



Electronic Piano

P-70/P-70S

Owner's Manual
Bedienungsanleitung
Mode d'emploi
Manual de instrucciones

ENGLISH

DEUTSCH

FRANÇAIS

ESPAÑOL

EN
DE
FR
ES

SPECIAL MESSAGE SECTION

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

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

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

SPECIFICATIONS SUBJECT TO CHANGE:

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

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

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

Some Yamaha products may have benches and / or accessory mounting fixtures that are either supplied with the product or as optional accessories. Some of these items are designed to be dealer assembled or installed. Please make sure that benches are stable and any optional fixtures (where applicable) are well secured BEFORE using.

Benches supplied by Yamaha are designed for seating only. No other uses are recommended.

NOTICE:

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

ENVIRONMENTAL ISSUES:

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

Battery Notice:

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

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

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

Warning:

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

Disposal Notice:

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

NAME PLATE LOCATION:

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

Model

Serial No.

Purchase Date

PLEASE KEEP THIS MANUAL

92-BP (bottom)

IMPORTANT SAFETY INSTRUCTIONS

INFORMATION RELATING TO PERSONAL INJURY, ELECTRICAL SHOCK, AND FIRE HAZARD POSSIBILITIES HAS BEEN INCLUDED IN THIS LIST.

WARNING- When using any electrical or electronic product, basic precautions should always be followed. These precautions include, but are not limited to, the following:

1. Read all Safety Instructions, Installation Instructions, Special Message Section items, and any Assembly Instructions found in this manual BEFORE making any connections, including connection to the main supply.
2. **Main Power Supply Verification:** Yamaha products are manufactured specifically for the supply voltage in the area where they are to be sold. If you should move, or if any doubt exists about the supply voltage in your area, please contact your dealer for supply voltage verification and (if applicable) instructions. The required supply voltage is printed on the name plate. For name plate location, please refer to the graphic found in the Special Message Section of this manual.
3. This product may be equipped with a polarized plug (one blade wider than the other). If you are unable to insert the plug into the outlet, turn the plug over and try again. If the problem persists, contact an electrician to have the obsolete outlet replaced. Do NOT defeat the safety purpose of the plug.
4. Some electronic products utilize external power supplies or adapters. Do NOT connect this type of product to any power supply or adapter other than one described in the owners manual, on the name plate, or specifically recommended by Yamaha.
5. **WARNING:** Do not place this product or any other objects on the power cord or place it in a position where anyone could walk on, trip over, or roll anything over power or connecting cords of any kind. The use of an extension cord is not recommended! If you must use an extension cord, the minimum wire size for a 25' cord (or less) is 18 AWG. NOTE: The smaller the AWG number, the larger the current handling capacity. For longer extension cords, consult a local electrician.
6. **Ventilation:** Electronic products, unless specifically designed for enclosed installations, should be placed in locations that do not interfere with proper ventilation. If instructions for enclosed installations are not provided, it must be assumed that unobstructed ventilation is required.
7. **Temperature considerations:** Electronic products should be installed in locations that do not significantly contribute to their operating temperature. Placement of this product close to heat sources such as; radiators, heat registers and other devices that produce heat should be avoided.
8. This product was NOT designed for use in wet/damp locations and should not be used near water or exposed to rain. Examples of wet/damp locations are; near a swimming pool, spa, tub, sink, or wet basement.
9. This product should be used only with the components supplied or; a cart, rack, or stand that is recommended by the manufacturer. If a cart, rack, or stand is used, please observe all safety markings and instructions that accompany the accessory product.
10. The power supply cord (plug) should be disconnected from the outlet when electronic products are to be left unused for extended periods of time. Cords should also be disconnected when there is a high probability of lightning and/or electrical storm activity.
11. Care should be taken that objects do not fall and liquids are not spilled into the enclosure through any openings that may exist.
12. Electrical/electronic products should be serviced by a qualified service person when:
 - a. The power supply cord has been damaged; or
 - b. Objects have fallen, been inserted, or liquids have been spilled into the enclosure through openings; or
 - c. The product has been exposed to rain; or
 - d. The product does not operate, exhibits a marked change in performance; or
 - e. The product has been dropped, or the enclosure of the product has been damaged.
13. Do not attempt to service this product beyond that described in the user-maintenance instructions. All other servicing should be referred to qualified service personnel.
14. 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 a long period 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.
15. Some Yamaha products may have benches and/or accessory mounting fixtures that are either supplied as a part of the product or as optional accessories. Some of these items are designed to be dealer assembled or installed. Please make sure that benches are stable and any optional fixtures (where applicable) are well secured BEFORE using. Benches supplied by Yamaha are designed for seating only. No other uses are recommended.

PLEASE KEEP THIS MANUAL

PRECAUTIONS

PLEASE READ CAREFULLY BEFORE PROCEEDING

* Please keep this manual 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:

Power supply/AC power adaptor

- Only use the voltage specified as correct for the instrument. The required voltage is printed on the name plate of the instrument.
- Use the specified adaptor (PA-5D or an equivalent recommended by Yamaha) only. Using the wrong adaptor can result in damage to the instrument or overheating.
- Check the electric plug periodically and remove any dirt or dust which may have accumulated on it.
- 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.

Do not open

- 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.

Water warning

- 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.
- Never insert or remove an electric plug with wet hands.

Fire warning

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

If you notice any abnormality

- 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.



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:

Power supply/AC power adaptor

- When removing the electric plug from the instrument or an outlet, always hold the plug itself and not the cord.
- Unplug the AC power adaptor when not using the instrument, or during electrical storms.
- 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.

Location

- 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 discoloration or damage to the internal components.
- Do not use the instrument in the vicinity of a TV, radio, stereo equipment, mobile phone, or other electric devices. Otherwise, the instrument, TV, or radio may generate noise.

- 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 setting up the instrument, make sure that the AC outlet you are using is easily accessible. If some trouble or malfunction occurs, immediately turn off the power switch and disconnect the plug from the outlet.
- 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.

Connections

- 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.

Maintenance

- When cleaning the instrument, use a soft, dry cloth. Do not use paint thinners, solvents, cleaning fluids, or chemical-impregnated wiping cloths.

Handling caution

- Do not insert a finger or hand in any gaps on the instrument.
- Never insert or drop paper, metallic, or other objects into the gaps on the panel or keyboard. If this happens, turn off the power immediately and unplug the power cord from the AC outlet. Then have the instrument inspected by qualified Yamaha service personnel.
- 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.
- 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.

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.

Even when the instrument turns the power off, electricity is still flowing to the instrument at the minimum level. When you are not using the instrument for a long time, make sure you unplug the AC power adaptor from the wall AC outlet.

Introduction

Thank you for purchasing the Yamaha Electronic Piano P-70/P-70S!

*We recommend that you read this manual carefully
so that you can fully take advantage of the advanced and
convenient functions of the P-70/P-70S.*

*We also recommend that you keep this manual in a safe and
handy place for future reference.*

Main Features

■ Graded Hammer Standard Keyboard

Thanks to our experience as the world's leading manufacturer of acoustic pianos, we've developed a keyboard with action that's virtually indistinguishable from the real thing. Just as on a traditional acoustic piano, the keys of the lower notes have a heavier touch, while the higher ones are more responsive to lighter playing. The keyboard's sensitivity can even be adjusted to match your playing style. This Graded Hammer technology also enables the P-70 to provide authentic touch in a lightweight instrument.

■ AWM Stereo Sampling

The Yamaha P-70 electronic piano offers unmatched sonic realism and natural grand-piano type playability as well as Yamaha's original "AWM Stereo Sampling" tone-generation technology for rich, musical voices.

In particular, the Grand Piano 1 and 2 voices feature samples painstakingly recorded from a full concert grand piano, while the Electric Piano 1 and 2 voice features multiple samples for different velocities (Dynamic Sampling); in other words, it uses different samples depending on the strength of your playing.

About this Owner's Manual

This manual consists of three main sections: Introduction, Reference and Appendix.

■ **Introduction (page 6):**

Please read this section first.

■ **Reference (page 13):**

This section explains how to make detailed settings for the P-70's various functions.

■ **Appendix (page 26):**

This section features a variety of essential, detailed information on the instrument.

- * The illustrations as shown in this owner's manual are for instructional purposes only, and may appear somewhat different from those on your instrument.
- * Copying of the commercially available musical data including but not limited to MIDI data and/or audio data is strictly prohibited except for your personal use.
- * For the sake of simplicity, both models P-70 and P-70S are hereafter referred to in this Owner's Manual as P-70.

This product incorporates and bundles computer programs and contents in which Yamaha owns copyrights or with respect to which it has license to use others' copyrights. Such copyrighted materials include, without limitation, all computer software, style files, MIDI files, WAVE data, musical scores and sound recordings. Any unauthorized use of such programs and contents outside of personal use is not permitted under relevant laws. Any violation of copyright has legal consequences. DON'T MAKE, DISTRIBUTE OR USE ILLEGAL COPIES.

- The company names and product names in this Owner's Manual are the trademarks or registered trademarks of their respective companies.

Accessories

- **Owner's Manual**
This manual contains complete instructions for operating your P-70.
- **Quick Operation Guide**
- **Yamaha PA-5D Power Adaptor ***
- **Pedal (FC5)**
- **Music Rest**

* May not be included depending on your particular area. Please check with your Yamaha dealer.

