.

STYLE   YESSure?
FUNCTION

To exit from the Song Clear operation, press one of the other mode buttons: SONG, STYLE, or VOICE.
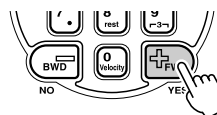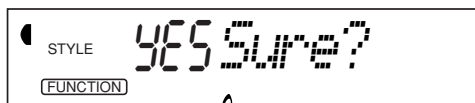
NOTE
These parameter numbers can be selected in the same way as with the voices (see page 28). You can use the numeric keypad to directly enter the number, use the +/- keys to step up and down through the parameters, or press the FUNCTION button to advance through the parameter numbers.

IMPORTANT
Since the "FUNCTION" indication flashes for only a couple of seconds, make sure to select the parameter quickly after step 1 above.

FOOTSWITCH

The PortaTone has a footswitch feature that can be used to control a variety of functions and operations. By using your foot to conveniently control these functions, you free your hands to concentrate on your performance.

Normally, this is used as a damper pedal, producing pedal-controlled sustain for piano and other instrument sounds that have a natural decay. It can also be assigned to any of these eleven other functions:

- *EZ Chord increment*
- *START/STOP*
- *INTRO/ENDING*
- *MAIN A*
- *MAIN B*
- *Harmony On/Off*

- *Dual On/Off*
- *Split On/Off*
- *Reverb On/Off*
- *Chorus On/Off*
- *DSP On/Off*

1 Call up the Function mode.
Press the FUNCTION button.

FUNCTION   SONG   STYLE   VOICE
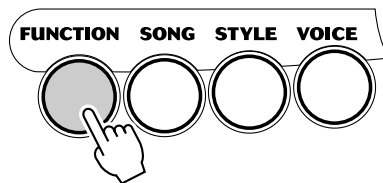
2 Select the Footswitch Assign parameter.
While the "FUNCTION" indication is flashing, use the numeric keypad to select Footswitch Assign (#71).

Function parameter numbers can be selected in the same way as with the voices (see page 28) — with the numeric keypad, +/- keys, or the FUNCTION button.

STYLE   *F71FootSw*
FUNCTION
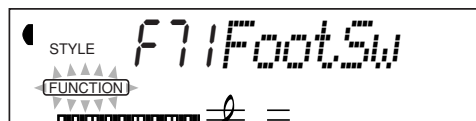
3 Select the desired footswitch function.
After the "FUNCTION" indication stops flashing, use the numeric keypad to change the setting. (See the "Footswitch Assign Functions" list below for details.)
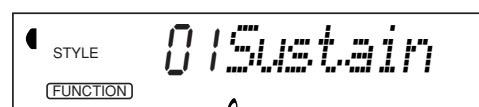
STYLE   *01Sustain*
FUNCTION

IMPORTANT
Since the "FUNCTION" indication flashes for only a couple of seconds, make sure to select the parameter quickly after step 1 above.

Restoring the Default Value
If you've changed the parameter setting, you can instantly restore the default setting (Sustain) by pressing both +/- buttons simultaneously.

Footswitch Assign Functions

Function Name	Display Name	Description
Sustain	Sustain	Damper pedal or sustain operation. Pressing the footswitch applies a natural sustain to the keyboard-played voice.
EZ Chord Increment	EZChdInc	When using EZ Chord (page 66), this provides the same function as pressing a key in the accompaniment section of the keyboard. Each press of the footswitch advances to and plays the next EZ Chord entry. When accompaniment is playing back, simply press and release the footswitch; when accompaniment playback is off, hold down the footswitch to keep playing the chord. **NOTE** *This does not disable the accompaniment section of the keyboard; either the footswitch or the keyboard can be used for EZ Chord increment when this is selected.*
Start/Stop	StartStp	When the Song mode or Style mode is active, this provides the same function as the START/STOP button (see pages 48). Each press of the footswitch alternately starts and stops song or accompaniment playback.
Intro/Ending	IntroEnd	When the Style mode is active, this provides the same function as the INTRO/ENDING button (see page 49). Pressing the footswitch twice while the accompaniment is playing back causes the Ending section to gradually slow down (page 51).
Main A	Main A	When the Style mode is active, this provides the same function as the MAIN A (AUTO FILL) button (see page 54).
Main B	Main B	When the Style mode is active, this provides the same function as the MAIN B (AUTO FILL) button (see page 54).
Harmony On/Off	Harmony	When the Style mode is active, this provides the same function as the HARMONY button (and the Harmony On/Off parameter, #37). (See page 43.)
Dual On/Off	Dual	This provides the same function as the DUAL button (and the Dual On/Off parameter, #18). (See page 34.)
Split On/Off	Split	This provides the same function as the Split On/Off parameter, #28. (See page 36.)
Reverb On/Off	Reverb	This provides the same function as the REVERB button (and the Reverb On/Off parameter, #31). (See page 40.)
Chorus On/Off	Chorus	This provides the same function as the Chorus On/Off parameter, #33. (See page 41.)
DSP On/Off	Dsp	This provides the same function as the DSP On/Off parameter, #35. (See page 42.)

4 Exit the Function mode.

Once you've made the desired setting, press one of the other mode buttons (SONG, STYLE, or VOICE).

MIDI FUNCTIONS

The PortaTone is MIDI-compatible, featuring MIDI IN and MIDI OUT terminals and providing a variety of MIDI-related controls. By using the MIDI functions you can expand your musical possibilities. This section explains what MIDI is, and what it can do, as well as how you can use MIDI on your PSR-225.

> **IMPORTANT** *The MIDI functions cannot be used in the Song mode.*

WHAT IS MIDI?

No doubt you have heard the terms "acoustic instrument" and "digital instrument." In the world today, these are the two main categories of instruments. Let's consider an acoustic piano and a classical guitar as representative acoustic instruments. They are easy to understand. With the piano, you strike a key, and a hammer inside hits some strings and plays a note. With the guitar, you directly pluck a string and the note sounds. But how does a digital instrument go about playing a note?

Acoustic guitar note production

Digital instrument note production
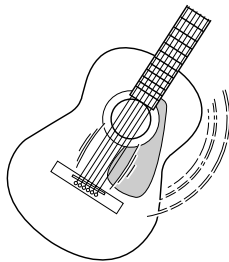
Pluck a string and the body resonates the sound.
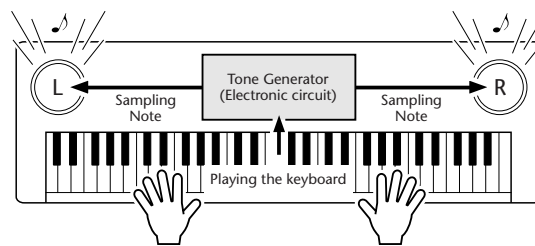
Based on playing information from the keyboard, a sampling note stored in the tone generator is played through the speakers.

As shown in the illustration above, in an electronic instrument the sampling note (previously recorded note) stored in the tone generator section (electronic circuit) is played based on information received from the keyboard. So then what is the information from the keyboard that becomes the basis for note production?

For example, let's say you play a "C" quarter note using the grand piano sound on the PSR-225 keyboard. Unlike an acoustic instrument that puts out a resonated note, the electronic instrument puts out information from the keyboard such as "with what voice," "with which key," "about how strong," "when was it pressed," and "when was it released." Then each piece of information is changed into a number value and sent to the tone generator. Using these numbers as a basis, the tone generator plays the stored sampling note.

Example of Keyboard Information

Voice number (with what voice)	01 (grand piano)
Note number (with which key)	60 (C3)
Note on (when was it pressed) and note off (when was it released)	Timing expressed numerically (quarter note)
Velocity (about how strong)	120 (strong)

MIDI is an acronym that stands for Musical Instrument Digital Interface, which allows electronic musical instruments to communicate with each other, by sending and receiving compatible Note, Control Change, Program Change and various other types of MIDI data, or messages.
The PSR-225 can control a MIDI device by transmitting note related data and various types of controller data. The PSR-225 can be controlled by the incoming MIDI messages which automatically determine tone generator mode, select MIDI channels, voices and effects, change parameter values and of course play the voices specified for the various parts.

MIDI messages can be divided into two groups: Channel messages and System messages. Below is an explanation of the various types of MIDI messages which the PSR-225 can receive/transmit.

● Channel Messages

The PSR-225 is an electronic instrument that can handle 16 channels. This is usually expressed as "it can play 16 instruments at the same time." Channel messages transmit information such as Note ON/OFF, Program Change, for each of the 16 channels.

Message Name	PSR-225 Operation/Panel Setting
Note ON/OFF	Messages which are generated when the keyboard is played. Each message includes a specific note number which corresponds to the key which is pressed, plus a velocity value based on how hard the key is stuck.
Program Change	Voice number (along with corresponding bank select MSB/LSB settings, if necessary).
Control Change	Messages that are used to change some aspect of the sound (modulation, volume, pan, etc.).

● System Messages

This is data that is used in common by the entire MIDI system. System messages include messages like Exclusive Messages that transmit data unique to each instrument manufacturer and Realtime Messages that control the MIDI device.

Message Name	PSR-225 Operation/Panel Setting
Exclusive Message	Reverb/chorus/DSP settings, etc.
Realtime Messages	Clock setting Start/stop operation

The messages transmitted/received by the PSR-225 are shown in the MIDI Implementation Chart on page 114.

