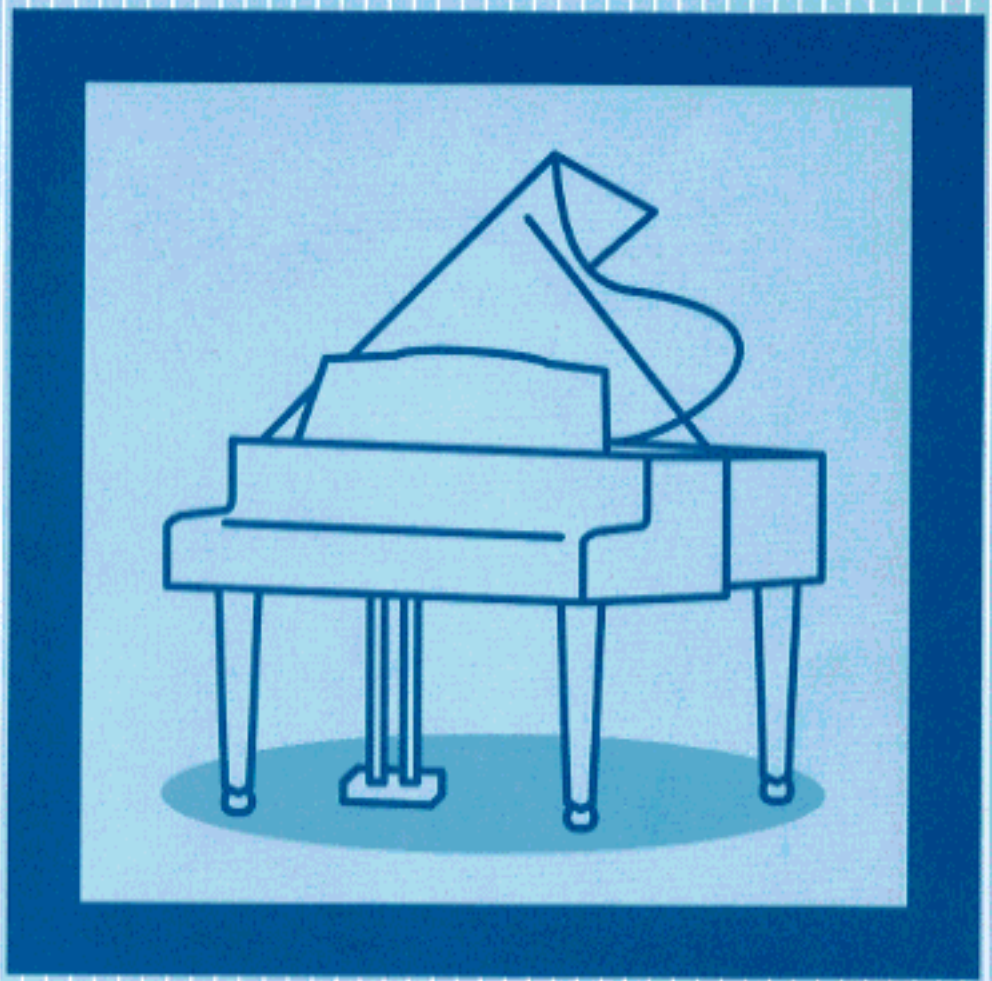
YAMAHA

PIANO TONE GENERATOR

P50-m



OWNER'S MANUAL
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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 user's 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 your 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, CA 90620

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

ADVARSEL!
Lithiumbatteri—Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Levér det brugte batteri tilbage til leverandoren.

VARNING
Explosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera använt batteri enligt fabrikantens instruktion.

VAROITUS
Paristo voi räjähtää, jos se on virheellisesti asennettu. Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

NEDERLAND
NETHERLAND

- Dit apparaat bevat een lithium batterij voor geheugen back-up.
- This apparatus contains a lithium battery for memory back-up.

- Raadpleeg uw leverancier over de verwijdering van de batterij op het moment dat u het apparaat aan het einde van de levensduur afdankt of de volgende Yamaha Service Afdeiing:
  Yamaha Music Nederland Service Afdeiing
  Kanaalweg 18-G, 3526 KL UTRECHT
  Tel. 030-2828425
- For the removal of the battery at the moment of the disposal at the end of the service life please consult your retailer or Yamaha Service Center as follows:
  Yamaha Music Nederland Service Center
  Address : Kanaalweg 18-G, 3526 KL UTRECHT
  Tel : 030-2828425

- Gooi de batterij niet weg, maar lever hem in als KCA.
- Do not throw away the battery. Instead, hand it in as small chemical waste.

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 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.

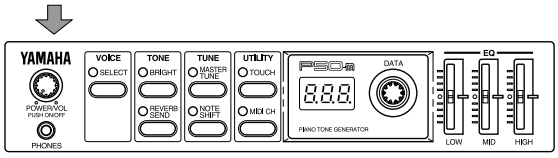
When installing batteries, do not mix old batteries with new, or with batteries of a different type. Batteries MUST be installed correctly. Mismatches or incorrect installation may result in overheating and battery case rupture.

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 top 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

Welcome to the P50-m

Congratulations and thank you for purchasing the Yamaha P50-m Piano Tone Generator!

The P50-m is an advanced tone generator with piano and other keyboard Voices. It provides exceptionally realistic and high-quality piano Voices — with complete 32-note polyphony — when connected to a MIDI keyboard or when used with a sequencer or computer. Reverb and Chorus effects are also built into the Voices for a rich, natural sound.

The P50-m gives you easy and intuitive control over the sound, including Brightness, Reverb Send, fine and coarse tuning, and touch sensitivity. Convenient EQ sliders on the panel let you adjust the timbre in real time. Other special controls such as Program Change Table and MIDI OUT ensure easy and trouble free operation when using the P50-m in General MIDI applications and with additional tone generators. What's more, you can combine two P50-m units together (using the Receive Mode control) for full 64-note polyphony.

Unpacking

Your P50-m package should include the items listed below. Make sure that you have them all. Also, write down the serial number of your P50-m in the box below, for future reference.

- P50-m
  Serial No.: _____

- PA-3B AC Adaptor

- Owner’s Manual

Table of Contents

How to Use This Manual

You are probably eager to play your new P50-m Piano Tone Generator right away, rather than have to read through a lot of instructions before you can even get a sound out of it.

However, to get the most out of your P50-m, we strongly suggest that you read the following sections in the order given:

1) Precautions
   This gives you important information on how to care for your new P50-m, how to avoid damaging it, and how to ensure long-term, reliable operation.

2) The Controls of the P50-m
   This section introduces you to the panel controls and connectors.

3) Setting Up and Playing Your P50-m
   This very important section gets you started using your P50-m. It guides you in connecting and setting up the instrument for different example systems, and shows you how to play the special Demo song.

4) Operation Guide
   Once you're familiar with everything above, go over this comprehensive guide to all P50-m functions. You won't need (or want) to read everything at once, but it is there for you to refer to when you need information about a certain feature or function.

5) Appendix
   Finally, use the sections in the Appendix as necessary. Specifically, if you run into some problem or difficulty, refer to the Troubleshooting section for help.

Precautions

Your P50-m will give you years of reliable service if you follow the simple precautions below:

■ LOCATION

Keep the instrument away from locations where it is likely to be exposed to high temperatures (such as direct sunlight) or humidity. Also avoid locations which are subject to excessive dust accumulation or vibration which could cause mechanical damage.

■ USE THE CORRECT POWER ADAPTOR

Use only the recommended PA-3B or PA-1207 Power Adaptor for supplying power to the instrument. Use of another adaptor may cause serious damage to the instrument or the adaptor itself.

■ MAKE SURE POWER IS OFF WHEN MAKING OR REMOVING CONNECTIONS

To prevent damage to the instrument and other connected equipment, always turn off the power prior to connecting or disconnecting cables. Also, turn the power off when the instrument is not in use, and disconnect the power adaptor during electric storms.

■ HANDLE THE INSTRUMENT WITH CARE

Although the instrument has been constructed to withstand the rigors of normal use for optimum sturdiness and reliability, avoid subjecting it to strong physical shocks (such as dropping or hitting it). Since the P50-m is a precision-made electronic device, also avoid applying excessive force to the various controls. When moving the instrument, first unplug the power adaptor and all other cables to prevent damage to cords and jacks. Always unplug cables by gripping the plug firmly, not by pulling on the cable.

■ CLEAN WITH A SOFT, DRY CLOTH

Never use solvents such as benzine or thinner to clean the instrument, since these will damage the panel finish. Wipe clean with a soft, dry cloth. If necessary, use a soft, clean, slightly moistened cloth — making sure to wipe the case off again with a dry cloth.

■ ELECTROMAGNETIC INTERFERENCE

Avoid using the unit near televisions, radios or other equipment generating electromagnetic fields. Proximity to such equipment may cause the unit to malfunction, and may generate interference noise in the other appliance as well.

■ DO NOT OPEN THE CASE OR TRY REPAIRING THE INSTRUMENT YOURSELF

The instrument contains no user-serviceable parts. Never open the case or tamper with the internal circuitry in any way, since doing so may result in damage to the instrument. Refer all servicing to qualified Yamaha service personnel.

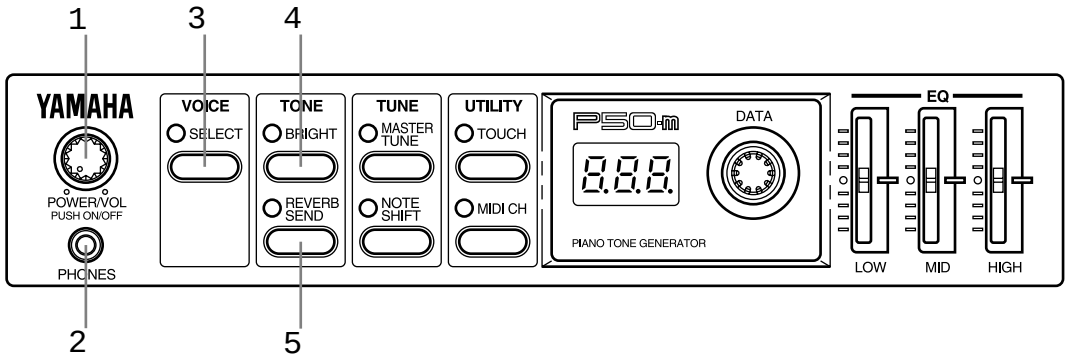
■ MIDI CABLES

When connecting the instrument to other MIDI equipment, be sure to use only high-quality cables made especially for MIDI data transmission. Also, avoid using cables longer than 15 meters, since long cables can result in data errors.

Yamaha is not responsible for damage caused by improper handling or operation.

The Controls of the P50-m

Front Panel



1 POWER/VOL control
Pressing this turns the power on and off. Turning it adjusts the overall volume of the P50-m.

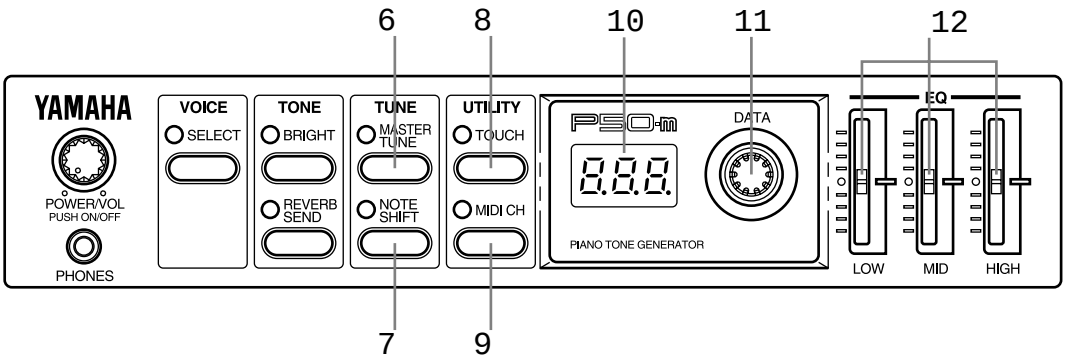
2 PHONES jack
For connection to a set of stereo headphones (mini-pin).

3 VOICE SELECT button
For selection of the internal Voices. (See page 9.) Also for changing the Program Change Table setting. (See page 18.)

TONE Controls

4 BRIGHT button
For adjusting the brightness of the selected Voice. (See page 11.)

5 REVERB SEND button
For adjusting the amount of sound processed with the Reverb effect. (See page 12.)



TUNE Controls

6 MASTER TUNE button

For adjusting the overall fine tuning of the instrument. (See page 14.) Also used with the NOTE SHIFT button for playing the Demo song. (See page 7.)

7 NOTE SHIFT button

For changing the key transposition setting of the instrument. (See page 15.) Also used with the MASTER TUNE button for playing the Demo song. (See page 7.)

UTILITY Controls

8 TOUCH button

For changing the touch (velocity) response of the instrument. (See page 16.) Also for changing the Device Number setting. (See page 19.) Also used with the MIDI CH button for changing the Receive Mode of the instrument. (See page 20.)

9 MIDI CH (Channel) button

For setting the MIDI Receive channel for the instrument. (See page 17.) Also for setting the MIDI OUT setting. (See page 21.) Also used with the TOUCH button for changing the Receive Mode of the instrument. (See page 20.)