Table of Contents

Introduction

Main Features.....	6
About this Owner's Manual	7
Accessories	7
Application Index	9
Panel Controls and Terminals.....	10
Before Using the P-70	11
Turning the Power On	11
Setting the Volume.....	11
Using the Pedal.....	12
Using Headphones	12
Music Rest.....	12

Reference

Listening to the Demo Songs	13
Listening to the 50 Piano Preset Songs.....	14
Selecting & Playing Voices.....	15
Selecting Voices	15
Combining Voices (Dual).....	16
Adding Variations to the Sound – Reverb	17
Transposition.....	18
Fine tuning of the Pitch.....	18
Touch Sensitivity	19
Connecting MIDI Instruments	20
Connecting MIDI [IN][OUT] terminals	20
MIDI's Capability	20
Connecting a Personal Computer	21
MIDI Functions	22
MIDI Transmit/Receive Channel Selection	22
Local Control ON/OFF	22
Program Change ON/OFF	23
Control Change ON/OFF	23
Troubleshooting.....	24
Optional Equipment.....	24
Index.....	25

Appendix

Preset Song List.....	26
MIDI Data Format	27
MIDI Implementation Chart	31
Specifications	32

Application Index

Use this index to find reference pages that may be helpful for your particular application and situation.

Listening

Listening to demo songs with different voices..... Listening to the Demo Songs on page 13

Playing

Using the sustain pedal Using the Pedal on page 12

Changing the key of the P-70 to facilitate playing in difficult/unfamiliar key signatures Transposition on page 18

Fine tuning the pitch of the entire instrument when you play the P-70 along with other instruments or CD music
..... Fine tuning of the Pitch on page 18

Selecting a touch sensitivity type..... Touch Sensitivity on page 19

Changing voices

Viewing the list of voices Selecting Voices on page 15

Simulating a concert hall Adding Variations to the Sound – Reverb on page 17

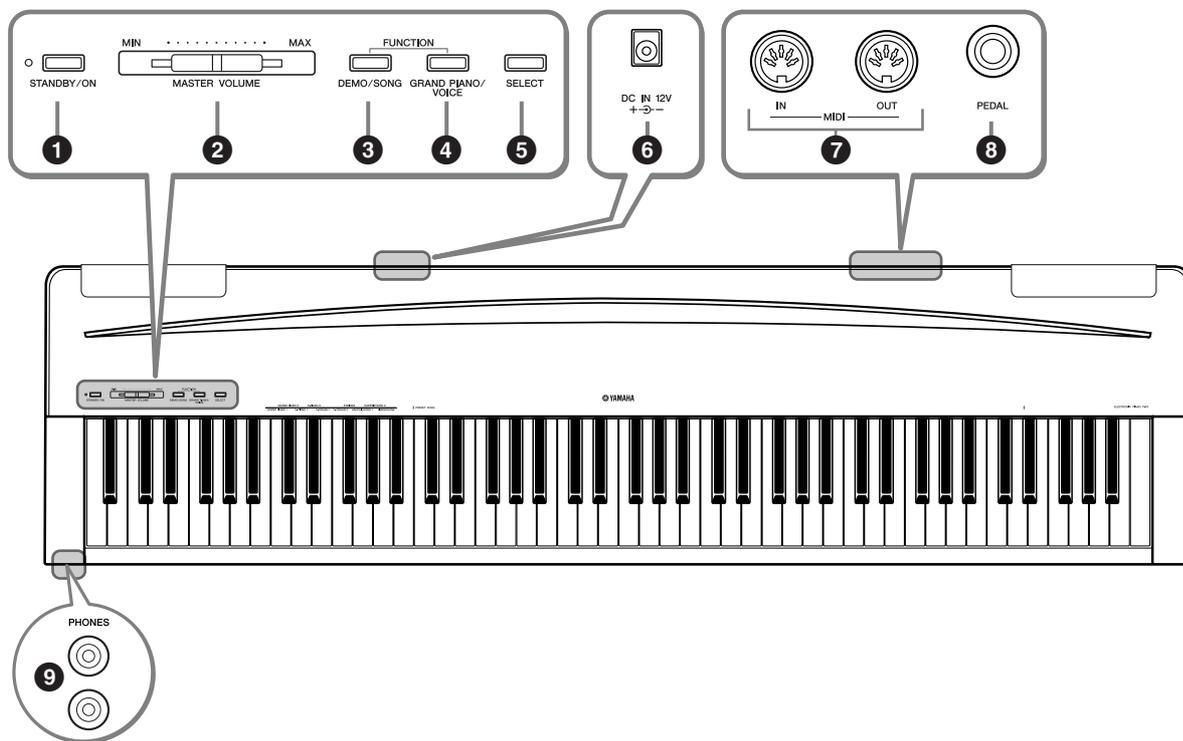
Combining two voices Combining Voices (Dual) on page 16

Connecting the P-70 to other devices

What is MIDI? About MIDI on page 20

Connecting a computer Connecting a Personal Computer on page 21

Panel Controls and Terminals

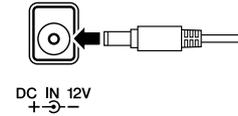


- 1 [STANDBY/ON] switch** page 11
For turning the power on or off.
- 2 [MASTER VOLUME] slider** page 11
For adjusting the volume level of the entire sound.
- 3 [DEMO/SONG] button** page 13, 14
For playing the demo songs and the 50 piano preset songs.
- 4 [GRAND PIANO/VOICE] button**
..... page 15-17, 19
For selecting voices from 10 internal sounds including Grand Piano 1 and 2 (page 15). You can also combine two voices (page 16) or add reverb effects to the selected voice for your keyboard performance (page 17).
- 5 [SELECT] button** pages 13, 14, 15
For selecting a demo song for each voice, or one of the 50 piano preset songs.
- 6 [DC IN 12V] jack**..... page 11
For connecting the included power adaptor (PA-5D).
- 7 MIDI [IN] [OUT] terminals** page 20
For connecting external MIDI devices, allowing the use of various MIDI functions.
- 8 [PEDAL] jack**..... page 12
For connecting an included pedal (FC5), an optional FC3 foot pedal or FC4 foot switch.
- 9 [PHONES] jack**..... page 12
For connecting a set of standard stereo headphones, allowing private practice.

Before Using the P-70

Turning the Power On

1. Connect the PA-5D power adaptor's DC cable to the [DC IN 12V] jack.



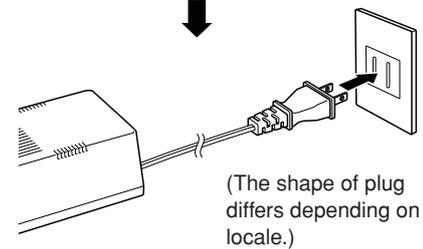
2. Plug the AC adaptor into an AC outlet.

⚠ WARNING

Use ONLY a Yamaha PA-5D 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 P-70.

⚠ CAUTION

Unplug the AC Power Adaptor when not using the P-70, or during electrical storms.



3. Press the [STANDBY/ON] switch to turn the power on.

The power indicator located to the left of the [STANDBY/ON] switch lights up.



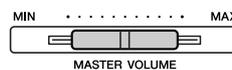
When turning off the power, press and hold down the [STANDBY/ON] switch for a short time until the power turns off. The P-70 uses this power-off procedure as a “safety” device to prevent the power from being inadvertently turned off during performance.

⚠ CAUTION

Even when the instrument is turned off, electricity is still flowing to the instrument at the minimum level. When you are not using the P-70 for a long time, make sure you unplug the AC power adaptor from the wall AC outlet.

Setting the Volume

Initially set the [MASTER VOLUME] slider about halfway between the “MIN” and “MAX” settings. Then, when you start playing, re-adjust the [MASTER VOLUME] slider to the most comfortable listening level.



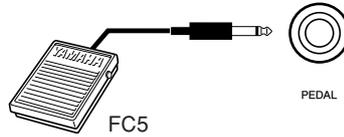
← The level decreases. The level increases. →

TERMINOLOGY

MASTER VOLUME:

The volume level of the entire keyboard sound

Using the Pedal



[PEDAL] jack (Sustain Pedal)

This jack is for connecting the included pedal (FC5).

The pedal functions in the same way as a damper pedal on an acoustic piano. Connect the included pedal (FC5) to this jack and press the pedal to sustain the sound.

An optional FC3 foot pedal or FC4 foot switch can also be connected to this jack.



Make sure that power is OFF when connecting or disconnecting the pedal.

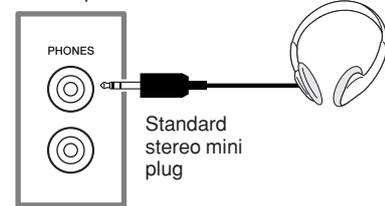
Using Headphones

Connect a set of headphones to one of the [PHONES] jacks.

Two [PHONES] jacks are provided.

You can connect two sets of standard stereo headphones. (If you are using only one set of headphones, you can plug them into either jack.) It can also connect to an amplifier/speaker system.

On front panel

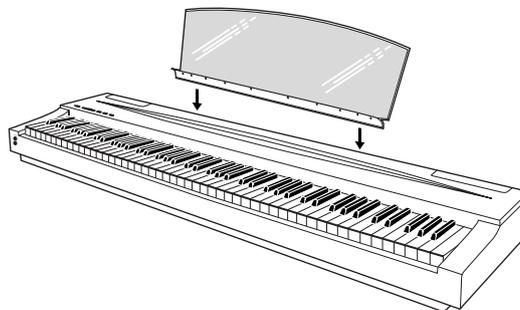


CAUTION

To protect your hearing, avoid listening to the P-70 at a high volume level for long periods of time.

Music Rest

The P-70 includes a music rest that can be attached to the instrument by inserting it into the slot at the top of the control panel.



Listening to the Demo Songs

Demo songs are provided that effectively demonstrate each of the P-70's voices.

