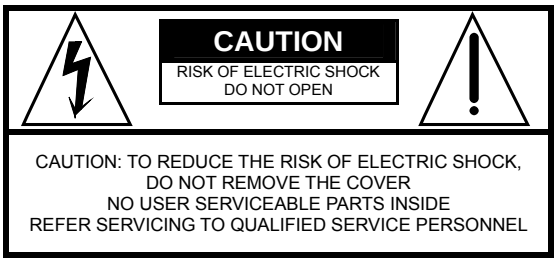
Musician's Guide

SP3

- *Digital Multi-Effects*
- *Built-in USB Terminal*
- *Flexible MIDI Controller*
- *Award Winning Sounds*
- *60 Rhythm Patterns*

KURZWEIL



The lightning flash with the arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

IMPORTANT SAFETY & INSTALLATION INSTRUCTIONS

INSTRUCTIONS PERTAINING TO THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

WARNING: When using electric products, basic precautions should always be followed, including the following:

1. Read all of the Safety and Installation Instructions and Explanation of Graphic Symbols before using the product.
2. Do not use this product near water - for example, near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool, or the like.
3. This product should only be used with a stand or cart that is recommended by the manufacturer.
4. This product, either alone or in combination with an amplifier and speakers or headphones, 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.
5. The product should be located so that its location or position does not interfere with its proper ventilation.
6. The product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
7. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.
8. This product may be equipped with a polarized line plug (one blade wider than the other). This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician to replace your obsolete outlet. Do not defeat the safety purpose of the plug.
9. The power supply cord of the product should be unplugged from the outlet when left unused for a long period of time.When unplugging the power supply cord, do not pull on the cord, but grasp it by the plug.
10. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
11. The product should be serviced by qualified service personnel when:
    A. The power supply cord or the plug has been damaged;
    B. Objects have fallen, or liquid has been spilled into the product;
    C. The product has been exposed to rain;
    D. The product does not appear to be operating normally or exhibits a marked change in performance;
    E. The product has been dropped, or the enclosure damaged.
12. Do not attempt to service the product beyond that described in the user maintenance instructions. All other servicing should be referred to qualified service personnel.
13. **WARNING:** Do not place objects on the product's power supply cord, or place the product in a position where anyone could trip over, walk on, or roll anything over cords of any type.
    Do not allow the product to rest on or be installed over cords of any type. Improper installations of this type create the possibility of a fire hazard and/or personal injury.

RADIO AND TELEVISION INTERFERENCE

WARNING: Changes or modifications to this instrument not expressly approved by Young Chang could void your authority to operate the instrument.

IMPORTANT: When connecting this product to accessories and/or other equipment use only high quality shielded cables.

NOTE: This instrument has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This instrument generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this instrument does cause harmful interference to radio or television reception, which can be determined by turning the instrument off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the instrument and the receiver.
• Connect the instrument into an outlet on a circuit other than the one to which the receiver is connected.
• If necessary consult your dealer or an experienced radio/television technician for additional suggestions.

NOTICE

This apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

AVIS

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de la class B prescrites dans le Reglement sur le brouillage radioelectrique edicte par le ministere des Communications du Canada.

SAVE THESE INSTRUCTIONS

Young Chang Distributors

Contact the nearest Young Chang office listed below to locate your local Young Chang/Kurzweil representative.

Kurzweil Headquarters
9FL, 102-BLDG, I'PARK, jeoungja-Dong, Buandang-Gu, Seongnam-Si,
Gyeonggi-Do, Korea 463-859
Tel : 001-82-31-786-7900
Fax : 001-82-31-785-2703
Web : www.ycpiano.co.kr

YCNA(Young Chang North America)
19060 S Dominguez Hills, Dr Rancho Dominguez, CA 90220, U.S.A
Tel : 1-310-637-2000
Fax : 1-310-637-2025
Web : www.kurzweilmusicsystems.com

YCRDI(Young Chang R&D Institute)
1432 Main Street Waltham, MA02451, U.S.A
Tel : 1-781-890-2929
Fax : 1-781-890-2014

Official distributors in other countries are listed on the web site.

World Wide Web Home Page

http://www.kurzweilmusicsystems.com

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KURZWEIL SP3 Quick Guide

SP3 Quick Start Guide

Thank you for purchasing a Kurzweil/Young Chang SP3 stage piano. Here's a brief description of all the essential operations you need to know to get started with your SP3 immediately. Through this manual, [ ] means "Button". For an example, [Yes] means you need to press the "Yes" button from the front panel of your SP3.