MIDI Terminals

In order to exchange MIDI data between multiple devices, each device must be connected by a cable.
The MIDI terminals of the PSR-225 are located on the rear panel.
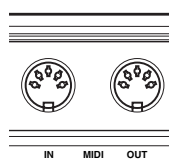
IN   MIDI   OUT

MIDI IN ....Receives MIDI data from another MIDI device.

MIDI OUT ....Transmits the PSR-225's keyboard information as MIDI data to another MIDI device.

NOTE

• Special MIDI cables (sold separately) must be used for connecting to MIDI devices. They can be bought at music stores, etc.

• Never use MIDI cables longer than about 15 meters. Cables longer than this can pick up noise which can cause data errors.

CONNECTING TO A PERSONAL COMPUTER

By connecting your PSR-225's MIDI terminals to a personal computer, you can have access to a wide variety of music software.

When using a MIDI interface device installed in the personal computer, connect the MIDI terminals of the personal computer and the PSR-225.

Use only special MIDI cables when connecting MIDI devices.

● **Connect the MIDI terminals of the PSR-225 to the MIDI terminals of the personal computer.**

MIDI OUT   MIDI IN   PSR-225
MIDI IN   MIDI OUT

Computer
(sequencer software)
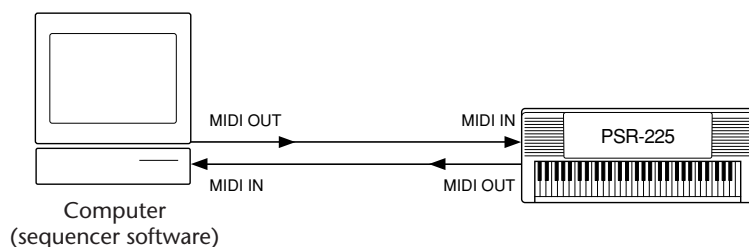
● **When using a MIDI interface with a Macintosh series computer, connect the RS-422 terminal of the computer (modem or printer terminal) to the MIDI interface, as shown in the diagram below.**

MIDI
interface
RS-422   MIDI IN   PSR-225
MIDI OUT

Computer
(sequencer software)
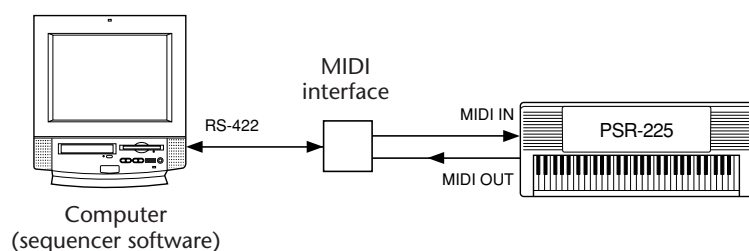
NOTE

When using a Macintosh series computer, set the MIDI interface clock setting in the application software to match the setting of the MIDI interface you are using. For details, carefully read the owner's manual for the software you are using.

FUNCTION PARAMETERS — MIDI

The Function parameters provide additional, more detailed MIDI settings for the PortaTone. These settings include:

- *Remote Channel*
- *Keyboard Out*
- *Accompaniment Out*
- *Local Control*
- *External Clock*
- *Bulk Dump Send*
- *Initial Setup Send*

1 Call up the Function mode.
Press the FUNCTION button.

FUNCTION   SONG   STYLE   VOICE
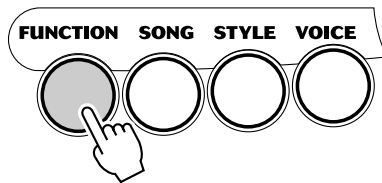
2 Select the desired Function parameter.
While the "FUNCTION" indication is flashing, use the numeric keypad to select the desired MIDI Function parameter number (81 - 87). (See the "Parameters" list below for details.)

Function parameter numbers can be selected in the same way as with the voices (see page 28) — with the numeric keypad, +/- keys, or the FUNCTION button.

STYLE   *F81 RemoteCh*
FUNCTION
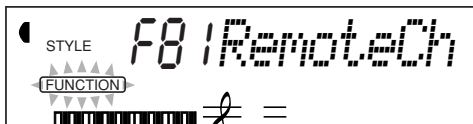
3 Change the parameter setting or value.
After the "FUNCTION" indication stops flashing, use the numeric keypad to change the value or setting.

> Restoring the Default Value
> If you've changed the parameter setting, you can instantly restore the default setting by pressing both +/- buttons simultaneously.

4 Set other parameters as needed.
To select and set other parameters, repeat steps 1 - 3 above.

5 Exit the Function mode.
Once you've made all desired settings, press one of the other mode buttons (SONG, STYLE, or VOICE).

IMPORTANT
Since the "FUNCTION" indication flashes for only a couple of seconds, make sure to select the parameter quickly after step 1 above.

NOTE
The MIDI settings below are saved even when the power is turned off. However, MIDI settings are NOT included in the data saved to the User banks in the One Touch Setting feature (page 72).

Function Parameters

No.	Parameter Name	Display Name	Range/Settings
81	Remote Channel	RemoteCh	off, 01 - 16

This determines how the PortaTone is controlled by a "remote" (external) MIDI keyboard.
Set this to one of the 16 channels (01 - 16) for using an external keyboard to remotely control the PortaTone functions over the selected channel. (The remaining 15 channels can be used for multi-timbral operation.)
When this is set to "off," the PortaTone can be used as a full 16-channel multi-timbral sound source.
The default setting is "off."

No.	Parameter Name	Display Name	Range/Settings
82	Keyboard Out	KbdOut	on/off

This determines whether the keyboard performance data of the PortaTone is transmitted or not.
When this is set to "off," notes played on the PortaTone will not affect (not be transmitted to) the connected MIDI device. When this is set to "on," the following keyboard data is transmitted: Main voice part over channel 1, Split voice part over channel 2, and Dual voice part over channel 11. The default setting is "on."

NOTE

If both Keyboard Out and Local Control (#84 below) are set to "off," neither the connected MIDI device nor the PortaTone voices will sound when playing the keyboard.

No.	Parameter Name	Display Name	Range/Settings
83	Accompaniment Out	AcmpOut	on/off

This determines whether Auto Accompaniment data is transmitted via MIDI OUT or not.
When set to "on," Auto Accompaniment data is transmitted over channels 3 - 10 (as listed below).
The default setting is "on."

Accompaniment Transmit Channels:

Channel 3	—	Bass
Channel 4	—	Chord part 1
Channel 5	—	Chord part 2
Channel 6	—	Pad
Channel 7	—	Phrase part 1
Channel 8	—	Phrase part 2
Channel 9	—	Rhythm part 2
Channel 10	—	Rhythm part 1

HINT

You can use Accompaniment Out in several ways. One useful application would be to play all or selected parts on a connected MIDI tone generator. In this way you could reinforce the PortaTone sounds by layering (or substituting) with the sounds of the tone generator. In a different application, you could record the individual parts from each channel to a sequencer, and use the comprehensive editing features of the sequencer to re-arrange the accompaniment parts.

No.	Parameter Name	Display Name	Range/Settings
84	Local Control	Local	on/off

This determines whether the keyboard is "connected" to the internal Voices of the PortaTone.
When set to "on," the Voices respond to notes played from the keyboard. When set to "off," the Voices respond only to incoming MIDI data (via MIDI IN). The default setting is "on." If you are routing the MIDI OUT on the PortaTone to a sequencer and back to the MIDI IN, you may want to set this to "off" to avoid MIDI "feedback."

No.	Parameter Name	Display Name	Range/Settings
85	External Clock	ExtClock	on/off

This determines whether the style playback function is controlled by the PortaTone's internal clock (off) or by MIDI clock data from an external sequencer or computer (on).
This should be set to "on" when you want to have style playback follow the external device (such as a rhythm machine or a sequencer). The default setting is "off."

NOTE

External Clock is automatically set to "off" when the Song mode is selected.

No.	Parameter Name	Display Name	Range/Settings
86	Bulk Dump Send	BulkSend	

This lets you save important PortaTone data and settings to another device (such as a sequencer, computer, or MIDI data filer).
The saved settings are: User One Touch Setting banks 1 - 4, User Songs 1 - 3, and EZ Chord banks 1 - 8), which you can then reload any time you need. For example, you can save data to floppy disk on a computer or a MIDI data filer (such as the Yamaha MDF3), and have unlimited storage capability for your valuable PortaTone data. (For detailed instructions, see the section "USING BULK DUMP SEND TO SAVE DATA" on page 99.)

No.	Parameter Name	Display Name	Range/Settings
87	Initial Setup Send	InitSend	

This function lets you transmit the initial setup settings of the PortaTone to a sequencer and record them as part of a song.
This ensures that when you playback the song, the PortaTone is instantly and automatically reconfigured to the proper settings for the song. (For detailed instructions, see the section "USING INITIAL SETUP SEND WITH A SEQUENCER" on page 102.)

USING BULK DUMP SEND TO SAVE DATA

Saving Bulk Data

1 First, set up the connected MIDI device for recording the data.

The actual procedure may differ depending on your particular equipment and software. For example, if you are using the Yamaha MDF3 MIDI Data Filer:

1) Make the appropriate MIDI connections.