10 LED display

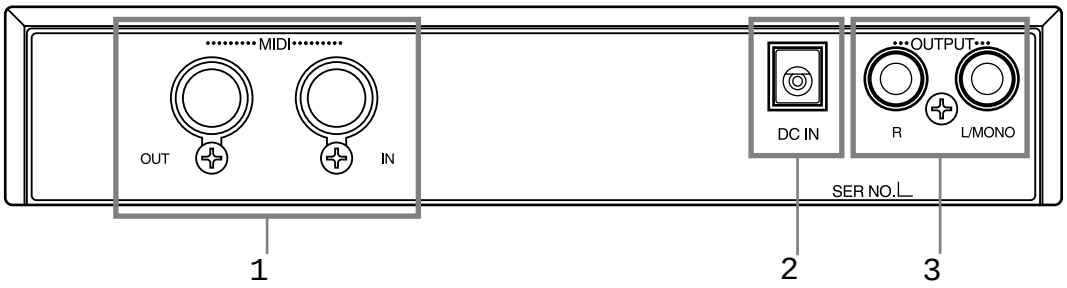
11 DATA dial

For adjusting values or changing settings of the various parameters.

12 EQ sliders (LOW, MID, HIGH)

For making fine changes to the tonal quality of the sound. (See page 13.)

Rear Panel



1 MIDI OUT/IN terminals
For connection to other MIDI devices, such as a MIDI keyboard, tone generator, sequencer, or to a computer that has a MIDI interface. (See pages 4–6 for more information on MIDI connections.)

2 DC IN jack
For connection to the PA-3B AC power adaptor.

3 OUTPUT R, L/MONO jacks (Right, Left/Mono)
For connection to a stereo amplifier/speaker system. When using a mono system, connect it to the L/MONO jack.

Setting Up and Playing Your P50-m

In this section, you'll learn how to set up the P50-m for use with a MIDI keyboard. You'll also learn how to set it up for use with a computer or sequencer and a second tone generator. Finally, you'll learn how to play the Demo song and hear the realistic and dynamic Voices of the P50-m.

What You'll Need

- ❏ The P50-m and the included power adaptor.
- ❏ A MIDI keyboard, electronic piano, or any instrument that can output MIDI data.
- ❏ An amplifier/speaker system, preferably stereo. Alternately, you can use a set of stereo headphones.
- ❏ Audio connecting cables.
- ❏ A MIDI cable.

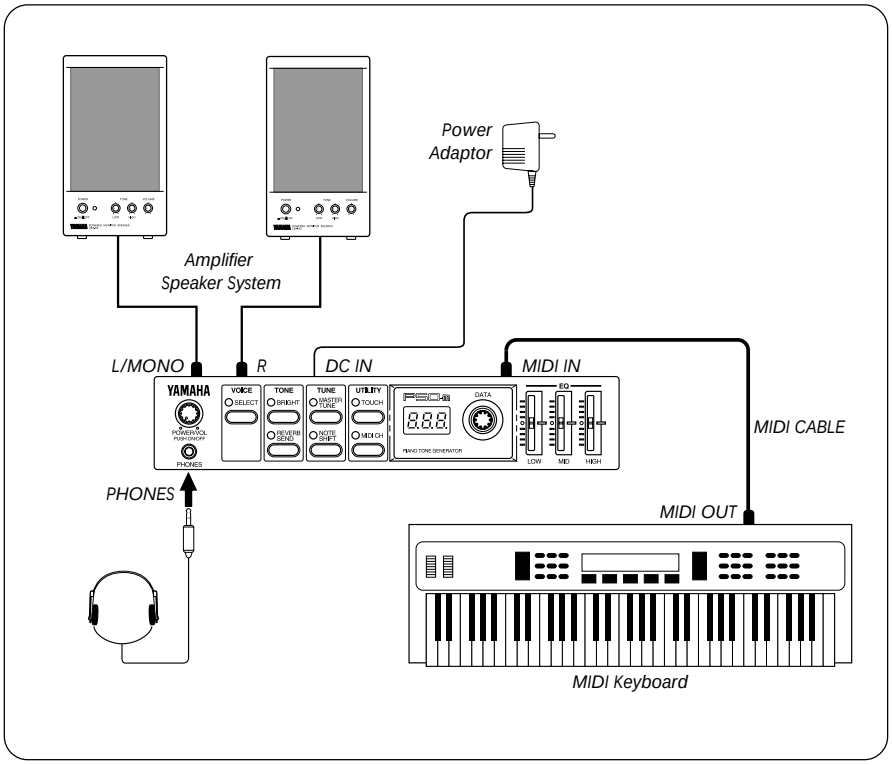
Making the Connections

Before making any connections, make sure that all equipment to be connected is turned off, and that the P50-m power adaptor is not connected to an electrical outlet.

1. Connect one end of the MIDI cable to the MIDI OUT terminal of the MIDI keyboard and the other to the MIDI IN terminal of the P50-m (as shown in the illustration below).
   Also, make sure that the MIDI send channel on the keyboard and the MIDI Receive Channel on the P50-m (see page 17) are set to the same value. (Refer to the owner's manual of the MIDI keyboard if necessary.)
2. Connect the audio cables from the R and L/MONO OUTPUT jacks of the P50-m to the appropriate inputs on the amplifier speaker system (as shown in the illustration below).
   If the amplifier has only one input, use the L/MONO jack on the P50-m. If you are using stereo headphones, connect them to the front panel PHONES jack.
3. Connect the power adaptor to the DC IN terminal on the P50-m and plug the adaptor into an appropriate electrical outlet.

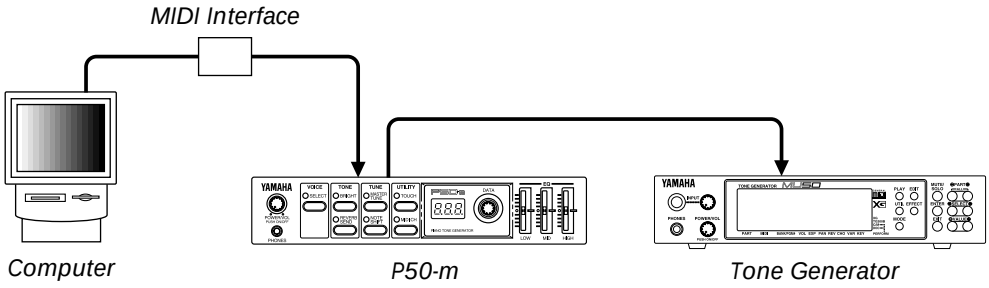
CAUTION

- Do not attempt to use an AC adaptor other than the PA-3B or PA-1207. The use of an incompatible adaptor may result in irreparable damage to the P50-m, and even pose a serious shock hazard.
- Be sure to disconnect the power adaptor from the outlet when the P50-m is not in use.



Using in Larger MIDI Systems

The P50-m is equipped with MIDI IN and OUT terminals, allowing you to use it in any MIDI system. In the system example shown below, the P50-m is connected to both a computer and another tone generator. Here, the computer (with sequencer or other music software) plays back song data using the Voices of the P50-m and the connected tone generator.



In systems such as this, you should make sure that:

- The MIDI Receive Channel on the P50-m (see page 17) is set to the same channel as that for the piano part (or track) on the software.
- The MIDI OUT Mode is set to “ot2.” (See page 21.) This ensures that the piano part data will play the Voices of the P50-m, and not the other tone generator.

Also, if you are using General MIDI (GM) compatible software, set the Program Change Table to “on.” (See page 18.) This ensures that the Voices on the P50-m will match the intended program changes in the software.

Powering Up and Playing the Demo Song

Once you’ve connected everything properly, you’re ready to turn the P50-m on and start playing it. However, a small word of caution before you begin: Follow the instructions given below to avoid possible damage to your equipment and speakers.

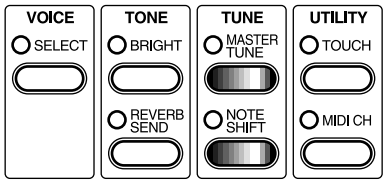
Powering Up

1. If you haven't done so already, press the **POWER/VOL** control on the P50-m.
2. Turn on the power of your MIDI keyboard.
3. Make sure that all volume controls (on the P50-m and the connected amplifier) are turned down. Then, turn on the power of your amplifier speaker system.
4. Finally, set the volume control on the P50-m to about the midway position initially (you can raise it later if needed), and set the volume on the amplifier to a suitable level.

Playing the Demo Song

Now that you've set everything up properly, try playing the built-in Demo Song. This showcases the high-quality Voices and the AWM2 tone generation system of the P50-m.

Simultaneously press the **MASTER TUNE** and **NOTE SHIFT** buttons.



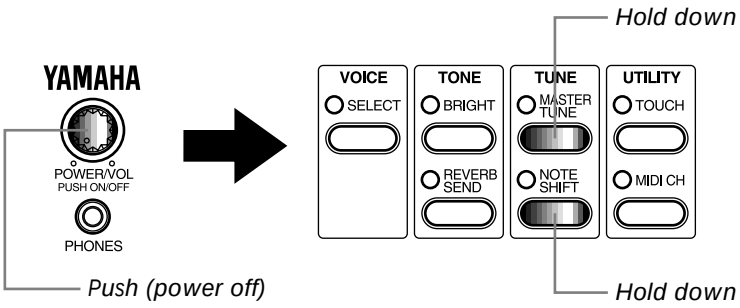
The Demo song for the selected Voice starts playing immediately and repeats indefinitely until stopped (by pressing any panel button). (The LEDs and lamps flash in a pattern during playback.)

> More about Demo Song
>
> There are actually two Demo Song modes. In the Single Demo Play mode (described above), the currently selected Voice is used for the Demo song. Each Voice has its own Demo song, specially programmed to suit and showcase that particular Voice.
>
> In the All Demo Play mode (described below), all Demo songs can be played back in succession.

Playing all Demo Songs

OPERATION

With the power off, simultaneously hold down the **MASTER TUNE** and **NOTE SHIFT** buttons and turn the power on.



Demo song number 1 (for Voice 01) starts playing immediately and is followed by the other Demo songs in succession. Playback of all songs repeats indefinitely until stopped (by pressing any panel button). (The LEDs and lamps flash in a pattern during playback.)

CAUTION

Using the All Demo Play mode resets the P50-m to the original factory settings. If you have made custom settings that you want to keep, make a note of them before using All Demo Play.

Voice Controls

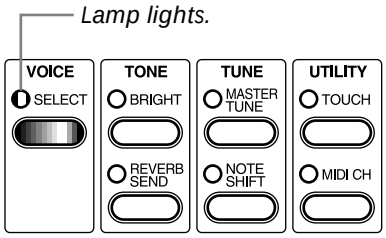
Selecting a Voice

The P50-m has 28 different piano and other keyboard Voices. (See list on page 30.) These can be selected either from the panel controls or remotely from a connected MIDI device.

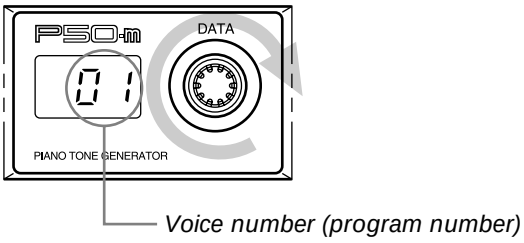
Range: 01 — 29

OPERATION

1. Press the SELECT button.



2. Use the DATA dial to change the Voice number.



Play this new Voice from the connected keyboard (or other device). Try selecting other Voices and playing them as well. (For a list of all available Voices, see page 30.)

NOTE

The polyphony (maximum simultaneous notes) of the P50-m is 32. However, for two-layered Voices (see page 30), this is reduced to 16.

Selecting Voices From Your MIDI Keyboard

You can also select Voices remotely from a connected MIDI keyboard. Though the actual operation may differ depending on the keyboard used, the general procedure is the same. (Refer to the owner's manual of your instrument for specific instructions.)

1. Make sure that your keyboard is set up to send Program Change messages.

2. Use your keyboard's panel controls to select a program. Generally, if everything has been set up properly, the Voice number on the P50-m will change, and will be the same number as the program number you selected on your keyboard.

- Keep in mind that the Voices of the P50-m number up to 29. Program change numbers higher than 28 select only the highest Voice (#29).
- Depending on the MIDI device you are using, the program numbers (on the device) may not match the Voice numbers on the P50-m. This is because the numbering system of some MIDI devices starts at #00, rather than #01. In such a case, for example, you would use program #12 to select Voice 13 on the P50-m.

Tone Controls

The Tone controls of the P50-m, BRIGHT and REVERB SEND, let you adjust the sound of individual Voices. Brightness (BRIGHT) determines the tonal quality of the Voice, while Reverb Send determines how much Reverb effect is applied to the selected Voice.

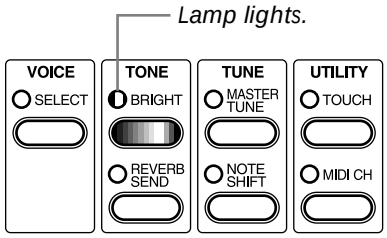
Both of these controls let you make independent settings for different Voices, and all settings are automatically saved as they are made.

Changing the Brightness of a Voice

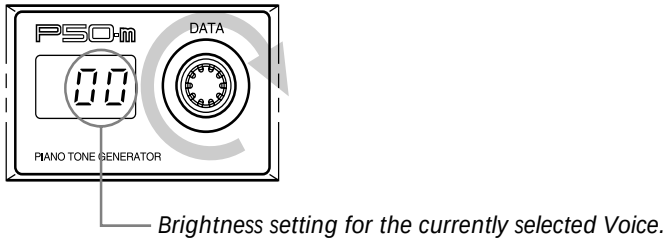
Lower values produce a soft, mellow sound, while higher values produce a bright, crisp sound. The normal setting is 00.