∩Initialize	[Global]Button → [Reset]Button → [+/Yes]Button → [+/Yes]Button → [+/Yes]Button
∩Playing the Demo Song	Sound Select/Data Entry → Category → [+/−]Button + [Enter]Button → [Start/Stop]Button
∩Selecting Program Voices	[Program/Setup] Button → Sound Select/Data Entry → Category → Select Sound Banks → Select Program Voices
∩Selecting Setup Voices	[Program/Setup] Button → Sound Select/Data Entry → Category → Select Program Voices
∩Selecting Rhythm Patterns	[Rhythm/Metronome] Button → Select Rhythm Patterns → [Start/Stop]Button
∩Setting Metronome Tempo	[Rhythm/Metronome] Button → Select r57 → [0]Button from numeric pad → [Start/Stop]Button
∩Editing Effects	[Effect] button → Sound Select/Data Entry → Category → Select Effects → [Store] button → [+/Yes] button
∩Saving	Select Programs or Setups → [Store] Button → [+/Yes] Button
∩Local On, Off	On : [Global]Button → [Local]Button → [+/Yes]Button Off : [Global]Button → [Local]Button → [−/No]Button
∩Selecting Layers	In Program or Setup mode → [Layer]Button → Select Programs
∩Auto Split	In Program or Setup mode → Select Programs → [Split] Button → Select Programs
∩Panic	[Key.Range]Button + [Vel.Range]Button

CHAPTER 1

Introduction

Thank you for purchasing a Kurzweil/Young Chang SP3 stage piano. With its 32 megabytes of high quality Kurzweil ROM sounds and an array of MIDI-control features, your SP3 is ideal for both stage and studio work. The USB port on the rear panel enables the immediate use of your SP3 as a MIDI controller in studios.

Also, the logical and friendly user interface really shines whenever you're at a gig or in the recording studio.

This chapter will help you...

overview the main features of the SP3

check the components of the SP3 package

Please, refer to the following list for information you need.

Main Features

The Sound

The SP3 offers 64 voices of polyphony and features balanced left and right analog audio outputs. There are 64 factory programs and 60 preset rhythm patterns. The programs include stereo triple-strike Grand Piano, Wurlitzer electric piano, stereo strings, brasses, guitars, basses, drums and percussion sounds, as well as the world-renowned A cappella group Take 6 vocal samples. The rhythm patterns include various styles of drum grooves such as ballad, pop, r&b, dance, rock, funk, country, latin, jazz, and world. Setup mode makes the SP3 an amazingly flexible MIDI controller as well as a powerful live instrument. In this mode, you can divide the SP3's keyboard into four different zones, each of which can cover part or all of the keyboard. Each zone can use a different MIDI channel, play a different program and have its own controller assignments. Also, you can program the SP3 to start rhythm patterns automatically. The SP3 comes with 16 factory setups and user programmed setups can be stored in the quick access (Q. Access) bank for instant use.

Keyboard and Controllers

The SP3 has a fully-weighted 88 key piano action. The array of physical controllers includes pitch wheel, modulation wheel and 4 knobs on the front panel as well as jacks for continuous and switch pedal on the rear panel. Because all of them are fully programmable, the SP3 can be not only a performance keyboard, but also a MIDI controller in a studio. You can use the SP3 as a sound module receiving MIDI data from a computer based sequencer or external MIDI device, too.

Effects

To perfect the ROM sounds, the SP3 provides over 64 multiple effects and 64 reverbs. These effects can be applied to both setups and programs and the wet/dry mix can be controlled in real time very easily. You can also program the internal multi-effect and reverbs for even more control in performance and recording.

Options

Your SP3 can use various optional devices. Ask your Kurzweil dealer about the following options.

Pedal

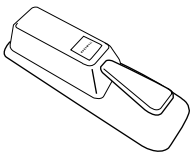
The SP3 has two jacks for optional pedals on the rear panel. One is for a switch pedal (for functions like sustain or program change) and the other is for a continuous control pedal (for functions like volume/expression control).

The compatible pedals from Kurzweil are;

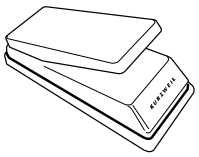
FS-1 / Standard box-shaped switch pedal

KP-1 / Single piano-style switch pedal

CC-1 / Continuous pedal



Kurzweil KP-1



Kurzweil CC-1

Do I Have Everything?

Your SP3 carton should include all of the following components.