PSR-225   MIDI OUT → MIDI IN
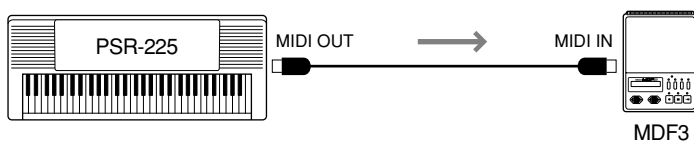
MDF3

2) Set up the MDF3 for recording MIDI data. (Refer to the MDF3 Owner's Manual.)

2 On the PortaTone, select the Bulk Dump Send function.

Do this in the normal way:

1) Press the FUNCTION button.
2) Select parameter #86 (with the numeric keypad).
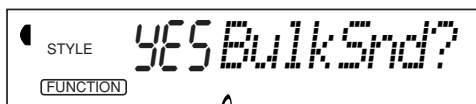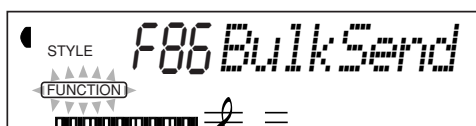
3 At the "BulkSnd?" prompt above, set the operation to standby.

Press the + button to start the Bulk Dump Send operation.

4 At the "Sure?" prompt, start sending the data.

Press the + button to actually start transmitting the data, or press the - button to cancel the operation and return to step 3.
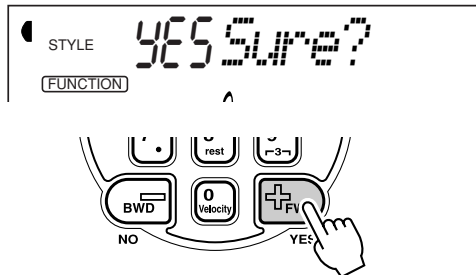
As the data is being sent, the display indicates the various stages of data transmission until the operation is complete:

Indicates One Touch Setting User data is being sent.

Indicates User Song data is being sent.

Indicates EZ Chord data is being sent.

When the operation is completed, the following displays appear:
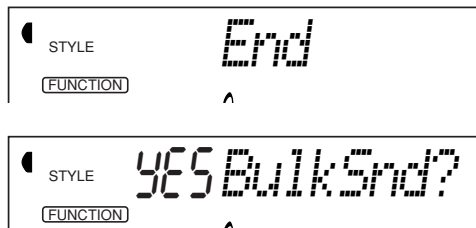
5 Exit from the Bulk Dump Send operation.

To exit from Bulk Dump Send, press one of the other mode buttons: SONG, STYLE, or VOICE.

NOTE

Bulk Dump Send can be cancelled in mid-operation by pressing the - button.

Loading Bulk Data

Once you've saved PortaTone data as described above, you can easily reload the data back to the PortaTone.

1 Set up the connected MIDI device for sending the appropriate data.

The actual procedure may differ depending on your particular equipment and software. For example, if you are using the Yamaha MDF3 MIDI Data Filer:

1) Make the appropriate MIDI connections.

2) Insert the appropriate floppy disk (containing the desired data) into the MIDI Data Filer.

2 Make sure that the PortaTone is set to the Style mode.

Make sure that the PortaTone is NOT set to the Song mode, and that it is not in the middle of an operation, such as song recording or playback, accompaniment playback, EZ Chord recording, Bulk Dump Send, etc.

3 Start sending the data from the connected MIDI device.

Send the data from the connected device. (Refer to the owner's manual of the device for details.)

The PortaTone automatically receives the data. As the data is being received, the PortaTone display indicates the various stages of data reception until the operation is complete:

Indicates One Touch Setting User data is being received.

Indicates User Song data is being received.

Indicates EZ Chord data is being received.
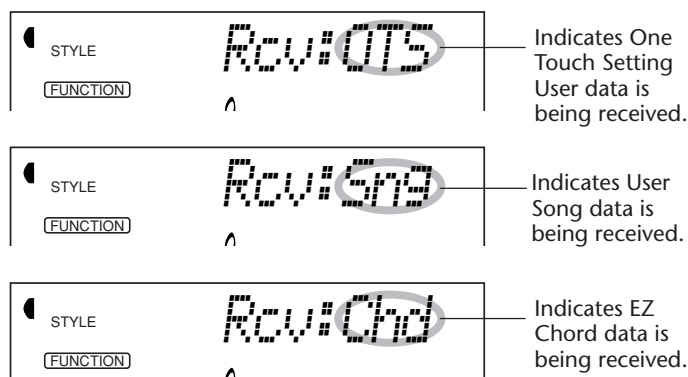
NOTE

When the PortaTone is receiving bulk data, none of the panel controls can be used.

When the operation is completed, the following display briefly appears (before returning to the original operation).

STYLE

End

FUNCTION

USING INITIAL SETUP SEND WITH A SEQUENCER

The most common use for the Initial Setup Send function is in recording a song on a sequencer that is intended for playback with the PortaTone. Essentially, this takes a "snapshot" of the PortaTone settings and sends that data to the sequencer. By recording this "snapshot" at the start of the song (before any actual performance data), you can instantly restore the necessary settings on the PortaTone. Provided there is a pause in the song, you could also do this in the middle of a song — for example, completely changing the PortaTone settings for the next section of the song.

Sending Initial Setup Data

1 First, set up the sequencer for recording.
The actual procedure may differ depending on your particular equipment and software.

Ideally, you should leave two or more measures of silence (no performance data) before the song begins. The Initial Setup data should then be recorded to this space in the song.

2 On the PortaTone, select the Initial Setup Send function.
Do this in the normal way:
      1) Press the FUNCTION button.
      2) Select parameter #87 (with the numeric keypad).

STYLE

F87InitSend

FUNCTION

3 At the "InitSnd?" prompt above, set the operation to standby.

Press the + button.

```
   STYLE     YES Sure?
 FUNCTION
```
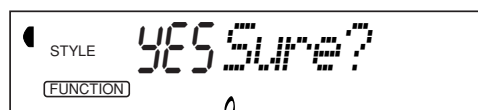
4 Start recording on the sequencer, then send the Initial Setup data.

Start recording on the sequencer in the normal way, then — with as little delay as possible — press the + button to actually start transmitting the data.

An "End" message briefly appears in the display when the operation is complete, followed by the "InitSnd?" prompt.

5 Stop recording on the sequencer.

Stop recording on the sequencer in the normal way. Make sure that any subsequently recorded performance data is recorded at least one measure following the Initial Setup data.

6 Exit from the Initial Setup Send operation.

To exit from Initial Setup Send, press one of the other mode buttons: SONG, STYLE, or VOICE.

TROUBLESHOOTING

Problem	Possible Cause and Solution
When the PortaTone is turned on or off, a popping sound is temporarily produced.	This is normal and indicates that the PortaTone is receiving electrical power.
There is no sound even when the keyboard is played or when a song is being played back.	Check that nothing is connected to the PHONES/AUX OUT jack on the rear panel. When a set of headphones is plugged into this jack, no sound is output.
The selected voice does not sound properly, or is too low in volume.	Make sure that the following settings are appropriate: Main Voice Volume (#01, page 31), Dual Voice Volume (#11, page 35), and Split Voice Volume (#21, page 37).
There is no sound when playing the keyboard.	When setting the Split Point, the keyboard is used only to change the value and does not produce any sound.
Playing keys in the right hand section of the keyboard does not produce any sound.	When using the Dictionary type (Chord Guide, page 62), the keys in the right hand section are used only for entering the chord root and type.
The sound of the voices or rhythms seems unusual or strange.	The battery power is too low. Replace the batteries. (See page 8.)
The accompaniment does not play back even when pressing the START/STOP button.	The External Clock (page 98) has been set to "on,". Change the External Clock setting to "off".
There is no sound on either the PortaTone or the connected MIDI device.	• If Local Control (Function #84, page 97) is set to "off," the PortaTone voices will not sound even when playing the keyboard. • If Keyboard Out (Function #82, page 97) is set to "off," the connected MIDI device will not sound when playing the PortaTone keyboard.
The accompaniment does not sound properly.	• Make sure that the Accompaniment Volume (page 55) is set to an appropriate level. • Make sure that the Accompaniment Split Point (#51, page 59) is set to an appropriate value.
The Reverb/Chorus/DSP/Harmony cannot be heard properly.	• Make sure that the Send Level parameter for the effect (and the intended voice: Main, Dual, of Split) is set to an appropriate value. (See pages 31, 35, 37) • Make sure that the corresponding effect is turned on. (See pages 40, 41, 42, 43) • For the Harmony effect, make sure that Harmony Volume (#39, page 44) is set to an appropriate value.
When playing back one of the Pianist styles (#91 - #100), the rhythm cannot be heard.	This is normal. The Pianist styles have no drums or bass — only piano accompaniment. The accompaniment of the style can only be heard when accompaniment is set to ON and keys are played in the auto accompaniment section of the keyboard.
Not all of the voices seem to sound, or the sound seems to be cut off.	The PortaTone is polyphonic up to a maximum of 32 notes. If the Dual voice or Split voice mode is being used and a style or song is playing back at the same time, some notes/sounds may be omitted (or "stolen") from the accompaniment or song. (See the note on page 108.)

