



PORTATONE *PSR-280*

Owner's Manual



SPECIAL MESSAGE SECTION

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

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

SPECIFICATIONS SUBJECT TO CHANGE:

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

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

IMPORTANT: The louder the sound, the shorter the time period before damage occurs.

NOTICE:

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

ENVIRONMENTAL ISSUES:

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

Battery Notice:

This product MAY contain a small non-rechargeable battery which (if applicable) is soldered in place. The average life span of this type of battery is approximately five years. When replacement becomes necessary, contact a qualified service representative to perform the replacement.

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

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

Warning:

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

Disposal Notice:

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

NAME PLATE LOCATION:

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

Model

Serial No.

Purchase Date

92-BP (bottom)

PLEASE KEEP THIS MANUAL

FCC INFORMATION (U.S.A.)

1. IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!

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

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

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

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

Relocate either this product or the device that is being affected by the interference.

Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.

In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to co-axial type cable.

If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Corporation of America, Electronic Service Division, 6600 Orangethorpe Ave, Buena Park, CA90620

The above statements apply ONLY to those products distributed by Yamaha Corporation of America or its subsidiaries.

* This applies only to products distributed by YAMAHA CORPORATION OF AMERICA.

(class B)

OBSERVERA!

Apparaten kopplas inte ur växelströmskällan (nätet) så länge som den är ansluten till vägguttaget, även om själva apparaten har stängts av.

ADVARSSEL: Netspændingen til dette apparat er IKKE afbrudt, så længe netledningen sidder i en stikkontakt, som er tændt — også selvom der er slukket på apparatets afbryder.

VAROITUS: Laitteen toisiopiiriin kytketty käyttökytkin ei irroita koko laitetta verkosta.

(standby)

Entsorgung leerer Batterien (nur innerhalb Deutschlands)

Leisten Sie einen Beitrag zum Umweltschutz. Verbrauchte Batterien oder Akkumulatoren dürfen nicht in den Hausmüll. Sie können bei einer Sammelstelle für Altbatterien bzw. Sondermüll abgegeben werden. Informieren Sie sich bei Ihrer Kommune.

(battery)

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.
- 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

- Always save data to an external device such as the Yamaha MIDI data filer MDF3 frequently, in order to help prevent the loss of important data due to a malfunction or user operating error.

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.

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-280 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 PSR-280 in order to take full advantage of its various features.

Main Features

The PSR-280 is a sophisticated yet easy-to-use keyboard with the following features and functions:

■ Yamaha Education Suite



The PSR-280 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:

● **Lesson** **page 60**

The convenient and easy-to-use Lesson feature, guides you through the parts of a song — just like a patient teacher! Select from any one of 100 songs on the PSR-280, and learn the left- and right-hand parts independently at first, then together. Lesson features four easy steps that help you master each song: Timing, Waiting, Minus One, and Both Hands.

● **Grade & Talking** **pages 65, 66**

The PSR-280 also has the Grade and Talking features. Grade is a virtual “teacher,” evaluating your practice sessions and rating your performance. The convenient Talking function “announces” each Lesson step and your “grades,” among other things.

● **Dictionary** **page 45**

Dictionary is a built-in “chord encyclopedia” that teaches you how to play specific chords by showing you the appropriate notes in the display — perfect for when you know the name of a chord and want to quickly learn how to play it!



■ Portable Grand **page 20**

The PSR-280 also has a **Portable Grand** function for realistic piano performance. Pressing the [Piano] button instantly calls up the stunningly authentic “Stereo Sampled Piano” voice and configures the entire PSR-280 for optimum piano play. Special Pianist styles — with piano-only accompaniment — are also provided.



■ DJ **page 22**

The DJ feature is an exciting new addition to the PSR-280, that puts a wealth of contemporary sounds and rhythms at your fingertips. Pressing the [DJ] button instantly calls up one of the special DJ songs (“DJ GAME”) and a DJ style, and provides the appropriate voice and sound effects to match.

Other powerful features include:

- **256** exceptionally **realistic and dynamic voices**, utilizing digital recordings of actual instruments.
- Special **Split voices**, with two different voices playable from separate sections of the keyboard.
- 10 different **Drum Kit voices**, with individual drum and percussion sounds on each key.
- High-quality **Reverb, DSP, and Harmony effects** for enhancing the sound of the voices — and your performance.
- **100 auto accompaniment styles**, each with Intro, Main A and B, and Ending sections. An Auto Fill function adds dynamic fills when switching sections.
- Powerful, easy-to-use **song recording** operations, for recording and playing back up to five of your original songs.
- **Registration Memory** presets for storing all of the PSR-280's panel settings to a single button for instant and automatic recall.
- **One Touch Setting** function for automatically calling up an appropriate voice to match the style or song you select.
- **Touch Response** and **Dynamic Filter** that give you extraordinarily expressive control over the voices. They automatically change both the volume and tone according to your playing strength — just like a real musical instrument!
- Full MIDI and **General MIDI (GM) compatibility**, letting you easily integrate the PSR-280 into a MIDI music system, and use the built-in GM voices with all GM software.
- Built-in high-quality stereo amplifier/speaker system.

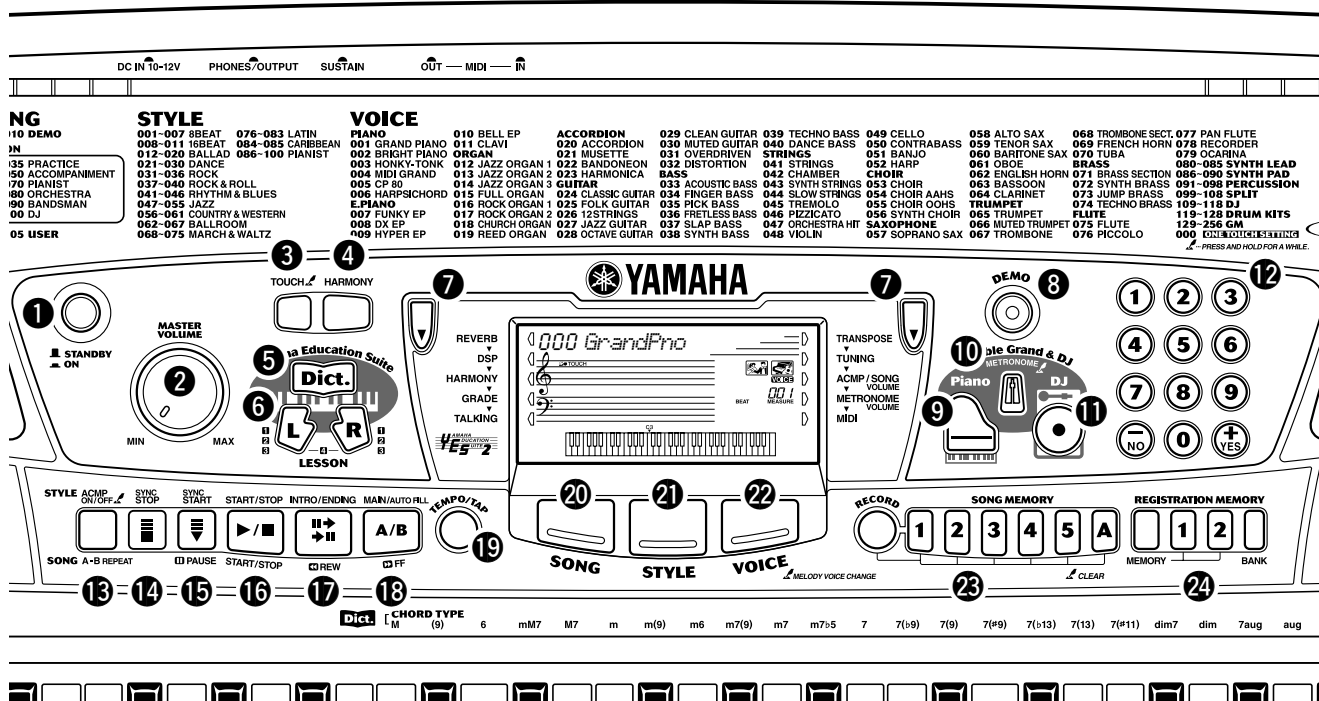
Contents

Panel Controls and Terminals	6	Selecting and Playing Songs	50
Setting Up	8	• Selecting and Playing a Song	50
• Power Requirements	8	• A-B Repeat	51
• Turning On the Power	8	• Melody Voice Change	52
• Accessory Jacks	9	• Changing the Tempo	53
		• Adjusting the Song Volume	54
Quick Guide	10	Song Recording	55
Step 1 Voices	10	• Recording a User Song	55
Step 2 Songs	12	• Song Clear	58
Step 3 Auto Accompaniment	14	• Track Clear	59
Step 4 Lesson	16	Song Lesson	60
		• Using the Lesson Feature	60
Panel Display Indications	18	• Lesson 1 — Timing	62
Portable Grand	20	• Lesson 2 — Waiting	63
• Playing the Portable Grand	20	• Lesson 3 — Minus One	63
• Using the Metronome	20	• Lesson 4 — Both Hands	64
DJ	22	• Grade	65
• Playing the DJ	22	Talking	66
Playing Voices	23	MIDI Functions	67
• Playing a Voice	23	• What Is MIDI?	67
• One Touch Setting	25	• Connecting to a Personal Computer	69
• Transpose and Tuning	26	• Controlling PSR-280 Playback from an External Device — External Clock	70
• Touch and Touch Sensitivity	28	• Using Bulk Dump Send to Save Data	71
		• Using Initial Setup Send with a Sequencer	73
Effects	29	Troubleshooting	75
• Reverb	29	Data Backup & Initialization	76
• DSP	30	Voice List	77
• Harmony	31	Style List	81
Auto Accompaniment	34	Drum Kit List	82
• Selecting a Style	34	MIDI Implementation Chart	84
• Playing the Accompaniment	35	Specifications	87
• Sync Stop	39	Index	88
• Changing the Tempo	40		
• Accompaniment Sections (Main A/B and Fill-ins)	40		
• Adjusting the Accompaniment Volume	41		
• Using Auto Accompaniment — Multi Fingering	42		
• Setting the Split Point	44		
• Dictionary	45		
Registration Memory	48		
• Registration Memory Presets	48		
• Recording a Registration Memory Preset	48		
• Recalling a Registration Memory Preset	49		



Panel Controls and Terminals

■ Front Panel



1 Power switch ([STANDBY/ON])

2 [MASTER VOLUME] dial
This determines the overall volume of the PSR-280.

3 [TOUCH] button
This turns the Touch function on and off. (See page 28.) Holding down this button allows you to adjust the Touch Sensitivity setting. (See page 28.)

4 [HARMONY] button
This turns the Harmony effect on and off. (See page 31.)

5 [Dict.] (DICTIONARY) button
This calls up the Dictionary function (page 45).

6 LESSON [L] (Left) and [R] (Right) buttons
These call up the Lesson exercises for the corresponding hand (left or right) for the selected song. (See page 61.)

7 Overall (left, right) buttons
These two buttons on either side of the LCD let you call up various functions, settings, and operations of the PSR-280, including effects, transpose, tuning, and MIDI. (See page 29.)

8 [DEMO] button
This is used to play the Demo songs. (See page 12.)

9 [Piano] button
This instantly calls up the Grand Piano voice, plus a special piano song and style. (See page 10.)

10 [METRONOME] button
This turns the metronome on and off. (See page 20.)

11 [DJ] button
This instantly calls up a special DJ voice, song and style.

12 Numeric keypad, [+]/YES and [-]/NO buttons
These are used for selecting songs, voices, and styles. (See pages 24.) They are also used for adjusting certain settings and answering certain display prompts.

13 [ACMP ON/OFF] / [A-B REPEAT] button
When the Style mode is selected, this turns the auto accompaniment on and off. (See page 35.) In the Song mode, this calls up the A-B Repeat function. (See page 51.)

14 [SYNC STOP] button

This turns the Sync Stop function on and off. (See page 39.)

15 [SYNC START] / [PAUSE] button

This turns the Sync Start function on and off. (See page 36.) In the Song mode, it is used to temporarily pause song playback. (See page 52.)

16 [START/STOP] button

When the Style mode is selected, this alternately starts and stops the auto accompaniment. (See page 35.) In the Song mode, this alternately starts and stops song playback. (See page 51.)

17 [INTRO/ENDING] / [REW] button

When the Style mode is selected, this is used to control the Intro and Ending functions. (See page 35.) When the Song mode is selected, this is used as a “rewind” control, or move the song playback point back toward the beginning.

18 [MAIN/AUTO FILL] / [FF] button

When the Style mode is selected, these are used to change auto accompaniment sections and control the Auto Fill function. (See page 40.) When the Song mode is selected, this is used as a “fast forward” control, or move the song playback point toward the end.

19 [TEMPO/TAP] button

This button is used to call up the Tempo setting, letting you set the Tempo with the numeric keypad or [+]/[-] buttons. (See page 20.) It also allows you to tap out the tempo and automatically start a selected song or style at that tapped speed. (See page 36.)

20 [SONG] button

This is for enabling song selection. (See page 50.)

21 [STYLE] button

This is for enabling style selection. (See page 34.)

22 [VOICE] button

This is for enabling voice selection. (See page 23.) Holding down this button calls up the Melody Voice Change function. (See page 52.)

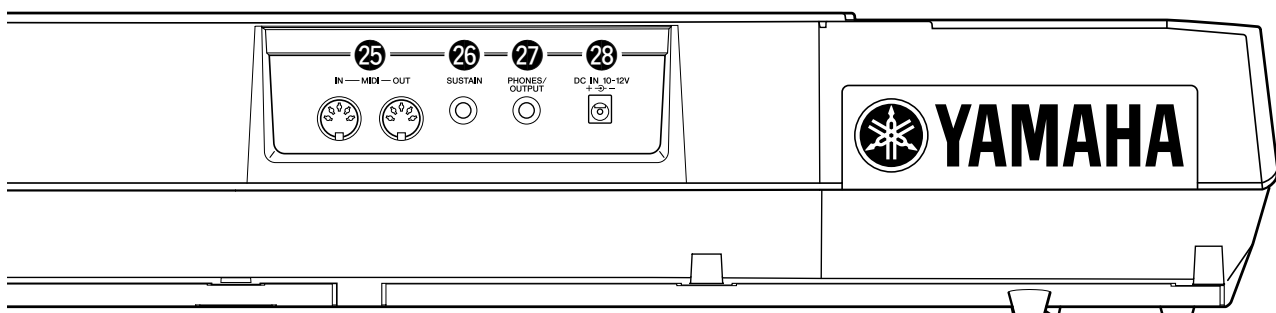
23 [SONG MEMORY] buttons

These buttons ([RECORD], [1] - [5], [A]) are used for song recording, letting you record up to six different tracks of a song (including a special Chord track). (See page 56.) They are also used for clearing recorded data of all or specific tracks of a User song. (See pages 59, 58.)

24 REGISTRATION MEMORY buttons

These are used for selecting and recording the Registration Memory presets. (See page 48.)

■ Rear Panel



25 MIDI IN, OUT terminals

These are for connection to other MIDI instruments and devices. (See page 67.)

26 SUSTAIN jack

This is for connection to an optional FC4 or FC5 Footswitch for control over sustain, just like the damper pedal on a piano. (See page 9.)

27 PHONES/OUTPUT jack

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

28 DC IN 10-12V jack

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



Setting Up

This section contains information about setting up your PSR-280 for playing. Make sure to read this section carefully before using the instrument.

Power Requirements

Although the PSR-280 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.

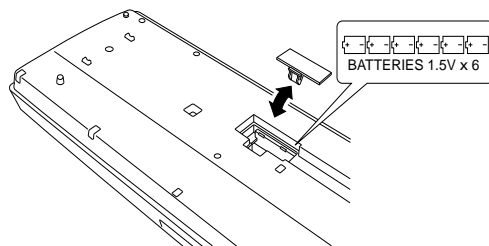
■ Using an AC Power Adaptor

To connect your PSR-280 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 PSR-280, and the other end to a suitable electrical outlet.

■ Using Batteries

● Inserting Batteries

Turn the instrument upside-down and remove the battery compartment lid. Insert six 1.5-volt size "D" (SUM-1, R-20 or equivalent) batteries as shown in the illustration, 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 PSR-280 may not sound or function properly. As soon as this happens, replace them with a complete set of six new batteries.

⚠ CAUTION

- Never interrupt the power supply (e.g. remove the batteries or unplug the AC adaptor) during any PSR-280 record operation! Doing so can result in a loss of data.

⚠ 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-280.
- Unplug the AC Power Adaptor when not using the PSR-280, or during electrical storms.

⚠ 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.)



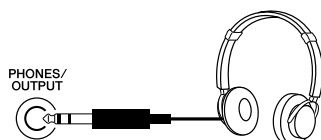
⚠ CAUTION

- 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-280 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

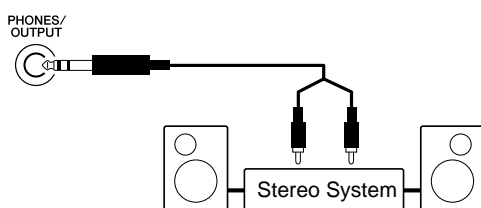
■ Using Headphones

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



■ Connecting a Keyboard Amplifier or Stereo System

Though the PSR-280 is equipped with a built-in speaker system, you can also play it through an external amplifier/speaker system. First, make sure the PSR-280 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/OUTPUT jack on the PSR-280.

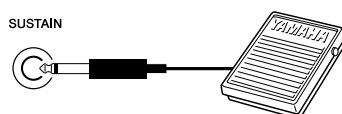


⚠ CAUTION

- 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. Also, be sure to set the volumes of all devices at their minimum levels and gradually raise the volume controls while playing the instrument to set the desired listening level.

■ Using a Footswitch

This feature lets you use an optional footswitch (Yamaha FC4 or FC5) to sustain the sound of the voices. 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.

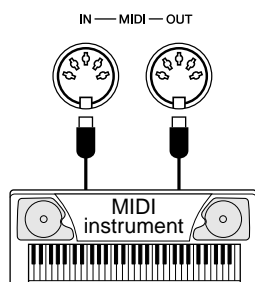


NOTE

- Make sure that the footswitch plug is properly connected to the SUSTAIN 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

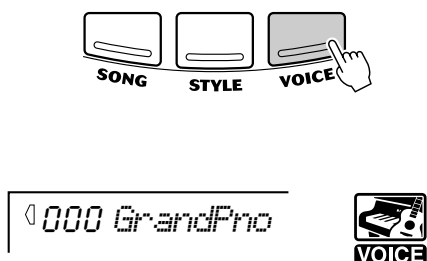
The PSR-280 also features MIDI terminals, allowing you to interface the PSR-280 with other MIDI instruments and devices. (For more information, see page 67.)



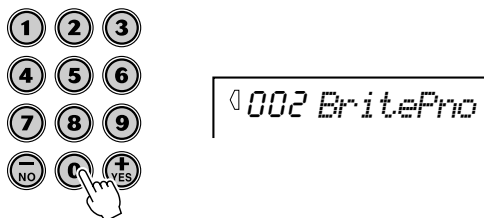
Selecting and Playing Other Voices

The PSR-280 has a huge total of 256 dynamic and realistic instrument voices. Let's try a few of them out now...

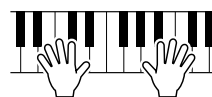
① Press the [VOICE] button.



② Select a voice.



③ Play the keyboard.

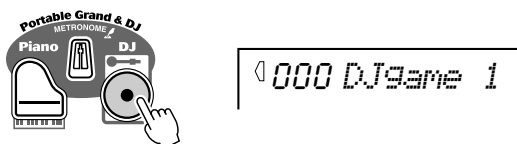


Want to find out more? See page 23.

Playing with the DJ Feature

The exciting new DJ feature gives you a full variety of dance and DJ sounds — letting you create your own real-time mixes and groove along with various contemporary rhythms.

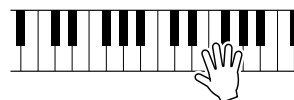
① Press the [DJ] button.



② Press the Lesson [L] or [R] button.



③ Play the DJ voice.



Want to find out more? See page 22.