1. Press the [STANDBY/ON] switch to turn the power on.

When the power is turned ON, the power indicator located to the left of the [STANDBY/ON] switch lights up.



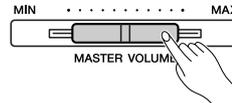
Refer to the voice list on page 15 for more information on the characteristics of each preset voice.



The demo songs will not be transmitted via MIDI.

2. Adjust the volume.

Initially set the [MASTER VOLUME] slider about half way between the "MIN" and "MAX" settings. Then, when you start playing, re-adjust the [MASTER VOLUME] slider to the most comfortable listening level.



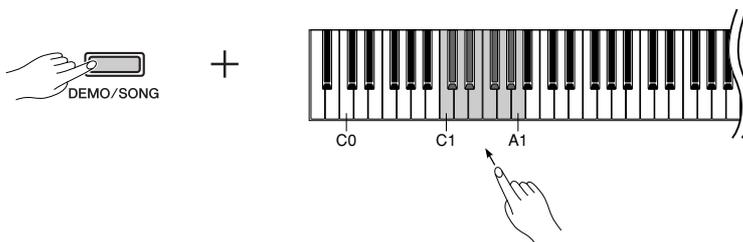
3. Press the [DEMO/SONG] button to listen to the demo songs.

The GRAND PIANO 1 demo song will start. Demo songs provided for each voice and the 50 piano preset songs will play back in sequence until you press the [DEMO/SONG] button.



Changing a Demo Song

You can change to another demo song during playback by pressing the [SELECT] button. For selecting a demo song using the keyboard, press one of the C1–A1 keys while holding down the [DEMO/SONG] button.



Demo Song List

Key	Voice Name	Title	Composer
G1	HARPSICHORD 1	Gavotte	J.S. Bach
G#1	HARPSICHORD 2	Invention No. 1	J.S. Bach

- The demonstration pieces listed above are short rearranged excerpts of the original compositions.
- All other songs are original (© 2005 Yamaha Corporation).

4. Press the [DEMO/SONG] button to stop the voice demo.

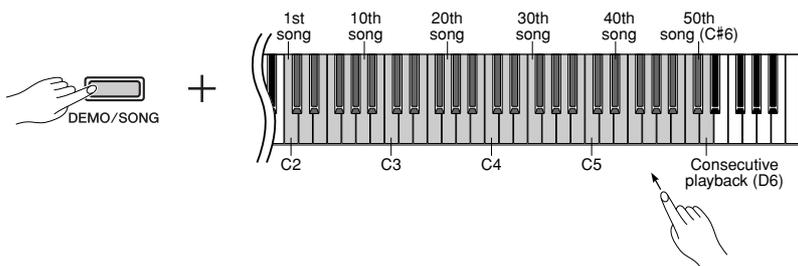


Listening to the 50 Piano Preset Songs

The P-70 provides performance data for 50 piano songs as well as voice demo songs, for your listening pleasure.

1. While holding down the [DEMO/SONG] button, press one of the C2–C#6 keys to select a song to play back.

The number of each piano preset song is assigned to the C2–C#6 keys. While holding down the [DEMO/SONG] button, press the D6 key to play all preset songs consecutively in sequence.



Press the [SELECT] button to change to the next piano song.

2. Press the [DEMO/SONG] button to stop playback.

To continue playing other songs, see step 1 above.



TERMINOLOGY

Song:

On the P-70, performance data is called a "Song." This includes demonstration tunes and piano preset tunes.

Preset:

Preset Data supplied with the internal memory of the P-70 shipped from the factory.



You can play the keyboard along with the preset song. You can change the voice playing on the keyboard.



When you select a different song (or a different song is selected during chained playback), an appropriate reverb type will be selected accordingly.



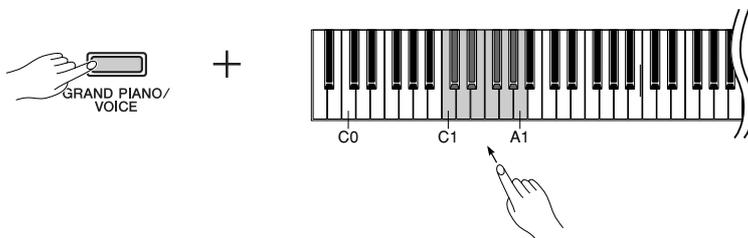
The 50 piano preset songs are not transmitted via MIDI.

Selecting & Playing Voices

Selecting Voices

1. While holding down the [GRAND PIANO/VOICE] button, press one of the C1–A4 keys to select a voice.

Pressing the [SELECT] button switches among the following ten voices.



Key	Voice Name	Description
C1	Grand Piano 1	Recorded samples from a full concert grand piano. Perfect for classical compositions as well as any other style that requires acoustic piano.
C#1	Grand Piano 2	Clear piano with bright reverb. Good for popular music.
D1	E.Piano 1	An electronic piano sound created by FM synthesis. Good for popular music.
D#1	E.Piano 2	The sound of an electric piano using hammer-struck metallic “tines.” Soft tone when played lightly, and an aggressive tone when played hard.
E1	Church Organ 1	This is a typical pipe organ sound (8' + 4' + 2'). Good for sacred music from the Baroque period.
F1	Church Organ 2	This is the organ's full coupler sound, often associated with Bach's "Toccatina and Fugue."
F#1	Strings	Spacious and large-scale string ensemble. Try combining this voice with piano in DUAL.
G1	Harpsichord 1	The definitive instrument for baroque music. Since the strings of a harpsichord are plucked, there is no touch response.
G#1	Harpsichord 2	Mixes the same voice an octave higher for a more brilliant tone.
A1	Vibraphone	The sound of a vibraphone played with relatively soft mallets.



To familiarize yourself with the characteristics of the voices, listen to the demo songs for each voice (page 13).

TERMINOLOGY

Voice:

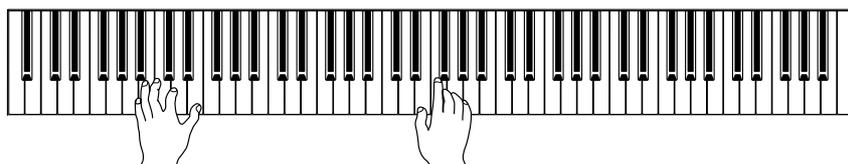
On the P-70, the term “voice” means “instrument sound.”



When you select a voice, an appropriate reverb type will be selected automatically (page 17).

2. Adjust the volume.

Re-adjust the [MASTER VOLUME] slider for the most comfortable listening level during your performance.

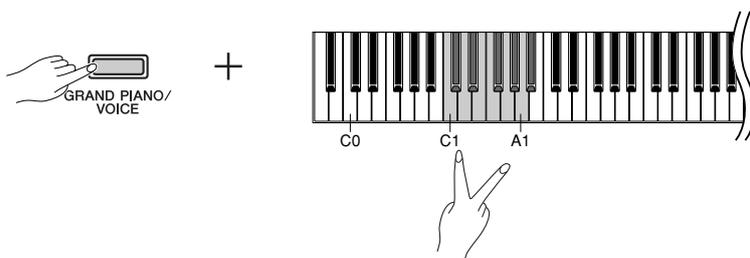


Combining Voices (Dual)

You can play voices simultaneously across the entire range of the keyboard. In this way, you can combine similar voices to create a thicker sound.

1. While holding down the [GRAND PIANO/VOICE] button, press two keys in the range of C1 through A1 simultaneously (or press one key while holding another) to engage Dual.

Refer to “Selecting Voices” on page 15 for more information on the voices that are assigned to the keys.



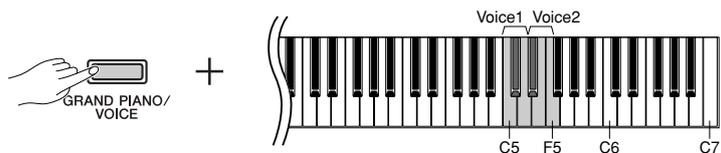
The voice assigned to the lower key will be designated as Voice 1, and the voice assigned to the higher key will be designated as Voice 2.

You can make the following settings for Voices 1 and 2 in Dual:

Setting the Octave

You can shift the pitch up and down in octave steps for Voice 1 and Voice 2 independently. Depending on which voices you combine in Dual, the combination may sound better if one of the voices is shifted up or down an octave.

While holding down the [GRAND PIANO/VOICE] button, press one of the C5–F5 keys.

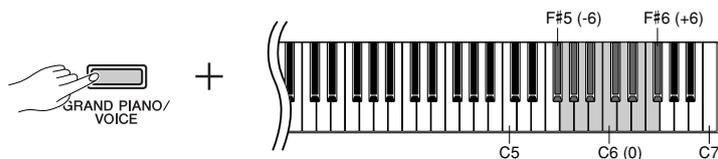


Voice 1	C5	-1	Voice 2	D#5	-1
	C#5	0		E5	0
	D5	+1		F5	+1

Setting the Balance

You can adjust the volume balance between two voices. For example, you can set one voice as the main voice with a louder setting, and make the other voice softer. While holding down the [GRAND PIANO/VOICE] button, press one of the F#5–F#6 keys.

A setting of “0” produces an equal balance between the two Dual voices. Settings below “0” increase the volume of Voice 2 in relation to Voice 1, and settings above “0” increase the volume of Voice 1 in relation to Voice 2.



2. While holding down the [GRAND PIANO/VOICE] button, press one of the C1–A1 keys (or press the [GRAND PIANO/VOICE] button) to exit Dual and return to the normal single-voice play.



Reverb in Dual

The reverb type assigned to Voice 1 will take priority. If the reverb assigned to Voice 1 is set to OFF, the reverb assigned to Voice 2 will be in effect.