Problem	Possible Cause and Solution
A strange "flanging" or "doubling" sound occurs when using the PortaTone with a sequencer. (This may also sound like a "dual" layered sound of two voices, even when Dual is turned off.)	• If you are routing the MIDI OUT on the PortaTone to a sequencer and back to the MIDI IN, you may want to set Local Control (page 97) to "off" to avoid MIDI "feedback." • When using the accompaniment with a sequencer, set MIDI Echo (or the relevant control) to "off." (Refer to the owner's manual of your particular device and/or software for details.)
The footswitch seems to produce the opposite effect. For example, when using the footswitch for sustain, pressing the footswitch cuts off the sound and releasing it sustains the sounds.	The polarity of the footswitch is reversed. Make sure that the footswitch plug is properly connected to the FOOT SWITCH jack before turning on the power.
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.

DATA BACKUP & INITIALIZATION

Except for the data listed below, all PSR-225 panel settings are reset to their initial settings whenever the power is turned on. The data listed below are backed up — i.e. retained in memory — as long as an AC adaptor is connected or a set of batteries is installed.

- • User Song Data
- • User One Touch Setting Data
- • One Touch Setting Bank Number
- • EZ Chord Data
- • EZ Chord Bank Number Data
- • Smart Chord Number

- • Metronome Volume
- • Touch On/Off
- • Touch Sensitivity
- • Split Point
- • Accompaniment Split Point
- • Footswitch Assign Function

Data Initialization

All data can be initialized and restored to the factory preset condition by turning on the power while holding the highest (rightmost) white key on the keyboard. "CLr Backup" will appear briefly on the display.
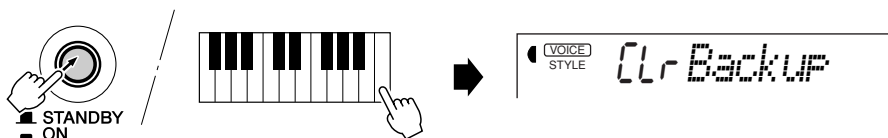
⚠ **CAUTION**

• All one touch setting (user) and song memory data, plus the other settings listed above, will be erased and/or changed when the data initialization procedure is carried out.

• Carrying out the data initialization procedure will usually restore normal operation if the PSR-225 freezes or begins to act erratically for any reason.

INDEX

EZ Chord | **Bank 1**

Menuet

EZ Chord | **Bank 2**

The Entertainer

VOICE LIST

■ Maximum Polyphony

The PSR-225 has 32-note maximum polyphony. This means that it can play a maximum of up to 32 notes at once, regardless of what functions are used. Auto Accompaniment uses a number of the available notes, so when Auto Accompaniment is used the total number of available notes for playing on the keyboard is correspondingly reduced. The same applies to the Dual Voice, Split Voice, and Song functions.

NOTE

• The Voice List includes MIDI program change numbers for each voice. Use these program change numbers when playing the PSR-225 via MIDI from an external device.

• Some voices may sound continuously or have a long decay after the notes have been released while the sustain pedal (footswitch) is held.

Panel Voice List

Voice Number	Bank Select		MIDI Program Change#	Voice Name
	MSB	LSB		
PIANO				
001	0	112	0	Grand Piano
002	0	112	1	Bright Piano
003	0	112	3	Honky-tonk Piano
004	0	112	4	Funky Electric Piano
005	0	112	5	DX Electric Piano
006	0	112	2	MIDI Grand Piano
007	0	113	2	CP 80
008	0	113	5	Hyper Electric Piano
009	0	114	5	Bell Electric Piano
010	0	112	6	Harpsichord
011	0	112	7	Clavi
012	0	112	8	Celesta
MALLET				
013	0	112	11	Vibraphone
014	0	112	12	Marimba
015	0	112	13	Xylophone
016	0	112	14	Tubular Bells
017	0	112	47	Timpani
018	0	112	114	Steel Drums
019	0	112	10	Music Box
ORGAN				
020	0	112	16	Jazz Organ 1
021	0	113	16	Jazz Organ 2
022	0	112	17	Jazz Organ 3
023	0	116	16	Full Organ
024	0	114	18	Rock Organ 1
025	0	112	18	Rock Organ 2
026	0	118	16	16'+2' Organ
027	0	119	16	16'+4' Organ
028	0	112	19	Church Organ
029	0	112	20	Reed Organ
030	0	112	21	Musette Accordion
031	0	113	21	Traditional Accordion
032	0	113	23	Bandoneon
GUITAR				
033	0	112	24	Classical Guitar
034	0	112	25	Folk Guitar
035	0	113	25	12Strings Guitar
036	0	112	26	Jazz Guitar
037	0	113	26	Octave Guitar
038	0	112	27	Clean Guitar
039	0	112	28	Muted Guitar
040	0	112	29	Overdriven Guitar
041	0	112	30	Distortion Guitar
BASS				
042	0	112	32	Acoustic Bass
043	0	112	33	Finger Bass
044	0	112	34	Pick Bass
045	0	112	35	Fretless Bass
046	0	112	36	Slap Bass
047	0	112	38	Synth Bass
048	0	113	38	Techno Bass
049	0	113	39	Dance Bass
ENSEMBLE				
050	0	112	48	Strings
051	0	112	49	Chamber Strings
052	0	112	50	Synth Strings
053	0	113	49	Slow Strings
054	0	112	44	Tremolo Strings
055	0	112	45	Pizzicato Strings
056	0	112	52	Choir

Voice Number	Bank Select		MIDI Program Change#	Voice Name
	MSB	LSB		
057	0	113	52	Choir Aahs
058	0	112	53	Choir Oohs
059	0	112	54	Synth Choir
060	0	112	55	Orchestra Hit
STRINGS				
061	0	112	40	Violin
062	0	112	42	Cello
063	0	112	43	Contrabass
064	0	112	105	Banjo
065	0	112	46	Harp
BRASS				
066	0	112	56	Trumpet
067	0	112	59	Muted Trumpet
068	0	112	57	Trombone
069	0	113	57	Trombone Section
070	0	112	60	French Horn
071	0	112	58	Tuba
072	0	112	61	Brass Section
073	0	112	62	Synth Brass
074	0	113	62	Jump Brass
075	0	114	62	Techno Brass
REED				
076	0	112	64	Soprano Sax
077	0	112	65	Alto Sax
078	0	112	66	Tenor Sax
079	0	112	67	Baritone Sax
080	0	112	68	Oboe
081	0	112	69	English Horn
082	0	112	70	Bassoon
083	0	112	71	Clarinet
084	0	112	22	Harmonica
PIPE				
085	0	112	72	Piccolo
086	0	112	73	Flute
087	0	112	75	Pan Flute
088	0	112	74	Recorder
089	0	112	79	Ocarina
SYNTH LEAD				
090	0	112	80	Square Lead
091	0	112	81	Sawtooth Lead
092	0	112	85	Voice Lead
093	0	112	98	Crystal
094	0	112	100	Brightness
095	0	115	81	Analog Lead
SYNTH PAD				
096	0	112	88	Fantasia
097	0	113	100	Bell Pad
098	0	112	91	Xenon Pad
099	0	112	94	Angels
100	0	113	89	Dark Moon
DRUM KITS				
101	127	0	0	Standard Kit 1
102	127	0	1	Standard Kit 2
103	127	0	8	Room Kit
104	127	0	16	Rock Kit
105	127	0	24	Electronic Kit
106	127	0	25	Analog Kit
107	127	0	27	Dance Kit
108	127	0	32	Jazz Kit
109	127	0	40	Brush Kit
110	127	0s	48	Symphony Kit

GM Voice List

Voice Number	Bank Select		MIDI Program Change#	Voice Name
	MSB	LSB		
PIANO				
111	0	0	0	Acoustic Grand Piano
112	0	0	1	Bright Acoustic Piano
113	0	0	2	Electric Grand Piano
114	0	0	3	Honky-tonk Piano
115	0	0	4	Electric Piano 1
116	0	0	5	Electric Piano 2
117	0	0	6	Harpsichord
118	0	0	7	Clavi
CHROMATIC				
119	0	0	8	Celesta
120	0	0	9	Glockenspiel
121	0	0	10	Music Box
122	0	0	11	Vibraphone
123	0	0	12	Marimba
124	0	0	13	Xylophone
125	0	0	14	Tubular Bells
126	0	0	15	Dulcimer
ORGAN				
127	0	0	16	Drawbar Organ
128	0	0	17	Percussive Organ
129	0	0	18	Rock Organ
130	0	0	19	Church Organ
131	0	0	20	Reed Organ
132	0	0	21	Accordion
133	0	0	22	Harmonica
134	0	0	23	Tango Accordion
GUITAR				
135	0	0	24	Acoustic Guitar (nylon)
136	0	0	25	Acoustic Guitar (steel)
137	0	0	26	Electric Guitar (jazz)
138	0	0	27	Electric Guitar (clean)
139	0	0	28	Electric Guitar (muted)
140	0	0	29	Overdriven Guitar
141	0	0	30	Distortion Guitar
142	0	0	31	Guitar Harmonics
BASS				
143	0	0	32	Acoustic Bass
144	0	0	33	Electric Bass (finger)
145	0	0	34	Electric Bass (pick)
146	0	0	35	Fretless Bass
147	0	0	36	Slap Bass 1
148	0	0	37	Slap Bass 2
149	0	0	38	Synth Bass 1
150	0	0	39	Synth Bass 2
STRINGS				
151	0	0	40	Violin
152	0	0	41	Viola
153	0	0	42	Cello
154	0	0	43	Contrabass
155	0	0	44	Tremolo Strings
156	0	0	45	Pizzicato Strings
157	0	0	46	Orchestral Harp
158	0	0	47	Timpani
ENSEMBLE				
159	0	0	48	Strings Ensemble 1
160	0	0	49	Strings Ensemble 2
161	0	0	50	Synth Strings 1
162	0	0	51	Synth Strings 2
163	0	0	52	Choir Aahs
164	0	0	53	Voice Oohs
165	0	0	54	Synth Voice