Range: –64 — 63

1. Press the **BRIGHT** button.



2. Use the **DATA** dial to change the Brightness setting.

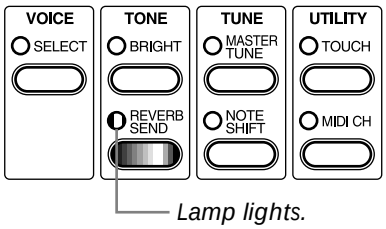


Changing the Reverb Send for a Voice

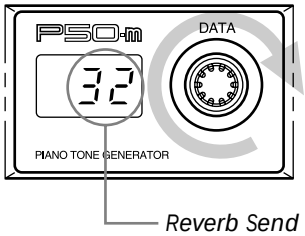
The higher the value, the greater the amount of Reverb sound. A value of 0 results in a completely “dry” Voice sound.

Range: 000 — 127

1. Press the **REVERB SEND** button.



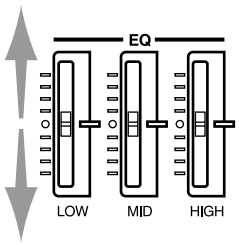
2. Use the **DATA** dial to change the Reverb Send setting.



3-Band EQ Sliders

The P50-m features 3-band EQ sliders on the panel. These are convenient for real-time adjustment of the overall timbre of the sound over three separate frequency bands.

Range: –12 — 12 dB
(for each frequency range: LOW, MID, HIGH)



NOTE

For stereo Voices (see page 26), the **MID** slider has no effect.

Tune Controls

The Tune controls of the P50-m, **MASTER TUNE** and **NOTE SHIFT**, let you adjust the overall pitch of the instrument. Master Tune lets you make fine adjustments to the tuning, while Note Shift lets you change the key transposition of the instrument.

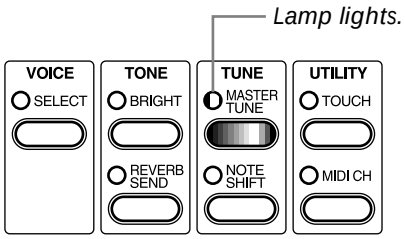
Both of these controls affect all Voices, and the settings are automatically saved as they are made.

Changing the Master Tune Setting

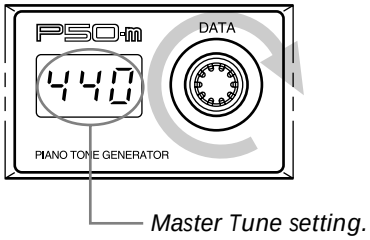
Master Tune is especially useful for adjusting the pitch of the P50-m when playing with other instruments. The normal setting is 440 Hz (or 00 cents).

Range: 415 — 466 Hz (–100 — 100 cents)

1. Press the **MASTER TUNE** button.



2. Use the **DATA** dial to change the Master Tune setting.



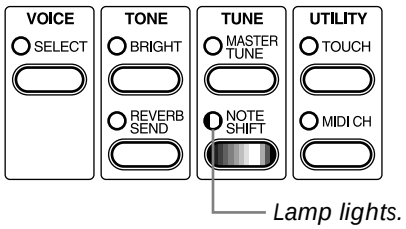
To switch the **LED** between displaying the value in Hertz (Hz) or cents, double-click the **MASTER TUNE** button (press it twice quickly).

Changing the Note Shift Setting

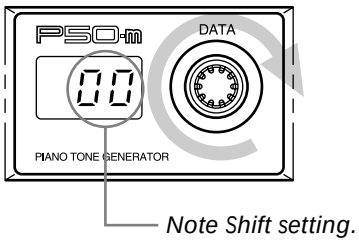
Note Shift is especially useful for instantly transposing the key of the P50-m. The normal setting is 00.

Range: –12 — 12 semitones (–/+ one octave)

1. Press the **NOTE SHIFT** button.



2. Use the **DATA** dial to change the Note Shift setting.



Utility Controls

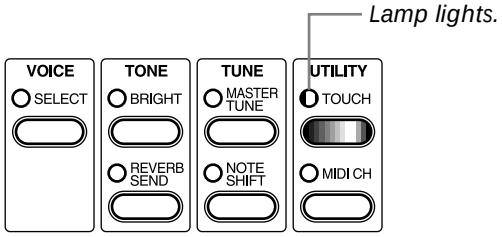
The Utility controls, **TOUCH** and **MIDI CH** (Channel), let you access some of the other important functions of the P50-m.

Changing the Touch Sensitivity

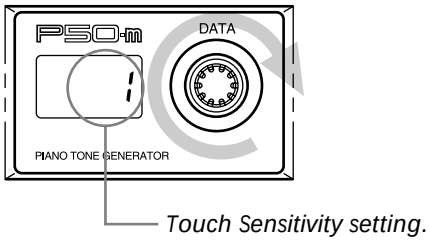
This function lets you determine how the volume of the P50-m's Voices respond to your playing touch (velocity). Eight different Touch Sensitivity settings (or curves) are available, letting you tailor the response to your own preference.

Settings: 1 — 8

1. Press the **TOUCH** button.



2. Use the **DATA** dial to change the Touch Sensitivity setting.



Settings: 1 — Normal
2 — Easy 1
3 — Easy 2
4 — Easy 3
5 — Hard 1
6 — Hard 2
7 — Cross 1
8 — Cross 2

The Normal (1) setting provides standard touch response. Easy 1 to 3 allow you to produce a reasonably high volume with a soft, light touch (low velocities). Hard 1 and 2 produce high volume only with a hard, strong touch (high velocities). Cross 1 and 2 produce nearly the same volume no matter how soft or hard the touch.

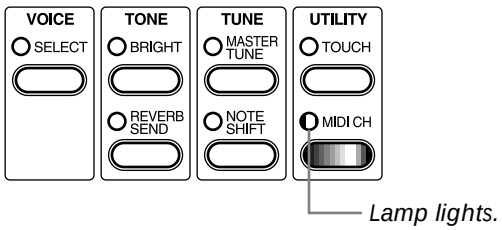
Changing the MIDI Receive Channel

In order to properly use the P50-m with another MIDI device, the MIDI channels on both machines must match. The MIDI Receive Channel setting allows you to set which MIDI channel the P50-m responds over.

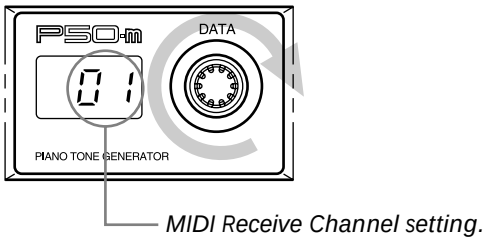
The “ALL” setting allows the P50-m to respond over all 16 MIDI channels.

Settings: 01 — 16, ALL

1. Press the **MIDI CH** button.



2. Use the **DATA** dial to change the MIDI Receive Channel setting.



Advanced Functions

The advanced functions are special functions not generally used in normal operation, but for specific applications. These are also “hidden” functions, accessed by double-clicking a button or pressing two buttons together.

Program Change Table

The Program Change Table setting is for use with XG applications, specifically when using the P50-m to replace the piano sounds of a connected second tone generator.

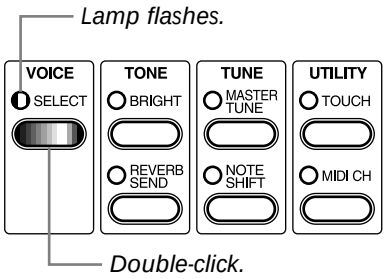
Settings: off (oFF), on

Normally (and when power is turned on), this is set to “oFF.” When set to “oFF,” the P50-m responds only to program changes 0 — 28. All other numbers are ignored, and the last selected Voice stays active.

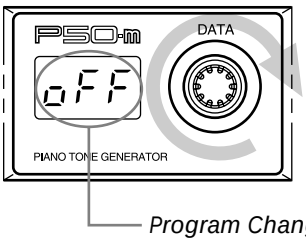
When set to “on,” the P50-m functions as a XG module for piano parts only. In this case, program changes (0 — 5, 7) corresponding to piano parts (according to XG) will select similar Voices on the P50-m, and all other numbers select a “blank” silent Voice (Voice No. 29). This ensures that the P50-m will play only the piano parts in XG song data.

OPERATION

1. Double-click the **SELECT** button (press it twice quickly).



2. Use the **DATA** dial to change the Program Change Table setting.



NOTE

- When Program Change Table is set to “oFF”
  The P50-m does not respond to XG System On or GM Mode On messages.
- When Program Change Table is set to “on”
  The P50-m responds to XG System On or GM Mode On messages and performs the following:
  - Resets all controllers to default or “zero” values.
  - Selects Voice number 9 (the Voice most similar to GM voice 001, Grand Piano).
  - Parameters of all voices are set to the same values as the Voice number 9 (Grand Piano).
  - Sets Reverb Send of selected Voice to 040.
  - Sets Transpose to 00.

Changing the Device Number

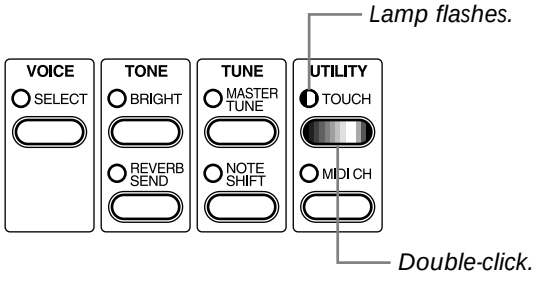
Device Number is a kind of MIDI “identification” number. This is convenient when using two or more P50-m units together in a MIDI chain. It is also important when sending System Exclusive data. When each unit in a chain is assigned a different Device Number, the controlling MIDI device can distinguish between different units.

The “ALL” setting allows the P50-m to respond to all 16 Device Numbers. For normal operation, this should be set to “ALL.”

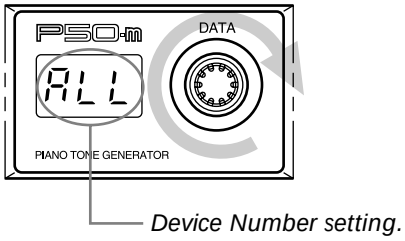
Settings: 01 — 16, ALL

OPERATION

1. Double-click the **TOUCH** button (press it twice quickly).



2. Use the **DATA** dial to change the Device Number setting.



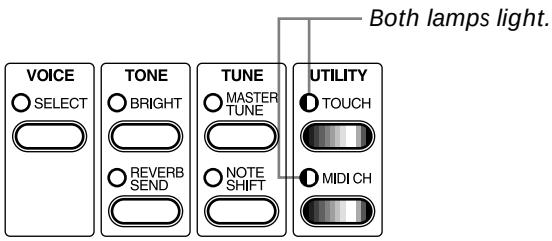
Receive Mode

When connecting two P50-m units together, the Receive Mode allows you to expand the maximum polyphony (simultaneous number of notes) from 32 to 64.

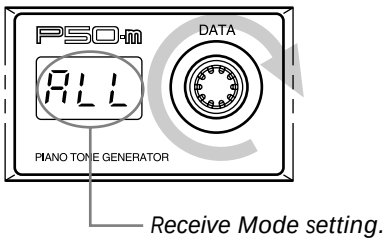
When set to “ALL” (normal operation), the P50-m plays all incoming MIDI notes. When set to “Evn,” the P50-m plays only even-numbered MIDI notes. Similarly, when set to “odd,” only odd-numbered MIDI notes are played. When combining two units for 64-note polyphony, set the Receive Mode to “Evn” on one unit and to “odd” on the other.

Settings: ALL, Evn (even), odd

1. Simultaneously press the **TOUCH** and **MIDI CH** buttons.



2. Use the **DATA** dial to change the Receive Mode setting.



Changing the MIDI OUT Setting

The MIDI OUT setting determines what incoming MIDI data is relayed via MIDI OUT terminal on the rear panel.

With “ot1,” *all* incoming MIDI data (over all MIDI channels) is relayed via the MIDI OUT terminal. With “ot2,” data received over the selected MIDI Receive Channel (see page 17) is filtered out, and only the data on the other channels is relayed.

Generally, when connecting another tone generator to the MIDI OUT and using the P50-m with a sequencer or computer, this should be set to “ot2.”

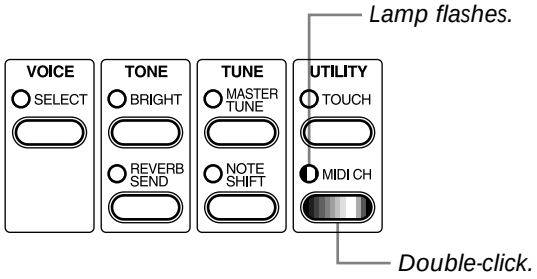
NOTE

If MIDI Receive Channel is set to “ALL” or the Voice number is set to 29 (no sound), all incoming MIDI data is relayed, regardless of the MIDI OUT setting.

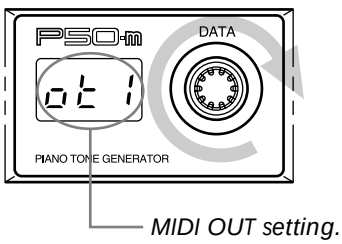
Settings: ot1, ot2

OPERATION

1. Double-click the **MIDI CH** button (press it twice quickly).



2. Use the **DATA** dial to change the MIDI OUT setting.



Factory Set

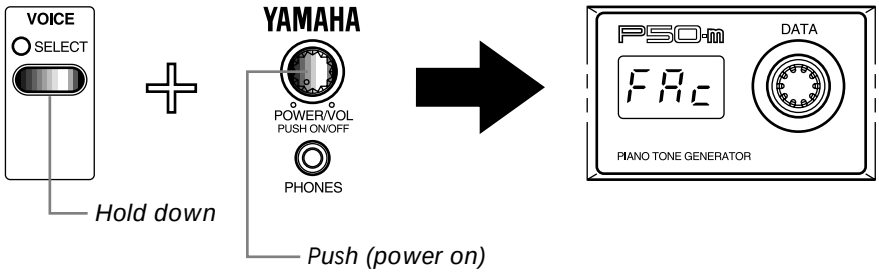
This function restores the original factory settings of the P50-m. When you make changes to the various controls of the P50-m, the new settings automatically replace the original factory settings and are retained in memory even when power is turned off. Use Factory Set to cancel your own settings and restore the factory settings.