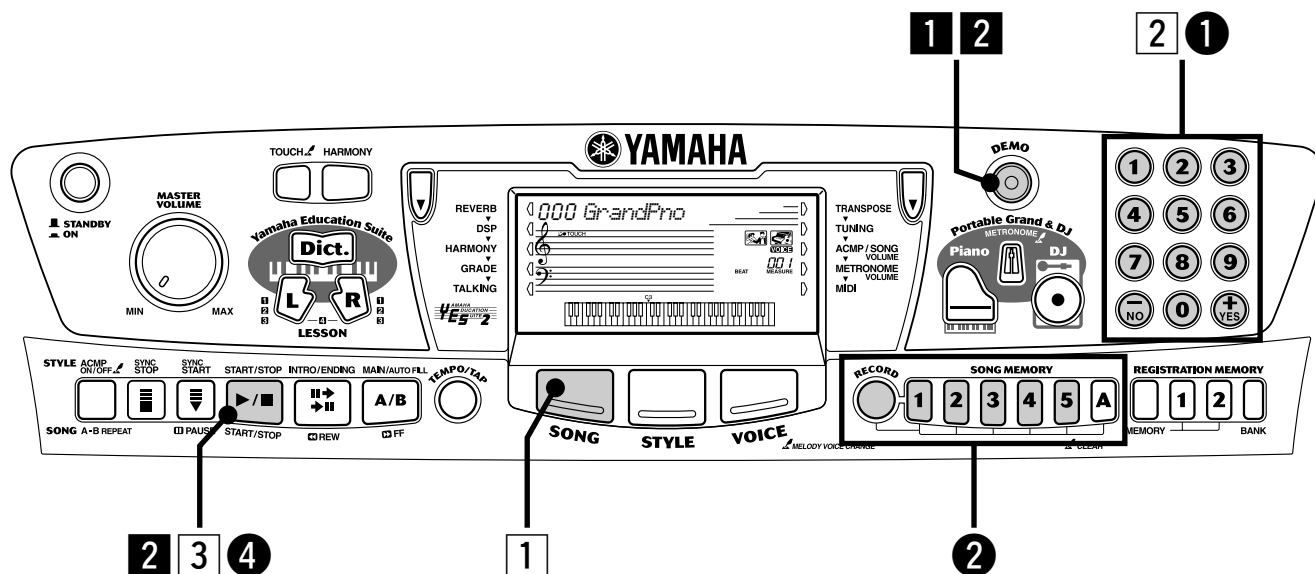
No.	Voice Name
TRUMPET	
065	Trumpet
066	Muted Trumpet
067	Trombone
068	Trombone Section
069	French Horn
070	Tuba
BRASS	
071	Brass Section
072	Synth Brass
073	Jump Brass
074	Techno Brass
FLUTE	
075	Flute
076	Piccolo
077	Pan Flute

No.	Voice Name
078	Recorder
079	Ocarina
SYNTH LEAD	
080	Square Lead
081	Sawtooth Lead
082	Voice Lead
083	Crystal
084	Brightness
085	Analog Lead
SYNTH PAD	
086	Fantasia
087	Bell Pad
088	Xenon Pad
089	Angels
090	Dark Moon

No.	Voice Name
PERCUSSION	
091	Vibraphone
092	Marimba
093	Xylophone
094	Steel Drums
095	Celesta
096	Tubular Bells
097	Timpani
098	Music Box
SPLIT	
099	Strings/Grand Piano
100	Grand Piano/Violin
101	DX Electric Piano/Harmonica
102	Grand Piano/Tenor Sax

No.	Voice Name
103	Choir Oohs/Ocarina
104	Vibraphone/Jazz Guitar
105	Classical Guitar/Flute
106	French Horn/Trumpet
107	Church Organ/Choir Aahs
108	Grand Piano/Musette Accordion
DJ	
109	DJ game 1
110	DJ game 2
111	DJ game 3
112	DJ game 4
113	DJ game 5
114	DJ game 6

No.	Voice Name
115	DJ game 7
116	DJ game 8
117	DJ game 9
118	DJ game 10
DRUM KITS	
119	Standard Kit 1
120	Standard Kit 2
121	Room Kit
122	Rock Kit
123	Electronic Kit
124	Analog Kit
125	Dance Kit
126	Jazz Kit
127	Brush Kit
128	Symphony Kit



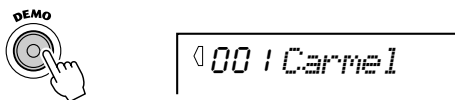
Playing the Songs

The PSR-280 is packed with a total of 105 songs, including five User songs to which you can record your own performances, plus 100 songs that not only showcase the high-quality sound of the PSR-280 but can also be used with the educational Lesson feature.

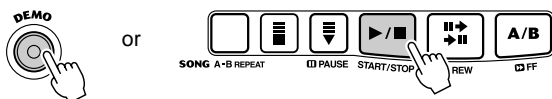
Playing the Demo songs

Demo songs (001 - 010) showcase the sophisticated features and stunning sound of the PSR-280. Let's play the Demo songs now, starting with 001...

- 1 Press the [DEMO] button.



- 2 Stop the Demo song.



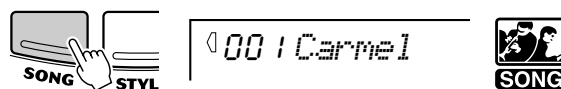
NOTE

• The PSR-280 also has a Demo Cancel function that allows you to disable Demo playback.

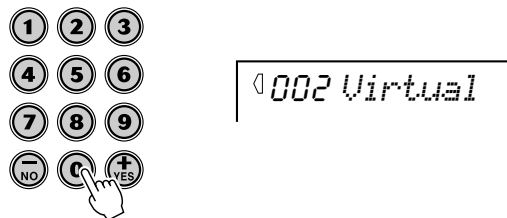
Playing a single song

Naturally, you can also individually select and play back any of the PSR-280's songs (001 - 100).

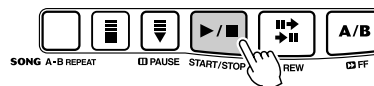
- 1 Press the [SONG] button.



- 2 Select a song.



- 3 Start (and stop) the song.



Want to find out more? See page 50.

Recording Your Own Song

Much like a multi-track tape recorder, the PSR-280 lets you play and record the individual parts of your own song in real time.

- 1** Select the desired User song (101 - 105) for recording.



102 User 2

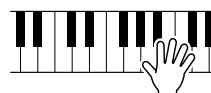
- 2** Simultaneously hold down the [RECORD] button and press the desired track number button ([1] - [5]).



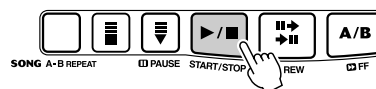
102 User 2

- 3** Start recording by playing a melody on the keyboard.

The PSR-280 starts recording as soon as you play the first note on the keyboard.



- 4** To stop recording, press the [START/STOP] button.

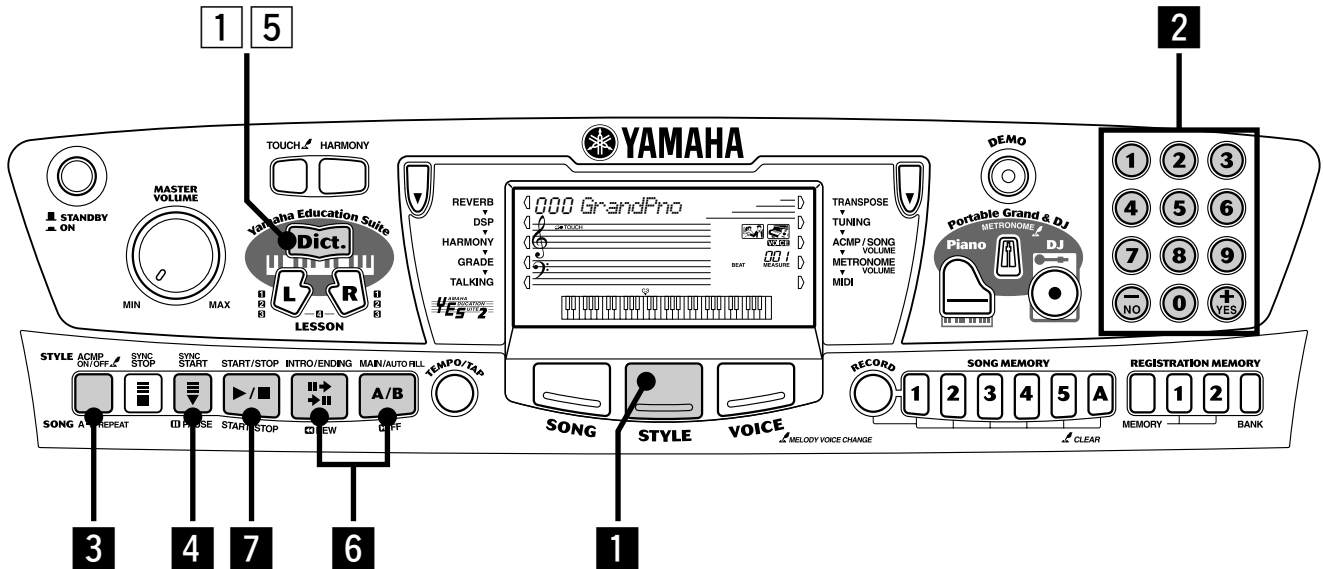


Want to find out more? See page 55.

Song List

No.	Song Name	No.	Song Name	No.	Song Name	No.	Song Name
DEMO				PIANIST			
001	Carmel	026	String Quartet No.17 2nd mov. "Serenade"	051	★ Melody in F	075	Slavonic Dances No.10
002	Virtual Insanity	027	Menuett	052	★ Greensleeves	076	American Patrol
003	Rockin'	028	Canon	053	★ Souvenir De Moscou op.6	077	Camptown Races
004	★ DX EP	029	The Danube Waves	054	★ Menuett	078	La Primavera (From Le Quattro Stagioni)
005	★ Arabesque 1 (Grand Piano)	030	From "The Magic Flute"	055	★ Leggenda Valacca	079	Méditation De Thais
006	Funky EP	031	Piano Sonate op.27-2 "Mondschein"	056	Aura Lee	080	Ungarische Tänze Nr.5
007	Jazz Organ	032	"The Surprise" Symphony	057	★ Londonderry Air	BANDSMAN	
008	★ Romance De L'amour (Guitar)	033	To A Wild Rose	058	★ Nocturne op.9-2	081	Rock Chick
009	★ Eine Kleine Nachtmusik (Strings)	034	Air de Toréador "Carmen"	059	★ Liebesträume Nr.3	082	Love You
010	Honky-Tonk Piano	035	O Mio Babbino Caro (From "Gianni Schicchi")	060	★ Tango (España)	083	Electric Path
PRACTICE				ACCOMPANIMENT			
011	Little Brown Jug	036	Twinkle Twinkle Little Star	061	★ Etude op.10-3 "Chanson De L'adieu"	084	Laidback
012	Loch Lomond	037	Beautiful Dreamer	062	★ Rondo K.V.485	085	Twilight
013	Oh! Susanna	038	Battle Hymn Of The Republic	063	★ Clair De Lune	086	Beach Party
014	Song Of The Pearl Fisher	039	Home Sweet Home	064	★ Moments Musicaux op.94-3	087	Sometime
015	Wenn Ich Ein Vöglein Wär ?	040	Valse Des Fleurs (From "The Nutcracker")	065	★ The Entertainer	088	Rock Melon Vamp
016	Die Lorelei	041	Aloha Oe	066	★ Träumerei	089	Slunky
017	Funiculi-Funicula	042	I've Been Working On The Railroad	067	★ Auf Flügeln Des Gesanges op.34-2	090	Always
018	Turkey In The Straw	043	My Darling Clementine	068	★ Prelude (Wohlt temperierte Klavier 1-1)	DJ	
019	Old Folks At Home	044	Auld Lang Syne	069	★ La Violette	091	DJ Game
020	Silent Night	045	Grandfather's Clock	070	★ Für Elise	092	Ragga
021	Jingle Bells	046	Amazing Grace	ORCHESTRA			
022	Muss I Denn	047	My Bonnie	071	Frühlingsstimmen	093	Digital Rock
023	Ring De Banjo	048	Yankee Doodle	072	Danse Des Mirlitons From "The Nutcracker"	094	Hip House
024	Jesu, Joy Of Man's Desiring	049	Joy To The World	073	Frühlingslied	095	All That
025	Gavotte	050	O Du Lieber Augustin	074	"Orphée Aux Enfers" Ouverture	096	Pop Reggae
						097	Acid House
						098	SupaBad
						099	Acid Techno
						100	Flares

The star mark(★) by certain song names indicates that the Song plays back at a "free" Tempo.(see page 50, 61)

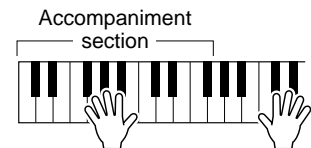


Using the Auto Accompaniment

The powerful yet easy-to-use Auto Accompaniment features give you professional instrumental backing for your performances. Simply play chords with your left hand — and the PSR-280 automatically produces appropriate bass, chord and rhythm backing. Use your right hand to play melodies, and you'll sound like an entire band!

NOTE

- For more information on playing proper chords for the auto accompaniment, see "Using Auto Accompaniment — Multi Fingering" on page 42 and "Looking up Chords in the Dictionary" on the next page.



Left hand + Right hand

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

- 1 Press the [STYLE] button.**
This calls up the Style mode.



00 | 8BtPop1

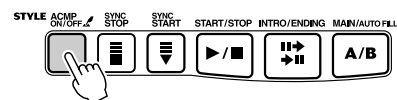


- 2 Select a style.**
Refer to the Style List on page 81.



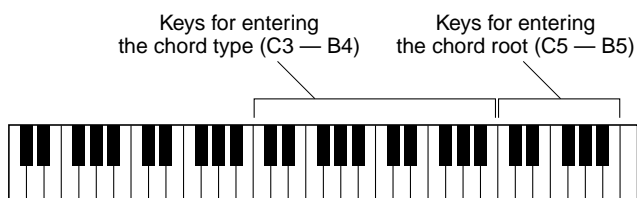
002 8BtPop2

- 3 Turn the auto accompaniment on.**



Looking up Chords in the Dictionary

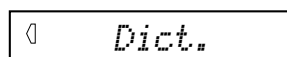
The convenient Dictionary function teaches you how to play chords by showing you the individual notes. In the example below, we'll learn how to play a GM7 chord...



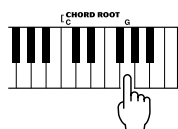
Learning how to play a specific chord

Example: **G M7**
Root note Chord type

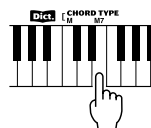
1 Press the [Dict.] button.



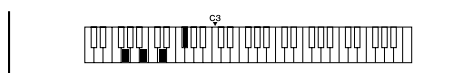
2 Specify the root note of the chord (in this case, G).



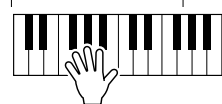
3 Specify the chord type of the chord (in this case, M7).



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



Accompaniment section

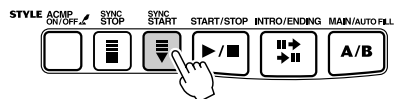


5 To leave the Dictionary function, press the [Dict.] button again



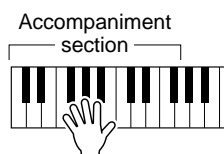
Want to find out more? See page 45.

4 Turn the Sync Start function on.



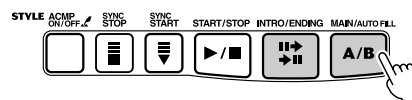
5 Play a chord with your left hand.

The auto accompaniment starts as soon as you play the keyboard. For more on chords, see “Looking up Chords in the Dictionary” above.

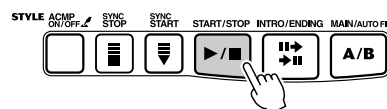


6 Select a section.

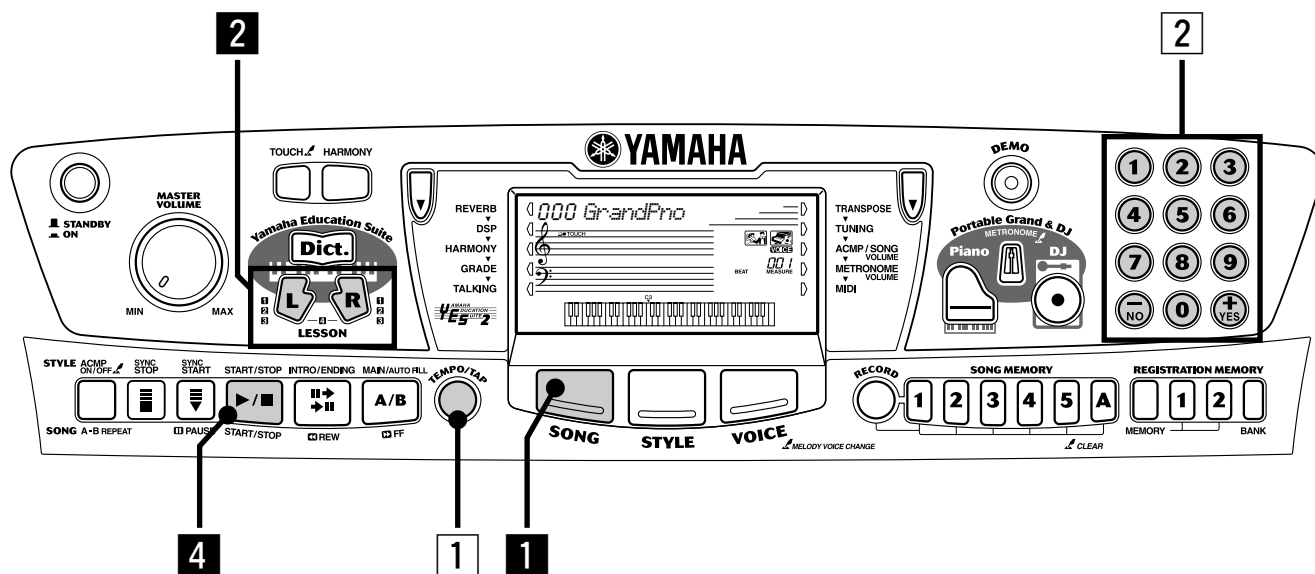
The auto accompaniment has four sections: Intro, Main A/B, and Ending.



7 Stop the auto accompaniment.



Want to find out more? See page 35.



Using the Lesson Feature

Songs 001 to 100 are specially designed for use with the educational Lesson feature. Lesson makes it fun and easy to master these songs. You can practice the left- and right-hand parts of each song individually: simply press the appropriate button, [L] (left) or [R] (right). The practice steps below apply to either hand.

- Lesson 1 — Timing** This lesson step lets you practice just the timing of the notes.
- Lesson 2 — Waiting** In this lesson step, the PSR-280 waits for you to play the correct notes before continuing playback of the song.
- Lesson 3 — Minus One** This lesson step plays back the song with one part muted — letting you play and master the missing part yourself.
- Lesson 4 — Both Hands** This lesson step is the same as “Minus One,” except in that both the left- and right-hand parts are muted — letting you play and master both hands.

1 Select one of the Lesson songs.
For instructions on selecting songs, see page 50.



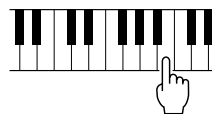
2 Select the part you wish to work on (left or right) and the Lesson step.
If you want to work on the right-hand part, press the [R] button; to work on the left, press the [L] button.



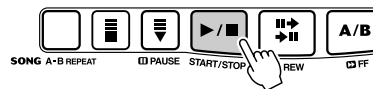
NOTE

- Each press of the corresponding button ([L] or [R]) alternately selects Lessons 1 - 3. Pressing both buttons simultaneously calls up Lesson 4, Both Hands.

3 Start the Lesson.



4 When you're finished, stop the Lesson.

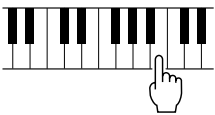


NOTE

- You can also exit from the Lesson by pressing one the LESSON buttons ([L] or [R]) repeatedly until “OFF” is shown in the display.

Lesson 1 — Timing

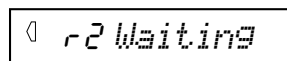
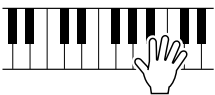
This step lets you work on the timing of the notes. In Lesson 1, the particular note you play on the keyboard is unimportant. The PSR-280 checks your timing and how rhythmically “tight” your playing is.



Want to find out more? See page 62.

Lesson 2 — Waiting

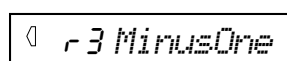
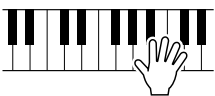
In Lesson 2, you practice playing the notes correctly as they appear in the display notation. The accompaniment pauses and waits for you to play the notes correctly before it continues.



Want to find out more? See page 63.

Lesson 3 — Minus One

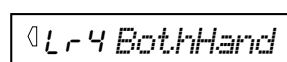
In Lesson 3, one of the parts is muted, and you practice the missing part in time with the rhythm.



Want to find out more? See page 63.

Lesson 4 — Both Hands

Lesson 4 is just like Lesson 3, except that the parts for both hands are muted, letting you practice the missing parts in time with the rhythm.



Want to find out more? See page 64.

Grade

The PSR-280 has a built-in evaluation function that monitors your practicing and — like a real teacher — tells you how well you did each exercise. Four grades are assigned, depending on your performance: “OK,” “Good,” “Very Good,” and “Excellent.”

Want to find out more? See page 65.

Talking

This feature “talks” to you through the speakers, “announcing” the Grade comments as well as the titles of the Lesson steps.

Want to find out more? See page 66.

Changing the Tempo

Naturally, you can change the tempo (speed) of the song to your liking, letting you slow down difficult passages and bring up the tempo gradually until you master them at normal speed.

- 1 Press the [TEMPO/TAP] button.



- 2 Use the numeric keypad to set the desired tempo.



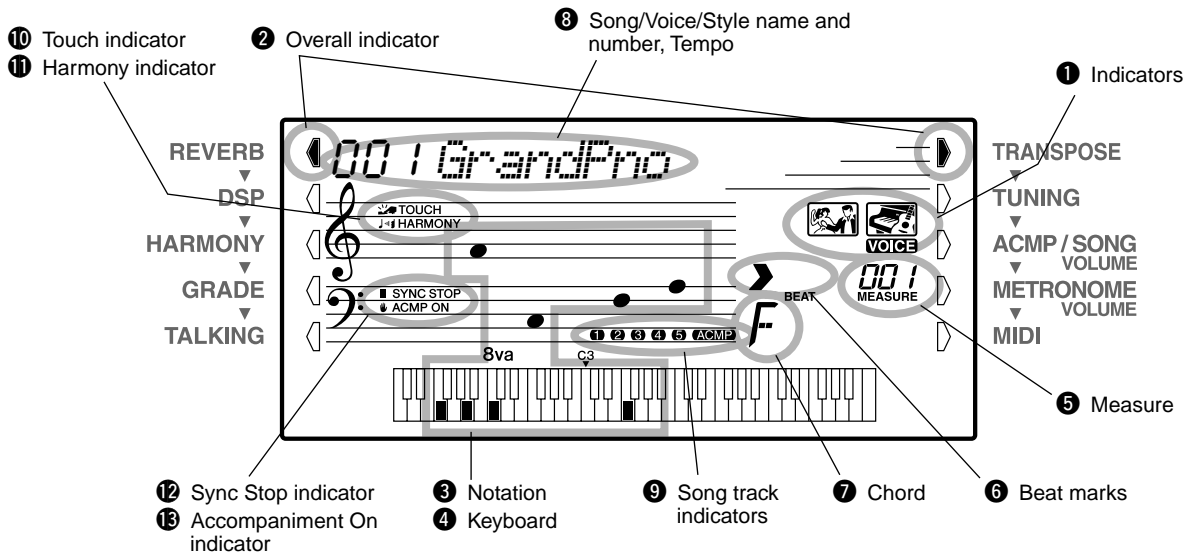
NOTE

- The PSR-280 also has a convenient Tap Tempo function that allows you to “tap” a new tempo in real time. (See page 36.)