Voice Number	Bank Select		MIDI Program Change#	Voice Name
	MSB	LSB		
166	0	0	55	Orchestra Hit
BRASS				
167	0	0	56	Trumpet
168	0	0	57	Trombone
169	0	0	58	Tuba
170	0	0	59	Muted Trumpet
171	0	0	60	French Horn
172	0	0	61	Brass Section
173	0	0	62	Synth Brass 1
174	0	0	63	Synth Brass 2
REED				
175	0	0	64	Soprano Sax
176	0	0	65	Alto Sax
177	0	0	66	Tenor Sax
178	0	0	67	Baritone Sax
179	0	0	68	Oboe
180	0	0	69	English Horn
181	0	0	70	Bassoon
182	0	0	71	Clarinet
PIPE				
183	0	0	72	Piccolo
184	0	0	73	Flute
185	0	0	74	Recorder
186	0	0	75	Pan Flute
187	0	0	76	Blown Bottle
188	0	0	77	Shakuhachi
189	0	0	78	Whistle
190	0	0	79	Ocarina
SYNTH LEAD				
191	0	0	80	Lead 1 (square)
192	0	0	81	Lead 2 (sawtooth)
193	0	0	82	Lead 3 (calliope)
194	0	0	83	Lead 4 (chiff)
195	0	0	84	Lead 5 (charang)
196	0	0	85	Lead 6 (voice)
197	0	0	86	Lead 7 (fifth)
198	0	0	87	Lead 8 (bass+Lead)
SYNTH PAD				
199	0	0	88	Pad 1 (new age)
200	0	0	89	Pad 2 (warm)
201	0	0	90	Pad 3 (polysynth)
202	0	0	91	Pad 4 (choir)
203	0	0	92	Pad 5 (bowed)
204	0	0	93	Pad 6 (metallic)
205	0	0	94	Pad 7 (halo)
206	0	0	95	Pad 8 (sweep)
SYNTH EFFECTS				
207	0	0	96	FX 1 (rain)
208	0	0	97	FX 2 (soundtrack)
209	0	0	98	FX 3 (crystal)
210	0	0	99	FX 4 (atmosphere)
211	0	0	100	FX 5 (brightness)
212	0	0	101	FX 6 (goblins)
213	0	0	102	FX 7 (echoes)
214	0	0	103	FX 8 (sci-fi)
ETHNIC				
215	0	0	104	Sitar
216	0	0	105	Banjo
217	0	0	106	Shamisen
218	0	0	107	Koto
219	0	0	108	Kalimba
220	0	0	109	Bagpipe

Voice Number	Bank Select		MIDI Program Change#	Voice Name
	MSB	LSB		
221	0	0	110	Fiddle
222	0	0	111	Shanai
PERCUSSIVE				
223	0	0	112	Tinkle Bell
224	0	0	113	Agogo
225	0	0	114	Steel Drums
226	0	0	115	Woodblock
227	0	0	116	Taiko Drum
228	0	0	117	Melodic Tom
229	0	0	118	Synth Drum
230	0	0	119	Reverse Cymbal

Voice Number	Bank Select		MIDI Program Change#	Voice Name
	MSB	LSB		
SOUND EFFECTS				
231	0	0	120	Guitar Fret Noise
232	0	0	121	Breath Noise
233	0	0	122	Seashore
234	0	0	123	Bird Tweet
235	0	0	124	Telephone Ring
236	0	0	125	Helicopter
237	0	0	126	Applause
238	0	0	127	Gunshot

STYLE LIST

Style Number	Style Name
8BEAT	
001	8Beat Pop 1
002	8Beat Pop 2
003	8Beat Uptempo
004	8Beat Standard
005	Folkrock
006	Pop Rock
007	8Beat Medium
008	8Beat Ballad
009	Epic Ballad
010	Piano Ballad
16BEAT	
011	16Beat Shuffle 1
012	16Beat Shuffle 2
013	16Beat Pop
014	Funk 1
015	16Beat Ballad 1
016	16Beat Ballad 2
017	Soul Ballad
6/8 BALLAD	
018	Slow Rock 1
019	Slow Rock 2
020	6/8 Ballad
DANCE	
021	Dance Pop 1
022	Dance Pop 2
023	Techno
024	Eurobeat
025	Euro House
026	Hip Hop
027	Synth Boogie

Style Number	Style Name
DISCO	
028	70s Disco
029	Disco Tropical
030	Polka Pop
ROCK	
031	8Beat Rock Ballad
032	16Beat Rock Ballad
033	Hard Rock
034	Rock Shuffle
035	6/8 Heavy Rock
036	US Rock
ROCK & ROLL	
037	Rock & Roll 1
038	Rock & Roll 2
039	Boogie
040	Twist
RHYTHM & BLUES	
041	R&B
042	Funk 2
043	Soul
044	Gospel Shuffle
045	6/8 Gospel
046	4/4 Blues
CONTEMPORARY JAZZ	
047	Cool Jazz
048	Jazz Ballad
049	Jazz Waltz
050	Fusion

Style Number	Style Name
TRADITIONAL JAZZ	
051	Swing
052	Big Band Swing
053	Big Band Ballad
054	Jazz Quartet
055	Dixieland
AMERICAS	
056	Cajun
057	Banda
058	Mariachi
059	Tejano
060	Cumbia
COUNTRY & WESTERN	
061	Bluegrass
062	Country 2/4
063	Country Rock
064	Country Ballad
065	Country Shuffle
066	Country Waltz
BALLROOM LATIN	
067	Cha Cha
068	Rhumba
069	Pasodoble
070	Tango Continental
BALLROOM STANDARD	
071	Foxtrot
072	Jive

Style Number	Style Name
MARCH & WALTZ	
073	March 1
074	March 2
075	6/8 March
076	Polka
077	Standard Waltz
078	German Waltz
079	Viennese Waltz
080	Musette Waltz
LATIN	
081	Bossa Nova 1
082	Bossa Nova 2
083	Salsa
084	Samba
085	Mambo
086	Beguine
087	Merengue
088	Bolero Lento
CARIBBEAN	
089	Reggae 12
090	Pop Reggae
PIANIST	
091	Rock-a-Ballad
092	8Beat
093	Swing
094	Jazz Ballad
095	2Beat
096	Boogie
097	Ragtime
098	Arpeggio
099	Waltz
100	Happy

DRUM KIT LIST

- "<——" indicates that the drum sound is the same as "Standard Kit 1".
- Each percussion voice uses one note.
- The MIDI Note # and Note are actually one octave lower than listed. For example, in "101: Standard Kit 1", the "Seq Click H" (Note# 36/Note C1) corresponds to (Note# 24/Note C0).
- Key Off: Keys marked "O" stop sounding the instant they are released.
- Voices with the same Alternate Note Number (*1 … 4) cannot be played simultaneously. (They are designed to be played alternately with each other.)