CAUTION

Keep in mind that this function completely alters any changes you have made to the settings. If you want to keep your custom settings, make a note of them before using Factory Set.

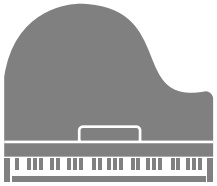
OPERATION

Simultaneously hold down the **SELECT** button and turn the power on. (The message “FAc” appears in the display.)



Factory Set resets the following parameters and values:

Voice Number	01
Brightness	00 (all voices)
Reverb Send	(varies according to the Voice)
Master Tune	440 (Hz)
Note Shift	00
Touch	0
MIDI Channel	01
Program Change Table	off
Device Number	ALL
Receive Mode	ALL
MIDI OUT Mode	ot1



APPENDIX

Troubleshooting

Even though the P50-m is exceptionally easy to use, it may occasionally not function as you expect it to. If that happens, check the possible problems and solutions below before assuming that the instrument is faulty.

Problem	Possible Cause and Solution
No power.	If you are using an AC adaptor, check that the adaptor is properly plugged into both the AC outlet and the P50-m (See page 4.)
No sound.	Check that: • The panel volume control is set to an appropriate level. • All connections have been properly made, including the PHONES jack (if used), external amplifier/speaker system, and MIDI. • The MIDI channel settings on the P50-m match those of the connected device. • One of the valid Voices (numbers 0–28) has been selected. Voice number 29 has no sound, and the P50-m has no Voices beyond 29.
No sound when playing the P50-m from a computer, sequencer or external keyboard.	Check all MIDI connections, making sure that the MIDI OUT of the external device is connected to the MIDI IN of the P50-m, and that the MIDI IN of the external device is connected to the MIDI OUT of the P50-m. (See pages 4–5.) Also, make sure that you have turned on the connected MIDI instrument or computer before turning on the P50-m. If you haven't, simply turning the P50-m off and back on again may solve the problem.
Devices connected to MIDI OUT do not sound.	Try setting the MIDI OUT setting to "ot2."

Problem	Possible Cause and Solution
Sound is distorted.	Check all volume settings, especially on the external amplifier/speaker system.
Volume is too low.	Check that incoming volume and expression data is set appropriately (not at or near minimum).
Sound is incorrect or unexpected.	Check: • The program change messages on your MIDI software. • The Bright and EQ settings on the P50-m.
Pitch is incorrect.	Check the Master Tune and Note Shift settings. Also, make sure that there are no incoming MIDI detune messages.
Notes are cut off or omitted.	The maximum polyphony of the P50-m may be exceeded. The P50-m can play no more than 32 notes at once; for the two-layered Voices, this is reduced to 16 (see page 27).
Cannot set Reverb and Chorus effects via MIDI.	Check that appropriate Reverb return and Chorus return messages are being sent.

Error Messages

E r 1

The battery voltage (for internal memory backup) may be too low. Bring the unit to your local Yamaha dealer or any other autorized Yamaha service personnel.

E r 2

The address of the received System Exclusive message is incorrect. Check the address and try transmitting again.

E r 3

The data of the received System Exclusive message is incorrect. Check the data (as to whether it requires an MSB or LSB header) and try transmitting again.

E r 4

The data size of the received System Exclusive message is incorrect. Check the size of the message and try transmitting again.

E r 5

The checksum of the received System Exclusive message is incorrect. Check the checksum of the message and try transmitting again.

Specifications

Tone Generation Method	AWM2 (Advanced Wave Memory 2)
Maximum Simultaneous Polyphony	32-note
Voices	28
Effects	Reverb (with Reverb Send control), Chorus; effects are built into certain Voices 3 band EQ
Demo Songs	28 (not editable, stored in ROM)
Display	Three 8-segment LEDs
Controls	POWER/VOL control; VOICE SELECT button; BRIGHT button; REVERB SEND button; MASTER TUNE button; NOTE SHIFT button; TOUCH button; MIDI CH button; DATA dial; EQ sliders
Jacks and Terminals	MIDI OUT/IN terminals; DC IN jack; OUTPUT R, L/MONO jacks; PHONES jack
Power Supply	Yamaha PA-3B AC Adaptor (included)
Dimensions	220 × 210 × 44 mm (8-5/8" × 8-1/4" × 1-3/4")
Weight	1.2 kg (2 lbs., 10 oz.)
Included Accessories	Owner's Manual, Yamaha PA-3B AC Adaptor

Index

PIANO TONE GENERATOR

P50-m

Voice List

PGM NO.	VOICE NAME	STEREO/MONO (Note 1)	Layer (Note 2)	Example of the Program Change Table setting (Note 3)	
				BANK NUMBER (LSB)	PROGRAM CHANGE NUMBER
01	BRIGHTPIANO	STEREO*	2	—	—
02		STEREO	2	3	1
03		MONO*	1	—	—
04		MONO	1	0	1
05	DARKPIANO	STEREO	2	18	1
06	GRANDPIANO	STEREO*	2	—	—
07		STEREO	2	3	0
08		MONO*	1	—	—
09		MONO	1	0	0
10	DANCE	STEREO	2	16	1
11	HONKYTONK	STEREO	2	0	3
12	HYBRIDPIANO	MONO	2	40	2
13	CP80	MONO	1	0	2
14		MONO*	1	—	—
15	CP80WITHCHORUS	MONO	1	32	2
16	DXEP	MONO	1	0	5
17	DXPAD	MONO	1	41	5
18	DXEPWITHCHORUS	MONO	1	32	5
19	ROADS	MONO	1	0	4
20	ROADSWITHCHORUS	MONO	1	32	4
21	SOFTROADS	MONO	1	18	4
22	HARDROADS	MONO	1	40	4
23	DYNO	MONO	1	45	4
24	RESONANTDYNO	MONO	1	20	4
25	DYNOWITHCHORUS	MONO	1	33	4
26	WURLI	MONO	1	64	4
27	CLAVI	MONO	1	0	7
28	CLAVIWITHWAH	MONO	1	27	7
29	(no sound)	—	—		8Å`

(Note 1) *: stretch-tuned
(Note 2) The polyphony of the P50-m is 32. However, for two-layered voices, this is reduced to 16.
(Note 3) The setting samples when the Program Change Table is set to “on.” (See page 18.)

Effect Lists

Effect Type List

REVERB

Exclusive		Effect Type	Description
MSB	LSB		
0	0	NOEFFECT	Effect turned off.
1	0	HALL1	Reverb simulating the resonance of a hall.
1	1	HALL2	Reverb simulating the resonance of a hall.
2	0	ROOM1	Reverb simulating the resonance of a room.
2	1	ROOM2	Reverb simulating the resonance of a room.
2	2	ROOM3	Reverb simulating the resonance of a room.
3	0	STAGE1	Reverb appropriate for a solo instrument.
3	1	STAGE2	Reverb appropriate for a solo instrument.
4	0	PLATE	Reverb simulating a metal plate reverb unit.
10	0	WHITE ROOM	A unique short reverb with a bit of initial delay.
11	0	TUNNEL	Simulation of a tunnel space expanding to left and right.
13	0	BASEMENT	A bit of initial delay followed by reverb with a unique resonance.

CHORUS

Exclusive		Effect Type	Description
MSB	LSB		
0	0	NOEFFECT	Effect turned off.
41	0	CHORUS1	Conventional chorus program that adds natural spaciousness.
41	1	CHORUS2	Conventional chorus program that adds natural spaciousness.
41	2	CHORUS3	Conventional chorus program that adds natural spaciousness.
41	8	CHORUS4	Chorus with stereo input. The pan setting specified for the Part will also apply to the effect sound.
42	0	CELESTE1	A 3-phase LFO adds modulation and spaciousness to the sound.
42	1	CELESTE2	A 4-phase LFO adds modulation and spaciousness to the sound.
42	2	CELESTE3	A 5-phase LFO adds modulation and spaciousness to the sound.
42	8	CELESTE4	CELESTE with stereo input. The pan setting specified for the Part will also apply to the effect sound.
43	0	FLANGER1	Adds a jet-airplane effect to the sound.
43	1	FLANGER2	Adds a jet-airplane effect to the sound.
43	8	FLANGER3	Adds a jet-airplane effect to the sound.

MSB and LSB values are in hexadecimal. *LSB=0 selects the basic type.

Effect Parameter List

CHORUS1,2,3,4,CELESTE1,2,3,4

No.	Parameter	Range	Value	→P32**	Control
1	LFO Frequency	0.00~39.7Hz	0-127	table#1	
2	LFO PM Depth	0~127	0-63		
3	Feedback Level	–63~+63	1-127		
4	Delay Offset	0~12a7	0-127	table#2	
5					
6	EQ Low Frequency	50Hz~2.0kHz	8-40	table#3	
7	EQ Low Gain	–12~+12dB	52-76		
8	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
9	EQ High Gain	–12~+12dB	52-76		
10	Dry/Wet	D63>W~D=W~D<W63	1-127		●
11					
12					
13					
14					
15	Input Mode	mono/stereo	0-1		
16					

HALL1,HALL2,ROOM1,ROOM2,ROOM3,STAGE1,STAGE2,PLATE

No.	Parameter	Range	Value	→P32**	Control
1	Reverb Time	0.3~30.0s	0-69	table#4	
2	Diffusion	0~10	0-10		
3	Initial Delay	0~63	0-63	table#5	
4	HPF Cutoff	Thru~8.0kHz	0-52	table#3	
5	LPF Cutoff	1.0k~Thru	34-60	table#3	
6					
7					
8					
9					
10	Dry/Wet	D63>W~D=W~D<W63	1-127		●
11	Rev Delay	0~63	0-63	table#5	
12	Density	0~3	0-3		
13	Er/Rev Balance	E63>R~E=R~E<R63	1-127		
14	High Damp	0.1~1.0	1-10		
15	Feedback Level	–63~+63	1-127		
16					

FLANGER1,2,3

No.	Parameter	Range	Value	→P32**	Control
1	LFO Frequency	0.00~39.7Hz	0-127	table#1	
2	LFO Depth	0~127	0-127		
3	Feedback Level	–63~+63	1-127		
4	Delay Offset	0~63	0-63	table#2	
5					
6	EQ Low Frequency	50Hz~2.0kHz	8-40	table#3	
7	EQ Low Gain	–12~+12dB	52-76		
8	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
9	EQ High Gain	–12~+12dB	52-76		
10	Dry/Wet	D63>W~D=W~D<W63	1-127		●
11					
12					
13					
14	LFO Phase Difference	–180~+180deg	4-124	resolution = 30deg.	
15					
16					

WHITE ROOM, TUNNEL, BASEMENT

No.	Parameter	Range	Value	→P32**	Control
1	Reverb Time	0.3~30.0s	0-69	table#4	
2	Diffusion	0~10	0-10		
3	Initial Delay	0~63	0-63	table#5	
4	HPF Cutoff	Thru~8.0kHz	0-52	table#3	
5	LPF Cutoff	1.0k~Thru	34-60	table#3	
6	Width	0.5~10.2m	0-37	table#11	
7	Heigt	0.5~20.2m	0-73	table#11	
8	Depth	0.5~30.2m	0-104	table#11	
9	Wall Vary	0~30	0-30		
10	Dry/Wet	D63>W~D=W~D<W63	1-127		●
11	Rev Delay	0~63	0-63	table#5	
12	Density	0~3	0-3		
13	Er/Rev Balance	E63>R~E=R~E<R63	1-127		
14					
15	Feedback Level	–63~+63	1-127		
16					

●: Indicates that AC1 (Assignable Controller 1) can be used to control the parameter value.
No.*: Corresponds to parameter number given in Appended Table 1-3 on page 38.
→P32**: Refer to the Effect-Data Assignment Table.