Panel Display Indications

The PSR-280 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.

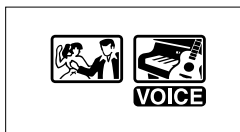


1 Indicators

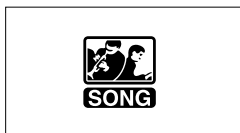
These indicate the operating condition of the PSR-280 as shown below:



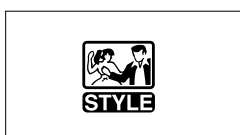
Using the numeric keypad selects **voice** numbers. Pressing the [START/STOP] button starts **song** playback.



Using the numeric keypad selects **voice** numbers. Pressing the [START/STOP] button starts **style** playback.



Using the numeric keypad selects **song** numbers. Pressing the [START/STOP] button starts **song** playback.



Using the numeric keypad selects **style** numbers. Pressing the [START/STOP] button starts **style** playback.

2 Overall indicator

The Overall buttons (on either side of the LCD) let you access the Function operations and settings of the PSR-280. The currently selected setting is indicated by a dark bar that appears next to its name (printed on the panel).

3 Notation / 4 Keyboard

These two portions of the display conveniently indicate notes. When a song is being played back, they show the melody or chord notes in succession. When you play the keyboard yourself, the display shows the notes you play.

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

These show the current measure during playback of a song or style.

6 Beat marks

These marks (one large, three small) flash in sequence and in time with the song or style. The large arrow indicates the first beat of the measure.

⑦ Chord

When a 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, Tempo

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. When the tempo setting is active, the value is shown.

⑨ Song track indicators

In song recording and playback, these indicate the status of the tracks. (See page 56.)

⑩ Touch indicator

This appears when the Touch function is turned on. (See page 28.)

⑪ Harmony indicator

This appears when the Harmony effect is turned on. (See page 31.)

⑫ Sync Stop indicator

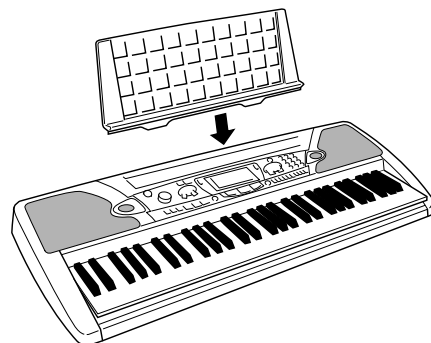
This appears when the Sync Stop function is turned on. (See page 39.)

⑬ Accompaniment On indicator

This appears when the auto accompaniment has been turned on. (See page 35.)

Music Stand

Insert the bottom edge of the included music stand into the slot located at the top rear of the PSR-280 control panel.





Portable Grand

This convenient function lets you instantly call up the Grand Piano voice.

Playing the Portable Grand

Press the [Piano] button.



NOTE

- When the [Piano] button is pressed, One Touch Setting (page 25) is automatically turned on.

Doing this automatically cancels any other mode or function, and resets the entire instrument for playing the special “Stereo Sampled Piano” Grand Piano voice. It automatically calls up song #051 (Melody in F) and style #086 (Stride).

The Portable Grand setting is designed also for playing with the special Pianist styles (#086 - #100). When auto accompaniment is turned on, these provide piano-only accompaniment in a variety of music styles.

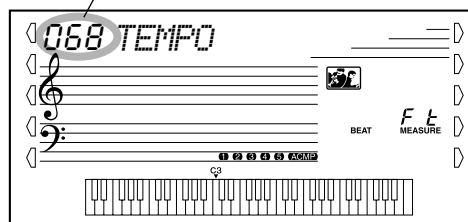
Using the Metronome

1 Call up the Tempo setting.

Press the [TEMPO/TAP] button.



Current Tempo value



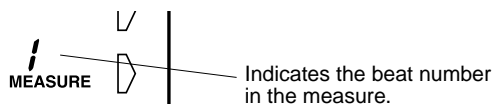
2 Change the value.

Use the numeric keypad to set the desired Tempo value, or use the [+]/[-] buttons to increase or decrease the value.



3 Turn on the Metronome.

Press the [METRONOME] button.



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

Setting the Metronome Time Signature

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



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

Hold down the [METRONOME] button (until “TIME SIG” appears in the display), then press the button on the numeric keypad that corresponds to the desired time signature (see chart at right).

Numeric keypad	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)

Indicates current beat number

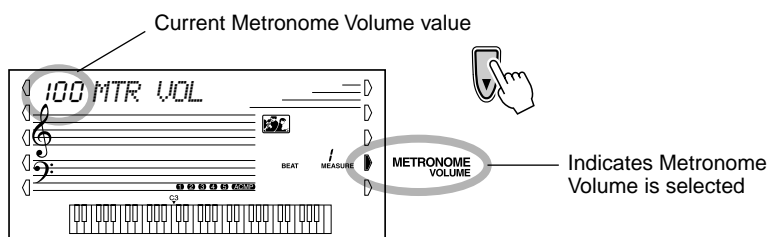


Adjusting the Metronome Volume

You can adjust the volume of the Metronome sound independently of the other PSR-280 sounds. The volume range is 000 - 127.

1 Call up the Metronome Volume setting.

Press the right Overall button until “MTR VOL” appears in the display.



2 Change the value.

Use the numeric keypad to set the desired Metronome Volume value, or use the [+]/[-] buttons to increase or decrease the value.



Restoring the Default Metronome Volume Value

To restore the default Metronome Volume value (100), press both [+]/[-] buttons simultaneously (when Metronome Volume is selected in the Overall menu).

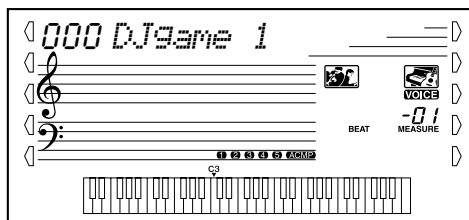
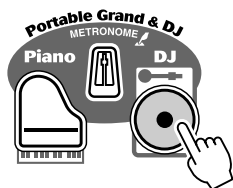


DJ

This exciting feature lets you instantly call up a dynamic DJ voice and style for playing contemporary dance music.

Playing the DJ

1 Press the [DJ] button.

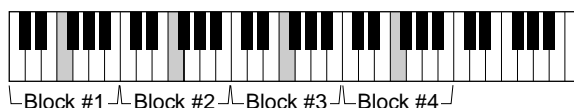


Doing this automatically resets the entire instrument for playing the specially programmed DJ song and voice.

2 Turn on the Lesson feature, and select a Lesson step.

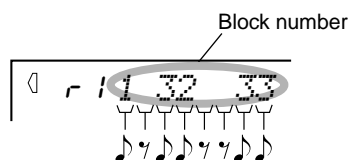
Lesson steps 1 - 3 can be used with DJ play. Press either the [L] or [R] button, repeatedly if necessary, until the desired Lesson step is called up.

The DJ voice is divided into “blocks” (as shown below). Each block has a different sound, and each block’s sound is played with the “F” key.



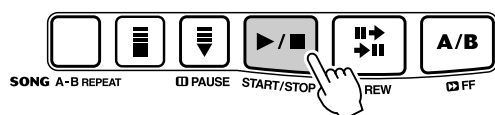
For Lesson 1, any note on the keyboard can be played. For the other Lesson steps, play “F” in the appropriate octave block.

Once the song starts playing, play the appropriate block as indicated in the display. (When Talking is on, the blocks are also “announced” in Lesson 2.)



When the DJ “teacher” is playing, the block numbers appear in the display one after another according to the rhythm.

3 Press the [START/STOP] button to stop the song.



NOTE

- If two sixteenth notes are to be played, the appropriate block numbers appear successively at the same position. If the same block is to be played twice as sixteenth notes, an equal sign appears after the block number (as shown below).

$3 \rightarrow 1$ Indicates that the third block and first block are to be played as successive sixteenth notes.

$3 \rightarrow =$ Indicates that the third block is to be played as two sixteenth notes.

NOTE

- Since there are no left or right parts in the DJ song, the [L] and [R] buttons can be used interchangeably. Also for the same reason, Lesson 3 and Lesson 4 are identical.

HINT

- Try playing one of the special DJ voices (#109 - #118) or the DJ songs. (#091 - #100)



Playing Voices

The PSR-280 features a total of 256 authentic voices — all of which have been created with Yamaha’s sophisticated AWM (Advanced Wave Memory) tone generation system. These include 128 General MIDI voices, plus special Split voices, DJ voices and drum kits.

The voices are divided into various instrument categories, and many of the voice names are printed on the panel for convenience. For a complete list of available voices, see page 77.

Special **Split voices** (#099 - #108) feature two different voices that you can play from separate sections of the keyboard — for example, playing a bass voice with your left hand and a piano voice with your right.

A special set of **DJ voices** (#109 - #118) provides dynamic, exciting voices for playing many of today’s popular music styles.

The Voice mode also features special effect sections that let you enhance the sound of the voice. These include Reverb and Harmony, as well as a “DSP” section that provides miscellaneous effects, such as tremolo, echo, delay, equalization, and wah. (See page 29.)

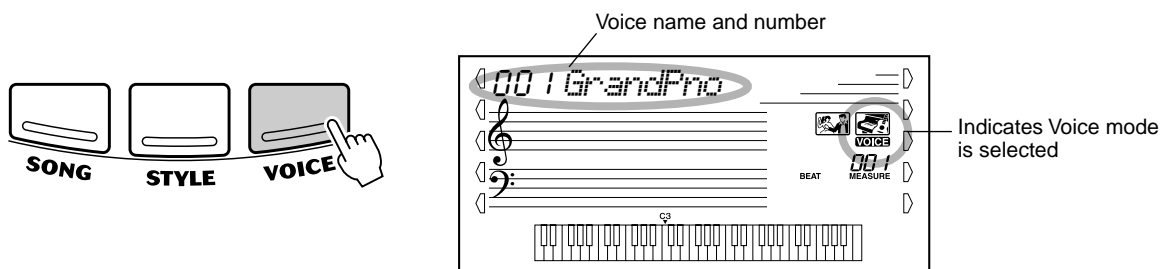
There’s also a Touch Sensitivity control (page 28), which determines how the voices respond to your playing technique.

The PSR-280 also includes special **Drum Kit voices** — #119 - #128 — that let you play various drum and percussion sounds from the keyboard. (Refer to the Drum Kit Voice chart on page 82.)

When a voice is selected, the most suitable DSP Type (page 30) and Harmony Type (page 31) for the voice are automatically called up.

Playing a Voice

1 Press the [VOICE] button.



2 Select the desired voice number.

Use the numeric keypad. The voices and their numbers are shown on the panel. A complete list of the available voices is given on page 77 .

VOICE

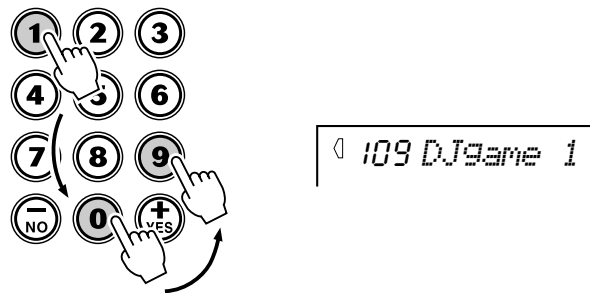
PIANO	010 BELL EP	ACCORDION	029 CLEAN GUITAR	039 TECHNC
001 GRAND PIANO	011 CLAVI	020 ACCORDION	030 MUTED GUITAR	040 DANCE
002 BRIGHT PIANO	ORGAN	021 MUSETTE	031 OVERDRIVEN	STRINGS
003 HONKY-TONK	012 JAZZ ORGAN 1	022 BANDONEON	032 DISTORTION	041 STRING
004 MIDI GRAND	013 JAZZ ORGAN 2	023 HARMONICA	BASS	042 CHAMBI
005 CP 80	014 JAZZ ORGAN 3	GUITAR	033 ACOUSTIC BASS	043 SYNTH S
006 HARPSICHOARD	015 FULL ORGAN	024 CLASSIC GUITAR	034 FINGER BASS	044 SLOW S
E.PIANO	016 ROCK ORGAN 1	025 FOLK GUITAR	035 PICK BASS	045 TREMOI
007 FUNKY EP	017 ROCK ORGAN 2	026 12STRINGS	036 FRETLESS BASS	046 PIZZICA
008 DX EP	018 CHURCH ORGAN	027 JAZZ GUITAR	037 SLAP BASS	047 ORCHES
009 HYPER EP	019 REED ORGAN	028 OCTAVE GUITAR	038 SYNTH BASS	048 VIOLIN

Playing Voices

There are two ways to select voices: 1) directly entering the voice number with the numeric keypad, or 2) using the [+]/[-] buttons to step up and down 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 #109, press “1” on the numeric keypad, then “0”, “9.” For voice numbers beginning with zeroes (such as #042 or #006), the initial zeroes may be omitted.



■ Using the [+]/[-] buttons

Press the [+] button to select the next voice number, and press the [-] button to select the previous voice. Holding down either button continuously scrolls up or down through the numbers.

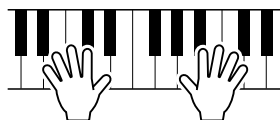


NOTE

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

3 Play the selected voice.

Since either the Style or Song mode is active in the background (as indicated by the illustration in the display), 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.



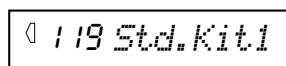
About Panel Voices and GM Voices

Keep in mind that the PSR-280 has two separate sets of voices: 128 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.



Drum Kit Voice Chart (voices 119 - 128)

When one of the 10 panel Drum Kit voices are selected you can play different drums and percussion instruments on the keyboard.

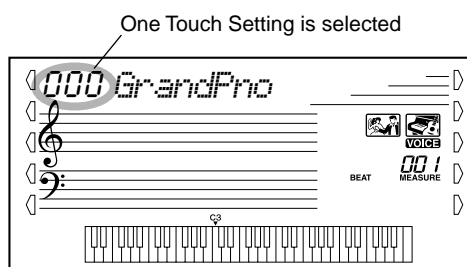
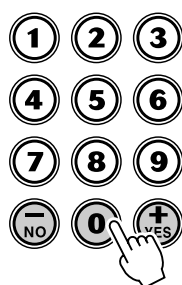


No.	Name	LCD
119	Standard Kit 1	Std.Kit1
120	Standard Kit 2	Std.Kit2
121	Room Kit	Room Kit
122	Rock Kit	Rock Kit
123	Electronic Kit	Elct.Kit
124	Analog Kit	AnlogKit
125	Dance Kit	DanceKit
126	Jazz Kit	Jazz Kit
127	Brush Kit	BrushKit
128	Symphony Kit	SymphKit

One Touch Setting

This special “voice” is actually a convenient feature which automatically selects a suitable voice for you when you select a style. The voice is selected to best match the style or song you’ve called up.

1 Select voice #000 (One Touch Setting).



The One Touch Setting feature automatically calls up a voice that best matches the style or song you’ve selected.

Transpose and Tuning

You can also adjust the tuning and change the transposition (key) of the entire PSR-280 sound with the Transpose and Tuning functions.

■ Transpose

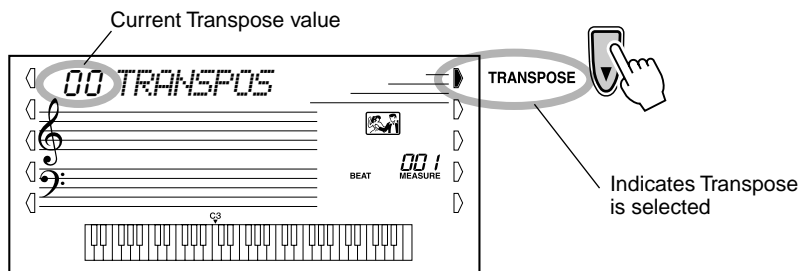
Transpose determines the key of both the main voice and the bass/chord accompaniment of the selected style. It also determines the pitch of the songs. This allows you to easily match the pitch of the PSR-280 to other instruments or singers, or play in a different key without changing your fingering. The Transpose settings can be adjusted over a range of ± 12 semitones (± 1 octave).

NOTE

- The Transpose function has no effect on the DJ voices (#109 - #118) or the Drum Kits voices (#119 - #128).

1 Select the Transpose function.

Press the right Overall button, repeatedly if necessary, until “TRANSPOS” appears in the display.

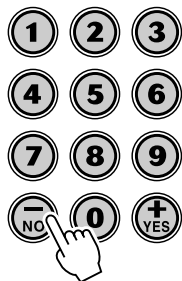


2 Change the value.

Use the numeric keypad to set the desired Transpose value (-12 - +12). To transpose the pitch down, simultaneously press and hold the [-] button, and use the numeric keypad to type in the (negative) value. You can also use the [+] / [-] buttons to increase or decrease the value. Holding down either button continuously increases or decreases the 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 [+] / [-] buttons simultaneously (when Transpose is selected).



Touch and Touch Sensitivity

The Touch function gives you dynamic, expressive control over the voices, letting you determine how loud or soft the sound is by your playing strength.

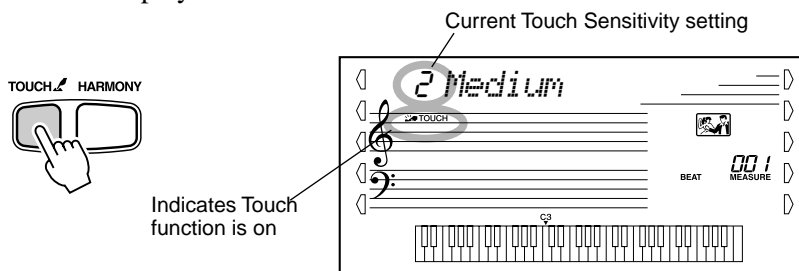
Turn the Touch function on or off as desired by pressing the [TOUCH] button.



Touch Sensitivity lets you set how the PSR-280 responds to your playing strength, allowing you to customize this expressive function to suit your own playing style.

1 Select the Touch Sensitivity control.

Press and hold the [TOUCH] button until the Touch Sensitivity setting and name appears in the display.



2 Change the value.

Use the numeric keypad or [+]/[-] buttons to set the desired setting: 1, 2, or 3 (explained below).



● Settings:

1 (Soft)	This results in limited touch response, and produces a relatively narrow dynamic range, no matter how lightly or strongly you play the keys.
2 (Medium)	This lets you play over a normal dynamic range (soft to loud).
3 (Hard)	This is designed for playing very soft passages, giving you slightly more detailed control in the soft volume range.

When Touch is turned off, a constant volume (corresponding to a velocity value of 80) is produced.

Restoring the Default Touch Sensitivity Value

The default Touch Sensitivity is 2 (Medium). To restore the default value, press both [+]/[-] buttons simultaneously (when Touch Sensitivity is selected).

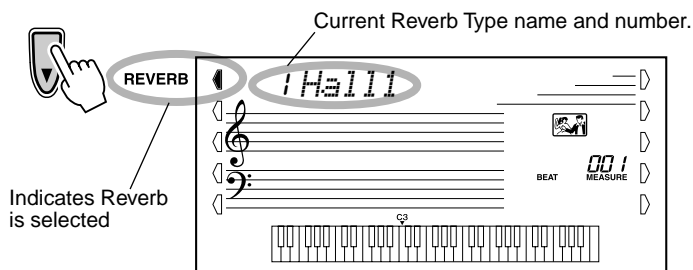


The PSR-280 is equipped with a wide variety of effects that can be used to enhance the sound of the voices. The PSR-280 has three separate effect systems — Reverb, DSP, and Harmony — and each has many different effect types to choose from.

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 Select the Reverb function.

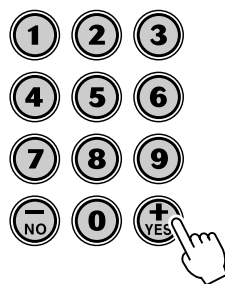


NOTE

- Twelve additional Reverb Types are available when controlling the PSR-280 from a MIDI device. (For details, see page 86.)

2 Set the Reverb Type, if desired.

Use the numeric keypad or [+]/[-] buttons to set the desired Reverb Type. (For a list of the available Reverb Types, see page 32.) To turn the Reverb effect off, select Reverb Type #9.



NOTE

- Each style of the PSR-280 has its own independent Reverb setting.

Restoring the Default Reverb Type

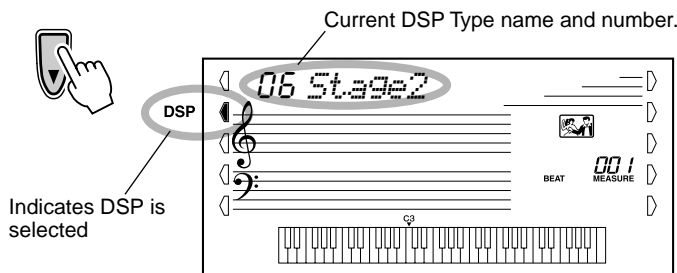
If you've changed the Reverb Type, you can instantly restore the default setting by pressing both [+]/[-] buttons simultaneously (when Reverb is selected).

DSP

The DSP effect section provides distortion 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-eight DSP types are available.

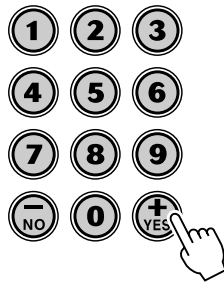
1 Select the DSP function.

Press the left Overall button, repeatedly if necessary, until the dark bar indication appears next to DSP.



2 Set the DSP Type, if desired.

Use the numeric keypad or [+]/[-] buttons to set the desired DSP Type. (For a list of the available DSP Types, see page 32.) To turn the DSP effect off, select DSP Type #39.



NOTE

- Each voice of the PSR-280 has its own independent DSP setting.
- Fifty-one additional DSP Types are available when controlling the PSR-280 from a MIDI device. (For details, see page 86.)

Restoring the Default DSP Type

If you've changed the DSP Type, you can instantly restore the default setting by pressing both [+]/[-] buttons simultaneously (when DSP is selected).