- The SP3 Stage Piano
- AC adapter (9VAC, 2.0A)
- Single Switch Pedal
- USB Cable
- This manual
- Warranty Card
- Four adhesive-backed rubber feet

Be sure to keep the box and packing materials during the warranty period, in case you need to ship the unit for any reason.

How To Use This Book

This manual will greatly help you learn and use the various features of the SP3. If you know electronic instruments and MIDI already, you might want to start from Chapter 2, "Getting Started" on page 2-1. If you need more help on using the SP3's many features, you should read all of Chapter 3 and 4. Chapters 5 and 6 give more information on global functions and description of some typical applications. The remaining chapters provide troubleshooting and reference materials that can be referred to when needed. Chapter 8 provides a few easy-to-follow tutorials which will help you understand your instrument more quickly. Finally, don't underestimate the index. When you need quick access to certain topics, the index will be the next best thing to a search engine! For any late-breaking information on the SP3 and other Kurzweil products, visit our web site.

http://www.kurzweilmusicsystems.com/

Above all, enjoy, and make great music with your SP3

CHAPTER 2

Getting Started

This chapter will help you hook up the SP3 to your sound and MIDI system. Also, you will learn how to play the demonstration songs. To find specific information, refer to the following list.

Setup

Attaching rubber feet

After you unpack the carton and make sure that all of the components are in the box, attach the four stick-on rubber feet to the bottom. Figure 2-1 shows the best places to attach the feet.

Caution! : The applied rubber feet could interfere with some keyboard stands' supports, so check how the SP3 fits on your stand before attaching the rubber feet.

Figure 2-1 Placement of Rubber Feet

Basic Connections

Connecting Power Supply

Before connecting the power supply, make sure your SP3 is off. After that, connect the plug to the AC In connector on the rear panel.

For your safety, place the power supply somewhere dry and out of the way. Also, to prevent overheating, do not cover the power supply with anything.

Caution : Use only the power supply that comes with your SP3.

Using a different power supply can cause serious damage to your instrument!

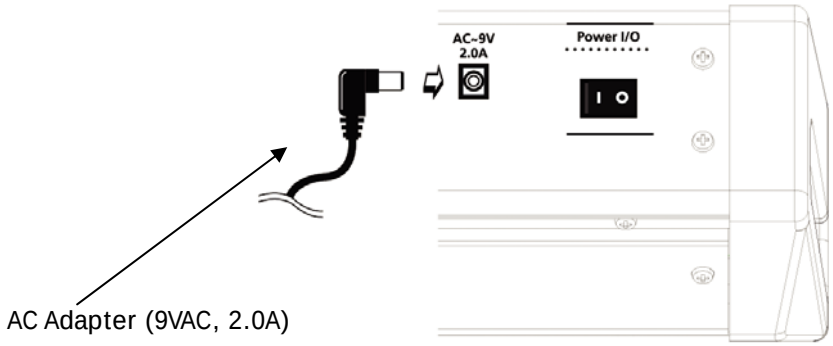


Figure 2-2 Connecting Power Supply

Connecting to Your Audio System

The SP3 features balanced left and right analog audio outputs. For the best results, use balanced cables to connect to balanced, line-level inputs on your mixer or sound system.

It is very important to use proper type of cables. The cables should have 1/4 inch stereo (tip-ring-sleeve) plugs on one end to connect to the SP3 and the other end of cable should have the same 1/4 inch stereo plugs or XLR plugs. Using balanced cables will greatly reduce noise.

For the best audio quality

1. Set the volume level of your sound system to its minimum. Be cautious! Not doing so may cause damage to your sound system such as speakers.
2. Set the SP3's volume level to its maximum.

   ☑**NOTE** **When you connect audio cables, make sure to turn down the level on your sound system.**
3. Adjust the volume of your sound system to the appropriate level.
4. The SP3 has a headphone jack which duplicates the signal from the main outputs. Plugging into the headphone jack does not mute the other audio outputs. You can also use the headphone jack as an unbalanced stereo line-level output. In this case, just connect a stereo cable from the headphone jack to a stereo input on any sound system.