Effect-Data Assignment Table

table#1

LFO Frequency (Hz)

Data	Value	Data	Value	Data	Value
0	0.00	43	1.80	86	5.38
1	0.04	44	1.85	87	5.55
2	0.08	45	1.89	88	5.72
3	0.12	46	1.93	89	6.05
4	0.16	47	1.97	90	6.39
5	0.21	48	2.01	91	6.72
6	0.25	49	2.06	92	7.06
7	0.29	50	2.10	93	7.40
8	0.33	51	2.14	94	7.73
9	0.37	52	2.18	95	8.07
10	0.42	53	2.22	96	8.41
11	0.46	54	2.27	97	8.74
12	0.50	55	2.31	98	9.08
13	0.54	56	2.35	99	9.42
14	0.58	57	2.39	100	9.75
15	0.63	58	2.43	101	10.0
16	0.67	59	2.48	102	10.7
17	0.71	60	2.52	103	11.4
18	0.75	61	2.56	104	12.1
19	0.79	62	2.60	105	12.7
20	0.84	63	2.65	106	13.4
21	0.88	64	2.69	107	14.1
22	0.92	65	2.77	108	14.8
23	0.96	66	2.86	109	15.4
24	1.00	67	2.94	110	16.1
25	1.05	68	3.02	111	16.8
26	1.09	69	3.11	112	17.5
27	1.13	70	3.19	113	18.1
28	1.17	71	3.28	114	19.5
29	1.22	72	3.36	115	20.8
30	1.26	73	3.44	116	22.2
31	1.30	74	3.53	117	23.5
32	1.34	75	3.61	118	24.8
33	1.38	76	3.70	119	26.2
34	1.43	77	3.86	120	27.5
35	1.47	78	4.03	121	28.9
36	1.51	79	4.20	122	30.2
37	1.55	80	4.37	123	31.6
38	1.59	81	4.54	124	32.9
39	1.64	82	4.71	125	34.3
40	1.68	83	4.87	126	37.0
41	1.72	84	5.04	127	39.7
42	1.76	85	5.21		

table#2

Modulation Delay Offset (msec)

Data	Value	Data	Value	Data	Value
0	0.0	43	4.3	86	8.6
1	0.1	44	4.4	87	8.7
2	0.2	45	4.5	88	8.8
3	0.3	46	4.6	89	8.9
4	0.4	47	4.7	90	9.0
5	0.5	48	4.8	91	9.1
6	0.6	49	4.9	92	9.2
7	0.7	50	5.0	93	9.3
8	0.8	51	5.1	94	9.4
9	0.9	52	5.2	95	9.5
10	1.0	53	5.3	96	9.6
11	1.1	54	5.4	97	9.7
12	1.2	55	5.5	98	9.8
13	1.3	56	5.6	99	9.9
14	1.4	57	5.7	100	10.0
15	1.5	58	5.8	101	11.1
16	1.6	59	5.9	102	12.2
17	1.7	60	6.0	103	13.3
18	1.8	61	6.1	104	14.4
19	1.9	62	6.2	105	15.5
20	2.0	63	6.3	106	17.1
21	2.1	64	6.4	107	18.6
22	2.2	65	6.5	108	20.2
23	2.3	66	6.6	109	21.8
24	2.4	67	6.7	110	23.3
25	2.5	68	6.8	111	24.9
26	2.6	69	6.9	112	26.5
27	2.7	70	7.0	113	28.0
28	2.8	71	7.1	114	29.6
29	2.9	72	7.2	115	31.2
30	3.0	73	7.3	116	32.8
31	3.1	74	7.4	117	34.3
32	3.2	75	7.5	118	35.9
33	3.3	76	7.6	119	37.5
34	3.4	77	7.7	120	39.0
35	3.5	78	7.8	121	40.6
36	3.6	79	7.9	122	42.2
37	3.7	80	8.0	123	43.7
38	3.8	81	8.1	124	45.3
39	3.9	82	8.2	125	46.9
40	4.0	83	8.3	126	48.4
41	4.1	84	8.4	127	50.0
42	4.2	85	8.5		

table#3

EQ Frequency (Hz)

Data	Value	Data	Value
0	THRU (20)	43	2.8k
1	22	44	3.2k
2	25	45	3.6k
3	28	46	4.0k
4	32	47	4.5k
5	36	48	5.0k
6	40	49	5.6k
7	45	50	6.3k
8	50	51	7.0k
9	56	52	8.0k
10	63	53	9.0k
11	70	54	10.0k
12	80	55	11.0k
13	90	56	12.0k
14	100	57	14.0k
15	110	58	16.0k
16	125	59	18.0k
17	140	60	THRU (20.0k)
18	160		
19	180		
20	200		
21	225		
22	250		
23	280		
24	315		
25	355		
26	400		
27	450		
28	500		
29	560		
30	630		
31	700		
32	800		
33	900		
34	1.0k		
35	1.1k		
36	1.2k		
37	1.4k		
38	1.6k		
39	1.8k		
40	2.0k		
41	2.2k		
42	2.5k		

table#4

Reverb Time (sec)

Data	Value	Data	Value
0	0.3	43	4.6
1	0.4	44	4.7
2	0.5	45	4.8
3	0.6	46	4.9
4	0.7	47	5.0
5	0.8	48	5.5
6	0.9	49	6.0
7	1.0	50	6.5
8	1.1	51	7.0
9	1.2	52	7.5
10	1.3	53	8.0
11	1.4	54	8.5
12	1.5	55	9.0
13	1.6	56	9.5
14	1.7	57	10.0
15	1.8	58	11.0
16	1.9	59	12.0
17	2.0	60	13.0
18	2.1	61	14.0
19	2.2	62	15.0
20	2.3	63	16.0
21	2.4	64	17.0
22	2.5	65	18.0
23	2.6	66	19.0
24	2.7	67	20.0
25	2.8	68	25.0
26	2.9	69	30.0
27	3.0		
28	3.1		
29	3.2		
30	3.3		
31	3.4		
32	3.5		
33	3.6		
34	3.7		
35	3.8		
36	3.9		
37	4.0		
38	4.1		
39	4.2		
40	4.3		
41	4.4		
42	4.5		

table#5

Delay Time (msec)

Data	Value	Data	Value	Data	Value
0	0.1	43	67.8	86	135.5
1	1.7	44	69.4	87	137.0
2	3.2	45	70.9	88	138.6
3	4.8	46	72.5	89	140.2
4	6.4	47	74.1	90	141.8
5	8.0	48	75.7	91	143.3
6	9.5	49	77.2	92	144.9
7	11.1	50	78.8	93	146.5
8	12.7	51	80.4	94	148.1
9	14.3	52	81.9	95	149.6
10	15.8	53	83.5	96	151.2
11	17.4	54	85.1	97	152.8
12	19.0	55	86.7	98	154.4
13	20.6	56	88.2	99	155.9
14	22.1	57	89.8	100	157.5
15	23.7	58	91.4	101	159.1
16	25.3	59	93.0	102	160.6
17	26.9	60	94.5	103	162.2
18	28.4	61	96.1	104	163.8
19	30.0	62	97.7	105	165.4
20	31.6	63	99.3	106	166.9
21	33.2	64	100.8	107	168.5
22	34.7	65	102.4	108	170.1
23	36.3	66	104.0	109	171.7
24	37.9	67	105.6	110	173.2
25	39.5	68	107.1	111	174.8
26	41.0	69	108.7	112	176.4
27	42.6	70	110.3	113	178.0
28	44.2	71	111.9	114	179.5
29	45.7	72	113.4	115	181.1
30	47.3	73	115.0	116	182.7
31	48.9	74	116.6	117	184.3
32	50.5	75	118.2	118	185.8
33	52.0	76	119.7	119	187.4
34	53.6	77	121.3	120	189.0
35	55.2	78	122.9	121	190.6
36	56.8	79	124.4	122	192.1
37	58.3	80	126.0	123	193.7
38	59.9	81	127.6	124	195.3
39	61.5	82	129.2	125	196.9
40	63.1	83	130.7	126	198.4
41	64.6	84	132.3	127	200.0
42	66.2	85	133.9		

table#6

Reverb Width; Depth; Height (meter)

Data	Value	Data	Value	Data	Value
0	0.5	43	11.8	86	24.2
1	0.8	44	12.1	87	24.5
2	1.0	45	12.3	88	24.9
3	1.3	46	12.6	89	25.2
4	1.5	47	12.9	90	25.5
5	1.8	48	13.1	91	25.8
6	2.0	49	13.4	92	26.1
7	2.3	50	13.7	93	26.5
8	2.6	51	14.0	94	26.8
9	2.8	52	14.2	95	27.1
10	3.1	53	14.5	96	27.5
11	3.3	54	14.8	97	27.8
12	3.6	55	15.1	98	28.1
13	3.9	56	15.4	99	28.5
14	4.1	57	15.6	100	28.8
15	4.4	58	15.9	101	29.2
16	4.6	59	16.2	102	29.5
17	4.9	60	16.5	103	29.9
18	5.2	61	16.8	104	30.2
19	5.4	62	17.1		
20	5.7	63	17.3		
21	5.9	64	17.6		
22	6.2	65	17.9		
23	6.5	66	18.2		
24	6.7	67	18.5		
25	7.0	68	18.8		
26	7.2	69	19.1		
27	7.5	70	19.4		
28	7.8	71	19.7		
29	8.0	72	20.0		
30	8.3	73	20.2		
31	8.6	74	20.5		
32	8.8	75	20.8		
33	9.1	76	21.1		
34	9.4	77	21.4		
35	9.6	78	21.7		
36	9.9	79	22.0		
37	10.2	80	22.4		
38	10.4	81	22.7		
39	10.7	82	23.0		
40	11.0	83	23.3		
41	11.2	84	23.6		
42	11.5	85	23.9		

MIDI Data Format

1. Channel voice messages

1.1 Note Off

1000nnnn	8n	Status	n=channel number
0kkkkkkk	kk	Note No.	k=0 (C-2)~127 (G8)
0vvvvvvv	vv	Velocity	v=0~127

Velocity is not received.
Not received when the Part Parameter setting Rcv NOTE MESSAGE = OFF.

1.2 Note On / Note Off

1001nnnn	9n	Status	n= channel number
0kkkkkkk	kk	Note No.	k=0 (C-2)~127 (G8)
0vvvvvvv	vv	Velocity	v=0: Note off, v=1~127: Note on

Velocity is received only for Note On.
Not received when the Part Parameter setting Rcv NOTE MESSAGE = OFF.

1.3 Polyphonic Aftertouch

1010nnnn	An	Status	n= channel number
0kkkkkkk	kk	Note No.	k=0 (C-2)~127 (G8)
0vvvvvvv	vv	Value	v=0~127

With the default settings, has no function.
Polyphonic Aftertouch is not received when the Part Parameter setting Rcv POLYPHONIC AFTER TOUCH = OFF.
The effect will apply only to the range of note numbers 36~97.

1.4 Control Changes

1011nnnn	Bn	Status	n= channel number
0ccccccc	cc	Control No.	The range of possible values for "c" is described in section 1.4.1 and following.
0vvvvvvv	vv	Control Value	v=0~127

Control Changes are not received when the Part Parameter setting Rcv CONTROL CHANGE = OFF.

1.4.1 Bank Select

Cntrl No.	parameter	Data Range
0	Bank Select MSB	0:Normal, 1~127:Silent
32	Bank Select LSB	0~127

Bank Select messages are not received when PROGRAM CHANGE TABLE = OFF, and Rcv BANK SELECT = OFF. Bank Select processing is suspended until a Program Change message is received.

1.4.2 Modulation

Cntrl No.	parameter	Data Range
1	Modulation	0~127

Modulation is not received if the Part Parameter setting Rcv MODULATION = OFF.

1.4.3 Portamento Time

Cntrl No.	parameter	Data Range
5	Portamento Time	0~127

1.4.9 When Portamento = ON, this adjusts the speed of the pitch change.
A value of 0 is the shortest portamento time, and 127 is the longest portamento time.

1.4.4 Data Entry

Cntrl No.	parameter	Data Range
6	Data Entry MSB	0~127
38	Data Entry LSB	0~127

Used to set the value of the parameter specified by RPN and NRPN.

1.4.5 Main Volume

Cntrl No.	parameter	Data Range
7	Main Volume	0~127

Volume is not received when the Part Parameter setting Rcv VOLUME = OFF.

1.4.6 Pan

Cntrl No.	parameter	Data Range
10	Pan	0~127

0 is left, 127 is right.
Pan is not received when the Part Parameter setting Rcv PAN = OFF.

1.4.7 Expression

Cntrl No.	parameter	Data Range
11	Expression	0~127

Expression is not received when the Part Parameter setting Rcv EXPRESSION = OFF.

1.4.8 Hold1

Cntrl No.	parameter	Data Range
64	Hold1	0~127 (0-63:off, 64-127:on)

Hold1 is not received when the Part Parameter setting Rcv HOLD1 = OFF.

1.4.9 Portamento

Cntrl No.	parameter	Data Range
65	Portamento	0~127 (0-63:off, 64-127:on)

Portamento is not received when the Part Parameter setting Rcv PORTAMENTO = OFF.

1.4.10 Sostenuto

Cntrl No.	parameter	Data Range
66	Sostenuto	0~127 (0-63:off, 64-127:on)

Sostenuto is not received when the Part Parameter setting Rcv SOSTENUTO = OFF.

1.4.11 Soft Pedal

Cntrl No.	parameter	Data Range
67	Soft Pedal	0~127 (0-63:off, 64-127:on)

Soft Pedal is not received when the Part Parameter setting Rcv SOFT PEDAL= OFF.

1.4.12 Harmonic Content

Cntrl No.	parameter	Data Range
71	Harmonic Content	0~127 (0:-64, 64:+0, 127:+63)

This parameter adjusts the resonance specified by the voice. Since it is a relative change parameter, it produces a boost or cut relative to a mid-point of 64. Higher values will produce a more distinctive sound.
Depending on the voice, the effective range of this parameter may be narrower than the range that can be set.

1.4.13 Release Time

Cntrl No.	parameter	Data Range
72	Release Time	0~127 (0:–64, 64:+0, 127:+63)

This adjusts the Envelope Release Time specified by the voice. Since it is a relative change parameter, it produces an increase or decrease relative to a mid-point of 64.

1.4.14 Attack Time

Cntrl No.	parameter	Data Range
73	Attack Time	0~127 (0:–64, 64:+0, 127:+63)

This parameter adjusts the Envelope Attack Time specified by the voice. Since it is a relative change parameter, it produces an increase or decrease relative to a mid-point of 64.

1.4.15 Brightness

Cntrl No.	parameter	Data Range
74	Brightness	0~127 (0:–64, 64:+0, 127:+63)

This parameter adjusts the Cutoff Frequency specified by the voice. Since it is a relative change parameter, it produces an increase or decrease relative to a mid-point of 64. Decreasing the value will make the sound more mellow.
For some voices, the effective range may be narrower than the range of settings.
Since this parameter is remembered for each voice, the Brightness value is stored for the currently selected voice number, and when you change the voice number the Brightness value will also change.
Since the Brightness which can be adjusted from the panel is an absolute adjustment, it will not match the value set using this parameter.
When a Brightness value of 64(+0) is received, the value indicated on the panel will be the ideal value for the currently selected voice.