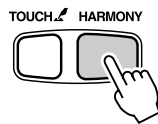
Harmony

The Harmony section features a variety of performance effects that enhance the melodies you play when using the accompaniment styles of the PSR-280. 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.

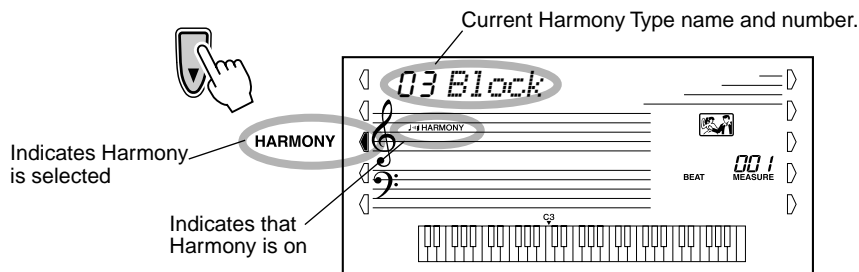
1 Turn on the Harmony effect.

Press the [HARMONY] button.



2 Select the Harmony function.

Press the left Overall button, repeatedly if necessary, until the dark bar indication appears next to HARMONY.



IMPORTANT

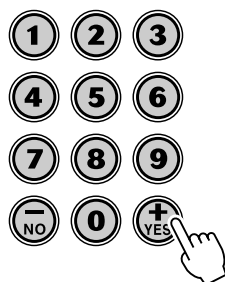
- For the first five Harmony Types (Duet, Trio, Block, Country, and Octave), chords must be played in the Accompaniment section of the keyboard.
- The speed of the Trill, Tremolo, and Echo effects depends on the Tempo setting (page 33).

NOTE

- Each voice of the PSR-280 has its own independent Harmony setting.

3 Set the Harmony Type, if desired.

Use the numeric keypad or [+]/[-] buttons to set the desired Harmony Type. (For a list of the available Harmony Types, see page 33.)



Restoring the Default Harmony Type

If you've changed the Harmony Type, you can instantly restore the default setting by pressing both [+]/[-] buttons simultaneously (when Harmony is selected).

Effects

■ Effect Types






















● Reverb Types

No.	Reverb Type	Display Name	Description
1	Hall 1	Hall1	Concert hall reverb.
2	Hall 2	Hall1	
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.

● 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	Guitar Tremolo	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	Karaoke	Karaoke	Deep, pronounced echo effect.
31	Distortion Hard	D Hard	Hard-edged, warm distortion.
32	Distortion Soft	D Soft	Soft, warm distortion.
33	Overdrive	Overdrv	Natural distortion, like that of an overdriven amplifier.
34	Amp Simulation	AmpSimu	Characteristic sound of a guitar amplifier/speaker.
35	EQ Disco	EQ Disco	Equalizer effect that boosts both high and low frequencies, as is typical in most disco music.
36	EQ Telephone	EQ Tel	Equalizer effect that cuts both high and low frequencies, to simulate the sound heard through a telephone receiver.
37	3Band EQ	3BandEQ	Equalizer with three separate frequency bands.
38	2Band EQ	2BandEQ	Equalizer with two separate frequency bands.
39	No Effect	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		<p>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 40). 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.</p> <ul style="list-style-type: none"> • The Trill effect Types (6 - 12) create two-note trills (alternating notes) when two notes are held. • The Tremolo effect Types (13 - 19) repeat all held notes (up to four). • The Echo effect Types (20 - 26) create delayed repeats of each note played.
7	Trill 1/6 note	Tril1/6		
8	Trill 1/8 note	Tril1/8		
9	Trill 1/12 note	Tril1/12		
10	Trill 1/16 note	Tril1/16		
11	Trill 1/24 note	Tril1/24		
12	Trill 1/32 note	Tril1/32		
13	Tremolo 1/4 note	Trem1/4		
14	Tremolo 1/6 note	Trem1/6		
15	Tremolo 1/8 note	Trem1/8		
16	Tremolo 1/12 note	Trem1/12		
17	Tremolo 1/16 note	Trem1/16		
18	Tremolo 1/24 note	Trem1/24		
19	Tremolo 1/32 note	Trem1/32		
20	Echo 1/4 note	Echo1/4		
21	Echo 1/6 note	Echo1/6		
22	Echo 1/8 note	Echo1/8		
23	Echo 1/12 note	Echo1/12		
24	Echo 1/16 note	Echo1/16		
25	Echo 1/24 note	Echo1/24		
26	Echo 1/32 note	Echo1/32		



Auto Accompaniment

The PSR-280 provides dynamic rhythm/accompaniment patterns — as well as voice settings appropriate for each pattern — for various popular music styles.

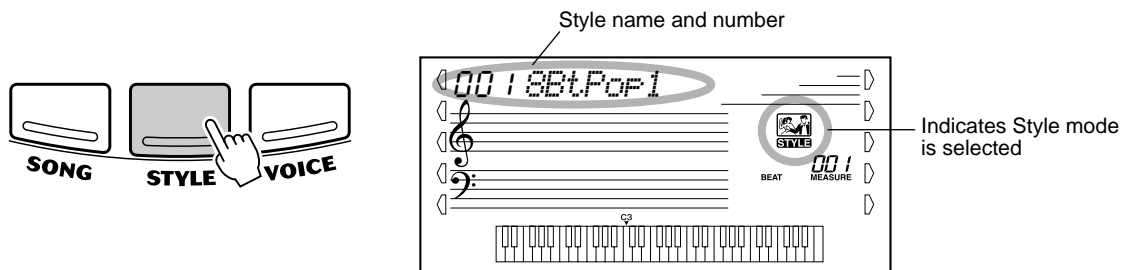
A total of 100 different styles are available, in several different categories. Each style is made up of separate “sections” — Intro, Main A and B, and Ending — letting you call up different accompaniment sections as you perform.

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 PSR-280 also features the convenient Dictionary function (page 45). Dictionary provides you with a built-in “chord encyclopedia” that teaches you how to play any chord you specify by showing you the appropriate notes in the display.

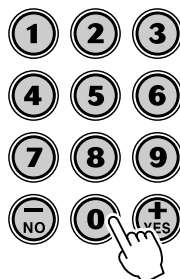
Selecting a Style

1 Press the [STYLE] button.



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 81.



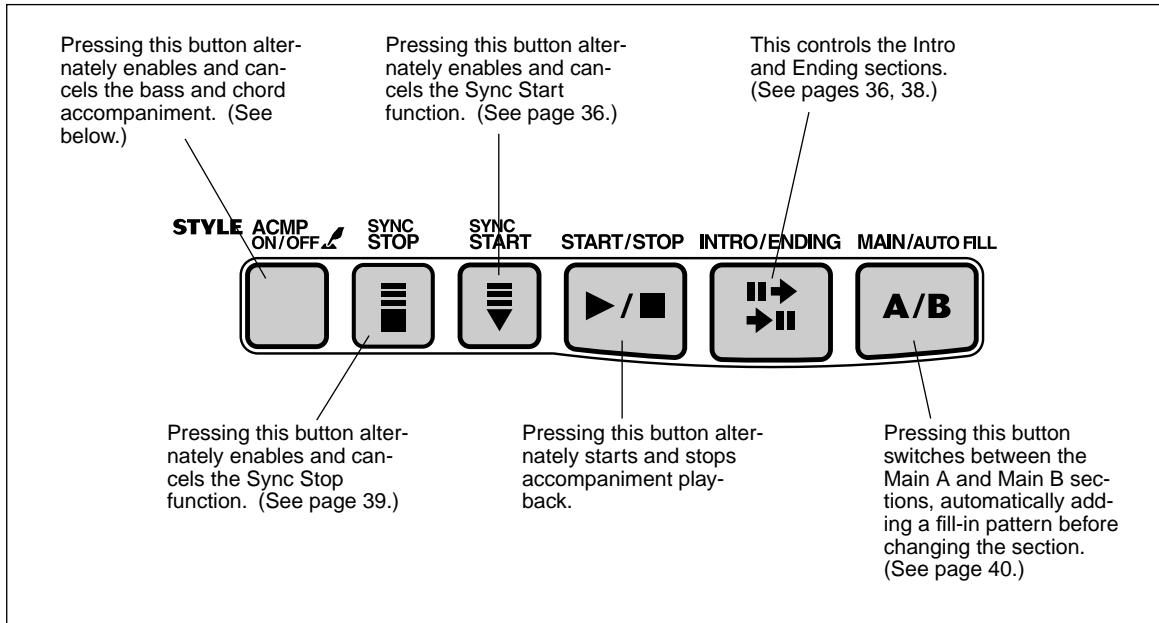
STYLE

- 001~007 8BEAT 076~083 LATIN
- 008~011 16BEAT 084~085 CARIBBEAN
- 012~020 BALLAD 086~100 PIANIST
- 021~030 DANCE
- 031~036 ROCK
- 037~040 ROCK & ROLL
- 041~046 RHYTHM & BLUES
- 047~055 JAZZ
- 056~061 COUNTRY & WESTERN
- 062~067 BALLROOM
- 068~075 MARCH & WALTZ

Style numbers can be selected in the same way as with the voices (see page 24). You can use the numeric keypad to directly enter the style number, or use the [+]/[-] buttons to step up and down through the styles.

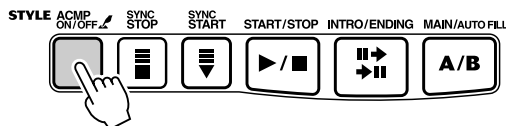
Playing the Accompaniment

The panel buttons below function as accompaniment controls.

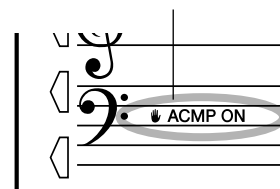


1 Turn on the auto accompaniment.

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



Indicates that auto accompaniment is on.

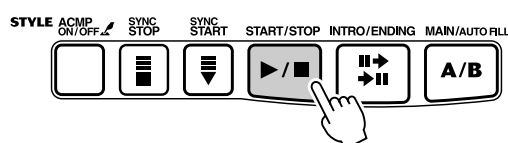


2 Start the accompaniment.

You can do this in one of the following ways:

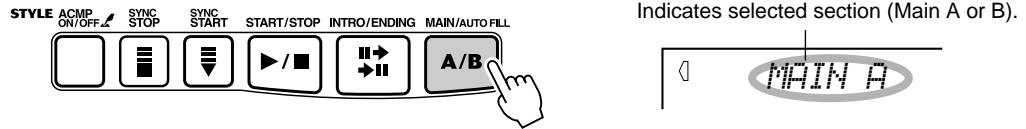
■ Pressing the [START/STOP] button

The rhythm starts playing immediately without bass and chord accompaniment. The currently selected Main A or B section will play.



Auto Accompaniment

You can select the Main A or B section by pressing the appropriate button — [MAIN A/B] — before pressing the [START/STOP] button. (The display briefly shows the letter of the selected section: “MAIN A” or “MAIN B.”)



■ Using Tap Tempo to Start

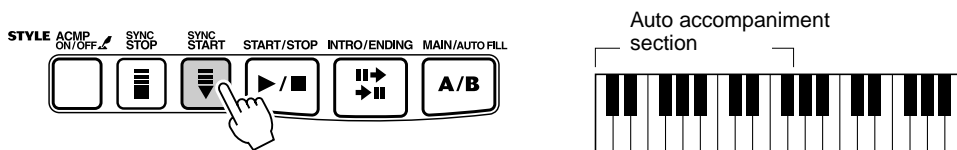
This useful feature lets you tap out the speed (tempo) of the auto accompaniment and automatically start the accompaniment at that tapped speed.



Simply tap the [TEMPO/TAP] button four times (or three times for a 3/4 time style), and the accompaniment starts automatically at the tempo you tapped. You can also change the tempo while the accompaniment is playing by tapping the [TEMPO/TAP] button twice at the desired tempo.

■ Using Sync Start

The PSR-280 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 marks all flash to indicate Sync Start stand-by), 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.)

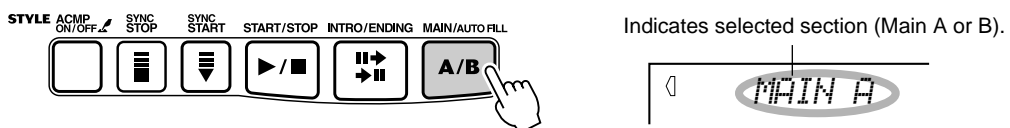


Starting with an Intro section

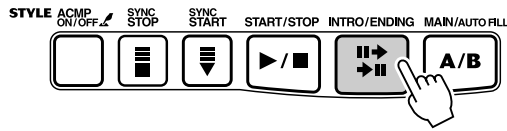
Each style has its own two- or four-measure Intro section. When used with the auto accompaniment, many of the Intro sections also include special chord changes and embellishments to enhance your performance.

To start with an Intro section:

- 1) Press the [MAIN/AUTO FILL] button — to select which section (A or B) is to follow the Intro.



2) Press the [INTRO/ENDING] button.



Indicates Intro standby.



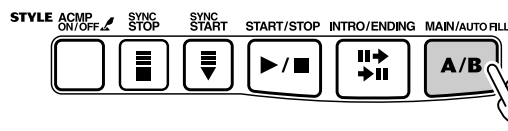
To actually start the Intro section and accompaniment, press the [START/STOP] button.

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:

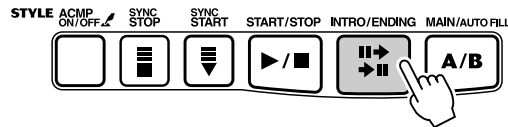
1) Press the [MAIN/AUTO FILL] button — to select which section (A or B) is to follow the Intro.



Indicates selected section (MAIN A or B).



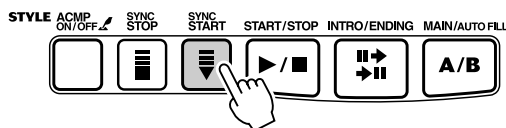
2) Press the [INTRO/ENDING] button.



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



3 Change chords using the auto accompaniment feature.

Try playing a few successive chords with your left hand, and notice how the bass and chord accompaniment change with each chord you play. (Refer to page 42 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 Stop function to create a similar, yet even more dramatic break. With Sync Stop on (page 39), you can control breaks in the rhythm and accompaniment simply by releasing your fingers from the keys. As long as you play and hold a chord, the accompaniment continues. When you release it, the accompaniment stops. You can also use this feature to create exciting rhythmic stutter effects, chord hits, and accents by playing staccato chords.

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.

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

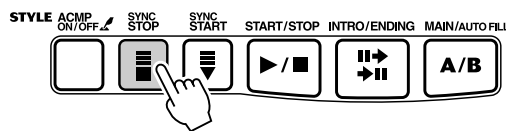
- To have the Ending section gradually slow down (*ritardando*) as it is playing, press the [INTRO/ENDING] button twice quickly.

Sync Stop

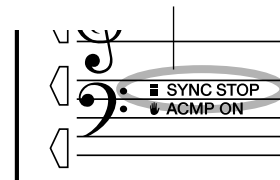
This convenient feature lets you stop (or pause) the auto accompaniment by releasing your fingers from the auto accompaniment section of the keyboard. Playing the chord again restarts the auto accompaniment. This is ideal for putting dynamic breaks in your performance — for example, stopping the rhythm and accompaniment briefly while you play a melodic break or solo with your right hand.

1 Press the [SYNC STOP] button.

Setting Sync Stop to on before starting the auto accompaniment automatically sets Sync Start to on as well, letting you immediately start the accompaniment by playing the keyboard.



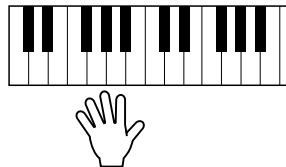
Indicates that Sync Stop is on.



2 Play a chord on the keyboard (in the auto accompaniment section of the keyboard).

The auto accompaniment starts as soon as you play a chord.

3 Stop the auto accompaniment by releasing the chord.



4 To start the auto accompaniment again, play a chord.

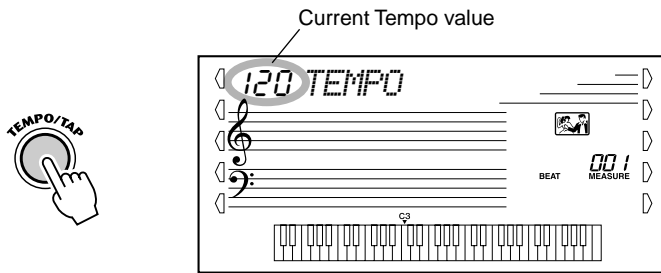
To turn Sync Stop off, press the [SYNC STOP] button again. To stop the auto accompaniment completely, press the [START/STOP] button.

Changing the Tempo

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

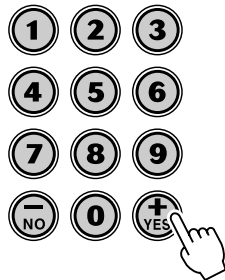
1 Call up the Tempo setting.

Press the [TEMPO/TAP] button.



2 Change the value.

Use the numeric keypad to set the desired Tempo value, or use the [+]/[-] buttons to increase or decrease the value.



Also, the tempo of a style returns to the default setting when selecting a different style. (The set tempo remains, however, when switching styles during playback.)

NOTE

- 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.)

Restoring the Default Tempo Value

Each song and style has been given a default or standard Tempo setting. If you've changed the Tempo, you can instantly restore the default setting by pressing both [+]/[-] buttons simultaneously (when Tempo is selected).

HINT

- You can also use the convenient Tap Tempo function to change the tempo by "tapping" a new one in real time. (See page 36.)

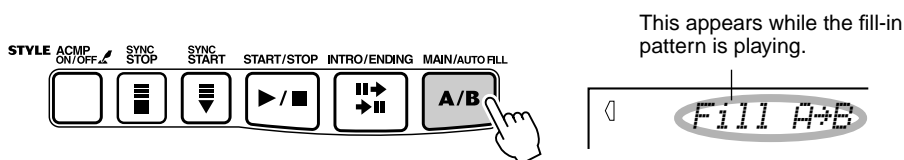
Accompaniment Sections (Main A/B and Fill-ins)

While the accompaniment is playing, you can add variation in the rhythm/accompaniment by pressing the [MAIN/AUTO FILL] button. This switches between the Main A and Main B sections, automatically playing a fill-in pattern to smoothly lead into the next section. For example, if the Main A section is currently playing, pressing this button automatically plays a fill-in pattern, followed by the Main B section. (See illustration on page 41.)

You can also select either the Main A or B section to start by pressing the [MAIN/AUTO FILL] button before starting the style.

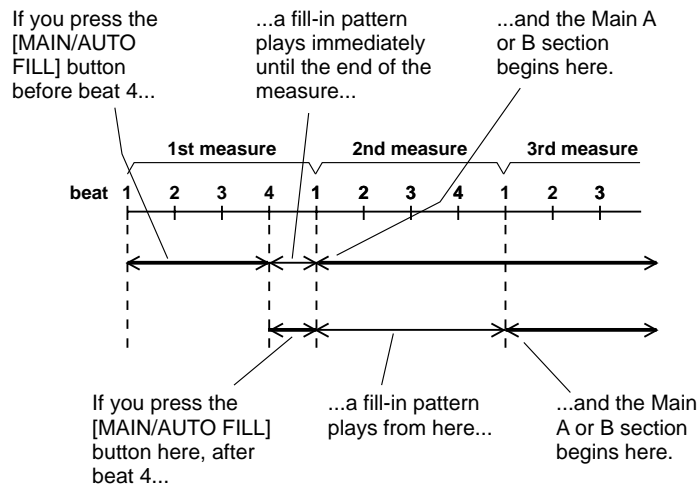
NOTE

- Rhythm sounds and fill-in sections are not available when one of the Pianist styles (#086 - #100) are selected.



This appears while the fill-in pattern is playing.

About the Fill-in Patterns

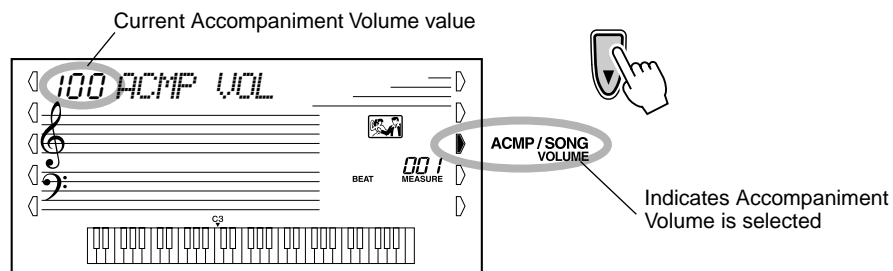


Adjusting the Accompaniment Volume

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.

Press the right Overall button, repeatedly if necessary, until "ACMP VOL" appears in the display.



2 Change the value.

Use the numeric keypad to set the desired Accompaniment Volume value (000 - 127). You can also use the [+]/[-] buttons to increase or decrease the value. Holding down either button continuously increases or decreases the value.

NOTE

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



Restoring the Default Accompaniment Volume Value

If you've changed the Accompaniment Volume setting, you can instantly restore the default setting of "100" by pressing both [+]/[-] buttons simultaneously (when Accompaniment Volume is selected).