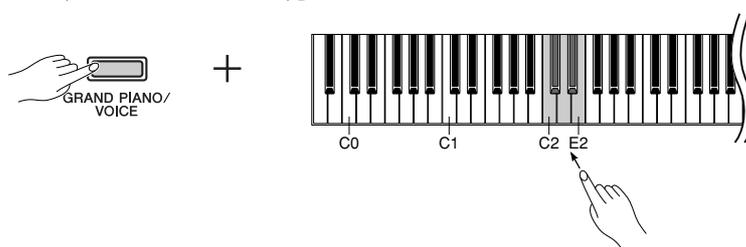
Adding Variations to the Sound – Reverb

This control enables you to select four different types of reverb effect that add extra depth and expression to the sound to create a realistic acoustic ambience.

Key	Reverb Type	Description
C2	Room	This setting adds a continuous reverb effect to the sound, similar to the acoustic reverberation you would hear in a room.
C#2	Hall1	For a “bigger” reverb sound, use the HALL 1 setting. This effect simulates the natural reverberation of a small-size concert hall.
D2	Hall2	For a truly spacious reverb sound, use the HALL 2 setting. This effect simulates the natural reverberation of a large concert hall.
D#2	Stage	Simulates the reverb of a stage environment.
E2	Off	No effect is applied.

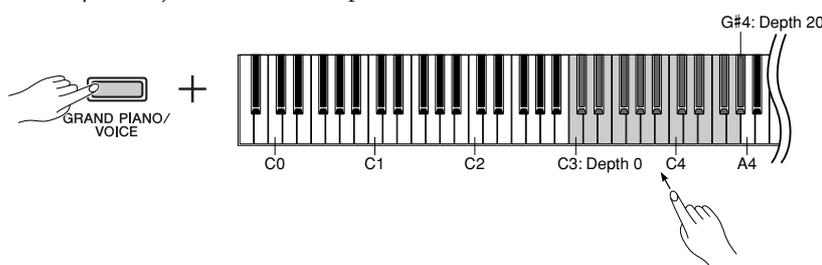
Selecting a Reverb Type

While holding down the [GRAND PIANO/VOICE] button, press one of the C2–E2 keys to select a reverb type.



Adjusting Reverb Depth

While holding down the [GRAND PIANO/VOICE] button, press one of the C3–G#4 keys to adjust the reverb depth for the selected voice.



The depth value increases as you press higher keys.

While holding down the [GRAND PIANO/VOICE] button, press the A4 key to set the reverb to the depth most suitable for the selected voice.



Reverb depth range:
0 (no effect)–
20 (maximum depth)



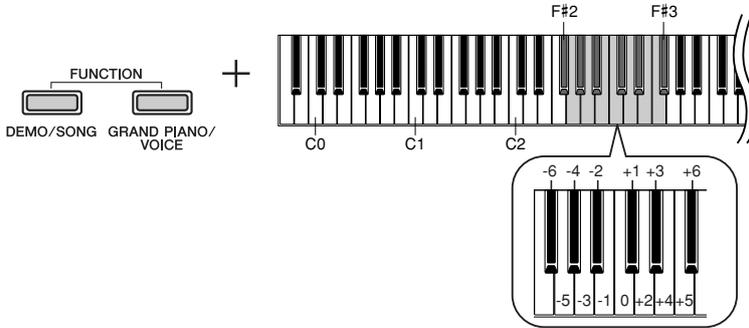
The default reverb type (including OFF) and depth settings are different for each voice.

Transposition

The P-70's Transpose function makes it possible to shift the pitch of the entire keyboard up or down in semitone intervals to facilitate playing in difficult key signatures, and to let you easily match the pitch of the keyboard to the range of a singer or other instruments. For example, if you set the transposition amount to "+5," playing key C produces pitch F. In this way, you can play a song as though it were in C major, and the P-70 will transpose it to the key of F.

Setting the amount of transposition

While holding down the [DEMO/SONG] and [GRAND PIANO/VOICE] buttons, press one of the F#2–F#3 keys to set the desired amount of transposition.



To transpose the pitch down (in semitone steps)

While holding down the [DEMO/SONG] and [GRAND PIANO/VOICE] buttons, press any key between F#2 and B2.

To transpose the pitch up (in semitone steps)

While holding down the [DEMO/SONG] and [GRAND PIANO/VOICE] buttons, press any key between C#3 and F#3.

To restore the normal pitch

While holding down the [DEMO/SONG] and [GRAND PIANO/VOICE] buttons, press the C3 key.

TERMINOLOGY

Transpose:

Changing the key signature. On the P-70, transposing shifts the pitch of the entire keyboard.



Transposition range:

- F#2 (-6 semitones)–
- C3 (normal pitch)–
- F#3 (+6 semitones)

Fine tuning of the Pitch

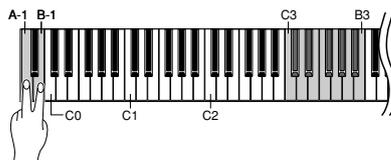
You can fine tune the pitch of the entire instrument. This function is useful when you play the P-70 along with other instruments or CD music.

Setting the Pitch

To raise the pitch

(in steps of roughly 0.2 Hz):

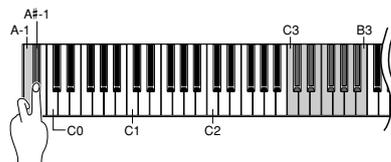
Hold down the A-1 and B-1 keys simultaneously and press any key between C3 and B3.



To lower the pitch

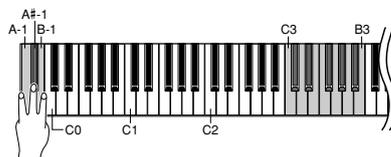
(in steps of roughly 0.2 Hz):

Hold down the A-1 and A#-1 keys simultaneously and press any key between C3 and B3.



To restore standard pitch:

Hold down the A-1, A#-1 and B-1 keys simultaneously and press any key between C3 and B3.



TERMINOLOGY

Hz (Hertz):

This unit of measurement refers to the frequency of a sound and represents the number of times a sound wave vibrates in a second.

Default setting:

The "Default setting" refers to the factory setting obtained when you first turn on the power to the P-70.



Setting range: 427.0–453.0 Hz

Standard pitch: 440.0 Hz

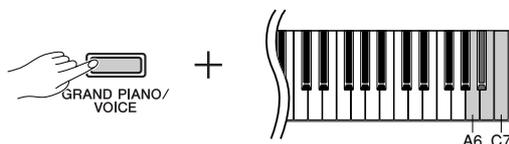
Touch Sensitivity

You can adjust the volume level that changes depending on how fast or strong you hit the keys. The following four settings are available.

Key	Touch Sensitivity	Description
A6	FIXED	The volume level does not change at all regardless of whether you play the keyboard soft or hard.
A#6	SOFT	The volume level does not change much when you play the keyboard soft or hard.
B6	MEDIUM	This is the standard piano touch response (default setting).
C7	HARD	The volume level changes very widely from pianissimo to fortissimo to facilitate dynamic and dramatic expression. You have to hit the keys hard to produce a loud sound.

Setting the Touch Sensitivity Type

While holding down the [GRAND PIANO/VOICE] button, press one of the A6–C7 keys to select the desired touch sensitivity.



The touch sensitivity settings may have little or no effect with Church Organ 1, 2 and Harpsichord 1, 2 voices that are not normally responsive to keyboard dynamics.

Default setting: B6

Connecting MIDI Instruments

The P-70 features MIDI IN/OUT terminals, allowing you to connect the P-70 to other instruments and devices—including computers—and take advantage of the various performance and recording capabilities in MIDI applications.



Since MIDI data that can be transmitted or received varies depending on the type of MIDI device, check the "MIDI Implementation Chart" to find out what MIDI data and commands your devices can transmit or receive. The P-70's MIDI Implementation Chart appears on page 27.

Connecting MIDI [IN][OUT] terminals

MIDI [IN] [OUT] terminals

Use MIDI cables to connect external MIDI devices to these connectors.



About MIDI

MIDI (Musical Instrument Digital Interface) is a standard format for data transmission/reception. It enables the transfer of performance data and commands between MIDI devices and personal computers. Using MIDI, you can control a connected MIDI device from the P-70, or control the P-70 from a connected MIDI device or computer.

MIDI's Capability

MIDI functions enable you to transfer performance data between MIDI devices.

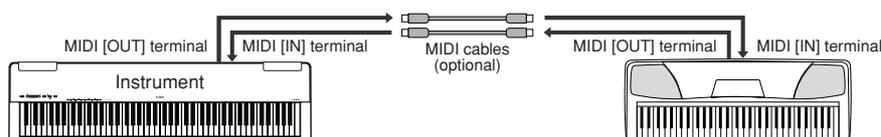


You cannot transmit the voice demo songs and the 50 piano preset songs from the P-70 to another MIDI device.

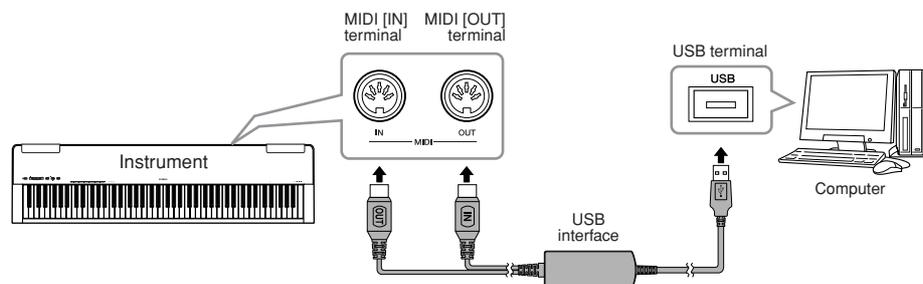
CAUTION

Before connecting the instrument to other electronic components, turn off the power of all the components.