1.4.16 Portamento Control

Cntrl No.	parameter	Data Range
84	Portamento Control	0~127

When transmitting Portamento Control, you specify a currently-sounding Note On key.
The value 0~127 specifies the Portamento Source Key number. When Portamento Control is received, the currently sounding note will change at a Portamento Time of 0 to the key of the Note On that is received next on the same channel. This is received even if Rcv PORTAMENTO = OFF.

1.4.17 Effect1 Depth (Reverb Send Level)

Cntrl No.	parameter	Data Range
91	Effect1 Depth	0~127

This sets the send level to the Reverb effect.
Since this parameter is remembered independently for each voice, the Reverb Send Level value of the currently selected voice number will be stored, and when the voice number is changed the Reverb Send Level value will also change.

1.4.18 Effect3 Depth (Chorus Send Level)

Cntrl No.	parameter	Data Range
93	Effect3 Depth	0~127

This sets the send level to the Chorus effect.
When the voice number is changed, this will change to the value that is preset for each voice number.

1.4.19 Data Increment/Decrement (for RPN)

Cntrl No.	parameter	Data Range
96	RPN Increment	0~127
97	RPN Decrement	0~127

The data bytes are ignored.

These messages increment/decrement the MSB values of Pitch Bend Sensitivity, Fine Tune, or Coarse Tune in steps of 1. When the value being incremented/decremented reaches is maximum/minimum value, further change will not occur. (Nor will incrementing Fine Tune to the maximum value cause the Coarse Tune to be incremented, etc.)

1.4.20 NRPN (Non-registered Parameter Numbers)

Cntrl No.	parameter	Data Range
98	NRPN LSB	0~127
99	NRPN MSB	0~127

NRPN is not received if the Part Parameter setting Rcv NRPN = OFF.
First transmit the NRPN MSB and NRPN LSB to specify the parameter which is to be controlled, then specify the parameter which is to be controlled, and then use Data Entry to set the value of the specified parameter.

Now the next NRPN can be received.

NRPN		Data entry	
MSB	LSB	MSB	Parameter name and range of values
01H	08H	mmH	Vibrato Rate mm : 00H~40H~7FH (–64~0~+63)
01H	09H	mmH	Vibrato Depth mm : 00H~40H~7FH (–64~0~+63)
01H	0AH	mmH	Vibrato Delay mm : 00H~40H~7FH (–64~0~+63)
01H	20H	mmH	Filter Cutoff Frequency mm : 00H~40H~7FH (–64~0~+63)
01H	21H	mmH	Filter Resonance mm : 00H~40H~7FH (–64~0~+63)
01H	63H	mmH	EG Attack Time mm : 00H~40H~7FH (–64~0~+63)
01H	64H	mmH	EG Decay Time mm : 00H~40H~7FH (–64~0~+63)
01H	66H	mmH	EG Release Time mm : 00H~40H~7FH (–64~0~+63)

1.4.21 RPN (Registered Parameter Numbers)

Cntrl No.	parameter	Data Range
100	RPN LSB	0~127
101	RPN MSB	0~127

Default:LSB=127, MSB=127
This is not received by a Part if its Part Parameter setting Rcv RPN = OFF.

The next RPN can be received.

RPN		Data entry		
MSB	LSB	MSB	LSB	Parameter name and range of values
00H	00H	mmH	—	Pitch Bend Sensitivity mm:00~18H(0~2 semitones) Settable in semitone steps up to 2 octaves Default:02H The LSB value is ignored.
00H	01H	mmH	11H	Fine Tuning mm:00H~40H~7FH (–64~0~+63)
00H	02H	mmH	—	Coarse Tuning mm:28H~40H~58H (–24~+24 semitones) The LSB value is ignored.
7FH	7FH	—	—	RPN null

This message specifies a condition in which RPN and NRPN numbers are un-set.
Values of internal settings will not change.

1.5 Program Change

1100nnnn	Cn	Status	n= channel number
0ppppppp	pp	Program No.	p=0~127

Program Change messages are not received when the Part Parameter setting Rcv PROGRAM CHANGE = OFF.
When MIDI PROGRAM CHANGE TABLE = OFF, values other than 0~28 are ignored.

1.6 Channel Aftertouch

1101nnnn	Dn	Status	n= channel number
0vvvvvvv	vv	Value	v=0~127

With the default settings, this has no function.
Channel Aftertouch messages are not received when the Part Parameter setting Rcv CHANNEL AFTER TOUCH = OFF.

1.7 Pitch Bend Change

1110nnnn	En	Status	n= channel number
0lllllll	ll	Value LSB	
0mmmmmmm	mm	Value MSB	

Pitch Bend Change messages are not received when the Part Parameter setting Rcv PITCH BEND CHANGE = OFF.

2. Channel Mode Messages

2.1 All Sound Off

1011nnnn	Bn	Status	n= channel number
01111000	78	Control No.	
00000000	00	Control Value	

All sounding notes on the corresponding channel will be silenced.
However the status of channel messages such as Note On and Hold On will be maintained.

2.2 Reset All Controllers

1011nnnn	Bn	Status	n= channel number
01111001	79	Control No.	
00000000	00	Control Value	

The values of the following controllers will change.

Controller	Setting value
Pitch Bend Range	+/–0 (center)
Channel Aftertouch	0 (off)
Polyphonic Aftertouch	0 (off)
Modulation	0 (off)
Expression	127(maximum)
Hold	0 (off)
Portamento	0 (off)
Sostenuto	0 (off)
Soft Pedal	0 (off)
Portamento Control	Reset the Portamento Source Note number that was received
RPN	Number un-specified, internal data not changed.
NRPN	Number un-specified, internal data not changed.

2.3 All Note Off

1011nnnn	Bn	Status	n= channel number
01111011	7B	Control No.	
00000000	00	Control Value	

All notes of the corresponding channel that are currently on will be turned off.
However if Hold1 or Sostenuto are on, the sound will continue until these are off.

2.4 Omni Off

1011nnnn	Bn	Status	n= channel number
01111100	7C	Control No.	
00000000	00	Control Value	

This performs the same processing as when All Note Off is received.

2.5 Omni On

1011nnnn	Bn	Status	n= channel number
01111101	7D	Control No.	
00000000	00	Control Value	

This performs the same processing as when All Note Off is received.

2.6 Mono

1011nnnn	Bn	Status	n= channel number
01111110	7E	Control No.	
00000000	00	Control Value	

This performs the same processing as when All Sound Off is received, and if the 3rd byte (the mono number) is in the range 0~16, sets the instrument to Mode 4 (m=1).

2.7 Poly

1011nnnn	Bn	Status	n= channel number
01111111	7E	Control No.	
00000000	00	Control Value	

This performs the same processing as when All Sound Off is received, and sets the instrument to Mode 3.

3. System Exclusive Messages

3.1 Parameter Changes

This instrument receives the following parameter changes.

[UNIVERSAL REALTIME MESSAGE]

1) Master Volume

[UNIVERSAL NON REALTIME MESSAGE]

1) General MIDI Mode On

[XG NATIVE]

1) XG System on
2) XG System Data parameter change
3) Multi Effect1 Data parameter change
4) Part Data parameter change

[P50-m NATIVE]

1) P50-m System data parameter change
2) Remote switch

[Other]

1) Master tuning

3.1.1 Universal Realtime Messages

3.1.1.1 Master Volume

11110000	F0	Exclusive status
01111111	7F	Universal Real Time
01111111	7F	ID of target device
00000100	04	Sub-ID #1=Device Control Message
00000001	01	Sub-ID #2=Master Volume
0sssssss	ss	Volume LSB
0ttttttt	tt	Volume MSB
11110111	F7	End of Exclusive

Alternatively,

11110000	F0	Exclusive status
01111111	7F	Universal Real Time
0xxxnnnn	xn	Device No.xxx = don't care

```
00000100  04  Sub-ID #1=Device Control Message
00000001  01  Sub-ID #2=Master Volume
Osssssss  ss  Volume LSB
Otttttt   tt  Volume MSB
11110111  F7  End of Exclusive
```

When this is received, the Volume MSB will be reflected in the System Parameter MASTER VOLUME setting.

3.1.2 Universal Non-realtime Messages

3.1.2.1 General MIDI Mode On

```
11110000  F0  Exclusive status
01111110  7E  Universal Non-Real Time
01111111  7F  ID of target device
00001001  09  Sub-ID #1=General MIDI Message
00000001  01  Sub-ID #2=General MIDI On
11110111  F7  End of Exclusive
```

Alternatively,

```
11110000  F0  Exclusive status
01111110  7E  Universal Non-Real Time
0xxxnnnn  xn  Device No.xxx = don't care
00001001  09  Sub-ID #1=General MIDI Message
00000001  01  Sub-ID #2=General MIDI On
11110111  F7  End of Exclusive
```

This is not received when Rcv GM EXCLUSIVE = OFF.
This is not received when MIDI PROGRAM CHANGE TABLE = OFF.
When an On message is received, the controller values will be reset, and the voice number will be 09.REVERB and CHORUS settings will be the settings of voice number 09.

3.1.3 XG Native Parameter Changes

```
11110000  F0  Exclusive status
01000011  43  YAMAHA ID
0001nnnn  1n  Device No.
01001100  4C  XG Model ID
Oaaaaaaa  aa  Address High
Oaaaaaaa  aa  Address Mid
Oaaaaaaa  aa  Address Low
Odddddddd dd  Data
    |      |
11110111  F7   End of Exclusive
```

Parameters with a Data Size of 2 or 4 transmit data of the corresponding size.

3.1.3.1 XG Sytem On

```
11110000  F0  Exclusive status
01000011  43  YAMAHA ID
0001nnnn  1n  Device No.
01001100  4C  XG Model ID
00000000  00  Address High
00000000  00  Address Mid
01111110  7E  Address Low
00000000  00  Data
11110111  F7  End of Exclusive
```

This is not received when MIDI PROGRAM CHANGE TABLE = OFF.
When an On message is received, the controller values will be reset, and the voice number will be 09.
REVERB and CHORUS settings will be the settings of voice number 09.

3.1.3.2 XG System Data parameter change
Refer to tables <1-1> and <1-2>.

3.1.3.3 Multi Effect1 Data parameter change
Refer to tables <1-1> and <1-3>.

3.1.3.4 Part Data parameter change
Refer to tables <1-1> and <1-4>.

3.1.4 P50-m Native Parameter Changes

```
11110000  F0  Exclusive status
01000011  43  YAMAHA ID
0001nnnn  1n  Device No.
01010101  55  P50-m Model ID
Oaaaaaaa  aa  Address High
Oaaaaaaa  aa  Address Mid
Oaaaaaaa  aa  Address Low
Odddddddd dd  Data
    |      |
11110111  F7  End of Exclusive
```

Parameters with a Data Size of 2 or 4 transmit the corresponding amount of data.

3.1.4.1 P50-m System Data parameter change
Refer to tables <2-1> and <2-2>.

3.1.4.2 Remote Switch
Refer to tables <2-1> and <2-3>.

3.1.5 Other parameter changes

3.1.5.1 Master Tuning

```
11110000  F0  Exclusive status
01000011  43  YAMAHA ID
0001nnnn  1n  Device No.
00100111  27  Model ID
00000001  30  Sub ID2
00000000  00
00000000  00
Ommmmmmm  mm  Master Tune MSB
Olllllll  ll  Master Tune LSB
Occccccc  cc
11110111  F7  End of Exclusive
```

This message modifies the pitch of all channels at once.

3.2 Bulk Dump

This instrument receives the following bulk data.

[XG NATIVE]

1) XG System Data
2) Multi Effect1 Data
3) Part Data

[P50-m NATIVE]

1) P50-m System data

3.2.1 XG Native Bulk Dump

```
11110000  F0  Exclusive status
01000011  43  YAMAHA ID
0000nnnn  0n  Device No.
01001100  4C  XG Model ID
Obbbbbbb  bb  Byte Count
Obbbbbbb  bb  Byte Count
Oaaaaaaa  aa  Address High
Oaaaaaaa  aa  Address Mid
Oaaaaaaa  aa  Address Low
00000000  00  Data
    |      |
Occccccc  cc  Check-sum
11110111  F7  End of Exclusive
```

For the Address and Byte Count, refer to the accompanying tables.
Check sum is the value which produces a lower 7 bits of zero when the Start Address, Byte Count, and Check-sum itself are added.

513 bytes or more shall not be received at one time. Thus, if a dump request for 513 bytes or more is received, the data must be divided into packets of 512 bytes or less, and the packets transmitted with an appropriate time interval (120 msec or more).

3.2.1.1 XG System Data bulk dump
Refer to tables <1-1> and <1-2>.

3.2.1.2 Multi Effect1 Data bulk dump
Refer to tables <1-1> and <1-3>.

3.2.1.3 Part Data bulk dump
Refer to tables <1-1> and <1-4>.

3.2.2 P50-m Native bulk dump

```
11110000  F0  Exclusive status
01000011  43  YAMAHA ID
0000nnnn  0n  Device No.
01010101  55    P50-m Model ID
0bbbbbbb  bb  Byte Count
0bbbbbbb  bb  Byte Count
0aaaaaaa  aa  Address High
0aaaaaaa  aa  Address Mid
0aaaaaaa  aa  Address Low
00000000  00  Data
    |     |
0ccccccc  cc  Check-sum
11110111  F7  End of Exclusive
```

For the Address and Byte Count, refer to the accompanying tables.
Check sum is the value which produces a lower 7 bits of zero when the Start Address, Byte Count, and Check-sum itself are added.
513 bytes or more shall not be received at one time. Thus, if a dump request for 513 bytes or more is received, the data must be divided into packets of 512 bytes or less, and the packets transmitted with an appropriate time interval (120 msec or more).