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 [(b5)]	1 - 3 - b5	C(b5)	Cb5
Major seventh flatted fifth [M7b5]	1 - 3 - b5 - 7	CM7b5	CM7b5
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 - b3 - 5	Cm	Cm
Minor add ninth [m(9)]	1 - 2 - b3 - 5	Cm(9)	Cm(9)
Minor sixth [m6]	1 - b3 - 5 - 6	Cm6	Cm6
Minor seventh [m7]	1 - b3 - (5) - b7	Cm7	Cm7
Minor seventh ninth [m7(9)]	1 - 2 - b3 - (5) - b7	Cm7(9)	Cm7(9)
Minor seventh add eleventh [m7(11)]	1 - (2) - b3 - 4 - 5 - (b7)	Cm7(11)	Cm7(11)
Minor major seventh [mM7]	1 - b3 - (5) - 7	CmM7	CmM7
Minor major seventh ninth [mM7(9)]	1 - 2 - b3 - (5) - 7	CmM7(9)	CmM7(9)
Minor seventh flatted fifth [m7b5]	1 - b3 - b5 - b7	Cm7b5	Cm7b5
Minor major seventh flatted fifth [mM7b5]	1 - b3 - b5 - 7	CmM7b5	CmM7b5
Diminished [dim]	1 - b3 - b5	Cdim	Cdim
Diminished seventh [dim7]	1 - b3 - b5 - 6	Cdim7	Cdim7
Seventh [7]	1 - 3 - (5) - b7 or 1 - (3) - 5 - b7	C7	C7
Seventh flatted ninth [7(b9)]	1 - b2 - 3 - (5) - b7	C7(b9)	C7(b9)
Seventh add flatted thirteenth [7(b13)]	1 - 3 - 5 - b6 - b7	C7(b13)	C7(b13)
Seventh ninth [7(9)]	1 - 2 - 3 - (5) - b7	C7(9)	C7(9)
Seventh add sharp eleventh [7(#11)]	1 - (2) - 3 - #4 - 5 - b7 or 1 - 2 - 3 - #4 - (5) - b7	C7(#11)	C7(#11)
Seventh add thirteenth [7(13)]	1 - 3 - (5) - 6 - b7	C7(13)	C7(13)
Seventh sharp ninth [7(#9)]	1 - #2 - 3 - (5) - b7	C7(#9)	C7(#9)
Seventh flatted fifth [7b5]	1 - 3 - b5 - b7	C7b5	C7b5
Seventh augmented [7aug]	1 - 3 - #5 - b7	C7aug	C7aug
Seventh suspended fourth [7sus4]	1 - 4 - (5) - b7	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, m7b5, 6, m6, sus4, aug, dim7, 7b5, 6(9), 1+2+5.
- Inversion of the 7sus4 and m7(11) chords are not recognized if the notes shown in parentheses are omitted.
- The auto accompaniment 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.

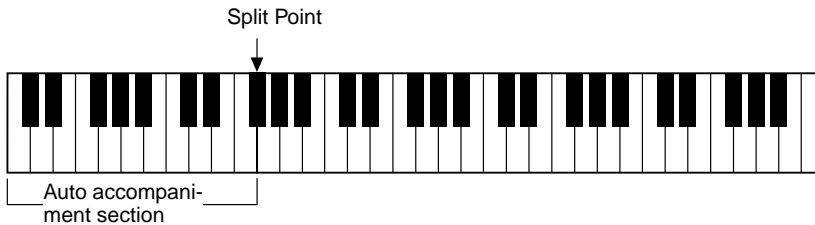
Auto Accompaniment

Setting the Split Point

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

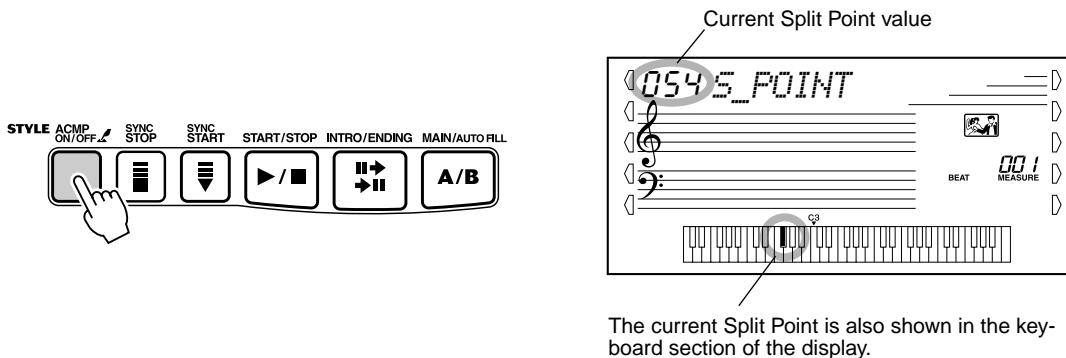
NOTE

- This setting also affects the split point for the special Split voices.



1 Select the Split Point control.

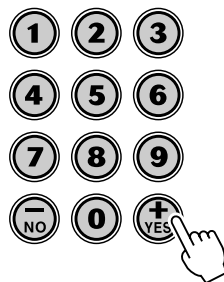
Press and hold the [ACMP ON/OFF] button until “S_POINT” appears in the display.



The current Split Point is also shown in the keyboard section of the display.

2 Change the value.

Use the numeric keypad or [+]/[-] buttons to set the desired value: 0 (C-2) - 127 (G8).



Restoring the Default Split Point Value

If you've changed the Split Point setting, you can instantly restore the default setting of "54" (F#2) by pressing both [+]/[-] buttons simultaneously (when Split Point is selected).

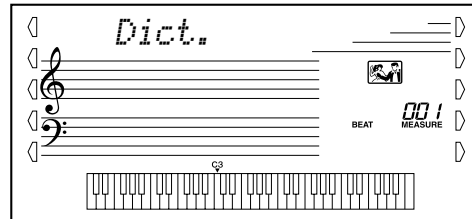
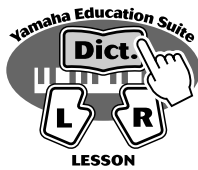
Dictionary

The Dictionary function 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.

IMPORTANT

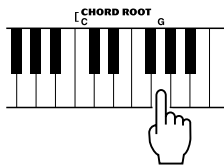
- Pressing the [Dict.] button automatically turns on the auto accompaniment.

1 Press the [Dict.] button.

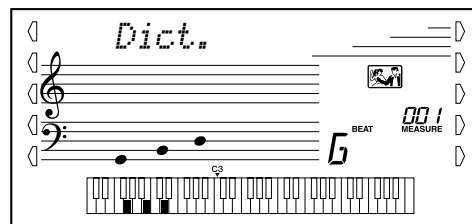


2 Specify the root of the chord.

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

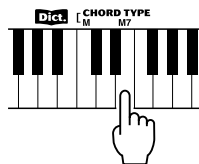


Pressing this key selects the root G.



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).

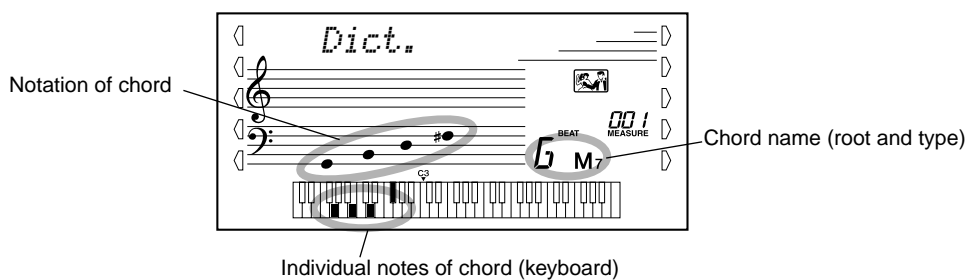


Pressing this key selects the major seventh chord type (M7).

The display shows the name of the chord, and the individual notes — both in notation and on the keyboard diagram.

NOTE

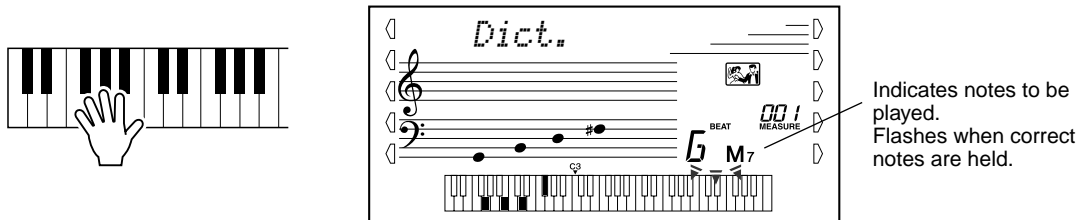
- For a few specific chords, not all notes may be shown in the notation section of the display. This is due to space limitations in the display.



4 Play the chord.

Play the chord (as indicated in the display) in the auto accompaniment section of the keyboard. The chord name flashes in the display (and a “congratulations” melody is played) when the correct notes are held down.

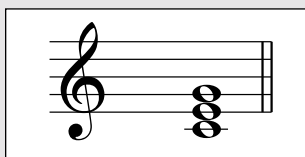
(Inversions for many of the chords are also recognized.)



To leave the Dictionary function, press the [Dict.] button again.

..... 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 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.

<p>Major chord (ex. C)</p> <p>Minor 3rd Major 3rd</p>	<p>Minor chord (ex. Cm)</p> <p>Major 3rd Minor 3rd</p>	<p>Augmented chord (ex. Caug)</p> <p>Major 3rd Major 3rd</p>	<p>Diminished chord (ex. Cdim)</p> <p>Minor 3rd Minor 3rd</p>
--	---	---	--

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

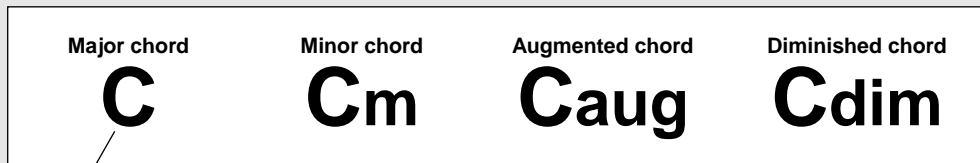


Beautiful sounding harmonies can be built in this manner. The use of intervals and chords is one of the most important elements in music. A wide variety of emotions and feelings can be created depending on the types of chords used and the order in which they are arranged.

••••• 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.

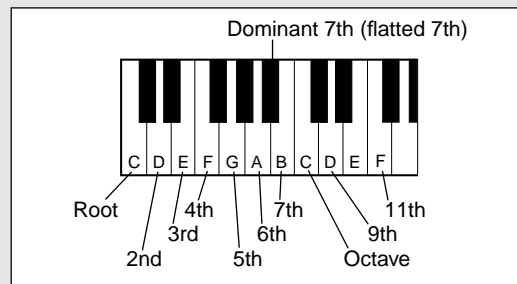


For simple major chords, the type is omitted.

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

Csus4

5th 4th

C7

Dominant 7th Major chord

Cm7

Dominant 7th Minor chord

CM7

7th Major chord

Cm7b5

Dominant 7th Diminished chord

Cm6

Minor chord 6th

C(9)

9th

Cdim7

Diminished 7th (double flatted 7th) Diminished chord

* Bbb = A



Registration Memory

Registration Memory is a flexible and convenient function that lets you instantly reconfigure virtually all settings of the PSR-280 with the touch of a single button. Simply save your favorite custom panel settings to one of the Registration Memory presets (up to sixteen are available) for future recall.

Registration Memory Presets

The PSR-280 has eight Registration Memory banks, each with two different presets (a total of sixteen) for your custom panel settings. Each of the sixteen Registration Memory can have different settings for the following parameters:

- Voice number
- Tempo
- Transpose
- Reverb Type
- DSP Type
- Harmony On/Off setting and Type
- Split Point
- Style number, and style-related settings: Accompaniment On/Off and Split Point

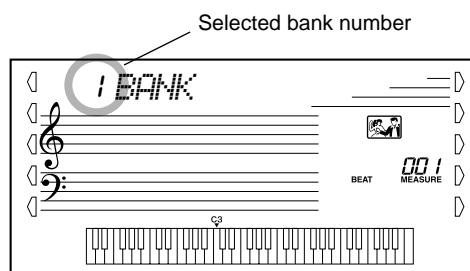
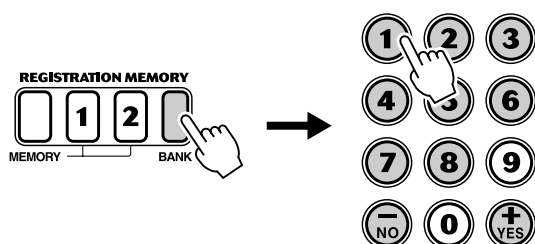
Recording a Registration Memory Preset

1 Make all desired settings for the PSR-280.

Virtually all of the PSR-280's settings can be saved to a Registration Memory button.

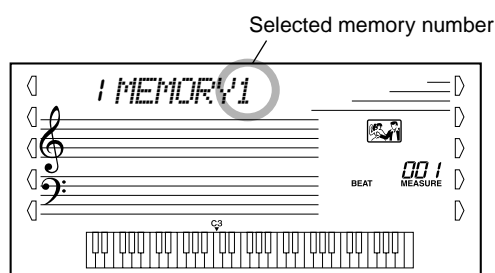
2 Select the desired bank.

Press the [BANK] button, then press the desired bank number (1 - 8).



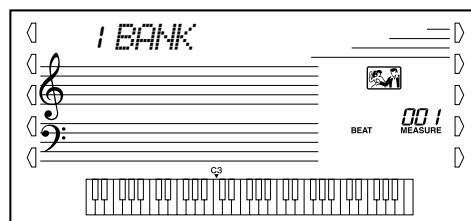
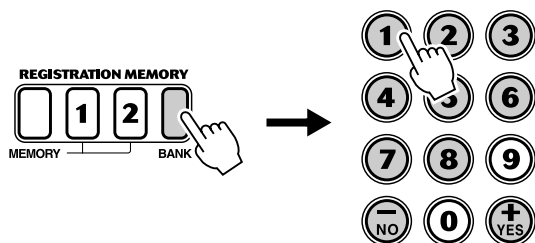
3 Record the settings to the desired preset, 1 or 2.

While holding down the [MEMORY] button, press the appropriate REGISTRATION MEMORY button, [1] or [2].

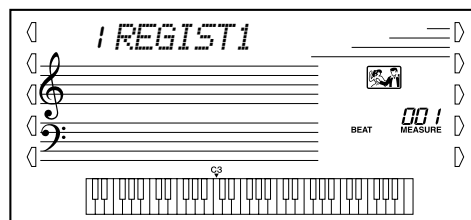


Recalling a Registration Memory Preset

1 Select the appropriate Registration Memory bank.



2 Press the desired Registration Memory preset button ([1] or [2]).





Selecting and Playing Songs

The PSR-280 features a total of 105 songs. These include 100 songs that showcase the rich and dynamic sounds of the instrument, and all 100 of these songs can be used with the educational Lesson feature (page 60), a powerful tool that makes learning songs fun and easy. Ten of the songs are special Demonstration songs that can be played automatically by pressing the [DEMO] button. Moreover, there are five special User songs to which you can record your own performance.

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 55.)

● Song Playback Display

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

Current measure number
* The indication “F t” appears in the display when a song having a “free” tempo is selected. (See page 13) Certain songs have been composed or arranged in “free” tempo, meaning that the tempo and/or the time signature are not constant during the piece. As a result, when a “free” tempo song plays back, the measure, beat and timing indications are not shown in the display.

These display the notes and name of the current chord.

About the Beat Display
The arrow marks in the beat display flash in time with the rhythm of the song or style. The first arrow indicates the first beat of the measure, and the others flash in sequence.

Selecting and Playing a Song

1 Press the [SONG] button.

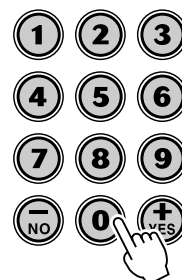
Song name and number

Indicates Song mode is selected

2 Select the desired song number.

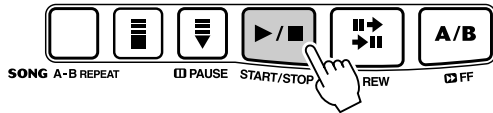
Use the numeric keypad.

You can use the numeric keypad to directly enter the song number, or use the [+]/[-] buttons to step up and down through the songs.



3 Start the selected song.

Press the [START/STOP] button. As the song plays back, the measure number and chords are shown in the display.



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. (See page 23.)

4 Stop the song.

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

A-B Repeat

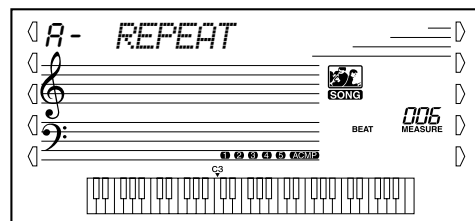
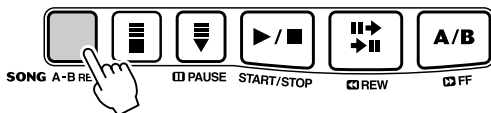
The convenient A-B Repeat function is an ideal aid for practicing and learning. It allows you to specify a phrase of a song (between point A and point B) and repeat it — while you play or practice along with it.

1 While playing a song, set point A (the start point).

During playback, press the [A-B REPEAT] button once, at the beginning point to be repeated.

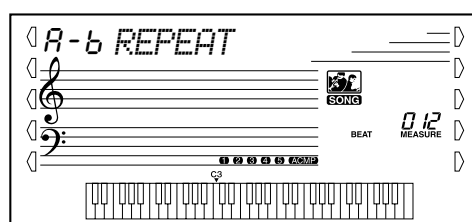
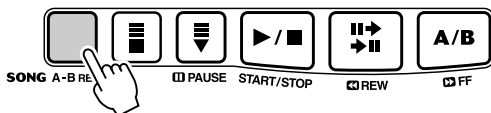
NOTE

- The A and B points can only be specified at the beginning of a measure (beat 1), and not at any point in the middle of a measure.



2 Set point B (the end point).

As the song continues playing, press the [A-B REPEAT] button once again, at the ending point to be repeated. The selected phrase repeats indefinitely until stopped.



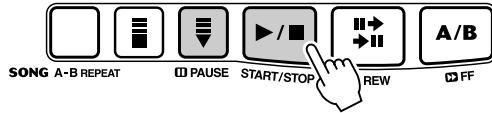
HINT

- If you're repeat practicing a particularly difficult section, try slowing down the Tempo to an appropriate speed to make it easier to play and master the part. You may also want to slow down the Tempo while setting the A and B points; this makes it easier to accurately set the points.
- You can also set the A-B Repeat function when the song is stopped. Simply use the [REW] and [FF] buttons to select the desired measures, pressing the [A-B REPEAT] button for each point, then start playback.
- To set the A point to the beginning of a song, press the [A-B REPEAT] button before starting playback.

Selecting and Playing Songs

3 Pause or stop playback as needed.

Use the [PAUSE] button or [START/STOP] button. Stopping playback does not cancel the set A/B points or the A-B Repeat function.



4 Turn off the A-B Repeat function.

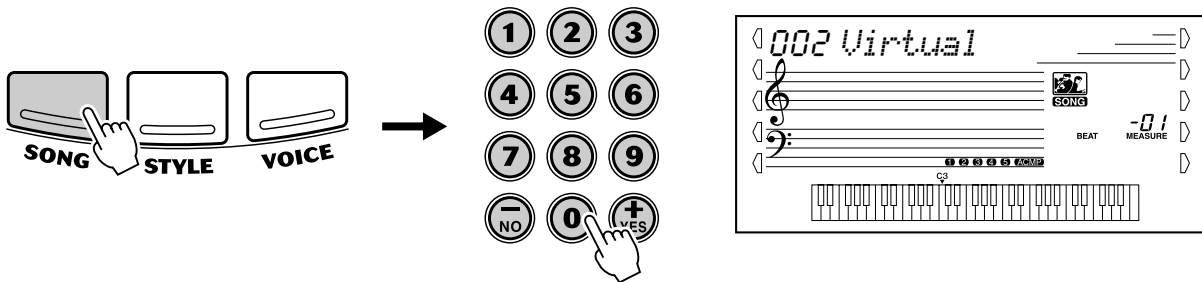
Press the [A-B REPEAT] button.

Melody Voice Change

The PSR-280 lets you play a melody on the keyboard along with each of the songs, either with the original melody voice or one of your own selection. The convenient Melody Voice Change feature takes this one step further — it lets you replace the original voice used for the melody of the song with the panel voice of your own selection. For example, if the current voice selected on the panel is piano but the song's melody is being played by a flute voice, using Melody Voice Change will change the flute melody voice to piano.

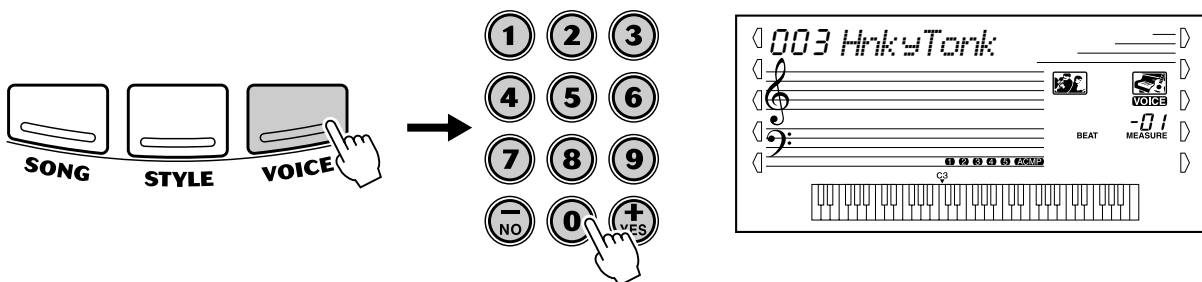
1 Select the desired song.

Press the [SONG] button, then use the numeric keypad or [+]/[-] buttons to select the desired song.



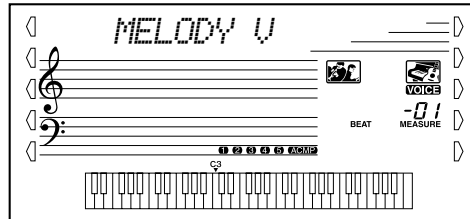
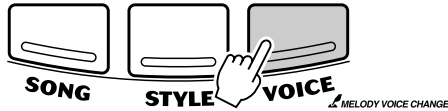
2 Select the desired voice.

Press the [VOICE] button, then use the numeric keypad or [+]/[-] buttons to select the desired voice.



3 Press and hold down the [VOICE] button for at least one second.

“MELODY VOICE CHANGE” appears in the display, indicating that the selected panel voice has replaced the song’s original melody voice.

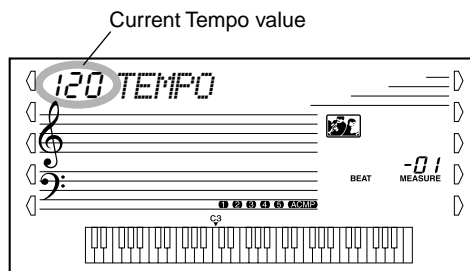


Changing the Tempo

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

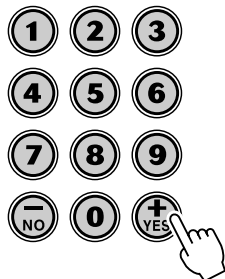
1 Call up the Tempo setting.