● Transferring performance data to and from another MIDI device



● Transferring MIDI data to and from a computer



For MIDI connections, use a standard (optional) MIDI cable, available at most musical instrument stores.

Connecting a Personal Computer

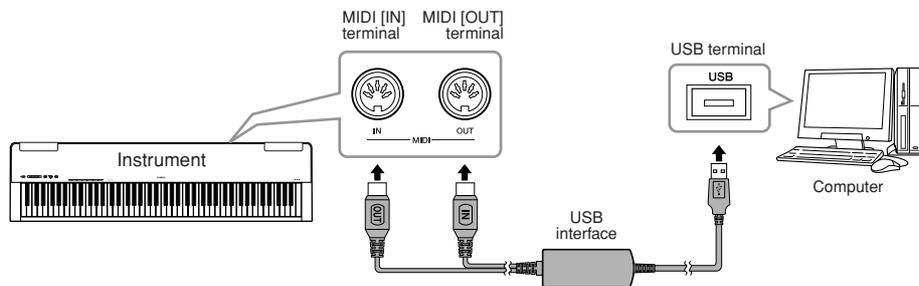
By connecting a computer to the MIDI terminals, you can transfer data between the P-70 and the computer via MIDI.

⚠ CAUTION

When connecting the P-70 to a computer, first turn off the power to both the P-70 and the computer before connecting any cables. After making connections, turn on the power to the computer first, then to the P-70.

Connecting the USB port on the computer to the P-70 via a USB interface (such as the UX16, UX96, or UX256)

Use a USB interface device to connect the USB port on your computer to the P-70's MIDI terminals. You must install the USB interface (such as the UX16, UX96, or UX256) driver. For more information, refer to the user's manual that came with the USB interface device.



NOTE

When the P-70 is used as a tone module, performance data with voices that are not found on the P-70 will not be played correctly.

NOTE

You must install a software application on the computer to be able to transfer MIDI data between the P-70 and a computer.

MIDI Functions

You can make detailed adjustments to MIDI settings.

MIDI Transmit/Receive Channel Selection

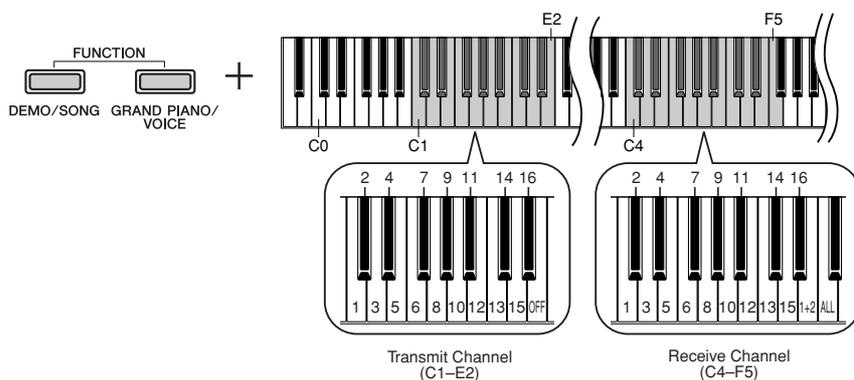
In any MIDI control setup, the MIDI channels of the transmitting and receiving devices must be matched for proper data transfer. This parameter enables you to specify the channel on which the P-70 transmits or receives MIDI data.

Setting the Transmit Channel

While holding down the [DEMO/SONG] and [GRAND PIANO/VOICE] buttons, press one of the C1–E2 keys.

Setting the Receive Channel

While holding down the [DEMO/SONG] and [GRAND PIANO/VOICE] buttons, press one of the C4–F5 keys.



In Dual, Voice 1 data is transmitted on its specified channel and Voice 2 data is transmitted on the next greater channel number relative to the specified channel. In this case, no data is transmitted if the transmit channel is set to "OFF."

ALL:

"Multi-timbre" Receive. This allows simultaneous reception of different parts on all 16 MIDI channels, enabling the P-70 to play multi-channel song data received from a music computer or sequencer.

1+2:

"1+2" Receive. This allows simultaneous reception on channels 1 and 2 only, enabling the P-70 to play 1 and 2 channel song data received from a music computer or sequencer.

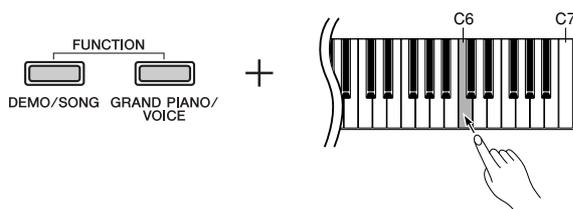
Program change and other like channel messages received will not affect the P-70's panel settings or the notes you play on the keyboard.

Data for the demo song and 50 piano preset songs cannot be transmitted via MIDI.

Local Control ON/OFF

"Local Control" refers to the fact that, normally, the P-70 keyboard controls its internal tone generator, allowing the internal voices to be played directly from the keyboard. This situation is "Local Control On," since the internal tone generator is controlled locally by its own keyboard. Local control can be turned OFF, however, so that the P-70 keyboard does not play the internal voices, but the appropriate MIDI information is still transmitted via the MIDI OUT terminal when notes are played on the keyboard. At the same time, the internal tone generator responds to MIDI information received via the MIDI IN terminal.

While holding down the [DEMO/SONG] and [GRAND PIANO/VOICE] buttons, press the C6 key. Pressing the C6 key repeatedly toggles between Local Control On and Off.

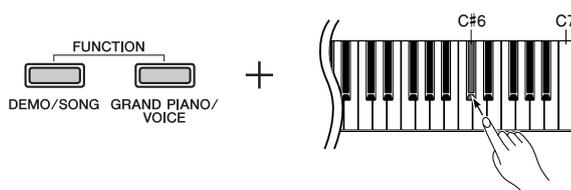


Default setting: ON

Program Change ON/OFF

Normally the P-70 will respond to MIDI program change numbers received from an external keyboard or other MIDI device, causing the same numbered voice to be selected on the corresponding channel (the keyboard voice does not change). The P-70 will normally also send a MIDI program change number whenever one of its voices is selected, causing the same numbered voice or program to be selected on the external MIDI device if the device is set up to receive and respond to MIDI program change numbers. This function makes it possible to cancel program change number reception and transmission so that voices can be selected on the P-70 without affecting the external MIDI device.

While holding down the [DEMO/SONG] and [GRAND PIANO/VOICE] buttons, press the C#6 key. Pressing the C#6 key repeatedly toggles between Program Change On and Off.



For information on program change numbers for each of the P-70's voices, refer to MIDI Data Format on page 27.

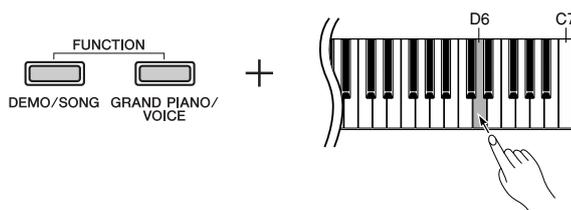
Default setting: ON

Control Change ON/OFF

Normally the P-70 will respond to MIDI control change data received from an external MIDI device or keyboard, causing the voice on the corresponding channel to be affected by pedal and other "control" settings received from the controlling device (the keyboard voice is not affected). The P-70 also transmits MIDI control change information when the pedal or other appropriate controls are operated.

This function makes it possible to cancel control change data reception and transmission so that, for example, the P-70's pedal and other controls can be operated without affecting an external MIDI device.

While holding down the [DEMO/SONG] and [GRAND PIANO/VOICE] buttons, press the D6 key. Pressing the D6 key repeatedly toggles between Control Change On and Off.



For information on control changes that can be used with the P-70, refer to MIDI Data Format on page 27.

Default setting: ON

Troubleshooting

Problem	Possible Cause and Solution
The P-70 does not turn on.	The P-70 has not been plugged in properly. Securely insert the female plug into the socket on the P-70, and the male plug into a proper AC outlet (page 11).
Noise is heard from the speakers or headphones.	The noise may be due to interference caused by the use of a mobile phone in close proximity to the P-70. Turn off the mobile phone, or use it further away from the P-70.
The overall volume is low, or no sound is heard.	<ul style="list-style-type: none"> • The Master Volume is set too low; set it to an appropriate level using the [MASTER VOLUME] control. • Make sure a pair of headphones is not connected to the headphones jack (page 12). • Make sure that Local Control (page 22) is ON.
The sustain pedal has no effect.	The pedal cable/plug may not be properly connected. Make sure to securely insert the pedal plug into the proper jack (page 12).