3.2.2.1 P50-m System Data bulk dump
Refer to tables <2-1> and <2-2>.

4. Realtime Messages

4.1 Active Sensing

Once FE has been received, failure to receive subsequent MIDI messages for an interval greater than approximately 300 msec will cause
the same processing to be performed as when SOUND OFF, ALL NOTE OFF, and RESET ALL CONTROLLERS are received, and then the instrument will return to the status of not having received FE.

5. MIDI thru out

MIDI data that is received is re-transmitted (thru out) in the following 2 modes.

5.1 When MIDI OUT=ot1

Data received at MIDI IN is re-transmitted (thru out) without change.

5.2 When MIDI OUT=ot2

Data other than Key ON/OFF messages of the receive channel specified by MIDI CH will be re-transmitted (thru out). However if the Receive Channel is set to ALL, or if the voice number is 29 (Silence), all data will be re-transmitted (thru out) without change.

When the setting is changed from ot1 to ot2, the change is made simply, without performing any management of notes which may be currently on. In some cases this can cause problems; switching the setting to ot2 while notes are on can cause stuck notes on a tone generator connected to MIDI OUT.

< Table 1-1>

Parameter Base Address
Model ID = 4C [XG]

Parameter Change				
	Address			Description
	(H)	(M)	(L)	
XG SYSTEM	00	00	00	System
	00	00	7E	XG System On
	00	00	7F	All Parameter Reset
EFFECT 1	02	01	00	Effect1(Reverb,Chorus)
PART	08	00	00	Part

< Table 1-2 >

MIDI Parameter Change table (SYSTEM) [XG]

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)
00 00 00	4	0000 - 07FF	MASTER TUNE	–102.4 - +102.3[cent] 1st bit3 - 30→bit15-12 2nd bit3 - 0→bit11-8 3rd bit3 - 0→bit7-4 4th bit3 - 0→bit3-0	00 04 00 00
04	1	00 - 7F	MASTER VOLUME	0 - 127	7F
05	1	00 - 7F	not used		
06	1	28 - 58	TRANSPOSE	–24 - +24[semitones]	40
7D		00 - 7F	not used		
7E		00	XG SYSTEM ON	00=XG sytem ON (receive only)	
7F		00	ALL PARAMETER RESET	00=ON (receive only)	
TOTAL SIZE 07					

XG SYSTEM ON and ALL PARAMETER RESET are not received when PROGRAM CHANGE TABLE = OFF.

< Table 1-3 >

MIDI Parameter Change table (EFFECT 1) [XG]

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)
02 01 00	2	00-7F	REVERB TYPE MSB	refer to Effect Program List	depends on voice number
		00-7F	REVERB TYPE LSB	00 : basic type	00
02	1	00-7F	REVERB PARAMETER 1	refer to Effect Program List	depends on reverb type
03	1	00-7F	REVERB PARAMETER 2	"	"
04	1	00-7F	REVERB PARAMETER 3	"	"
05	1	00-7F	REVERB PARAMETER 4	"	"
06	1	00-7F	REVERB PARAMETER 5	"	"
07	1	00-7F	REVERB PARAMETER 6	"	"
08	1	00-7F	REVERB PARAMETER 7	"	"
09	1	00-7F	REVERB PARAMETER 8	"	"
0A	1	00-7F	REVERB PARAMETER 9	"	"
0B	1	00-7F	REVERB PARAMETER 10	"	"
0C	1	00-7F	REVERB RETURN	–∞dB…0dB…+6dB(0…64…127)	depends on voice number
0D	1	01-7F	REVERB PAN	L63...C...R63(1...64...127)	depends on voice number
TOTAL SIZE 0E					
02 01 10	1	00-7F	REVERB PARAMETER 11 [L2-OP]	refer to Effect Parameter List	depends on reverb type
11	1	00-7F	REVERB PARAMETER 12 [L2-OP]	"	"
12	1	00-7F	REVERB PARAMETER 13 [L2-OP]	"	"
13	1	00-7F	REVERB PARAMETER 14 [L2-OP]	"	"
14	1	00-7F	REVERB PARAMETER 15 [L2-OP]	"	"
15	1	00-7F	REVERB PARAMETER 16 [L2-OP]	"	"
TOTAL SIZE 6					
02 01 20	2	00-7F	CHORUS TYPE MSB	refer to Effect Program List	depends on voice number
		00-7F	CHORUS TYPE LSB	00 : basic type	00
22	1	00-7F	CHORUS PARAMETER 1	refer to Effect Parameter List	depends on chorus Type
23	1	00-7F	CHORUS PARAMETER 2	"	"
24	1	00-7F	CHORUS PARAMETER 3	"	"
25	1	00-7F	CHORUS PARAMETER 4	"	"
26	1	00-7F	CHORUS PARAMETER 5	"	"
27	1	00-7F	CHORUS PARAMETER 6	"	"
28	1	00-7F	CHORUS PARAMETER 7	"	"
29	1	00-7F	CHORUS PARAMETER 8	"	"
2A	1	00-7F	CHORUS PARAMETER 9	"	"
2B	1	00-7F	CHORUS PARAMETER 10	"	"
2C	1	00-7F	CHORUS RETURN	–∞dB…0dB…+6dB(0…64…127)	depends on voice number
2D	1	01-7F	CHORUS PAN	L63...C...R63(1...64...127)	depends on voice number
2E	1	00-7F	SEND CHORUS TO REVERB	–∞dB…0dB…+6dB(0…64…127)	depends on voice number
TOTAL SIZE 0F					
02 01 30	1	00-7F	CHORUS PARAMETER 11 [L2-OP]		refer to Effect Parameter List depends on chorus Type
31	1	00-7F	CHORUS PARAMETER 12 [L2-OP]		" "
32	1	00-7F	CHORUS PARAMETER 13 [L2-OP]		" "
33	1	00-7F	CHORUS PARAMETER 14 [L2-OP]		" "
34	1	00-7F	CHORUS PARAMETER 15 [L2-OP]		" "
35	1	00-7F	CHORUS PARAMETER 16 [L2-OP]		" "
TOTAL SIZE 6					

When the voice number is changed, EFFECT 1 will have the value that is preset for the new voice number.

< Table 1-4 >

MIDI Parameter Change table (PART) [XG]

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value (H)
08	00	00	1		NOT USED		
	00	01	1	00 - 7F	BANK SELECT MSB	0 - 127	00
	00	02	1	00 - 7F	BANK SELECT LSB	0 - 127	00
	00	03	1	00 - 1C	PROGRAM NUMBER	1 - 29	00
	00	04	1	00 - 10	Rcv CHANNEL	"1 - 16,ALL"	00
	00	05	1	00 - 01	MONO/POLY MODE	0:MONO 1:POLY	01
	00	06	1	00 - 02	SAME NOTE NUMBER KEY ON ASSIGN	0:SINGLE 1:MULTI	00
	00	07	1		NOT USED		
	00	08	1	34 - 4C	NOTE SHIFT	–12 - +12[semitones]	40
	00	09	2	00 - FF	DETUNE	–12.8 - +12.7[Hz]	08 00
	00	0A				1st bit3-0→bit7-4 2nd bit3-0→bit3-0	(80)
	00	0B	1	00 - 7F	VOLUME	0 - 127	64
	00	0C	1	00 - 7F	VELOCITY SENSE DEPTH	0 - 127	40
	00	0D	1	00 - 7F	VELOCITY SENSE OFFSET	0 - 127	40
	00	0E	1	00 - 7F	PAN	"0/random, 1/L63 - 64/C - 127/R63"	40
	00	0F	1	00 - 7F	NOTE LIMIT LOW	C-2 - G8	00
	00	10	1	00 - 7F	NOTE LIMIT HIGH	C-2 - G8	7F
	00	11	1		NOT USED		
	00	12	1	00 - 7F	CHORUS SEND	0 - 127	00
	00	13	1	00 - 7F	REVERB SEND	0 - 127	28
	00	14	1	00 - 7F	NOT USED		
	00	15	1	00 - 7F	VIBRATO RATE	–64 - +63	40
	00	16	1	00 - 7F	VIBRATO DEPTH	–64 - +63	40
	00	17	1	00 - 7F	VIBRATO DELAY	–64 - +63	40
	00	18	1	00 - 7F	FILTER CUTOFF FREQUENCY	0 - 127	40
	00	19	1	00 - 7F	FILTER RESONANCE	–64 - +63	40
	00	1A	1	00 - 7F	EG ATTACK TIME	–64 - +63	40
	00	1B	1	00 - 7F	EG DECAY TIME	–64 - +63	40
	00	1C	1	00 - 7F	EG RELEASE TIME	–64 - +63	40
	00	1D	1	28 - 58	MW PITCH CONTROL	–24 - +24[semitones]	40
	00	1E	1	00 - 7F	MW FILTER CONTROL	–9600 - +9450[cent]	40
	00	1F	1	00 - 7F	MW AMPLITUDE CONTROL	–64 - +63	40
	00	20	1	00 - 7F	MW LFO PMOD DEPTH	0 - 127	0A
	00	21	1	00 - 7F	MW LFO FMOD DEPTH	0 - 127	00
	00	22	1	00 - 7F	MW LFO AMOD DEPTH [L3-80]	0 - 127	00
	00	23	1	28 - 58	BEND PITCH CONTROL	–24 - +24[semitones]	42
	00	24	1	00 - 7F	BEND FILTER CONTROL	–9600 - +9450[cent]	40
	00	25	1	00 - 7F	BEND AMPLITUDE CONTROL	–64 - +63	40
	00	26	1	00 - 7F	BEND LFO PMOD DEPTH	–100 - +100[%]	40
	00	27	1	00 - 7F	BEND LFO FMOD DEPTH	–100 - +100[%]	40
	00	28	1	00 - 7F	BEND LFO AMOD DEPTH [L3-80]	–100 - +100[%]	40
TOTAL SIZE			29				
	00	30	1	00 - 01	Rcv PITCH BEND [L2-OP]	"0/OFF,1/ON"	01
	00	31	1	00 - 01	Rcv CH AFTER TOUCH(CAT) [L2-OP]	"0/OFF,1/ON"	01
	00	32	1	00 - 01	Rcv PROGRAM CHANGE [L2-OP]	"0/OFF,1/ON"	01
	00	33	1	00 - 01	Rcv CONTROL CHANGE [L2-OP]	"0/OFF,1/ON"	01
	00	34	1	00 - 01	Rcv POLY AFTER TOUCH(PAT) [L2-OP]	"0/OFF,1/ON"	01
	00	35	1	00 - 01	Rcv NOTE MESSAGE [L2-OP]	"0/OFF,1/ON"	01
	00	36	1	00 - 01	Rcv RPN [L2-OP]	"0/OFF,1/ON"	01
	00	37	1	00 - 01	Rcv NRPN [L2-OP]	"0/OFF,1/ON"	01
	00	38	1	00 - 01	Rcv MODURATION [L2-OP]	"0/OFF,1/ON"	01
	00	39	1	00 - 01	Rcv VOLUME [L2-OP]	"0/OFF,1/ON"	01
	00	3A	1	00 - 01	Rcv PAN [L2-OP]	"0/OFF,1/ON"	01
	00	3B	1	00 - 01	Rcv EXPRESSION [L2-OP]	"0/OFF,1/ON"	01
	00	3C	1	00 - 01	Rcv HOLD1 [L2-OP]	"0/OFF,1/ON"	01
	00	3D	1	00 - 01	Rcv PORTAMENTO [L2-OP]	"0/OFF,1/ON"	01
	00	3E	1	00 - 01	Rcv SOSTENUTO [L2-OP]	"0/OFF,1/ON"	01
	00	3F	1	00 - 01	Rcv SOFT PEDAL [L2-OP]	"0/OFF,1/ON"	01
	00	40	1	00 - 01	Rcv BANK SELECT [L2-OP]	"0/OFF,1/ON"	01
	00	41	1	00 - 7F	SCALE TUNING C [L2-OP]	–64 - +63[cent]	40
	00	42	1	00 - 7F	SCALE TUNING C# [L2-OP]	–64 - +63[cent]	40
	00	43	1	00 - 7F	SCALE TUNING D [L2-OP]	–64 - +63[cent]	40
	00	44	1	00 - 7F	SCALE TUNING D# [L2-OP]	–64 - +63[cent]	40
	00	45	1	00 - 7F	SCALE TUNING E [L2-OP]	–64 - +63[cent]	40
	00	46	1	00 - 7F	SCALE TUNING F [L2-OP]	–64 - +63[cent]	40
	00	47	1	00 - 7F	SCALE TUNING F# [L2-OP]	–64 - +63[cent]	40
	00	48	1	00 - 7F	SCALE TUNING G [L2-OP]	–64 - +63[cent]	40
	00	49	1	00 - 7F	SCALE TUNING G# [L2-OP]	–64 - +63[cent]	40
	00	4A	1	00 - 7F	SCALE TUNING A [L2-OP]	–64 - +63[cent]	40