Press the [TEMPO/TAP] button.



2 Change the value.

Use the numeric keypad to set the desired Tempo value, or use the [+]/[-] buttons to increase or decrease the value.



Restoring the Default Tempo Value

Each song has been given a default or standard Tempo setting. If you’ve changed the Tempo, you can instantly restore the default setting by pressing both [+]/[-] buttons simultaneously (when Tempo is selected).

Also, the tempo of a song returns to the default setting when selecting a different song. (The set tempo remains, however, when switching styles during playback.)

HINT

- You can also use the convenient Tap Tempo function to change the tempo by “tapping” a new one in real time. (See page 36.)

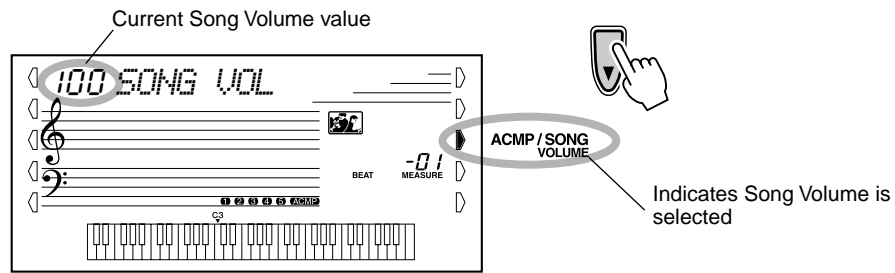
Selecting and Playing Songs

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.

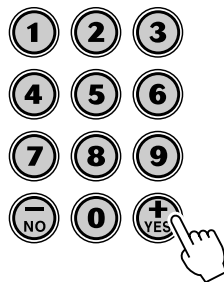
1 Select the Song Volume function.

Press the right Overall button, repeatedly if necessary, until “SONG VOL” appears in the display.



2 Change the value.

Use the numeric keypad to set the desired Song Volume value (000 - 127). You can also use the [+]/[-] buttons to increase or decrease the value. Holding down either button continuously increases or decreases the value.



NOTE

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

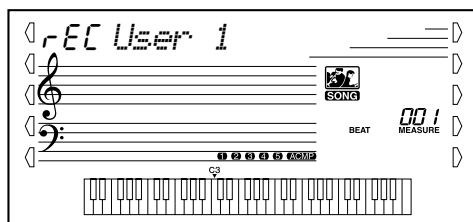
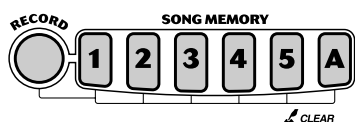
Restoring the Default Song Volume Value

If you've changed the Song Volume setting, you can instantly restore the default setting of "100" by pressing both [+]/[-] buttons simultaneously (when Song Volume is selected).



Song Recording

The PSR-280 features powerful and easy-to-use song recording features that let you record your keyboard performances — using up to six independent tracks (including one track for accompaniment) — for creating your own complete, fully orchestrated compositions. You can record and save up to five User songs.



NOTE

Song Memory Capacity

- Maximum number of notes : approximately 10,000 (when only "melody" tracks are recorded)
- Maximum number of chords : approximately 5,500 (when only the chord track is recorded)

Song recording on the PSR-280 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.

Recording a User Song

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

- Note on/off
- Velocity
- Voice Number
- Reverb Type*
- Chorus Type*
- DSP Type*
- Sustain
- 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 PSR-280 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. (See pages 34, 40, and 23.)

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

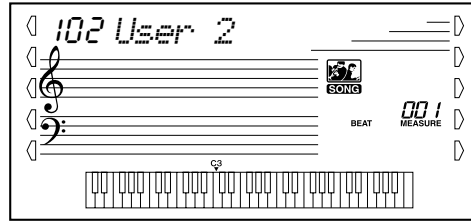
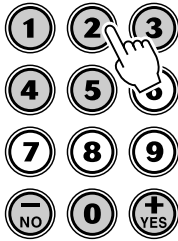
Using the Metronome

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 #4 below. After the song is completely recorded, simply play back the song with the Metronome turned off. (See page 20.)

Song Recording

2 Select a User song for recording.

Use the numeric keypad to select the desired song: 101 - 105. If no song is manually selected, the PSR-280 automatically selects the first available empty song number.

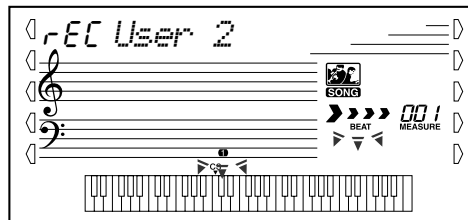


NOTE

• User song numbers can be selected in the same way as with the voices (see page 24). You can use the numeric keypad to directly enter the song number, use the [+]/[-] buttons to step up and down through the songs.

3 Select a track number for recording.

While holding down the [RECORD] button, press the appropriate SONG MEMORY button.



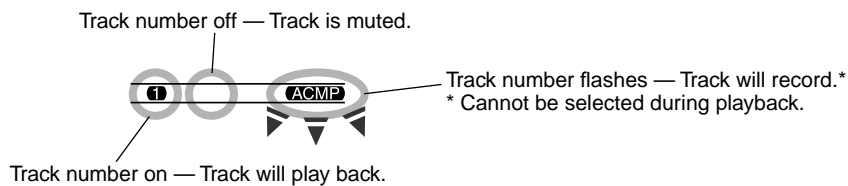
CAUTION

• 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.

● Muting Tracks During Playback

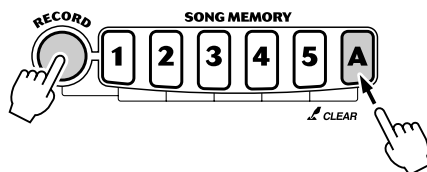
While recording is enabled, you can selectively mute different tracks. This is useful for when you want to clearly hear certain tracks, and not others, during recording. Muting can also be done “on the fly” during playback. To use muting, press the corresponding SONG MEMORY button, repeatedly if necessary,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



■ Recording to the Chord Track

A special Chord track is provided for recording accompaniment data. This is automatically recorded to the Chord track (track A). Selecting the Chord track automatically turns on the accompaniment.



NOTE

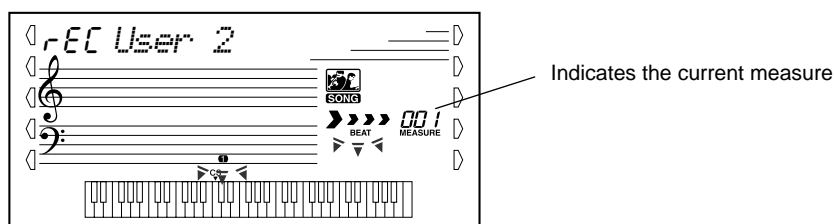
• If accompaniment has already been turned on before entering the Record mode, the Chord track is automatically selected.

■ Recording to a Melody Track (1 - 5)

Five independent Melody tracks are provided for recording your keyboard performance. Normally, you'll want to record these after you've recorded the Chord track. You can also record the Chord track and one of the Melody tracks simultaneously.

4 Start recording.

When the beat marks and track number start flashing, you can start recording simply by playing the keyboard (or by pressing the [START/STOP] button).



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.

5 Stop recording.

After you've finished playing the part, press the [START/STOP] or [RECORD] button.

6 Record to other tracks as desired.

To do this, simply repeat steps #3 - #5 above. Make sure that when you press the SONG MEMORY button corresponding to the desired track, the track number in the display flashes.

7 Listen to your new recording.

To play back the song from the beginning, simply press the [START/STOP] button again. Playback stops when the [START/STOP] button is pressed again.

Song Clear

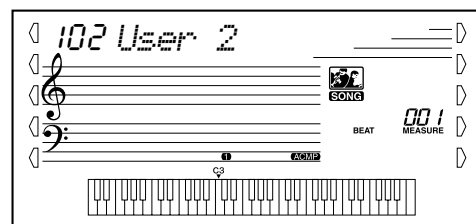
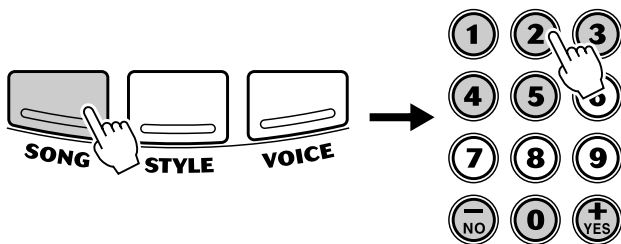
The Song Clear operation completely erases all recorded data on all tracks of a selected User song. Use this operation only when you're sure you want to erase a song and record a new one. To erase an individual track of a song while leaving the other tracks intact, use the Track Clear operation (page 59).

1 Select the desired song.

Press the [SONG] button, then use the numeric keypad or [+]/[-] buttons to select the desired song (101 - 105).

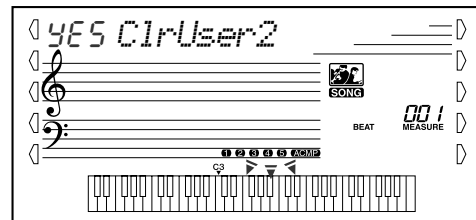
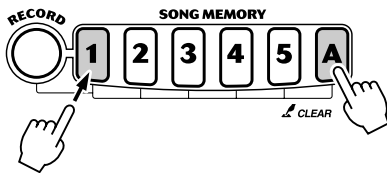
NOTE

• Songs 001 - 100 cannot be selected for this operation.



2 While holding down the [A] button, press SONG MEMORY button [1].

All track indications in the display flash, indicating that all tracks are to be erased.

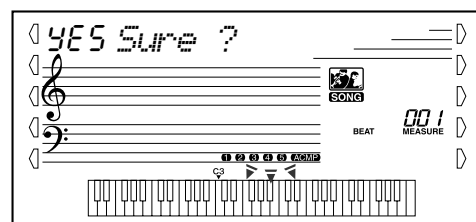


3 Press the [+ / YES] button.

4 At the "Sure?" prompt, press the [+ / YES] button, or press the [- / NO] button to abort.

Pressing the [+ / YES] button executes the Song Clear operation.

Pressing the [- / NO] button aborts.



Track Clear

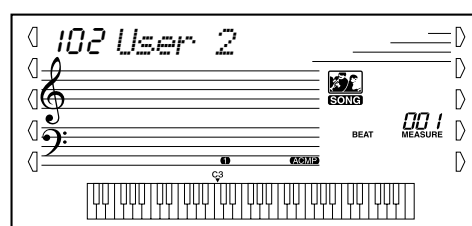
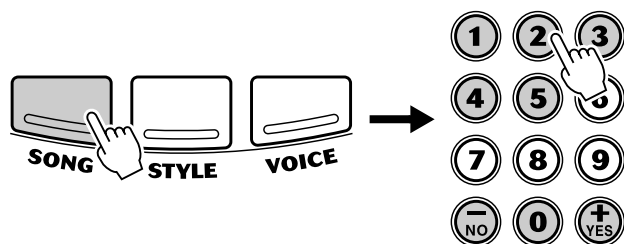
The Track Clear operation completely erases all recorded data on a selected track of a selected User song, leaving the other tracks intact. Use this operation only when you're sure you want to erase a track and record a new one. To erase the data of an entire song, use the Song Clear operation (page 58).

1 Select the desired song.

Press the [SONG] button, then use the numeric keypad or [+]/[-] buttons to select the desired song (101 - 105).

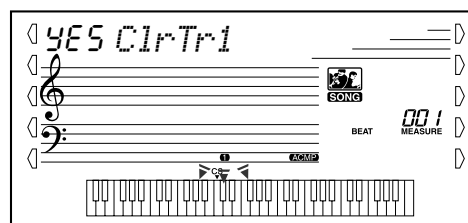
NOTE

• Songs 001 - 100 cannot be selected for this operation.



2 Press and hold down the button corresponding to the track to be erased.

Press and hold down the appropriate SONG MEMORY button ([1] - [5], [A]) for at least one second.

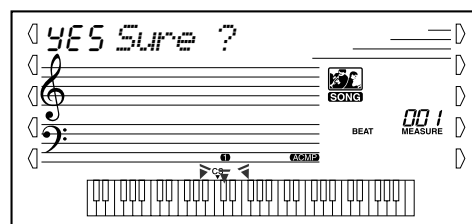


3 Press the [+]/YES button.

4 At the "Sure?" prompt, press the [+]/YES button, or press the [-]/NO button to abort.

Pressing the [+]/YES button executes the Track Clear operation.

Pressing the [-]/NO button aborts.





Song Lesson

The Lesson feature provides an exceptionally fun and easy-to-use way to learn how to read music and play the keyboard. There are a total of 100 Lesson songs (Songs 001 to 100), specially designed for use with the educational features. Lesson lets you practice the left- and right-hand parts of each song independently, step by step, until you've mastered them and are ready to practice with both hands together. These practices are divided into four Lesson steps, as described below. Lessons 1 - 3 apply to each hand; press the appropriate button, [L] (left) or [R] (right) to select the desired part for practice.

■ Lesson 1 — Timing

This lesson step lets you practice just the timing of the notes — any note can be used, as long as you play in rhythm.

■ Lesson 2 — Waiting

In this lesson step, the PSR-280 waits for you to play the correct notes before continuing playback of the song.

■ Lesson 3 — Minus One

This lesson step plays back the song with one part muted, letting you play and master the missing part yourself — in rhythm and at the proper tempo.

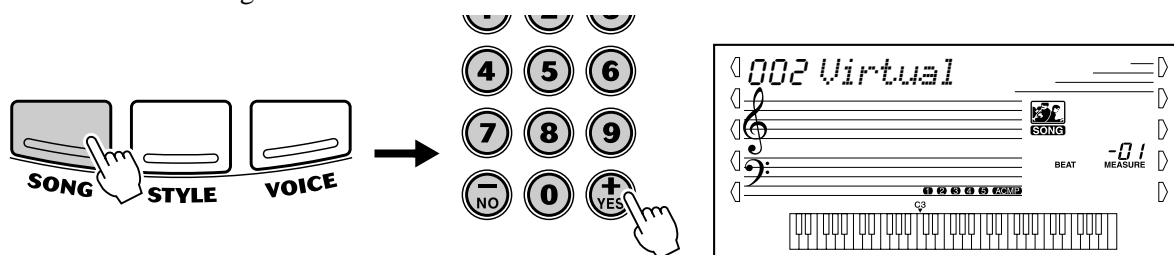
■ Lesson 4 — Both Hands

Lesson 4 is a “Minus One” practice essentially the same as Lesson 3, except that both the left- and right-hand parts are muted — letting you play and master both hands at the same time.

Using the Lesson Feature

1 Select one of the Lesson songs.

Press the [SONG] button, then use the numeric keypad or [+]/[-] buttons to select the desired song.

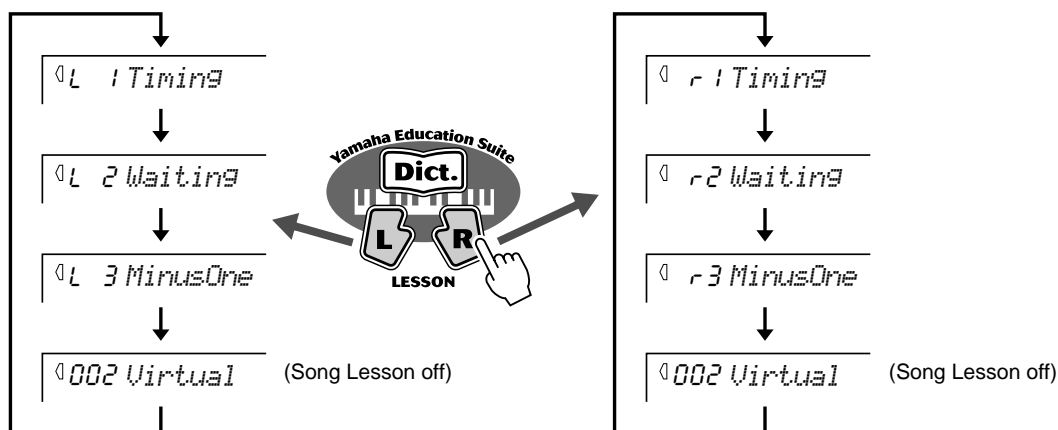


The Lesson songs are divided into several different categories or music genres, with 100 songs available.

- SONG**
001~010 DEMO
LESSON
011~035 PRACTICE
036~050 ACCOMPANIMENT
051~070 PIANIST
071~080 ORCHESTRA
081~090 BANDSMAN
091~100 DJ

2 Select the part you wish to work on (left or right) and the Lesson step.

If you want to work on the right-hand part, press the [R] button; to work on the left, press the [L] button. Pressing either button repeatedly cycles through the available Lesson steps in order: Lesson 1 → Lesson 2 → Lesson 3 → Off → Lesson 1, etc. The selected Lesson step is indicated in the display.



To select Lesson 4, press both [L] and [R] buttons simultaneously.



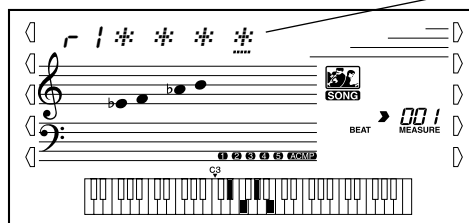
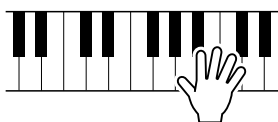
◁ L r 4 BothHand

NOTE

- When the Talking function (page 66) is on, the PSR-280 "announces" the current Lesson step.
- When a DJ song is selected, the left (L) and right (R) lessons are identical.

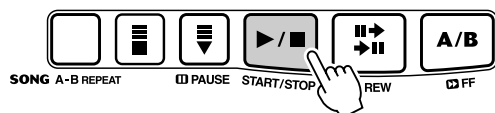
3 Start the Lesson.

The Lesson and song playback start automatically (following a lead-in count) as soon as the Lesson step is selected. When the Lesson is finished, your performance "grade" is shown in the display (if the Grade function is turned on; page 65). After a short pause, the Lesson begins again automatically.



Asterisks appear indicating the timing at which you should play the notes. The line of asterisks represents one full measure. Sixteenth notes are indicated by an alternating asterisk and sharp sign. (for songs having a "free" tempo, no such indications appear.) see page 13

4 Press the [START/STOP] button to stop the Lesson.



The PSR-280 exits from the Lesson feature automatically when the [START/STOP] button is pressed.

Lesson 1 — Timing

This lesson step lets you practice just the timing of the notes — any note can be used, as long as you play in rhythm. Pick a note to play. For the left hand, use a note in the auto accompaniment section or play the appropriate left-hand note; for the right, play a note above F#2. Simply concentrate on playing each note in time with the rhythmic accompaniment.

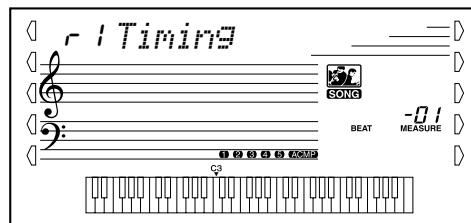
NOTE

- The melody note does not sound unless your playing is in time with the rhythm.

1 Select one of the Lesson songs.

2 Select Lesson 1.

Press the [L] or [R] button (repeatedly, if necessary) until Lesson 1 is indicated.

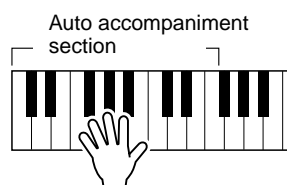


3 Play the appropriate melody or chord with the song.

After the lead-in, the song starts automatically, and the appropriate notes appear in the display. In Lesson 1, simply play one note repeatedly in time with the music.

Regarding chords and the use of the left hand, the PSR-280 actually has two different types of songs: 1) songs with normal left-hand chords, and 2) songs in which the left hand plays arpeggios or melodic figures in combination with the right.

In the case of the first type, play the chords with your left hand in the auto accompaniment section of the keyboard.



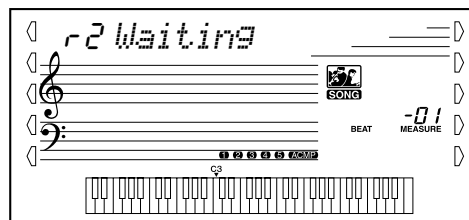
Lesson 2 — Waiting

In this lesson step, the PSR-280 waits for you to play the correct notes before continuing playback of the song. This lets you practice reading the music at your own pace. The notes to be played are shown in the display, one after another, as you play them correctly.

1 Select one of the Lesson songs.

2 Select Lesson 2.

Press the [L] or [R] button (repeatedly, if necessary) until Lesson 2 is indicated.



3 Play the appropriate melody or chord with the song.

After the lead-in, the song starts automatically, and the appropriate notes appear in the display. In Lesson 2, play the correct notes at your own pace, until you can master playing them in rhythm.

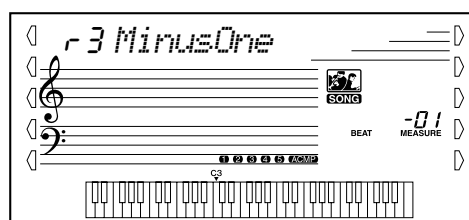
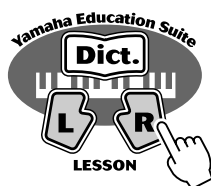
Lesson 3 — Minus One

This lesson step lets you practice one part of the song in rhythm at the proper tempo. The PSR-280 plays back the song accompaniment with one part muted (either the left part or the right)—letting you play and master the missing part yourself. The notes you are to play are shown continuously in the display as the song plays back.

1 Select one of the Lesson songs.

2 Select Lesson 3.

Press the [L] or [R] button (repeatedly, if necessary) until Lesson 3 is indicated.