Optional Equipment

Foot Pedal (FC3/FC4/FC5)

Keyboard Stand (L-70/L-70S)

Index

Numerics

50 Piano Preset Songs 14

C

Combining Voices (Dual)..... 16

Connecting a Personal Computer 21

D

DC IN 12V 11

Default setting 18

Demo Songs..... 13

[DEMO/SONG] button..... 13, 14

Dual..... 16

G

[GRAND PIANO/VOICE] button..... 15, 16, 17, 19

H

Hz (Hertz) 18

M

[MASTER VOLUME] slider..... 11

MIDI [IN] [OUT] 20

MIDI Data Format 27

MIDI Implementation Chart..... 31

MIDI terminals..... 20

Music Rest..... 12

O

Optional Equipment 24

P

Panel Controls and Terminals..... 10

[PEDAL] jack 12

[PHONES] jack..... 12

PRECAUTIONS..... 4, 5

Preset songs → 50 Piano Preset Songs..... 14

R

Reverb..... 17

S

[SELECT] button 13, 14, 15

Song 14

Specifications..... 32

[STANDBY/ON] switch 11

Start/stop playback..... 14

 50 Piano Preset Song..... 14

 Demo songs 13

Sustain pedal 12

T

Touch Sensitivity..... 19

Transposition 18

Troubleshooting..... 24

Tuning → Fine tuning of the Pitch..... 18

V

Voice 15

Preset Song List / Liste der voreingestellten Songs / Liste des morceaux prédéfinis / Lista de canciones preseleccionadas

No.	Title	Composer
1	Invention No. 1	J.S.Bach
2	Invention No. 8	J.S.Bach
3	Gavotte	J.S.Bach
4	Prelude (Wohltemperierte Klavier I No.1)	J.S.Bach
5	Menuett G dur BWV.Anh.114	J.S.Bach
6	Le Coucou	L-C.Daquin
7	Piano Sonate No.15 K.545 1st mov.	W.A.Mozart
8	Turkish March	W.A.Mozart
9	Menuett G dur	W.A.Mozart
10	Little Serenade	J.Haydn
11	Perpetuum mobile	C.M.v.Weber
12	Ecossaise	L.v.Beethoven
13	Für Elise	L.v.Beethoven
14	Marcia alla Turca	L.v.Beethoven
15	Piano Sonate op.13 "Pathétique" 2nd mov.	L.v.Beethoven
16	Piano Sonate op.27-2 "Mondschein" 1st mov.	L.v.Beethoven
17	Piano Sonate op.49-2 1st mov.	L.v.Beethoven
18	Impromptu op.90-2	F.P.Schubert
19	Moments Musicaux op.94-3	F.P.Schubert
20	Frühlingslied op.62-2	J.L.F.Mendelssohn
21	Jägerlied op.19b-3	J.L.F.Mendelssohn
22	Fantaisie-Impromptu	F.F.Chopin
23	Prelude op.28-15 "Raindrop"	F.F.Chopin
24	Etude op.10-5 "Black keys"	F.F.Chopin
25	Etude op.10-3 "Chanson de l'adieu"	F.F.Chopin
26	Etude op.10-12 "Revolutionary"	F.F.Chopin
27	Valse op.64-1 "Petit chien"	F.F.Chopin
28	Valse op.64-2	F.F.Chopin
29	Valse op.69-1 "L'adieu"	F.F.Chopin
30	Nocturne op.9-2	F.F.Chopin
31	Träumerei	R.Schumann
32	Fröhlicher Landmann	R.Schumann
33	La prière d'une Vierge	T.Badarzewska
34	Dolly's Dreaming and Awakening	T.Oesten
35	Arabesque	J.F.Burgmüller
36	Pastorale	J.F.Burgmüller
37	La chevaleresque	J.F.Burgmüller
38	Liebesträume Nr.3	F.Liszt
39	Blumenlied	G.Lange
40	Barcarolle	P.I.Tchaikovsky
41	Melody in F	A.Rubinstein
42	Humoresque	A.Dvořák
43	Tango (España)	I.Albéniz
44	The Entertainer	S.Joplin
45	Maple Leaf Rag	S.Joplin
46	La Fille aux Cheveux de Lin	C.A.Debussy
47	Arabesque 1	C.A.Debussy
48	Clair de lune	C.A.Debussy
49	Réverie	C.A.Debussy
50	Golliwog's Cakewalk	C.A.Debussy

MIDI Data Format / MIDI-Datenformat / Format des données MIDI / Formato de datos MIDI

If you're already very familiar with MIDI, or are using a computer to control your music hardware with computer-generated MIDI messages, the data provided in this section can help you to control the P-70.

Falls Sie bereits mit MIDI vertraut sind oder einen Computer zur Erzeugung von MIDI-Steuermeldungen für die Instrumente verwenden, können Sie sich zur Steuerung des P-70 nach den im folgenden Abschnitt aufgeführten Spezifikationen richten.

Si vous êtes très familier avec l'interface MIDI ou si vous utilisez un ordinateur pour commander votre matériel de musique au moyen de messages MIDI générés par ordinateur, les données suivantes vous seront utiles et vous aideront à commander le P-70.

Si usted está ya familiarizado con MIDI, o si emplea una computadora para controlar sus aparatos musicales con mensajes MIDI generados por computadora, los datos proporcionados en esta sección le ayudarán a controlar la P-70.

1. NOTE ON/OFF

Data format: [9nH] -> [kk] -> [vv]

9nH = Note ON/OFF event (n = channel number)
kk = Note number (Transmit: 09H–78H = A-2–C8 /
Receive: 00H–7FH = C-2–G8)
vv = Velocity (Key ON = 01H–7FH, Key OFF = 00H)

Data format: [8nH] -> [kk] -> [vv] (reception only)

8nH = Note OFF event (n = channel number)
kk = Note number: 00H–7FH = C-2–G8)
vv = Velocity

2. CONTROL CHANGE

Data format: [BnH] -> [cc] -> [vv]

BnH = Control change (n = channel number)
cc = Control number
vv = Data Range

(1) Bank Select

ccH	Parameter	Data Range (vvH)
00H	Bank Select MSB	00H:Normal
20H	Bank Select LSB	00H...7FH

Bank selection processing does not occur until receipt of next Program Change message.

(2) Main Volume

ccH	Parameter	Data Range (vvH)
07H	Volume MSB	00H...7FH

(3) Expression (reception only)

ccH	Parameter	Data Range (vvH)
0BH	Expression MSB	00H...7FH

(4) Sustain

ccH	Parameter	Data Range (vvH)
40H	Sustain MSB	00H...7FH

(5) Sostenuto (reception only)

ccH	Parameter	Data Range (vvH)
42H	Sostenuto	00H...3FH:off, 40H...7FH:on

(6) Soft Pedal (reception only)

ccH	Parameter	Data Range (vvH)
43H	Soft Pedal	00H...3FH:off, 40H...7FH:on

(7) Effect1 Depth (Reverb Send Level)

ccH	Parameter	Data Range (vvH)
5BH	Effect1 Depth	00H...7FH

Adjusts the reverb send level.

(8) Effect4 Depth (Variation Effect Send Level)

ccH	Parameter	Data Range (vvH)
5EH	Effect4 Depth	00H...7FH

(9) RPN

65H	RPN	MSB
64H	RPN	LSB
06H	Data Entry	MSB
26H	Data Entry	LSB
60H	Data	Increment
61H	Data	Decrement

* Parameters that are controllable with RPN:

- Coarse Tune
- Fine Tune
- Pitch Bend Range

3. MODE MESSAGES

Data format: [BnH] -> [cc] -> [vv]

BnH = Control event (n = channel number)
cc = Control number
vv = Data Range

(1) All Sound Off

ccH	Parameter	Data Range (vvH)
78H	All Sound Off	00H

(2) Reset All Controllers

ccH	Parameter	Data Range (vvH)
79H	Reset All Controllers	00H

Resets controllers as follows.

Controller	Value
Expression	127 (max)
Sustain Pedal	0 (off)
Sostenuto	0 (off)
Soft Pedal	0 (off)

(3) Local Control (reception only)

ccH	Parameter	Data Range (vvH)
7AH	Local Control	00H (off), 7FH (on)

(4) All Notes Off

ccH	Parameter	Data Range (vvH)
7BH	All Notes Off	00H

Switches OFF all the notes that are currently ON on the specified channel. Any notes being held by the sustain or sostenuto pedal will continue to sound until the pedal is released.

(5) Omni Off (reception only)

ccH	Parameter	Data Range (vvH)
7CH	Omni Off	00H

Same processing as for All Notes Off.

(6) Omni On (reception only)

ccH	Parameter	Data Range (vvH)
7DH	Omni On	00H

Same processing as for All Notes Off.

(7) Mono (reception only)

ccH	Parameter	Data Range (vvH)
7EH	Mono	00H

Same processing as for All Sound Off.

(8) Poly (reception only)

ccH	Parameter	Data Range (vvH)
7FH	Poly	00H

Same processing as for All Sound Off.

- When Control Change is turned OFF, Control Change messages will not be transmitted or received.
- Local on/off, OMNI on/off are not transmitted. (The appropriate note off number is supplied with "All Note Off" transmission).
- When a voice bank MSB/LSB is received, the number is stored in the internal buffer regardless of the received order, then the stored value is used to select the appropriate voice when a program change message is received.
- Poly mode is always active. This mode will not change when the instrument receives a MONO/POLY mode message.

4. PROGRAM CHANGE

Data format: [CnH] -> [ppH]

CnH = Program event (n = channel number)

ppH = Program change number

P.C.#=Program Change number

P-70	MSB	LSB	P.C.#
Grand Piano 1	0	122	1
Grand Piano 2	0	112	1
E.Piano 1	0	122	6
E.Piano 2	0	122	5
Church Organ 1	0	123	20
Church Organ 2	0	122	20
Strings	0	122	49
Harpichord 1	0	122	7
Harpichord 2	0	123	7
Vibraphone	0	122	12

- When program change reception is turned OFF, no program change data is transmitted or received.
- When you specify a program change as a number in the range of 0–127, specify a number that is one less than the program change number listed above. For example, to specify program change number 1, you would specify a value of 0.