Address (H)		Size (H)	Data (H)	Parameter	Description	Default value (H)
00	4B	1	00 - 7F	SCALE TUNING A# [L2-OP]	–64 - +63[cent]	40
00	4C	1	00 - 7F	SCALE TUNING B [L2-OP]	–64 - +63[cent]	40
00	4D	1	28 - 58	CAT PITCH CONTROL [L2-OP]	–24 - +24[semitones]	40
00	4E	1	00 - 7F	CAT FILTER CONTROL [L2-OP]	–9600 - +9450[cent]	40
00	4F	1	00 - 7F	CAT AMPLITUDE CONTROL [L2-OP]	–64 - +63	40
00	50	1	00 - 7F	CAT LFO PMOD DEPTH [L2-OP]	0 - 127	00
00	51	1	00 - 7F	CAT LFO FMOD DEPTH [L2-OP]	0 - 127	00
00	52	1	00 - 7F	CAT LFO AMOD DEPTH [L3-80]	0 - 127	00
00	53	1	28 - 58	PAT PITCH CONTROL [L2-OP]	–24 - +24[semitones]	40
00	54	1	00 - 7F	PAT FILTER CONTROL [L2-OP]	–9600 - +9450[cent]	40
00	55	1	00 - 7F	PAT AMPLITUDE CONTROL [L2-OP]	–64 - +63	40
00	56	1	00 - 7F	PAT LFO PMOD DEPTH [L2-OP]	0 - 127	00
00	57	1	00 - 7F	PAT LFO FMOD DEPTH [L2-OP]	0 - 127	00
00	58	1	00 - 7F	PAT LFO AMOD DEPTH [L3-80]	0 - 127	00
00	59	1	00 - 5F	AC1 CONTROLLER NUMBER [L2-OP]	0 - 95	10
00	5A	1	28 - 58	AC1 PITCH CONTROL [L2-OP]	–24 - +24[semitones]	40
00	5B	1	00 - 7F	AC1 FILTER CONTROL [L2-OP]	–9600 - +9450[cent]	40
00	5C	1	00 - 7F	AC1 AMPLITUDE CONTROL [L2-OP]	–64 - +63	40
00	5D	1	00 - 7F	AC1 LFO PMOD DEPTH [L2-OP]	0 - 127	00
00	5E	1	00 - 7F	AC1 LFO FMOD DEPTH [L2-OP]	0 - 127	00
00	5F	1	00 - 7F	AC1 LFO AMOD DEPTH [L3-80]	0 - 127	00
00	60	1	00 - 5F	AC2 CONTROLLER NUMBER [L2-OP]	0 - 95	11
00	61	1	28 - 58	AC2 PITCH CONTROL [L2-OP]	–24 - +24[semitones]	40
00	62	1	00 - 7F	AC2 FILTER CONTROL [L2-OP]	–9600 - +9450[cent]	40
00	63	1	00 - 7F	AC2 AMPLITUDE CONTROL [L2-OP]	–64 - +63	40
00	64	1	00 - 7F	AC2 LFO PMOD DEPTH [L2-OP]	0 - 127	00
00	65	1	00 - 7F	AC2 LFO FMOD DEPTH [L2-OP]	0 - 127	00
00	66	1	00 - 7F	AC2 LFO AMOD DEPTH [L3-80]	0 - 127	00
00	67	1	00 - 01	PORTAMENTO SWITCH [L2-OP]	“0/OFF,1/ON”	00
00	68	1	00 - 7F	PORTAMENTO TIME [L2-OP]	0 - 127	00
00	69	1	00 - 7F	PITCH EG INITIAL LEVEL [L2-OP]	–64 - +63	40
00	6A	1	00 - 7F	PITCH EG ATTACK TIME [L2-OP]	–64 - +63	40
00	6B	1	00 - 7F	PITCH EG RELEASE LEVEL [L2-OP]	–64 - +63	40
00	6C	1	00 - 7F	PITCH EG RELEASE TIME [L2-OP]	–64 - +63	40
00	6D	1	01 - 7F	VELOCITY LIMIT LOW [L2-OP]	1 - 127	01
00	6E	1	01 - 7F	VELOCITY LIMIT HIGH [L2-OP]	1 - 127	7F
TOTAL SIZE		3F				

If a Stereo voice is not selected, setting PAN to “random” will produce the same result as “center.”

< Table 2-1>

Parameter Base Address
Model ID = 55 [P50-m]

Parameter Change				
	Address			Address
	(H)	(M)	(L)	
P50-m SYSTEM	00	00	00	System
REMOTE SWITCH	0A	00	00	Switch Remote

< Table 2-2 >

MIDI Parameter Change table (SYSTEM) [P50-m]

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value (H)
00	00	00	1	00-1C	PROGRAM NUMBER	1 - 29	0
		01	1	00-01	MASTER TUNE DISPLAY MODE	“0:Hz, 1:cent”	0
		02	4	0000-07FF	MASTER TUNE	–100.0 - +100.0[cent] 1st bit3-0→bit15-12 2nd bit3-0→bit11-8 3rd bit3-0→bit3-0 4th bit3-0→bit3-0	00 04 00 00
		06	1	34-4C	NOTE SHIFT	–12 - +12[semitones]	40
		07	1	00-06	TOUCH CURVE	1 - 7	0
		08	1	00-10	MIDI RECEIVE CHANNEL	“1 - 16, ALL”	0
		09	1	00-02	RECEIVE MODE	“0:ALL, 1:EVEN, 2:ODD”	0
		0A	1	00-01	MIDI OUT MODE	“0:ot1, 1:ot2”	0
		0B	1	00-01	PROGRAM CHANGE TABLE	“0:OFF, 1:ON”	0
		0C	1	00-7F	VOICE 1 BRIGHTNESS	–64 - 63	40
		0D	1	00-7F	VOICE 1 REVERB SEND	0 - 127	30
		0E	1	00-7F	VOICE 2 BRIGHTNESS	–64 - 63	40

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)
0F	1	00-7F	VOICE 2 REVERB SEND	0 - 127	30
10	1	00-7F	VOICE 3 BRIGHTNESS	–64 - 63	40
11	1	00-7F	VOICE 3 REVERB SEND	0 - 127	30
12	1	00-7F	VOICE 4 BRIGHTNESS	–64 - 63	40
13	1	00-7F	VOICE 4 REVERB SEND	0 - 127	30
14	1	00-7F	VOICE 5 BRIGHTNESS	–64 - 63	40
15	1	00-7F	VOICE 5 REVERB SEND	0 - 127	30
16	1	00-7F	VOICE 6 BRIGHTNESS	–64 - 63	40
17	1	00-7F	VOICE 6 REVERB SEND	0 - 127	30
18	1	00-7F	VOICE 7 BRIGHTNESS	–64 - 63	40
19	1	00-7F	VOICE 7 REVERB SEND	0 - 127	30
1A	1	00-7F	VOICE 8 BRIGHTNESS	–64 - 63	40
1B	1	00-7F	VOICE 8 REVERB SEND	0 - 127	30
1C	1	00-7F	VOICE 9 BRIGHTNESS	–64 - 63	40
1D	1	00-7F	VOICE 9 REVERB SEND	0 - 127	30
1E	1	00-7F	VOICE 10 BRIGHTNESS	–64 - 63	40
1F	1	00-7F	VOICE 10 REVERB SEND	0 - 127	47
20	1	00-7F	VOICE 11 BRIGHTNESS	–64 - 63	40
21	1	00-7F	VOICE 11 REVERB SEND	0 - 127	47
22	1	00-7F	VOICE 12 BRIGHTNESS	–64 - 63	40
23	1	00-7F	VOICE 12 REVERB SEND	0 - 127	30
24	1	00-7F	VOICE 13 BRIGHTNESS	–64 - 63	40
25	1	00-7F	VOICE 13 REVERB SEND	0 - 127	30
26	1	00-7F	VOICE 14 BRIGHTNESS	–64 - 63	40
27	1	00-7F	VOICE 14 REVERB SEND	0 - 127	30
28	1	00-7F	VOICE 15 BRIGHTNESS	–64 - 63	40
29	1	00-7F	VOICE 15 REVERB SEND	0 - 127	30
2A	1	00-7F	VOICE 16 BRIGHTNESS	–64 - 63	40
2B	1	00-7F	VOICE 16 REVERB SEND	0 - 127	30
2C	1	00-7F	VOICE 17 BRIGHTNESS	–64 - 63	40
2D	1	00-7F	VOICE 17 REVERB SEND	0 - 127	30
2E	1	00-7F	VOICE 18 BRIGHTNESS	–64 - 63	40
2F	1	00-7F	VOICE 18 REVERB SEND	0 - 127	30
30	1	00-7F	VOICE 19 BRIGHTNESS	–64 - 63	40
31	1	00-7F	VOICE 19 REVERB SEND	0 - 127	30
32	1	00-7F	VOICE 20 BRIGHTNESS	–64 - 63	40
33	1	00-7F	VOICE 20 REVERB SEND	0 - 127	30
34	1	00-7F	VOICE 21 BRIGHTNESS	–64 - 63	40
35	1	00-7F	VOICE 21 REVERB SEND	0 - 127	30
36	1	00-7F	VOICE 22 BRIGHTNESS	–64 - 63	40
37	1	00-7F	VOICE 22 REVERB SEND	0 - 127	30
38	1	00-7F	VOICE 23 BRIGHTNESS	–64 - 63	40
39	1	00-7F	VOICE 23 REVERB SEND	0 - 127	30
3A	1	00-7F	VOICE 24 BRIGHTNESS	–64 - 63	40
3B	1	00-7F	VOICE 24 REVERB SEND	0 - 127	20
3C	1	00-7F	VOICE 25 BRIGHTNESS	–64 - 63	40
3D	1	00-7F	VOICE 25 REVERB SEND	0 - 127	30
3E	1	00-7F	VOICE 26 BRIGHTNESS	–64 - 63	40
3F	1	00-7F	VOICE 26 REVERB SEND	0 - 127	30
40	1	00-7F	VOICE 27 BRIGHTNESS	–64 - 63	40
41	1	00-7F	VOICE 27 REVERB SEND	0 - 127	30
42	1	00-7F	VOICE 28 BRIGHTNESS	–64 - 63	40
43	1	00-7F	VOICE 28 REVERB SEND	0 - 127	30
TOTAL SIZE	44				

< Table 2-3 >

MIDI Parameter Change table (REMOTE SWITCH) [P50-m]

Address (H)	Size (H)	Data (H)	Parameter	Description
0A 00 00	1	00-01	VOICE SELECT switch	“0:OFF, 1:ON”
0A 00 01	1	00-01	BRIGHTNESS switch	“0:OFF, 1:ON”
0A 00 02	1	00-01	MASTER TUNE switch	“0:OFF, 1:ON”
0A 00 03	1	00-01	TOUCH switch	“0:OFF, 1:ON”
0A 00 04	1	00-01	REVERB SEND switch	“0:OFF, 1:ON”
0A 00 05	1	00-01	NOTE SHIFT switch	“0:OFF, 1:ON”
0A 00 06	1	00-01	MIDI CHANNEL switch	“0:OFF, 1:ON”
0A 00 07	1	00-01	MIDI OUT switch	“0:OFF, 1:ON”
0A 00 08	1	00-01	DEVICE NUMBER switch	“0:OFF, 1:ON”
0A 00 09	1	00-01	PROGRAM CHANGE TABLE switch	“0:OFF, 1:ON”
0A 00 0A	1	00-01	RECEIVE MODE switch	“0:OFF, 1:ON”
0A 00 0B	1	00-01	DEMO switch	“0:OFF, 1:ON”
0A 00 0C	1	00-01	MASTER TUNE CHANGE switch	“0:OFF, 1:ON”
0A 00 0D	1	00-7F	DATA inc/dec	“0/DEC,1/INC”
0A 00 0E	2	00-FF	DATA set	1st bit0→bit7 2nd bit6-0→bit6-0
0A 00 10	1	00-7F	EQ LOW slider	–12 - +12 [dB]
0A 00 11	1	00-7F	EQ MID slider	–12 - +12 [dB]
0A 00 12	1	00-7F	EQ HIGH slider	–12 - +12 [dB]
TOTAL SIZE	13			

MIDI Implementation Chart

YAMAHA [Piano Tone Generator] Date:09-APR-1996
Model P50-m MIDI Implementation Chart Version : 1.1

Function ...	Transmitted	Recognized	Remarks
Basic Default	x	1 - 16	
Basic Changed	x	1 - 16	
Mode Default	x	3	
Mode Messages	x	3,4(m = 1) *2	
Mode altered	**********	x	
Note Number	x	0 - 127	
Note True voice	**********	0 - 127	
Velocity Note ON	x	o 9nH,v=1-127	
Velocity Note OFF	x	x	
After Touch Key's	x	o *1	
After Touch Ch's	x	o *1	
Pitch Bender	x	o 0-24 semi *1	
Control Change 0,32	x	o *1	Bank Select
Control Change 1,5,7,10,11	x	o *1	
Control Change 6,38	x	o *1	Data Entry
Control Change 64-67	x	o *1	
Control Change 71-74	x	o *1	Sound Controller
Control Change 84	x	o *1	Portamento Cntrl
Control Change 91,93,94	x	o *1	Effect Depth
Control Change 96-97	x	o *1	RPN Inc,Dec
Control Change 98-99	x	o *1	NRPN LSB,MSB
Control Change 100-101	x	o *1	RPN LSB,MSB
Control Change 120	x	o	All Sound Off
Control Change 121	x	o	Reset All Cntrls

Prog Change	: True #	x **********	o 0 - 28 *3	
System Exclusive		x	o	
common	: Song Pos. : Song Sel. : Tune	x x x	x x x	
System Real Time	:Clock :Commands	x x	x x	
Aux	:Local ON/OFF :All Notes OFF	x x	x o(123-127)	
Mes-sages	:Active Sense :Reset	x x	o x	

Note: *1 ; receive if switch is on.
*2 ; m is always treated as “1” regardless of its value.
*3 ; extent is 0-127 if program change table switch is on.

Mode 1 : OMNI ON, POLY	Mode 2 : OMNI ON, MONO	o : Yes
Mode 3 : OMNI OFF, POLY	Mode 4 : OMNI OFF, MONO	x : No

YAMAHA

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