Voice#						101	102	103	104	105
Bank MSB#						127	127	127	127	127
Bank LSB#						0	0	0	0	0
Program Change#						0	1	8	16	24
Keyboard		MIDI		Key off	Alternate Assign	Standard Kit 1	Standard Kit 2	Room Kit	Rock Kit	Electronic Kit
Note#	Note	Note#	Note							
25	C# 0	13	C# -1		*3	Surdo Mute	<——	<——	<——	<——
26	D 0	14	D -1		*3	Surdo Open	<——	<——	<——	<——
27	D# 0	15	D# -1			Hi-Q	<——	<——	<——	<——
28	E 0	16	E -1			Whip	<——	<——	<——	<——
29	F 0	17	F -1		*4	Scratch H	<——	<——	<——	<——
30	F# 0	18	F# -1		*4	Scratch L	<——	<——	<——	<——
31	G 0	19	G -1			Finger Snap	<——	<——	<——	<——
32	G# 0	20	G# -1			Click	<——	<——	<——	<——
33	A 0	21	A -1			Metronome Click	<——	<——	<——	<——
34	A# 0	22	A# -1			Metronome Bell	<——	<——	<——	<——
35	B 0	23	B -1			Seq Click L	<——	<——	<——	<——
36	C 1	24	C 0			Seq Click H	<——	<——	<——	<——
37	C# 1	25	C# 0			Brush Tap	<——	<——	<——	<——
38	D 1	26	D 0	O		Brush Swirl	<——	<——	<——	<——
39	D# 1	27	D# 0			Brush Slap	<——	<——	<——	<——
40	E 1	28	E 0	O		Brush Swirl W/Attack	<——	<——	<——	Reverse Cymbal
41	F 1	29	F 0	O		Snare Roll	<——	<——	<——	<——
42	F# 1	30	F# 0			Castanet	<——	<——	<——	Hi Q
43	G 1	31	G 0			Snare H Soft	Snare H Soft2	<——	SD Elec M	Snare L
44	G# 1	32	G# 0			Sticks	<——	<——	<——	<——
45	A 1	33	A 0			Bass Drum L	Bass Drum L2	<——	<——	Bass Drum H
46	A# 1	34	A# 0			Open Rim Shot	Open Rim Shot2	<——	<——	<——
47	B 1	35	B 0			Bass Drum M	<——	<——	Bass Drum H3	BD Rock
48	C 2	36	C 1			Bass Drum H	Bass Drum H 2	<——	BD Rock	BD Rock 2
49	C# 2	37	C# 1			Side Stick	<——	<——	<——	<——
50	D 2	38	D 1			Snare L	Snare L2	SD Room L	SD Rock	SD Elec M
51	D# 2	39	D# 1			Hand Clap	<——	<——	<——	<——
52	E 2	40	E 1			Snare H Hard	Snare H Hard2	SD Room H	SD Rock Rim	SD Elec H
53	F 2	41	F 1			Floor Tom L	<——	Room Tom 1	Rock Tom 1	E Tom 1
54	F# 2	42	F# 1		*1	Hi-Hat Closed	<——	<——	<——	<——
55	G 2	43	G 1			Floor Tom H	<——	Room Tom 2	Rock Tom 2	E Tom 2
56	G# 2	44	G# 1		*1	Hi-Hat Pedal	<——	<——	<——	<——
57	A 2	45	A 1			Low Tom	<——	Room Tom 3	Rock Tom 3	E Tom 3
58	A# 2	46	A# 1		*1	Hi-Hat Open	<——	<——	<——	<——
59	B 2	47	B 1			Mid Tom L	<——	Room Tom 4	Rock Tom 4	E Tom 4
60	C 3	48	C 2			Mid Tom H	<——	Room Tom 5	Rock Tom 5	E Tom 5
61	C# 3	49	C# 2			Crash Cymbal 1	<——	<——	<——	<——
62	D 3	50	D 2			High Tom	<——	Room Tom 6	Rock Tom 6	E Tom 6
63	D# 3	51	D# 2			Ride Cymbal 1	<——	<——	<——	<——
64	E 3	52	E 2			Chinese Cymbal	<——	<——	<——	<——
65	F 3	53	F 2			Ride Cymbal Cup	<——	<——	<——	<——
66	F# 3	54	F# 2			Tambourine	<——	<——	<——	<——
67	G 3	55	G 2			Splash Cymbal	<——	<——	<——	<——
68	G# 3	56	G# 2			Cowbell	<——	<——	<——	<——
69	A 3	57	A 2			Crash Cymbal 2	<——	<——	<——	<——
70	A# 3	58	A# 2			Vibraslap	<——	<——	<——	<——
71	B 3	59	B 2			Ride Cymbal 2	<——	<——	<——	<——
72	C 4	60	C 3			Bongo H	<——	<——	<——	<——
73	C# 4	61	C# 3			Bongo L	<——	<——	<——	<——
74	D 4	62	D 3			Conga H Mute	<——	<——	<——	<——
75	D# 4	63	D# 3			Conga H Open	<——	<——	<——	<——
76	E 4	64	E 3			Conga L	<——	<——	<——	<——
77	F 4	65	F 3			Timbale H	<——	<——	<——	<——
78	F# 4	66	F# 3			Timbale L	<——	<——	<——	<——
79	G 4	67	G 3			Agogo H	<——	<——	<——	<——
80	G# 4	68	G# 3			Agogo L	<——	<——	<——	<——
81	A 4	69	A 3			Cabasa	<——	<——	<——	<——
82	A# 4	70	A# 3			Maracas	<——	<——	<——	<——
83	B 4	71	B 3	O		Samba Whistle H	<——	<——	<——	<——
84	C 5	72	C 4	O		Samba Whistle L	<——	<——	<——	<——
85	C# 5	73	C# 4			Guiro Short	<——	<——	<——	<——
86	D 5	74	D 4	O		Guiro Long	<——	<——	<——	<——
87	D# 5	75	D# 4			Claves	<——	<——	<——	<——
88	E 5	76	E 4			Wood Block H	<——	<——	<——	<——
89	F 5	77	F 4			Wood Block L	<——	<——	<——	<——
90	F# 5	78	F# 4			Cuica Mute	<——	<——	<——	Scratch Push
91	G 5	79	G 4			Cuica Open	<——	<——	<——	Scratch Pull
92	G# 5	80	G# 4		*2	Triangle Mute	<——	<——	<——	<——
93	A 5	81	A 4		*2	Triangle Open	<——	<——	<——	<——
94	A# 5	82	A# 4			Shaker	<——	<——	<——	<——
95	B 5	83	B 4			Jingle Bell	<——	<——	<——	<——
96	C 6	84	C 5			Bell Tree	<——	<——	<——	<——

Voice#						106	107	108	109	110
Bank MSB#						127	127	127	127	127
Bank LSB#						0	0	0	0	0
Program Change#						25	27	32	40	48
Keyboard		MIDI		Key off	Alternate Assign	Analog Kit	Dance Kit	Jazz Kit	Brush Kit	Symphony Kit1
Note#	Note	Note#	Note							
25	C# 0	13	C# -1		*3	<——	<——	<——	<——	<——
26	D 0	14	D -1		*3	<——	<——	<——	<——	<——
27	D# 0	15	D# -1			<——	<——	<——	<——	<——
28	E 0	16	E -1			<——	<——	<——	<——	<——
29	F 0	17	F -1		*4	<——	<——	<——	<——	<——
30	F# 0	18	F# -1		*4	<——	<——	<——	<——	<——
31	G 0	19	G -1			<——	<——	<——	<——	<——
32	G# 0	20	G# -1			<——	<——	<——	<——	<——
33	A 0	21	A -1			<——	<——	<——	<——	<——
34	A# 0	22	A# -1			<——	<——	<——	<——	<——
35	B 0	23	B -1			<——	<——	<——	<——	<——
36	C 1	24	C 0			<——	<——	<——	<——	<——
37	C# 1	25	C# 0			<——	<——	<——	<——	<——
38	D 1	26	D 0	○		<——	<——	<——	<——	<——
39	D# 1	27	D# 0			<——	<——	<——	<——	<——
40	E 1	28	E 0	○		Reverse Cymbal	Reverse Cymbal	<——	<——	<——
41	F 1	29	F 0	○		<——	<——	<——	<——	<——
42	F# 1	30	F# 0			Hi Q	Hi Q	<——	<——	<——
43	G 1	31	G 0			SD Elec H2	SD Analog 2	<——	Brush Slap L	<——
44	G# 1	32	G# 0			<——	<——	<——	<——	<——
45	A 1	33	A 0			Bass Drum H	BD Analog 2	<——	<——	Bass Drum L3
46	A# 1	34	A# 0			<——	SD Analog Open Rim	<——	<——	<——
47	B 1	35	B 0			BD Analog 1L	BD Analog 3	<——	<——	Gran Casa
48	C 2	36	C 1			BD Analog 1H	BD Analog 4	BD Jazz	BD Jazz	Gran Casa Mute
49	C# 2	37	C# 1			Analog Side Stick	Analog Side Stick	<——	<——	<——
50	D 2	38	D 1			SD Analog 1H	SD Analog 3	SD Jazz L	Brush Slap H	Marching SD M
51	D# 2	39	D# 1			<——	<——	<——	<——	<——
52	E 2	40	E 1			SD Analog 1L	SD Analog 4	SD Jazz H	Brush Tap	Marching SD H
53	F 2	41	F 1			Analog Tom 1	Analog Tom 1	Jazz Tom 1	Brush Tom 1	Jazz Tom 1
54	F# 2	42	F# 1		*1	Analog HH Closed1	Dance HH Closed1	<——	<——	<——
55	G 2	43	G 1			Analog Tom 2	Analog Tom 2	Jazz Tom 2	Brush Tom 2	Jazz Tom 2
56	G# 2	44	G# 1		*1	Analog HH Closed2	Dance HH Closed2	<——	<——	<——
57	A 2	45	A 1			Analog Tom 3	Analog Tom 3	Jazz Tom 3	Brush Tom 3	Jazz Tom 3
58	A# 2	46	A# 1		*1	Analog HH 1 Open	HH Open2	<——	<——	<——
59	B 2	47	B 1			Analog Tom 4	Analog Tom 4	Jazz Tom 4	Brush Tom 4	Jazz Tom 4
60	C 3	48	C 2			Analog Tom 5	Analog Tom 5	Jazz Tom 5	Brush Tom 5	Jazz Tom 5
61	C# 3	49	C# 2			Analog Cymbal	Analog Cymbal	<——	<——	Hand Cym.L Open
62	D 3	50	D 2			Analog Tom 6	Analog Tom 6	Jazz Tom 6	Brush Tom 6	Jazz Tom 6
63	D# 3	51	D# 2			<——	<——	<——	<——	Hand Cym. L Closed
64	E 3	52	E 2			<——	<——	<——	<——	<——
65	F 3	53	F 2			<——	<——	<——	<——	<——
66	F# 3	54	F# 2			<——	<——	<——	<——	<——
67	G 3	55	G 2			<——	<——	<——	<——	<——
68	G# 3	56	G# 2			Analog Cowbell	Analog Cowbell	<——	<——	<——
69	A 3	57	A 2			<——	<——	<——	<——	Hand Cym. H Open
70	A# 3	58	A# 2			<——	<——	<——	<——	<——
71	B 3	59	B 2			<——	<——	<——	<——	Hand Cym. H Closed
72	C 4	60	C 3			<——	<——	<——	<——	<——
73	C# 4	61	C# 3			<——	<——	<——	<——	<——
74	D 4	62	D 3			Analog Conga H	Analog Conga H	<——	<——	<——
75	D# 4	63	D# 3			Analog Conga M	Analog Conga M	<——	<——	<——
76	E 4	64	E 3			Analog Conga L	Analog Conga L	<——	<——	<——
77	F 4	65	F 3			<——	<——	<——	<——	<——
78	F# 4	66	F# 3			<——	<——	<——	<——	<——
79	G 4	67	G 3			<——	<——	<——	<——	<——
80	G# 4	68	G# 3			<——	<——	<——	<——	<——
81	A 4	69	A 3			<——	<——	<——	<——	<——
82	A# 4	70	A# 3			Analog Maracas	Analog Maracas	<——	<——	<——
83	B 4	71	B 3	○		<——	<——	<——	<——	<——
84	C 5	72	C 4	○		<——	<——	<——	<——	<——
85	C# 5	73	C# 4			<——	<——	<——	<——	<——
86	D 5	74	D 4	○		<——	<——	<——	<——	<——
87	D# 5	75	D# 4			Analog Claves	Analog Claves	<——	<——	<——
88	E 5	76	E 4			<——	<——	<——	<——	<——
89	F 5	77	F 4			<——	<——	<——	<——	<——
90	F# 5	78	F# 4			Scratch Push	Scratch Push	<——	<——	<——
91	G 5	79	G 4			Scratch Pull	Scratch Pull	<——	<——	<——
92	G# 5	80	G# 4		*2	<——	<——	<——	<——	<——
93	A 5	81	A 4		*2	<——	<——	<——	<——	<——
94	A# 5	82	A# 4			<——	<——	<——	<——	<——
95	B 5	83	B 4			<——	<——	<——	<——	<——
96	C 6	84	C 5			<——	<——	<——	<——	<——