5. Pitch Bend Change (reception only)

[EnH] -> [ccH] -> [ddH]

ccH = LSB

ddH = MSB

6. SYSTEM REALTIME MESSAGES

[rrH]

F8H: Timing clock

FAH: Start

FCH: Stop

FEH: Active sensing

Data	Transmission	Reception
F8H	Transmitted every 96 clocks	Received as 96-clock tempo timing when MIDI clock is set to External.
FAH	Song start	Song start Not received when the MIDI clock is set to Internal.
FCH	Song stop	Song stop Not received when the MIDI clock is set to Internal.
FEH	Transmitted every 200 milliseconds	If a signal is not received via MIDI for more than 400 milliseconds, the same processing will take place for All Sound Off, All Notes Off and Reset All Controllers as when those signals are received.

- If an error occurs during MIDI reception, the Sustain, Sostenuto, and Soft effects for all channels are turned off and an All Note Off occurs.

7. SYSTEM EXCLUSIVE MESSAGES (Universal System Exclusive)

(1) Universal Realtime Message

Data format: [F0H] -> [7FH] -> [XnH] -> [04H] -> [01H] -> [lH] -> [mmH] -> [F7H]

MIDI Master Volume

- Simultaneously changes the volume of all channels.
- When a MIDI master volume message is received, the volume only has affect on the MIDI receive channel, not the panel master volume.

F0H = Exclusive status

7FH = Universal Realtime

7FH = ID of target device

04H = Sub-ID #1=Device Control Message

01H = Sub-ID #2=Master Volume

lH = Volume LSB

mmH = Volume MSB

F7H = End of Exclusive

or

F0H = Exclusive status

7FH = Universal Realtime

XnH = When received, n=0–F.

X = irrelevant

04H = Sub-ID #1=Device Control Message

01H = Sub-ID #2=Master Volume

lH = Volume LSB

mmH = Volume MSB

F7H = End of Exclusive

(2) Universal Non-Realtime Message (GM On)

General MIDI Mode On

Data format: [F0H] -> [7EH] -> [XnH] -> [09H] -> [01H] -> [F7H]

F0H = Exclusive status

7EH = Universal Non-Realtime

7FH = ID of target device

09H = Sub-ID #1=General MIDI Message

01H = Sub-ID #2=General MIDI On

F7H = End of Exclusive

or

F0H = Exclusive status

7EH = Universal Non-Realtime

XnH = When received, n=0–F.

X = irrelevant

09H = Sub-ID #1=General MIDI Message

01H = Sub-ID #2=General MIDI On

F7H = End of Exclusive

When the General MIDI mode ON message is received, the MIDI system will be reset to its default settings.

This message requires approximately 50ms to execute, so sufficient time should be allowed before the next message is sent.

8. SYSTEM EXCLUSIVE MESSAGES (XG Standard)

(1) XG Native Parameter Change

Data format: [F0H] -> [43H] -> [1nH] -> [4CH] -> [hhH] -> [mmH] -> [//H] -> [ddH] -> [F7H]

F0H = Exclusive status
43H = YAMAHA ID
1nH = When received, n=0–F.
When transmitted, n=0.
4CH = Model ID of XG
hhH = Address High
mmH = Address Mid
//H = Address Low
ddH = Data

|
F7H = End of Exclusive

Data size must match parameter size (2 or 4 bytes).

When the XG System On message is received, the MIDI system will be reset to its default settings.

The message requires approximately 50ms to execute, so sufficient time should be allowed before the next message is sent.

(2) XG Native Bulk Data (reception only)

Data format: [F0H] -> [43H] -> [0nH] -> [4CH] -> [aaH] -> [bbH] -> [hhH] -> [mmH] -> [//H] -> [ddH] ->...-> [ccH] -> [F7H]

F0H = Exclusive status
43H = YAMAHA ID
0nH = When received, n=0–F.
When transmitted, n=0.
4CH = Model ID of XG
aaH = ByteCount
bbH = ByteCount
hhH = Address High
mmH = Address Mid
//H = Address Low
ddH = Data

| |
| |
ccH = Check sum
F7H = End of Exclusive

- Receipt of the XG SYSTEM ON message causes reinitialization of relevant parameters and Control Change values. Allow sufficient time for processing to execute (about 50 msec) before sending the P-70 another message.
- XG Native Parameter Change message may contain two or four bytes of parameter data (depending on the parameter size).
- For information about the Address and Byte Count values, refer to Table 1 below. Note that the table's Total Size value gives the size of a bulk block. Only the top address of the block (00H, 00H, 00H) is valid as a bulk data address.

9. SYSTEM EXCLUSIVE MESSAGES (Digital Piano MIDI Format)

Data format: [F0H] -> [43H] -> [73H] -> [xxH] -> [nnH] -> [F7H]

F0H = Exclusive status
43H = Yamaha ID
73H = Digital Piano ID
01H = Product ID (digital piano common)
xxH = Substatus
nn = Control
02H = Internal MIDI clock
03H = External MIDI clock
06H = Bulk Data (the bulk data follows 06H)
F7H = End of Exclusive

10. SYSTEM EXCLUSIVE MESSAGES (Special Control)

Data format: [F0H] -> [43H] -> [73H] -> [66H] -> [11H] -> [0nH] -> [ccH] -> [vvH] -> [F7H]

F0H = Exclusive status
43H = Yamaha ID
73H = Digital Piano ID
7FH = Extended Product ID
4BH = Product ID
11H = Special control
0nH = Control MIDI change (n=channel number)
cc = Control number
vv = Value
F7H = End of Exclusive

Control	Channel	ccH	vvH
Channel Detune	ch: 00H–0FH	43H	(Sets the Detune value for each channel) 00H–7FH
Voice Reserve	ch: 00H–0FH	45H	00H : Reserve off 7FH : on*

* When Volume, Expression is received for Reserve On, they will be effective from the next Key On. Reserve Off is normal.

11. SYSTEM EXCLUSIVE MESSAGES (Others)

Data format: [F0H] -> [43H] -> [1nH] -> [27H] -> [30H] -> [00H] -> [00H] -> [mmH] -> [//H] -> [ccH] -> [F7H]

Master Tuning (XG and last message priority) simultaneously changes the pitch of all channels.

F0H = Exclusive Status
43H = Yamaha ID
1nH = When received, n=0–F.
When transmitted, n=0.
27H = Model ID of TG100
30H = Sub ID
00H =
00H =
mmH = Master Tune MSB
//H = Master Tune LSB
ccH = irrelevant (under 7FH)
F7H = End of Exclusive

<Table 1>**MIDI Parameter Change table (SYSTEM)**

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)
00 00 00	4	020C–05F4(*1)	MASTER TUNE	-50→+50[cent]	00 04 00 00
01				1st bit 3–0 → bit 15–12	400
02				2nd bit 3–0 → bit 11–8	
03				3rd bit 3–0 → bit 7–4	
04	1	00–7F	MASTER VOLUME	0–127	7F
7E		00	XG SYSTEM ON	00=XG system ON	
7F		00	RESET ALL PARAMETERS	00=ON (receive only)	
TOTAL SIZE 07					

*1: Values lower than 020CH select -50 cents. Values higher than 05F4H select +50 cents.

<Table 2>**MIDI Parameter Change table (EFFECT 1)**

Refer to the "Effect MIDI Map" for a complete list of Reverb, Chorus and Variation type numbers.

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)
02 01 00	2	00–7F 00–7F	REVERB TYPE MSB REVERB TYPE LSB	Refer to Effect MIDI Map 00 : basic type	01 (=HALL1) 00
02 01 40	2	00–7F 00–7F	VARIATION TYPE MSB VARIATION TYPE LSB	Refer to Effect MIDI Map 00 : basic type	00 (=Effect off) 00

• "VARIATION" refers to the EFFECT on the panel.

<Table 3>**MIDI Parameter Change table (MULTI PART)**

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)
08 nn 11	1	00–7F	DRY LEVEL	0–127	7F
nn = Part Number					

• Effect MIDI Map**REVERB**

	MSB	LSB
ROOM	02H	10H
HALL 1	01H	10H
HALL 2	01H	11H
STAGE	03H	10H
OFF	00H	00H

EFFECT

	MSB	LSB
CHORUS	42H	10H
PHASER	48H	10H
TREMOLO	46H	10H
ROTARY SP	47H	10H
OFF	00H	00H

Function	Transmitted	Recognized	Remarks
Basic Channel Default Changed	1 1 - 16	1 - 16 1 - 16	
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 X	O 9nH, v=1-127 X	
After Touch Key's Ch's	X X	X X	
Pitch Bend	X	O 0 - 24 semi	
Control Change	0,32 O 1 X 7 O 10 X 11 X 6,38 X 64 O 66,67 X 84 X 91,94 O 96-97 X 100-101 X	O O O O O O O O O O O O	Bank Select Modulation Main Volume Panpot Expression Data Entry Sustain Portamento Control Effect Depth RPN Inc, Dec RPN LSB, MSB
Prog Change : True #	O 0 - 127 *****	O 0 - 127	
System Exclusive	O	O	
Common : Song Pos. : Song Sel. : Tune	X X X	X X X	
System : Clock Real Time : Commands	O O	O O	
Aux : All Sound Off : Reset All Cntrls : Local ON/OFF Mes- : All Notes OFF sages: Active Sense : Reset	O O X O O X	O (120, 126, 127) O (121) O (122) O (123-125) O X	
Notes:			

Mode 1 : OMNI ON , POLY Mode 2 : OMNI ON , MONO O : Yes
 Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO X : No

Specifications / Technische Daten / Caractéristiques techniques / Especificaciones

Keyboard	88 keys (A-1–C7)
Sound Source	AWM Stereo Sampling
Polyphony (Max.)	32
Voice Selection	10
Effect	Reverb
Volume	Master Volume
Controls	Dual, Transpose, Touch (Hard/Medium/Soft/Fixed)
Pedal	SUSTAIN PEDAL*
Demo Songs	10 voice Demo Songs, 50 preset Songs
Jacks/Connectors	MIDI (IN/OUT), PHONES × 2, DC IN 12V, PEDAL
Main Amplifiers	6 W × 2
Speakers	(12 cm × 6 cm) × 2
Dimensions (W × D × H)	1,330 mm × 355 mm × 133 mm [52-3/8" × 14" × 5-1/4"] (1,330 mm × 402 mm × 319 mm) [52-3/8" × 15-13/16" × 12-9/16"]
Weight	13 kg (28 lbs. 11 oz.)
Accessories	Owner's Manual, Yamaha PA-5D power adaptor, Pedal (FC5), Music Rest

- * When an optional FC3 Foot Pedal is connected, the half-damper pedal effect can be used.
- * Wenn ein optionales Fußpedal FC3 angeschlossen wird, kann der Halbdämpferpedal-Effekt verwendet werden.
- * Lorsqu'une pédale au pied FC3 en option est connectée, vous pouvez utiliser l'effet de pédale à mi-course.
- * Cuando está conectado un pedal FC3 opcional, se puede utilizar el efecto de medio pedal amortiguador.