Song Lesson

3 Play the appropriate part with the song.

After the lead-in, the song starts automatically, and the appropriate notes appear in the display. In Lesson 3, listen carefully to the un-muted part, and play the muted part yourself.

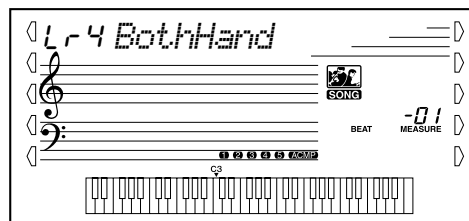
Lesson 4 — Both Hands

Lesson 4 is a “Minus One” practice essentially the same as Lesson 3, except that both the left- and right-hand parts are muted — letting you play and master both hands at the same time. Go on to this lesson step after you’ve mastered each hand’s part in the previous three lesson steps. Practice both hands in time with the rhythm along with the notation in the display.

1 Select one of the Lesson songs.

2 Select Lesson 4.

Press the [L] and [R] buttons simultaneously, so that Lesson 4 is indicated.

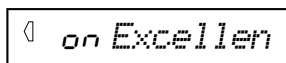


3 Play both the left- and right-hand parts with the song.

After the lead-in, the song starts automatically, and the appropriate notes appear in the display. In Lesson 4, both parts (left and right) are muted, letting you play the entire song by yourself.

Grade

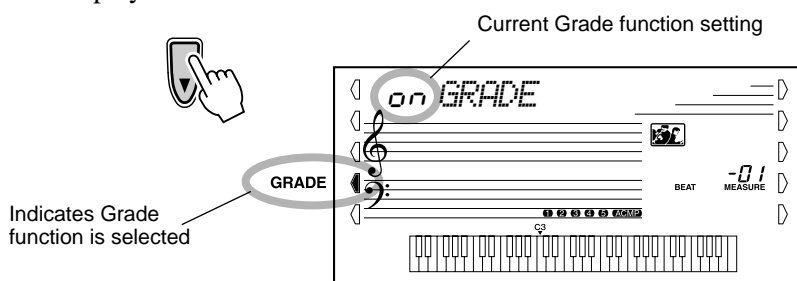
The Lesson feature has a built-in evaluation function that monitors your practicing of the Lesson songs, and just like a real teacher, it tells you how well you did each exercise. Four grades are assigned, depending on your performance: “OK,” “Good,” “Very Good,” and “Excellent.” When the Talking function (page 66) is on, the PSR-280 also “announces” your grade.



1 Select the Grade function.

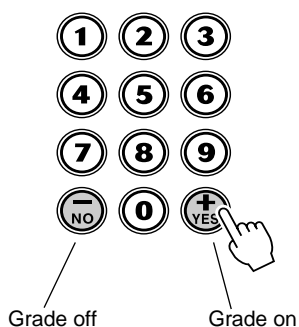
Press the left Overall button, repeatedly if necessary, until “GRADE” appears in the display.

NOTE
• Grade is automatically set to on as the default setting.



2 Set Grade to on or off as desired.

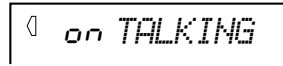
Use the [+]/[-] buttons to set Grade to on or off.





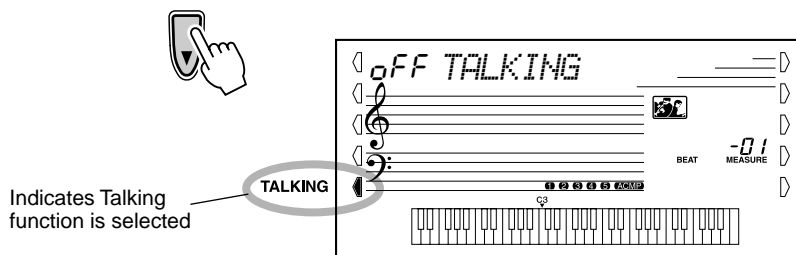
Talking

This feature “talks” to you through the speakers, “announcing” the Grade comments as well as the titles of the Lesson steps and the names of certain functions.



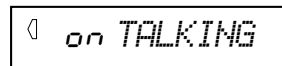
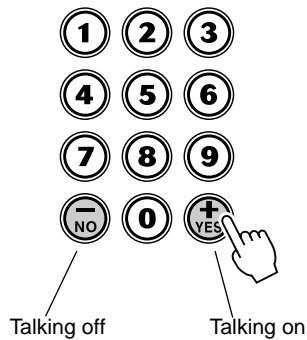
1 Select the Talking function.

Press the left Overall button, repeatedly if necessary, until “TALKING” appears in the display.



2 Set Talking to on or off as desired.

Use the [+]/[-] buttons to set Talking to on or off.



NOTE

- Talking is automatically set to on as the default setting.



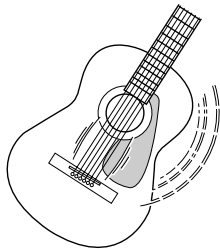
MIDI Functions

The PSR-280 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-280.

What Is MIDI?

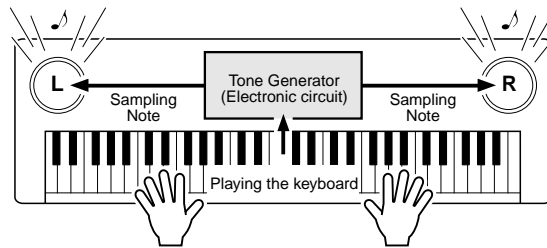
No doubt you have heard the terms “acoustic instrument” and “digital instrument.” In the world today, these are the two main categories of instruments. Let’s consider an acoustic piano and a classical guitar as representative acoustic instruments. They are easy to understand. With the piano, you strike 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



Pluck a string and the body resonates the sound.

Digital instrument note production



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-280 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)	20 (strong)

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-280 supports GM System Level 1.



MIDI Functions

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-280 can control a MIDI device by transmitting note related data and various types of controller data. The PSR-280 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-280 can receive/transmit.

● Channel Messages

The PSR-280 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-280 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 struck.
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

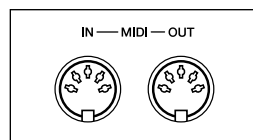
This is data that is used in common by the entire MIDI system. System messages include messages like Exclusive Messages that transmit data unique to each instrument manufacturer and Realtime Messages that control the MIDI device.

Message Name	PSR-280 Operation/Panel Setting
Exclusive Message	Reverb/chorus/DSP settings, etc.
Realtime Messages	Clock setting Start/stop operation

The messages transmitted/received by the PSR-280 are shown in the MIDI Implementation Chart on page 84.

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-280 are located on the rear panel.



MIDI IN	Receives MIDI data from another MIDI device.
MIDI OUT	Transmits the PSR-280'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.

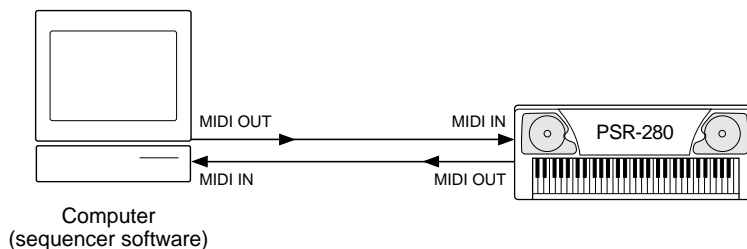
Connecting to a Personal Computer

By connecting your PSR-280's MIDI terminals to a personal computer, you can have access to a wide variety of music software.

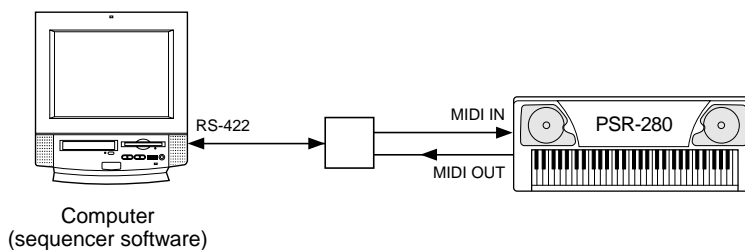
When using a MIDI interface device installed in the personal computer, connect the MIDI terminals of the personal computer and the PSR-280.

Use only special MIDI cables when connecting MIDI devices.

- Connect the MIDI terminals of the PSR-280 to the MIDI terminals of the personal computer.



- 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.



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, refer to the owner's manual for the software you are using.

NOTE

Viewing the Notation for MIDI Channel 1

- The PSR-280 has a special function that lets you view the notes of the MIDI data (channel 1 only) on the display.

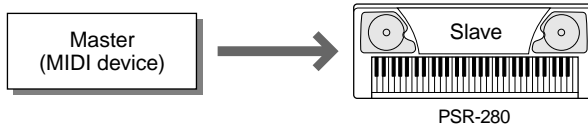
NOTE

Bank LSB Cancel Function

- The PSR-280 lets you disable or ignore incoming Bank LSB messages, which might otherwise cause problems when selecting PSR-280 voices from an external device. To cancel Bank LSB messages, simultaneously hold down the lowest key on the keyboard (C1) and turn the power on ([STANDBY] button).

Controlling PSR-280 Playback from an External Device — External Clock

This function allows you to “slave” the PSR-280 to a “master” MIDI device, so that playback of the PSR-280 is controlled from that device.



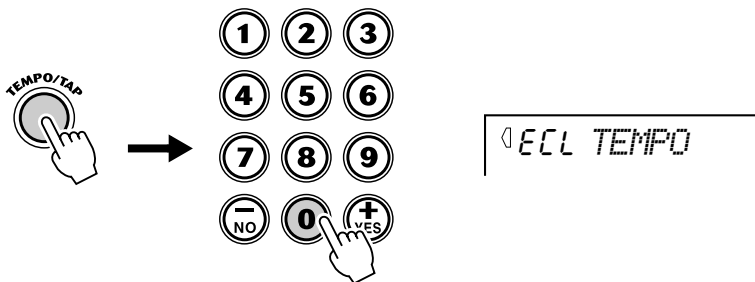
Normally, the PSR-280 is set up to control another MIDI device, such as in playing the sounds of an external tone generator. You can also control the PSR-280 from an external device, such as playing back song data on a sequencer using the voices of the PSR-280, or playing the PSR-280 voices from a separate MIDI keyboard or controller.

When you want to control playback of the PSR-280’s styles or songs from an external MIDI device, you’ll have to change the clock setting on the PSR-280 to external.

1 Press the [TEMPO/TAP] button, then enter “000” (External Clock) for the Tempo value.

“ECL TEMPO” is shown in the display, indicating that the PSR-280 is waiting for an external clock signal.

Any value other than “000” automatically sets the PSR-280 to Internal Clock.



2 Make sure the PSR-280 is set to the appropriate mode (Song or Style), and start playback on the connected device.

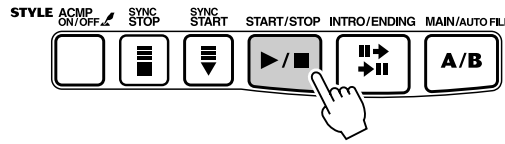
NOTE

- When External Clock is set to on, song or style playback cannot be controlled from the PSR-280 panel controls.

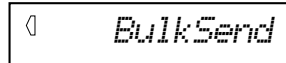
MIDI Functions

4 Start the operation.

Press the [START/STOP] button to start the Bulk Dump operation.



The following display is shown while the data is being sent.



When the operation is completed, the following display appears:



NOTE

- When the Bulk Dump operation is completed, the PSR-280 automatically returns to the previous panel condition.

■ Loading Bulk Data

Once you've saved PSR-280 data as described above, you can easily reload the data back to the PSR-280.

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.

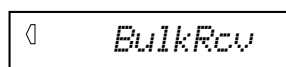


2) Insert the appropriate floppy disk (containing the desired data) into the MIDI Data Filer.

2 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 PSR-280 automatically receives the data. The following display is shown while the data is being received.



CAUTION

- This operation erases any and all of your original data in the PSR-280. Make sure to save your original settings and data using the Bulk Dump operation (page 71).

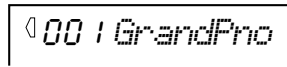
NOTE

- Make sure that the PSR-280 is not in the middle of an operation, such as song recording or playback, Style (accompaniment) playback, saving of a Registration Memory preset, sending of Bulk Dump data, etc.

NOTE

- When the PSR-280 is receiving bulk data, none of the panel controls can be used.

The display returns to the currently selected voice.



NOTE

- If, for some reason, some problem occurred in the data reception, a "RcvError" message is shown in the display. Check all connections and settings and try the operation again.

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 PSR-280. Essentially, this takes a "snapshot" of the PSR-280 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 PSR-280. Provided there is a pause in the song, you could also do this in the middle of a song — for example, completely changing the PSR-280 settings for the next section of the song.

■ Sending Initial Setup Data •••••

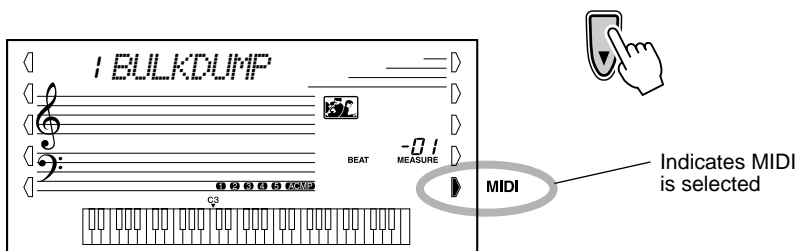
1 First, set up the sequencer for recording.

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 Select the MIDI operations.

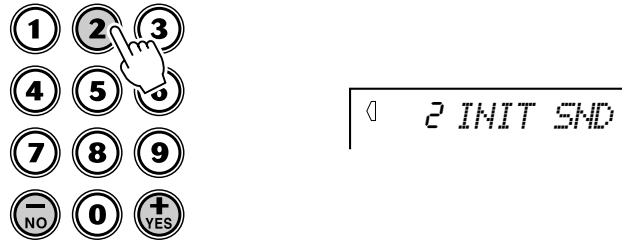
Press the right Overall button, repeatedly if necessary, until MIDI is selected.



MIDI Functions

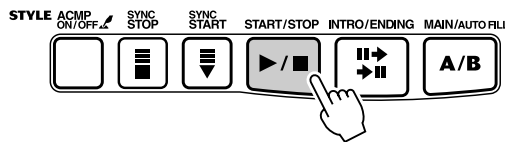
3 Select the Initial Setup Send operation.

Press “2” on the numeric keypad or use the [+]/[-] buttons to select operation #2, Initial Setup Send.



4 Press the [START/STOP] button.

Start the Initial Setup Send operation.



5 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.



6 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.

NOTE

- When the Initial Setup Send operation is completed, the PSR-280 automatically returns to the previous panel condition.



Troubleshooting

Problem	Possible Cause and Solution
When the PSR-280 is turned on or off, a popping sound is temporarily produced.	This is normal and indicates that the PSR-280 is receiving electrical power.
When using a mobile phone, noise is produced.	Using a mobile phone in close proximity to the PSR-280 may produce interference. To prevent this, turn off the mobile phone or use it further away from the PSR-280.
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/OUTPUT jack on the rear panel. When a set of headphones is plugged into this jack, no sound is output.
Playing keys in the right hand section of the keyboard does not produce any sound.	When using the Dictionary function (page 45), 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 auto accompaniment doesn't turn on, even when pressing the [ACMP ON/OFF] button.	Make sure the Style mode is active before using the auto accompaniment. Press the [STYLE] button to enable style operations.
The accompaniment or song does not play back even when pressing the [START/STOP] button.	When External Clock (page 70) is set to "on," style playback CAN-NOT be controlled from the PSR-280 panel controls.
The accompaniment does not sound properly.	Make sure that the Accompaniment Volume (page 41) is set to an appropriate level. Make sure that the Split Point (page 44) is set to an appropriate value.
When playing back one of the Pianist styles (#086 - #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 PSR-280 is polyphonic up to a maximum of 32 notes. If the Dual voice or Split voice 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.
A strange "flanging" or "doubling" sound occurs when using the PSR-280 with a sequencer. (This may also sound like a "dual" layered sound of two voices, even when Dual is turned off.)	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 (for sustain) seems to produce the opposite effect. For example, 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 SUSTAIN 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.

Voice List

Voice #	Bank Select		MIDI Program Change#	Voice Name
	MSB	LSB		
079	0	112	79	Ocarina
SYNTH LEAD				
080	0	112	80	Square Lead
081	0	112	81	Sawtooth Lead
082	0	112	85	Voice Lead
083	0	112	98	Crystal
084	0	112	100	Brightness
085	0	115	81	Analog Lead
SYNTH PAD				
086	0	112	88	Fantasia
087	0	113	100	Bell Pad
088	0	112	91	Xenon Pad
089	0	112	94	Angels
090	0	113	89	Dark Moon
PERCUSSION				
091	0	112	11	Vibraphone
092	0	112	12	Marimba
093	0	112	13	Xylophone
094	0	112	114	Steel Drums
095	0	112	8	Celesta
096	0	112	14	Tubular Bells
097	0	112	47	Timpani
098	0	112	10	Music Box
SPLIT				
099	0	-	-	Strings/Grand Piano
100	0	-	-	Grand Piano/Violin
101	0	-	-	DX Electric Piano/Harmonica
102	0	-	-	Grand Piano/Tenor Sax
103	0	-	-	Choir Oohs/Ocarina
104	0	-	-	Vibraphone/Jazz Guitar
105	0	-	-	Classical Guitar/Flute
106	0	-	-	French Horn/Trumpet
107	0	-	-	Church Organ/Choir Aahs
108	0	-	-	Grand Piano/Musette Accordion
DJ				
109	0	123	118	DJ game 1
110	0	123	119	DJ game 2
111	0	123	120	DJ game 3
112	0	123	121	DJ game 4
113	0	123	122	DJ game 5
114	0	123	123	DJ game 6
115	0	123	124	DJ game 7
116	0	123	125	DJ game 8
117	0	123	126	DJ game 9
118	0	123	127	DJ game 10
DRUM KITS				
119	127	0	0	Standard Kit 1
120	127	0	1	Standard Kit 2
121	127	0	8	Room Kit
122	127	0	16	Rock Kit
123	127	0	24	Electronic Kit
124	127	0	25	Analog Kit
125	127	0	27	Dance Kit
126	127	0	32	Jazz Kit
127	127	0	40	Brush Kit
128	127	0	48	Symphony Kit

● GM Voice List

Voice #	Bank Select		MIDI Program Change#	Voice Name
	MSB	LSB		
PIANO				
129	0	0	0	Acoustic Grand Piano
130	0	0	1	Bright Acoustic Piano
131	0	0	2	Electric Grand Piano
132	0	0	3	Honky-tonk Piano
133	0	0	4	Electric Piano 1
134	0	0	5	Electric Piano 2
135	0	0	6	Harpichord
136	0	0	7	Clavi
CHROMATIC				
137	0	0	8	Celesta
138	0	0	9	Glockenspiel
139	0	0	10	Music Box
140	0	0	11	Vibraphone
141	0	0	12	Marimba
142	0	0	13	Xylophone
143	0	0	14	Tubular Bells
144	0	0	15	Dulcimer
ORGAN				
145	0	0	16	Drawbar Organ
146	0	0	17	Percussive Organ
147	0	0	18	Rock Organ
148	0	0	19	Church Organ
149	0	0	20	Reed Organ
150	0	0	21	Accordion
151	0	0	22	Harmonica
152	0	0	23	Tango Accordion
GUITAR				
153	0	0	24	Acoustic Guitar (nylon)
154	0	0	25	Acoustic Guitar (steel)
155	0	0	26	Electric Guitar (jazz)
156	0	0	27	Electric Guitar (clean)
157	0	0	28	Electric Guitar (muted)
158	0	0	29	Overdriven Guitar
159	0	0	30	Distortion Guitar
160	0	0	31	Guitar Harmonics
BASS				
161	0	0	32	Acoustic Bass
162	0	0	33	Electric Bass (finger)
163	0	0	34	Electric Bass (pick)
164	0	0	35	Fretless Bass
165	0	0	36	Slap Bass 1
166	0	0	37	Slap Bass 2
167	0	0	38	Synth Bass 1
168	0	0	39	Synth Bass 2
STRINGS				
169	0	0	40	Violin
170	0	0	41	Viola
171	0	0	42	Cello
172	0	0	43	Contrabass
173	0	0	44	Tremolo Strings
174	0	0	45	Pizzicato Strings
175	0	0	46	Orchestral Harp
176	0	0	47	Timpani
ENSEMBLE				
177	0	0	48	Strings Ensemble 1
178	0	0	49	Strings Ensemble 2
179	0	0	50	Synth Strings 1

Voice #	Bank Select		MIDI Program Change#	Voice Name
	MSB	LSB		
180	0	0	51	Synth Strings 2
181	0	0	52	Choir Aahs
182	0	0	53	Voice Oohs
183	0	0	54	Synth Voice
184	0	0	55	Orchestra Hit
BRASS				
185	0	0	56	Trumpet
186	0	0	57	Trombone
187	0	0	58	Tuba
188	0	0	59	Muted Trumpet
189	0	0	60	French Horn
190	0	0	61	Brass Section
191	0	0	62	Synth Brass 1
192	0	0	63	Synth Brass 2
REED				
193	0	0	64	Soprano Sax
194	0	0	65	Alto Sax
195	0	0	66	Tenor Sax
196	0	0	67	Baritone Sax
197	0	0	68	Oboe
198	0	0	69	English Horn
199	0	0	70	Bassoon
200	0	0	71	Clarinet
PIPE				
201	0	0	72	Piccolo
202	0	0	73	Flute
203	0	0	74	Recorder
204	0	0	75	Pan Flute
205	0	0	76	Blown Bottle
206	0	0	77	Shakuhachi
207	0	0	78	Whistle
208	0	0	79	Ocarina
SYNTH LEAD				
209	0	0	80	Lead 1 (square)
210	0	0	81	Lead 2 (sawtooth)
211	0	0	82	Lead 3 (calliope)
212	0	0	83	Lead 4 (chiff)
213	0	0	84	Lead 5 (charang)
214	0	0	85	Lead 6 (voice)
215	0	0	86	Lead 7 (fifth)
216	0	0	87	Lead 8 (bass+Lead)
SYNTH PAD				
217	0	0	88	Pad 1 (new age)
218	0	0	89	Pad 2 (warm)
219	0	0	90	Pad 3 (polysynth)
220	0	0	91	Pad 4 (choir)
221	0	0	92	Pad 5 (bowed)
222	0	0	93	Pad 6 (metallic)
223	0	0	94	Pad 7 (halo)
224	0	0	95	Pad 8 (sweep)
SYNTH EFFECTS				
225	0	0	96	FX 1 (rain)
226	0	0	97	FX 2 (soundtrack)
227	0	0	98	FX 3 (crystal)
228	0	0	99	FX 4 (atmosphere)
229	0	0	100	FX 5 (brightness)
230	0	0	101	FX 6 (goblins)
231	0	0	102	FX 7 (echoes)
232	0	0	103	FX 8 (sci-fi)