MIDI IMPLEMENTATION CHART

Function		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1 - 16 1 - 16	1 - 16 *1 1 - 16 *1	
Mode	Default Messages Altered	3 X **************	3 X X	
Note Number	 : True voice	0 - 127 **************	0 - 127 0 - 127	
Velocity	Note ON Note OFF	O 9nH, v=1 - 127 O 9nH, v=0	O 9nH, v=1 - 127 O 9nH, v=0 or 8nH	
After Touch	key's Ch's	X X	X X	
Pitch Bender		X	O	
Control Change	0, 32 1 7, 10 11 6, 38 64 84 91, 93, 94 96, 97 100, 101 120 121	O X *2 O X *2 X *2 O X *2 O X X *2 X X	O O O O O O O O O O O O	Bank Select Modulation Expression Data Entry Sustain Portamento Control Effect Depth Data Inc, Dec RPN LSB, MSB All Sound Off Reset All Controllers
Program Change	 : True #	O 0 - 127 **************	O 0 - 127	
System Exclusive		O *3	O *3	
System Common	: Song Position : Song Select : Tune	X X X	X X X	
System Real Time	: Clock : Commands	O O *5	O *4 O *5	
Aux Messages	: Local ON/OFF : All Notes OFF : Active Sense : Reset	X X O X	X O (123 - 127) O X	

NOTE:

*1 By default (factory settings) the PSR-225 ordinarily functions as a 16-channel multi-timbral tone generator, and incoming data does not affect the panel voices or panel settings. However, the MIDI messages listed below do affect the panel voices, auto accompaniment, and songs.
   • MIDI Master Tuning
   • System exclusive messages for changing the Reverb Type, Chorus Type, and DSP Type.

   The Remote Channel can be designated by using Function parameter #81. The messages received over the set channel are handled in the same way as key data received from the PSR-225 itself. The following messages can be received over the designated channel set in this Function parameter; all other messages will be ignored.
   • Note ON
   • Note OFF
   • Control change : Bank select MSB, LSB (Main Voice Only), Modulation, Volume, Expression, Sustain, All sound off, All note off
   • Program Change (Main Voice Only)
   • Pitch Bend

*2 Messages for these control change numbers cannot be transmitted from the PSR-225 itself. However, they may be transmitted when playing the accompaniment or using the Harmony effect.

*3 Exclusive
   <GM System ON> F0H, 7EH, 7FH, 09H, 01H, F7H
   • This message automatically restores all default settings for the instrument, with the exception of MIDI Master Tuning.

   <MIDI Master Volume> F0H, 7FH, 7FH, 04H, 01H, ll, mm, F7H
   • This message allows the volume of all channels to be changed simultaneously (Universal System Exclusive).
   • The values of "mm" is used for MIDI Master Tuning. (Values for "ll" are ignored.)

   <MIDI Master Tuning> F0H, 43H, 1nH, 27H, 30H, 00H, 00H, mm, ll, cc, F7H
   • This message simultaneously changes the tuning value of all channels.
   • The values of "mm" and "ll" are used for MIDI Master Tuning.
   • The default value of "mm" and "ll" are 08H and 00H, respectively. Any values can be used for "n" and "cc."

   <Bulk Dump>
   • This is used for saving (recording) User data (User songs, User One Touch Setting, and EZ Chord).

   <Internal Clock, External Clock> (Receive Only)
   F0H, 43H, 73H, 01H, 02H, F7H (Internal Clock)
   F0H, 43H, 73H, 01H, 03H, F7H (External Clock)
   • These messages control the clock setting for the accompaniment.

   <Reverb Type> F0H, 43H, 1nH, 4CH, 02H, 01H, 00H, mmH, llH, F7H
   • mm : Reverb Type MSB
   • ll : Reverb Type LSB
   Refer to the Effect Map (page 116) for details.

   <Chorus Type> F0H, 43H, 1nH, 4CH, 02H, 01H, 20H, mmH, llH, F7H
   • mm : Chorus Type MSB
   • ll : Chorus Type LSB
   Refer to the Effect Map (page 116) for details.

   <DSP Type> F0H, 43H, 1nH, 4CH, 02H, 01H, 40H, mmH, llH, F7H
   • mm : DSP Type MSB
   • ll : DSP Type LSB
   Refer to the Effect Map (page 116) for details.

   <DRY Level> F0H, 43H, 1nH, 4CH, 08H, 0mH, 11H, llH, F7H
   • ll : Dry Level
   • 0m : Channel Number

*4 It is possible to switch between External and Internal Clock.

*5 When the accompaniment is started, an FAH message is transmitted. When accompaniment is stopped, an FCH message is transmitted. When the clock is set to External, both FAH (accompaniment start) and FCH (accompaniment stop) are recognized.

   No MIDI messages can be received or transmitted in the Song mode.

■ Effect map

* If the received value does not contain an effect type in the TYPE LSB, the LSB will be directed to TYPE 0.
* Panel Effects are based on the "(Number) Effect Name".
* By using an external sequencer, which is capable of editing and transmitting the system exclusive messages and parameter changes, you can select the Reverb, Chorus and DSP effect types which are not accessible from the PSR-225 panel itself. When one of the effects is selected by the external sequencer, " - " will be shown on the display.

REVERB

TYPE	TYPE LSB								
MSB	00	01	02	08	16	17	18	19	20
000	NO EFFECT								
001	(1)HALL1					(2)HALL2			
002	ROOM					(3)ROOM1		(4)ROOM2	
003	STAGE				(5)STAGE1	(6)STAGE2			
004	PLATE				(7)PLATE1	(8)PLATE2			
005...127	NO EFFECT								

CHORUS

TYPE	TYPE LSB								
MSB	00	01	02	08	16	17	18	19	20
000...064	NO EFFECT								
065	CHORUS		(2)CHORUS2						
066	CELESTE					(1)CHORUS1			
067	FLANGER			(3)FLANGER1		(4)FLANGER2			
068...127	NO EFFECT								

DSP

TYPE	TYPE LSB								
MSB	00	01	02	08	16	17	18	19	20
000	NO EFFECT								
001	(1)HALL1					(2)HALL2			
002	ROOM					(3)ROOM1		(4)ROOM2	
003	STAGE				(5)STAGE1	(6)STAGE2			
004	PLATE				(7)PLATE1	(8)PLATE2			
005	DELAY L,C,R				(26)DELAY L,C,R				
006	(27)DELAY L,R								
007	(28)ECHO								
008	(29)CROSS DELAY								
009	(9)EARLY REFLECTION1	(10)EARLY REFLECTION2							
010	(11)GATE REVERB								
011	(12)REVERSE GATE								
012...019	NO EFFECT								
020	KARAOKE								
021...063	NO EFFECT								
064	THRU								
065	CHORUS		(14)CHORUS2						
066	CELESTE					(13)CHORUS1			
067	FLANGER			(15)FLANGER1		(16)FLANGER2			
068	SYMPHONIC				(17)SYMPHONIC				
069	ROTARY SPEAKER				(19)ROTARY SPEAKER1				
070	TREMOLO				(21)TREMOLO1				
071	AUTO PAN				(24)AUTO PAN		(20)ROTARY SPEAKER2	(22)TREMOLO2	(23)GUITAR TREMOLO
072	(18)PHASER								
073	DISTORTION								
074	OVERDRIVE								
075	AMP SIMULATION				(30)DISTORTION HARD	(31)DISTORTION SOFT			
076	3BAND EQ				(32)EQ DISCO	(33)EQ TEL			
077	2BAND EQ								
078	AUTO WAH				(25)AUTO WAH				
079...127	THRU								

SPECIFICATIONS

Keyboards
- 61 standard-size keys (C1 - C6), with Touch Response.