- * 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.
- * Die technischen Daten und Beschreibungen in dieser Bedienungsanleitung dienen nur der Information. Yamaha Corp. behält sich das Recht vor, Produkte oder deren technische Daten jederzeit ohne vorherige Ankündigung zu verändern oder zu modifizieren. Da die technischen Daten, das Gerät selbst oder Sonderzubehör nicht in jedem Land gleich sind, setzen Sie sich im Zweifel bitte mit Ihrem Yamaha-Händler in Verbindung.
- * Les caractéristiques techniques et les descriptions du mode d'emploi ne sont données que pour information. Yamaha Corp. se réserve le droit de changer ou modifier les produits et leurs caractéristiques techniques à tout moment sans aucun avis. Du fait que les caractéristiques techniques, les équipements et les options peuvent différer d'un pays à l'autre, adressez-vous au distributeur Yamaha le plus proche.
- * Las especificaciones y descripciones de este manual del propietario tienen sólo el propósito de servir como información. Yamaha Corp. se reserva el derecho a efectuar cambios o modificaciones en los productos o especificaciones en cualquier momento sin previo aviso. Puesto que las especificaciones, equipos u opciones pueden no ser las mismas en todos los mercados, solicite información a su distribuidor Yamaha.

MEMO

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.

ADVARSEL: 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 käyttökytin ei irroita koko laitetta verkosta.

(standby)

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

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

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

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

NORTH AMERICA

CANADA

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

U.S.A.

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

CENTRAL & SOUTH AMERICA

MEXICO

Yamaha de México S.A. de C.V.
Calz. Javier Rojo Gómez #1149,
Col. Guadalupe del Moral
C.P. 09300, México, D.F., México
Tel: 55-5804-0600

BRAZIL

Yamaha Musical do Brasil Ltda.
Av. Reboucas 2636-Pinheiros CEP: 05402-400
Sao Paulo-SP, Brasil
Tel: 011-3085-1377

ARGENTINA

Yamaha Music Latin America, S.A.
Sucursal de Argentina
Viamonte 1145 Piso 2-B 1053,
Buenos Aires, Argentina
Tel: 1-4371-7021

PANAMA AND OTHER LATIN AMERICAN COUNTRIES/ CARIBBEAN COUNTRIES

Yamaha Music Latin America, S.A.
Torre Banco General, Piso 7, Urbanización Marbella,
Calle 47 y Aquilino de la Guardia,
Ciudad de Panamá, Panamá
Tel: +507-269-5311

EUROPE

THE UNITED KINGDOM

Yamaha-Kemble Music (U.K.) Ltd.
Sherbourne Drive, Tilbrook, Milton Keynes,
MK7 8BL, England
Tel: 01908-366700

IRELAND

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

GERMANY

Yamaha Music Central Europe GmbH
Siemensstraße 22-34, 25462 Rellingen, Germany
Tel: 04101-3030

SWITZERLAND/LIECHTENSTEIN

Yamaha Music Central Europe GmbH,
Branch Switzerland
Seefeldstrasse 94, 8008 Zürich, Switzerland
Tel: 01-383 3990

AUSTRIA

Yamaha Music Central Europe GmbH,
Branch Austria
Schleiergasse 20, A-1100 Wien, Austria
Tel: 01-60203900

CZECH REPUBLIC/SLOVAKIA/ HUNGARY/SLOVENIA

Yamaha Music Central Europe GmbH,
Branch Austria, CEE Department
Schleiergasse 20, A-1100 Wien, Austria
Tel: 01-602039025

POLAND

Yamaha Music Central Europe GmbH
Sp.z o.o. Oddział w Polsce
ul. 17 Stycznia 56, PL-02-146 Warszawa, Poland
Tel: 022-868-07-57

THE NETHERLANDS/ BELGIUM/LUXEMBOURG

Yamaha Music Central Europe GmbH,
Branch Benelux
Clarissenhof 5-b, 4133 AB Vianen, The Netherlands
Tel: 0347-358 040

FRANCE

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

ITALY

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

SPAIN/PORTUGAL

Yamaha-Hazen Música, S.A.
Ctra. de la Corona km. 17, 200, 28230
Las Rozas (Madrid), Spain
Tel: 91-639-8888

GREECE

Philippos Nakas S.A. The Music House
147 Skiathou Street, 112-55 Athens, Greece
Tel: 01-228 2160

SWEDEN

Yamaha Scandinavia AB
J. A. Wettergrens Gata 1
Box 30053
S-400 43 Göteborg, Sweden
Tel: 031 89 34 00

DENMARK

YS Copenhagen Liaison Office
Generatorvej 6A
DK-2730 Herlev, Denmark
Tel: 44 92 49 00

FINLAND

F-Musiikki Oy
Kluuvikatu 6, P.O. Box 260,
SF-00101 Helsinki, Finland
Tel: 09 618511

NORWAY

Norsk filial av Yamaha Scandinavia AB
Grini Næringspark 1
N-1345 Østerås, Norway
Tel: 67 16 77 70

ICELAND

Skifan HF
Skeifan 17 P.O. Box 8120
IS-128 Reykjavik, Iceland
Tel: 525 5000

OTHER EUROPEAN COUNTRIES

Yamaha Music Central Europe GmbH
Siemensstraße 22-34, 25462 Rellingen, Germany
Tel: +49-4101-3030

AFRICA

Yamaha Corporation,
Asia-Pacific Music Marketing Group
Nakazawa-cho 10-1, Hamamatsu, Japan 430-8650
Tel: +81-53-460-2312

MIDDLE EAST

TURKEY/CYPRUS

Yamaha Music Central Europe GmbH
Siemensstraße 22-34, 25462 Rellingen, Germany
Tel: 04101-3030

OTHER COUNTRIES

Yamaha Music Gulf FZE
LB21-128 Jebel Ali Freezone
P.O.Box 17328, Dubai, U.A.E.
Tel: +971-4-881-5868

ASIA

THE PEOPLE'S REPUBLIC OF CHINA

Yamaha Music & Electronics (China) Co., Ltd.
25/F., United Plaza, 1468 Nanjing Road (West),
Jingan, Shanghai, China
Tel: 021-6247-2211

HONG KONG

Tom Lee Music Co., Ltd.
11/F., Silvercord Tower 1, 30 Canton Road,
Tsimshatsui, Kowloon, Hong Kong
Tel: 2737-7688

INDONESIA

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

KOREA

Yamaha Music Korea Ltd.
Tong-Yang Securities Bldg. 16F 23-8 Yoido-dong,
Yongdungpo-ku, Seoul, Korea
Tel: 02-3770-0660

MALAYSIA

Yamaha Music Malaysia, Sdn., Bhd.
Lot 8, Jalan Perbandaran, 47301 Kelana Jaya,
Petaling Jaya, Selangor, Malaysia
Tel: 3-78030900

PHILIPPINES

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

SINGAPORE

Yamaha Music Asia Pte., Ltd.
#03-11 A-Z Building
140 Paya Lebar Road, Singapore 409015
Tel: 747-4374

TAIWAN

Yamaha KHS Music Co., Ltd.
3F, #6, Sec.2, Nan Jing E. Rd. Taipei.
Taiwan 104, R.O.C.
Tel: 02-2511-8688

THAILAND

Siam Music Yamaha Co., Ltd.
891/1 Siam Motors Building, 15-16 floor
Rama 1 road, Wangmai, Pathumwan
Bangkok 10330, Thailand
Tel: 02-215-2626

OTHER ASIAN COUNTRIES

Yamaha Corporation,
Asia-Pacific Music Marketing Group
Nakazawa-cho 10-1, Hamamatsu, Japan 430-8650
Tel: +81-53-460-2317

OCEANIA

AUSTRALIA

Yamaha Music Australia Pty. Ltd.
Level 1, 99 Queensbridge Street, Southbank,
Victoria 3006, Australia
Tel: 3-9693-5111

NEW ZEALAND

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

COUNTRIES AND TRUST TERRITORIES IN PACIFIC OCEAN

Yamaha Corporation,
Asia-Pacific Music Marketing Group
Nakazawa-cho 10-1, Hamamatsu, Japan 430-8650
Tel: +81-53-460-2312



Yamaha Home Keyboards Home Page (English Only)
<http://music.yamaha.com/homekeyboard>
Yamaha Manual Library
<http://www.yamaha.co.jp/manual/>

U.R.G., Pro Audio & Digital Musical Instrument Division, Yamaha Corporation
© 2005 Yamaha Corporation

WF15840 XXXPOXXX.X-01A0
Printed in China