Voice #	Bank Select		MIDI Program Change#	Voice Name
	MSB	LSB		
ETHNIC				
233	0	0	104	Sitar
234	0	0	105	Banjo
235	0	0	106	Shamisen
236	0	0	107	Koto
237	0	0	108	Kalimba
238	0	0	109	Bagpipe
239	0	0	110	Fiddle
240	0	0	111	Shanai
PERCUSSIVE				
241	0	0	112	Tinkle Bell
242	0	0	113	Agogo
243	0	0	114	Steel Drums
244	0	0	115	Woodblock
245	0	0	116	Taiko Drum
246	0	0	117	Melodic Tom
247	0	0	118	Synth Drum
248	0	0	119	Reverse Cymbal
SOUND EFFECTS				
249	0	0	120	Guitar Fret Noise
250	0	0	121	Breath Noise
251	0	0	122	Seashore
252	0	0	123	Bird Tweet
253	0	0	124	Telephone Ring
254	0	0	125	Helicopter
255	0	0	126	Applause
256	0	0	127	Gunshot
PERCUSSION KIT				
-	127	0	0	Standard Kit 1
-	127	0	1	Standard Kit 2
-	127	0	8	Room Kit
-	127	0	16	Rock Kit
-	127	0	24	Electronic Kit
-	127	0	25	Analog Kit
-	127	0	27	Dance Kit
-	127	0	32	Jazz Kit
-	127	0	40	Bursh Kit
-	127	0	48	Classic Kit

Voice List

● DJ Voice List

No.1 DJ_Kit

Note #	Key #	MIDI		Prg #	Category Name	Voice Name
		Bank Select				
		MSB	LSB			
036 – 047	C1 – B1	0	123	118	Drum Loop	Drum Loop
048 – 059	C2 – B2	0	123	118	Scratch	Scratch (L) – (H)
060	C3	0	123	118	Human Voice	Uhh+Hit
061	C#3	0	123	118	Talking Voice	One
062	D3	0	123	118	Human Voice	One More Time
063	D#3	0	123	118	Talking Voice	Two
064	E3	0	123	118	Human Voice	Ohh 2
065	F3	0	123	118	Human Voice	Ohh 1
066	F#3	0	123	118	Talking Voice	Three
067	G3	0	123	118	Human Voice	Yo-Kurt
068	G#3	0	123	118	Talking Voice	Four
069	A3	0	123	118	Human Voice	Whew!
070	A#3	0	123	118	Talking Voice	Ok
071	B3	0	123	118	Human Voice	Huh!
072	C4	0	123	118	SFX	Turntable
073	C#4	0	123	118	Talking Voice	Off
074	D4	0	123	118	SFX	Signal
075	D#4	0	123	118	Talking Voice	Lesson
076	E4	0	123	118	SFX	Reverse
077	F4	0	123	118	SFX	Omen-FX
078	F#4	0	123	118	Talking Voice	DJ!
079	G4	0	123	118	SFX	FMTB2
080	G#4	0	123	118	Talking Voice	Pinpon
081	A4	0	123	118	SFX	BLJ Trill
082	A#4	0	123	118	Talking Voice	Good
083	B4	0	123	118	SFX	FMTB1
084	C5	0	123	118	Human Voice	Yeah...
085	C#5	0	123	118	Talking Voice	Very Good
086	D5	0	123	118	Human Voice	Uhh
087	D#5	0	123	118	Talking Voice	Excellent
088	E5	0	123	118	Human Voice	Go!!
089	F5	0	123	118	Human Voice	GetUp!
090	F#5	0	123	118	Talking Voice	Dictionary
091	G5	0	123	118	Human Voice	Come On 2
092	G#5	0	123	118	Standard Kit 1	Hand Clap
093	A5	0	123	118	Human Voice	Come On 1
094	A#5	0	123	118	Standard Kit 1	Bell Tree
095	B5	0	123	118	Scratch	Scratch (L)
096	C6	0	123	118	Scratch	Scratch (H)

DJ game No.	Song No.	MSB	LSB	PC#	Block1(F1)	Block2(F2)	Block3(F3)	Block4(F4)
1	091	0	123	118	DJ_Kit	–	–	–
2	092	0	123	119	Yo-Kurt	Come On 1	Clap	Scratch (L)
3	093	0	123	120	Kick	Snare	Hi-hat	hat open
4	094	0	123	121	Saw Lead (G2)	Saw Lead (A2)	Saw Lead (C3)	Saw Lead (D3)
5	095	0	123	122	Kick	Clap	Ohh 2	Huh!
6	096	0	123	123	Piano F	Piano G	Orch. Hit	Clap
7	097	0	123	124	Signal	Omen-FX	FMTB2	FMTB1
8	098	0	123	125	Organ (E4)	Organ (F4)	Organ (G4)	Organ (C5)
9	099	0	123	126	Guitar (E2)	Guitar (G2)	Guitar (A2)	Guitar (C3)
10	100	0	123	127	Scratch (L)	Scratch (H)	Yo-Kurt	GetUp!



Style List

Serial No.	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
16BEAT	
008	16Beat Shuffle 1
009	16Beat Shuffle 2
010	16Beat Pop
011	Funk 1
BALLAD	
012	8Beat Ballad
013	Epic Ballad
014	Piano Ballad
015	16Beat Ballad 1
016	16Beat Ballad 2
017	Soul Ballad
018	Slow Rock 1
019	Slow Rock 2
020	6/8 Ballad 1
DANCE	
021	Hip House
022	Pop Reggae
023	Ragga
024	Digital Rock
025	Supabad
026	Flares
027	All That
028	Hard Step
029	Acid Techno
030	Acid House
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 1
040	Twist
RHYTHM & BLUES	
041	R&B
042	Funk 2
043	Soul
044	Gospel Shuffle
045	6/8 Gospel
046	4/4 Blues

Serial No.	Style Name
JAZZ	
047	Cool Jazz
048	Jazz Ballad 1
049	Jazz Waltz 1
050	Fusion
051	Swing 1
052	Big Band Swing
053	Big Band Ballad
054	Jazz Quartet
055	Dixieland
COUNTRY & WESTERN	
056	Bluegrass
057	Country 2/4
058	Country Rock
059	Country Ballad
060	Country Shuffle
061	Country Waltz
BALLROOM	
062	Cha Cha
063	Rhumba
064	Pasodoble
065	Tango Continental
066	Foxtrot
067	Jive
MARCH & WALTZ	
068	March 1
069	March 2
070	6/8 March
071	Polka
072	Standard Waltz
073	German Waltz
074	Viennese Waltz
075	Musette Waltz
LATIN	
076	Bossa Nova 1
077	Bossa Nova 2
078	Salsa
079	Samba
080	Mambo
081	Beguine
082	Merengue
083	Bolero Lento
CARIBBEAN	
084	Reggae 12
085	Swing Reggae
PIANIST	
086	Stride
087	Boogie 2
088	Swing 2
089	8Beat 1
090	Ballad1
091	Ballad2
092	6/8Ballad 2
093	Rock-A-Ballad
094	8Beat 2
095	Ragtime
096	Bossa Nova 3
097	Jazz Ballad 2
098	Jazz Waltz 2
099	Waltz
100	Happy



Drum Kit List

- " " indicates that the drum sound is the same as "Standard Kit 1".
- " " indicates that in the column on the immediate left.
- Each percussion voice uses one note.
- The MIDI Note # and Note are actually one octave lower than listed. For example, in "119: 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#		119		120		121		122		123		124		125	
Bank MSB#		127		127		127		127		127		127		127	
Bank LSB#		0		0		0		0		0		0		0	
Program Change#		0		1		8		16		24		25		27	
Keyboard		MIDI		Key off	Alternate assign	Standard Kit 1	Standard Kit 2	Room Kit	Rock Kit	Electronic Kit	Analog Kit	Dance 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	SD Elec H2	SD Analog 2			
44	G# 1	32	G# 0			Sticks									
45	A 1	33	A 0			Bass Drum L	Bass Drum L2			Bass Drum H	Bass Drum H	BD Analog 2			
46	A# 1	34	A# 0			Open Rim Shot	Open Rim Shot2					SD Analog Open Rim			
47	B 1	35	B 0			Bass Drum M			Bass Drum H3	BD Rock	BD Analog 1L	BD Analog 3			
48	C 2	36	C 1			Bass Drum H	Bass Drum H 2		BD Rock	BD Rock 2	BD Analog 1H	BD Analog 4			
49	C# 2	37	C# 1			Side Stick					Analog Side Stick				
50	D 2	38	D 1			Snare L	Snare L2	SD Room L	SD Rock	SD Elec M	SD Analog 1H	SD Analog 3			
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	SD Analog 1L	SD Analog 4			
53	F 2	41	F 1			Floor Tom L		Room Tom 1	Rock Tom 1	E Tom 1	Analog Tom 1				
54	F# 2	42	F# 1	1		Hi-Hat Closed					Analog HH Closed1	Dance HH Closed1			
55	G 2	43	G 1			Floor Tom H		Room Tom 2	Rock Tom 2	E Tom 2	Analog Tom 2				
56	G# 2	44	G# 1	1		Hi-Hat Pedal					Analog HH Closed2	Dance HH Closed2			
57	A 2	45	A 1			Low Tom		Room Tom 3	Rock Tom 3	E Tom 3	Analog Tom 3				
58	A# 2	46	A# 1	1		Hi-Hat Open					Analog HH 1 Open	HH Open2			
59	B 2	47	B 1			Mid Tom L		Room Tom 4	Rock Tom 4	E Tom 4	Analog Tom 4				
60	C 3	48	C 2			Mid Tom H		Room Tom 5	Rock Tom 5	E Tom 5	Analog Tom 5				
61	C# 3	49	C# 2			Crash Cymbal 1					Analog Cymbal				
62	D 3	50	D 2			High Tom		Room Tom 6	Rock Tom 6	E Tom 6	Analog 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					Analog 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					Analog Conga H				
75	D# 4	63	D# 3			Conga H Open					Analog Conga M				
76	E 4	64	E 3			Conga L					Analog 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					Analog 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					Analog 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			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									

Drum Kit List

Voice#		119		126		127		128	
Bank MSB#		127		127		127		127	
Bank LSB#		0		0		0		0	
Program Change#		0		32		40		48	
Keyboard	MIDI		Key off	Alternate assign	Standard Kit 1	Jazz Kit	Brush Kit	Symphony 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			
41	F 1	29	F 0	O		Snare Roll			
42	F# 1	30	F# 0			Castanet			
43	G 1	31	G 0			Snare H Soft		Brush Slap L	
44	G# 1	32	G# 0			Sticks			
45	A 1	33	A 0			Bass Drum L			Bass Drum L3
46	A# 1	34	A# 0			Open Rim Shot			
47	B 1	35	B 0			Bass Drum M			Gran Cassa
48	C 2	36	C 1			Bass Drum H	BD Jazz		Gran Cassa Mute
49	C# 2	37	C# 1			Side Stick			
50	D 2	38	D 1			Snare L	SD Jazz L	Brush Slap H	Marching SD M
51	D# 2	39	D# 1			Hand Clap			
52	E 2	40	E 1			Snare H Hard	SD Jazz H	Brush Tap	Marching SD H
53	F 2	41	F 1			Floor Tom L	Jazz Tom 1	Brush Tom 1	Jazz Tom 1
54	F# 2	42	F# 1	1		Hi-Hat Closed			
55	G 2	43	G 1			Floor Tom H	Jazz Tom 2	Brush Tom 2	Jazz Tom 2
56	G# 2	44	G# 1	1		Hi-Hat Pedal			
57	A 2	45	A 1			Low Tom	Jazz Tom 3	Brush Tom 3	Jazz Tom 3
58	A# 2	46	A# 1	1		Hi-Hat Open			
59	B 2	47	B 1			Mid Tom L	Jazz Tom 4	Brush Tom 4	Jazz Tom 4
60	C 3	48	C 2			Mid Tom H	Jazz Tom 5	Brush Tom 5	Jazz Tom 5
61	C# 3	49	C# 2			Crash Cymbal 1			Hand Cym.L Open
62	D 3	50	D 2			High Tom	Jazz Tom 6	Brush Tom 6	Jazz Tom 6
63	D# 3	51	D# 2			Ride Cymbal 1			Hand Cym. L Closed
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			Hand Cym. H Open
70	A# 3	58	A# 2			Vibraslap			
71	B 3	59	B 2			Ride Cymbal 2			Hand Cym. H Closed
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			
91	G 5	79	G 4			Cuica Open			
92	G# 5	80	G# 4			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			



MIDI Implementation Chart

YAMAHA [Portable Keyboard]
 Model PSR-280 MIDI Implementation Chart

Date:26-JAN-2000
 Version : 1.0

Function...	Transmitted	Recognized	Remarks
Basic Default Channel 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 Key's Touch Ch's	x x	x x	
Pitch Bend	x	o	
Control Change	0,32 o 1 x *2 6,38 x *2 7 o 10 x 11 x *2 64 o 84 x *2 91,93,94 x 96,97 x 100,101 x *2	o o o o o o o o o o	Bank Select Modulation wheel Data Entry Part Volume Pan Expression Sustain Portamento Cntrl Effect Depth RPN Inc,Dec RPN LSB,MSB
Prog Change : True #	o 0 - 127 *****	o 0 - 127	
System Exclusive	o *3	o *3	
: Song Pos. Common : Song Sel. : Tune	x x x	x x x	
System :Clock Real Time:Commands	o o *4	o o *4	
Aux :All Sound OFF :Reset All Cntrls :Local ON/OFF :All Notes OFF Mes- :Active Sense sages:Reset	x x x x o x	o(120,126,127) o(121) x o(123-125) o x	

Mode 1 : OMNI ON , POLY
 Mode 3 : OMNI OFF, POLY

Mode 2 : OMNI ON ,MONO
 Mode 4 : OMNI OFF,MONO

o : Yes
 x : No

NOTE:

- *1 By default (factory settings) the PSR-280 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.
- *2 Messages for these control change numbers cannot be transmitted from the PSR-280 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, II, 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 "II" are ignored.)
- <MIDI Master Tuning> F0H, 43H, 1nH, 27H, 30H, 00H, 00H, mm, II, cc, F7H
- This message simultaneously changes the tuning value of all channels.
 - The values of "mm" and "II" are used for MIDI Master Tuning.
 - The default value of "mm" and "II" 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 and Registration Memory).
 - These messages control the clock setting for the accompaniment.
- <Reverb Type> F0H, 43H, 1nH, 4CH, 02H, 01H, 00H, mmH, IIH, F7H
- mm : Reverb Type MSB
 - II : Reverb Type LSB
- Refer to the Effect Map (page 86) for details.
- <Chorus Type> F0H, 43H, 1nH, 4CH, 02H, 01H, 20H, mmH, IIH, F7H
- mm : Chorus Type MSB
 - II : Chorus Type LSB
- Refer to the Effect Map (page 86) for details.
- <DSP Type> F0H, 43H, 1nH, 4CH, 02H, 01H, 40H, mmH, IIH, F7H
- mm : DSP Type MSB
 - II : DSP Type LSB
- Refer to the Effect Map (page 86) for details.
- <DRY Level> F0H, 43H, 1nH, 4CH, 08H, 0mH, 11H, IIH, F7H
- II : Dry Level
 - 0m : Channel Number
- *4 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.

MIDI Implementation Chart

■ Effect map

- * If the received value does not contain an effect type in the TYPE LSB, the LSB will be directed to TYPE 0.
- * The numbers in parentheses in front of the Effect Type names correspond to the number indicated in the display..
- * 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-280 panel itself. When one of the effects is selected by the external sequencer, “ - ” will be shown on the display.

● REVERB

TYPE MSB	TYPE LSB								
	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 MSB	TYPE LSB								
	00	01	02	08	16	17	18	19	20
000...064	No Effect								
065	Chorus		Chorus2						
066	Celeste					Chorus1			
067	Flanger			Flanger1		Flanger2			
068...127	No Effect								

● DSP

TYPE MSB	TYPE LSB								
	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	(30)Karaoke								
021...064	No Effect								
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	(33)Overdrive								
075	(34)Amp Simulation				(31)Distortion Hard	(32)Distortion Soft			
076	(36)3Band EQ					(35)EQ Telephone			
077	(37)2Band EQ								
078	Auto Wah				(25)Auto Wah				
079...127	No Effect								



Specifications

Keyboards

- 61 standard-size keys (C1 - C6), with Touch Response and Dynamic Filter.

Display

- Large multi-function LCD display (backlit)

Setup

- STANDBY/ON
- MASTER VOLUME : MIN - MAX

Panel Controls

- OVERALL (L, R), SONG, VOICE, STYLE, PORTABLE GRAND, DJ, METRONOME, [0]-[9], [+] (YES), [-] (NO), DEMO, TOUCH, HARMONY, Dict., L, R, TEMPO/TAP

Voice

- 118 panel voices + 10 Drum Kits + 128 GM Voices
- Polyphony : 32
- Voice Set

Auto Accompaniment

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

Yamaha Educational Suite

- Dictionary
- Lesson 1-4

One Touch Setting

- Voice (for each style or song)

Overall controls

- Transpose
- Tuning
- Accompaniment Volume
- Song Volume
- Metronome Volume
- MIDI
- Reverb
- DSP
- Harmony
- Grade
- Talking

Effects

- Reverb : 8 types
- DSP : 37 types
- Harmony : 26 types

Song

- 100 Songs + 5 User Songs
- Song Clear, Track Clear

Recording

- Song
 - User Song : 5 Songs
 - Real Time Recording
 - Recording Tracks : 1, 2, 3, 4, 5, CHORD

MIDI

- Clock
- Bulk Send/Receive
- Initial Send

Auxiliary jacks

- PHONES/OUTPUT, DC IN 10-12V, MIDI IN/OUT, SUSTAIN

Amplifier

- 3.0W + 3.0W

Speakers

- 12cm x 2 + 3cm x 2

Power Consumption

- 15 W (when using PA-3B power adaptor)

Power Supply

- Adaptor : Yamaha PA-3B AC power adaptor
- Batteries : Six "D" size, SUM-1, R-20 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
- Song Book

Optional Accessories

- Headphones : HPE-150
 - AC power adaptor : PA-3B
 - Footswitch : FC4, FC5
 - Keyboard stand : L-2L, L-2C
-

* 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.



Index

Misc.

+/- buttons 24

A

AC adaptor 8

accessory jacks 9

accompaniment sections 40

Accompaniment Split Point 44

Accompaniment Volume 41

accompaniment, playing 35

auto accompaniment 35

B

Bank 48

batteries 8

beat display 50

beat marks 50

Bulk Dump Send 71

C

chord names 47

chord track 56

chord type 45

chords, about 46

chords, Fingered 42

chords, Single Finger 42

clearing, song 58

clock (MIDI) 70

D

DEMO button 12

Demo songs 12

Dictionary 45

DJ 22

Drum Kit Voice Chart 82

DSP 30

DSP types 32

E

effects 29

Ending 35

external clock (MIDI) 70

F

Fill-in 40

Fingered chords 42

footswitch 9

G

GM (General MIDI) voices 78

Grade 65

H

Harmony 31

HARMONY button 31

Harmony types 33

headphones 9

I

Indicator 18

Initial Setup Send 73

Initialization 76

internal clock (MIDI) 70

Intro 36

L

Lesson 60

loading bulk data 72

M

Main A/B 40

Metronome 20

MIDI 67

MIDI channels 68

MIDI Implementation Chart 84

MIDI terminals 68

Multi Fingered 42

music stand 19

N

numeric keypad 24

O

One Touch Setting 25

Overall buttons 21

P

PHONES/OUTPUT jack 7

Portable Grand 20

Q

Quick Guide 10

R

RECORD button 56

recording, song 55

Registration Memory 48

Reverb 29

Reverb types 32

root 46

S

saving bulk data 71

sections (accompaniment) 40

Single Finger chords 42

Song Clear 58

SONG MEMORY 56

song recording 55

Song Volume 54

songs, recording 55

songs, selecting and playing 50

Specifications 87

Split Point 44

styles, selecting 34

sustain 9

Sync Start 36

Sync Stop 39

T

Talking 66

Tap 36

Tempo (song) 53

Tempo (style) 40

Time Signature 21

TOUCH button 28

Touch Sensitivity 28

track (song) 56

tracks, muting 56

Transpose 26

Troubleshooting 75

Tuning 27

U

User songs 56

V

Voice List 77

voices, Drum Kit 82

voices, GM 78

voices, selecting and playing 23

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:

PSR SERIES OF PORTATONE ELECTRONIC KEYBOARDS

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!

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.

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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

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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: 1-371-7021

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Torre Banco General, Piso 7, Urbanización Marbella,
Calle 47 y Aquilino de la Guardia,
Ciudad de Panamá, Panamá
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Yamaha-Kemble Music (U.K.) Ltd.
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MK7 8BL, England
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Tel: 01-60203900

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Division Claviers
BP 70-77312 Marne-la-Vallée Cedex 2, France
Tel: 01-64-61-4000

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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.
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Philippe Nakas S.A.
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Tel: 01-364-7111

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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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Norsk filial av Yamaha Scandinavia AB
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N-1345 Østerås, Norway
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10F, 150, Tun-Hwa Northroad,
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121/60-61 RS Tower 17th Floor,
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NEW ZEALAND

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146/148 Captain Springs Road, Te Papapa,
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