Display
- Large multi-function LCD display

Setup
- STANDBY/ON
- MASTER VOLUME : MIN - MAX

Panel Controls
- OVERALL (▲▼, +, -), FUNCTION, SONG, VOICE, STYLE, PORTABLE GRAND, METRONOME, [0]-[9], [+](YES/FWD), [-](NO/BWD), TOUCH

Demo Song
- 3 songs

Voice
- 100 panel voices + 10 Drum Kits + 128 GM Voices
- Polyphony : 32
- Voice Set
- Dual Voice Mode
- Split Voice Mode

Auto Accompaniment
- 100 styles
- Accompaniment Control : ACMP ON/OFF, SYNC-START, START/STOP, INTRO/ENDING, MAIN A/B(AUTO FILL)
- Beat Indicator
- Fingering : Multi fingering
- Accompaniment Volume

Yamaha Educational Suite
- Chord Guide : Dictionary, Smart Chord, EZ Chord

One Touch Setting
- Preset A and B (for each style)
- User (4 Setups x 4 Banks)

Overall controls
- Tempo
- Transpose
- Tuning
- Accompaniment Volume
- Song Volume
- Metronome Volume

Effects
- Reverb : 8 types
- Chorus : 4 types
- DSP : 33 types
- Harmony : 26 types

Song
- 3 Preset Songs (Demo) + 3 User Songs
- Song Clear

Recording
- Song
  - User Song : 3 Songs
  - Real Time Recording/Step Recording
  - Recording Tracks : 1, 2, 3, 4, 5, 6/CHORD
- EZ Chord
  - 8 Banks + Bank Chain
- OTS (One Touch Setting)
  - User : 4 Setups x 4 Banks

MIDI
- Transmit Settings
- Receive Settings
- Local Control
- Clock
- Bulk Send/Receive
- Initial Send

Auxiliary jacks
- PHONES/AUX OUT, DC IN 10-12V, MIDI IN/OUT, FOOTSWITCH

Amplifier
- 3.0W + 3.0W

Speakers
- 12cm x 2

Power Consumption
- 13 W (when using PA-3B power adaptor)

Power Supply
- Adaptor : Yamaha PA-3B AC power adaptor
- Batteries : Six "D" size, R20P (LR20) or equivalent batteries

Dimensions (W x D x H)
- 933 x 370 x 129 mm (36-3/4" x 14-5/8" x 5-1/6")

Weight
- 5.5 kg (12 lbs. 2 oz.)

Supplied Accessories
- Music Stand
- Owner's Manual

Optional Accessories
- Headphones   : HPE-150
- AC power adaptor : PA-3B, PA-3C
- Footswitch   : FC4, FC5
- Keyboard stand   : L-2C

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* Specifications and descriptions in this owner's manual are for information purposes only. Yamaha Corp. reserves the right to change or modify products or specifications at any time without prior notice. Since specifications, equipment or options may not be the same in every locale, please check with your Yamaha dealer.

Limited Warranty

90 DAYS LABOR   **1 YEAR PARTS**

Yamaha Corporation of America, hereafter referred to as Yamaha, warrants to the original consumer of a product included in the categories listed below, that the product will be free of defects in materials and/or workmanship for the periods indicated. This warranty is applicable to all models included in the following series of products:

YPP SERIES OF PORTABLE PIANO

If during the first 90 days that immediately follows the purchase date, your new Yamaha product covered by this warranty is found to have a defect in material and/or workmanship, Yamaha and/or its authorized representative will repair such defect without charge for parts or labor.

If parts should be required after this 90 day period but within the one year period that immediately follows the purchase date, Yamaha will, subject to the terms of this warranty, supply these parts without charge. However, charges for labor, and/or any miscellaneous expenses incurred are the consumers responsibility. Yamaha reserves the right to utilize reconditioned parts in repairing these products and/or to use reconditioned units as warranty replacements.

THIS WARRANTY IS THE ONLY EXPRESS WARRANTY WHICH YAMAHA MAKES IN CONNECTION WITH THESE PRODUCTS. ANY IMPLIED WARRANTY APPLICABLE TO THE PRODUCT, INCLUDING THE WARRANTY OF MERCHANT ABILITY IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY. YAMAHA EXCLUDES AND SHALL NOT BE LIABLE IN ANY EVENT FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Some states do not allow limitations that relate to implied warranties and/or the exclusion of incidental or consequential damages. Therefore, these limitations and exclusions may not apply to you.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

CONSUMERS RESPONSIBILITIES

If warranty service should be required, it is necessary that the consumer assume certain responsibilities:

1. Contact the Customer Service Department of the retailer selling the product, or any retail outlet authorized by Yamaha to sell the product for assistance. You may also contact Yamaha directly at the address provided below.

2. Deliver the unit to be serviced under warranty to: the retailer selling the product, an authorized service center, or to Yamaha with an explanation of the problem. Please be prepared to provide proof purchase date (sales receipt, credit card copy, etc.) when requesting service and/or parts under warranty.

3. Shipping and/or insurance costs are the consumers responsibility.* Units shipped for service should be packed securely.

    *Repaired units will be returned PREPAID if warranty service is required within the first 90 days.

    IMPORTANT: Do NOT ship anything to ANY location without prior authorization. A Return Authorization (RA) will be issued that has a tracking number assigned that will expedite the servicing of your unit and provide a tracking system if needed.

4. Your owners manual contains important safety and operating instructions. It is your responsibility to be aware of the contents of this manual and to follow all safety precautions.

EXCLUSIONS

This warranty does not apply to units whose trade name, trademark, and/or ID numbers have been altered, defaced, exchanged removed, or to failures and/or damages that may occur as a result of:

1. Neglect, abuse, abnormal strain, modification or exposure to extremes in temperature or humidity.

2. Improper repair or maintenance by any person who is not a service representative of a retail outlet authorized by Yamaha to sell the product, an authorized service center, or an authorized service representative of Yamaha.

3. This warranty is applicable only to units sold by retailers authorized by Yamaha to sell these products in the U.S.A., the District of Columbia, and Puerto Rico. This warranty is not applicable in other possessions or territories of the U.S.A. or in any other country.

Please record the model and serial number of the product you have purchased in the spaces provided below.

Model_____   Serial #_____   Sales Slip #_____

Purchased from_____   Date_____
(Retailer)

YAMAHA CORPORATION OF AMERICA
Electronic Service Division
6600 Orangethorpe Avenue
Buena Park, CA 90620

KEEP THIS DOCUMENT FOR YOUR RECORDS. DO NOT MAIL!

FCC INFORMATION (U.S.A.)

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.

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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

CENTRAL & 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

BRAZIL
Yamaha Musical do Brasil LTDA.
Av. Rebouças 2636, São Paulo, Brasil
Tel: 011-853-1377

ARGENTINA
Yamaha Music Argentina S.A.
Viamonte 1145 Piso2-B 1053,
Buenos Aires, Argentina
Tel: 1-4371-7021

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Yamaha de Panama S.A.
Torre Banco General, Piso 7, Urbanización Marbella,
Calle 47 y Aquilino de la Guardia,
Ciudad de Panamá, Panamá
Tel: 507-269-5311

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Yamaha-Kemble Music (U.K.) Ltd.
Sherbourne Drive, Tilbrook, Milton Keynes,
MK7 8BL, England
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Tel: 030-2828411

BELGIUM
Yamaha Music Belgium
Keiberg Imperiastraat 8, 1930 Zaventem, Belgium
Tel: 02-7258220

FRANCE
Yamaha Musique France,
Division Claviers
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/PORTUGAL
Yamaha-Hazen Electronica Musical, S.A.
Ctra. de la Coruna km. 17, 200, 28230
Las Rozas (Madrid) Spain
Tel: 91-201-0700

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Philippe Nakas S.A.
Navarinou Street 13, P.Code 10680, Athens, Greece
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S-400 43 Göteborg, Sweden
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Generatorvej 8B
DK-2730 Herlev, Denmark
Tel: 44 92 49 00

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SF-00101 Helsinki, Finland
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Grini Næringspark 1
N-1345 Østerås, Norway
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Skeifan 17 P.O. Box 8120
IS-128 Reykjavik, Iceland
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Gedung Yamaha Music Center, Jalan Jend. Gatot
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1461-9, Seocho Dong, Seocho Gu, Seoul, Korea
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Yamaha Music Malaysia, Sdn., Bhd.
Lot 8, Jalan Perbandaran, 47301 Kelana Jaya,
Petaling Jaya, Selangor, Malaysia
Tel: 3-703-0900

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339 Gil J. Puyat Avenue, P.O. Box 885 MCPO,
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TAIWAN
Yamaha KHS Music Co., Ltd.
10F, 150, Tun-Hwa Northroad,
Taipei, Taiwan, R.O.C.
Tel: 02-2713-8999

THAILAND
Siam Music Yamaha Co., Ltd.
121/60-61 RS Tower 17th Floor,
Ratchadaphisek RD., Dindaeng,
Bangkok 10320, Thailand
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Tel: 3-9693-5111

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