◄ connecting powered speakers

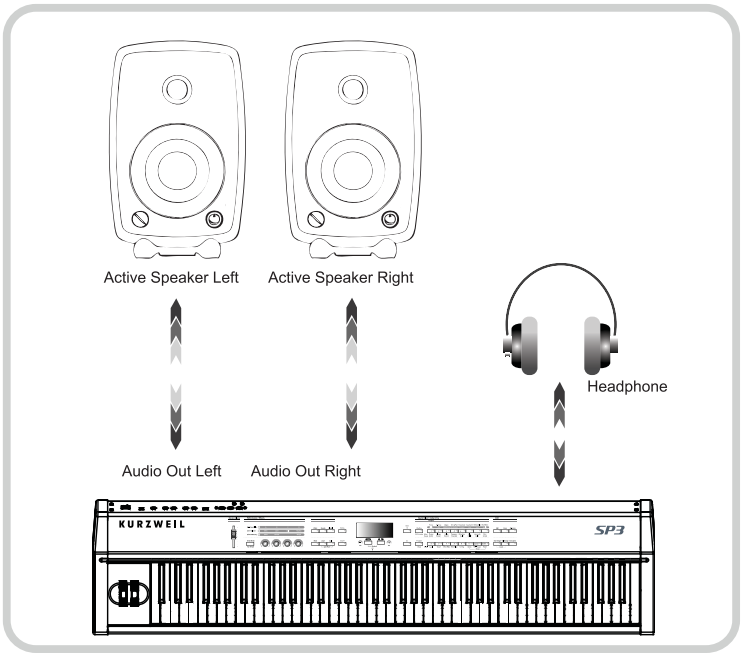


Figure 2-3 connecting powered speakers

◄ connecting an audio mixer

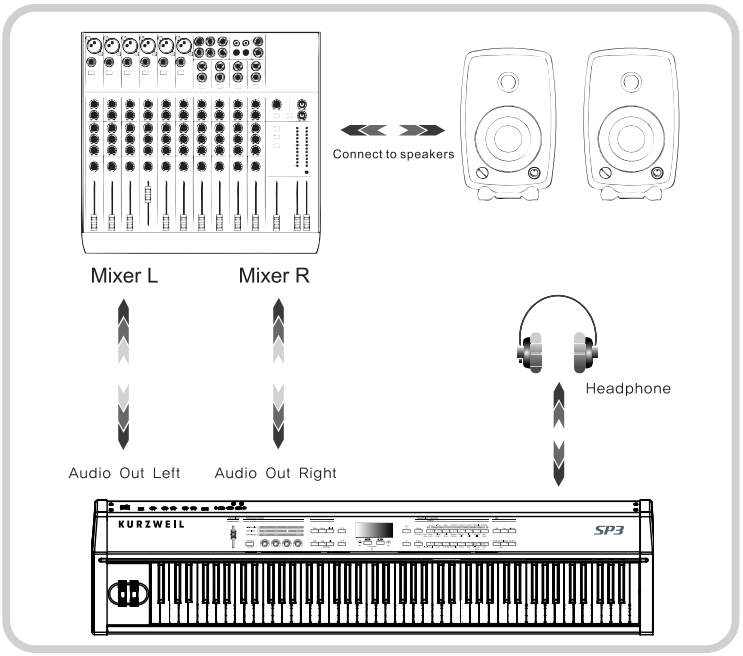


Figure 2-4 connecting an audio mixer

◄ connecting a home audio system

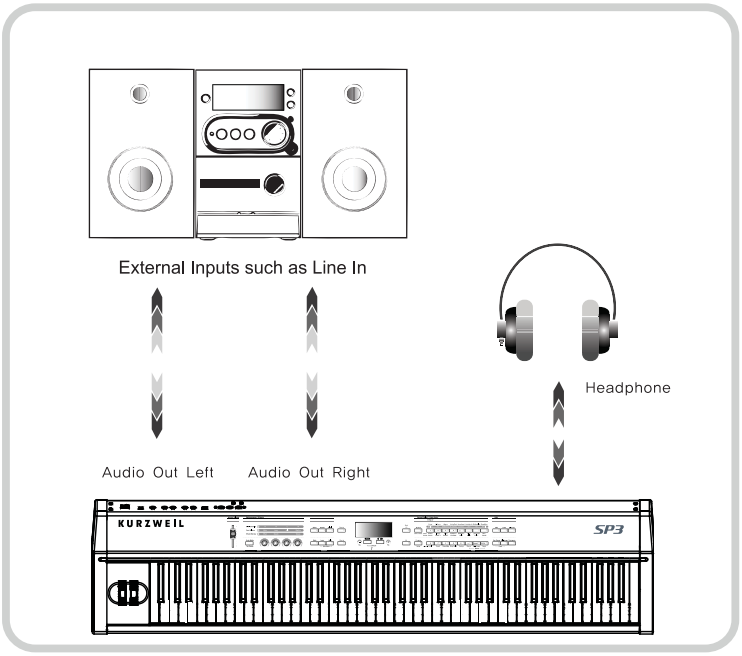


Figure 2-5 connecting a home audio system

Connecting MIDI

MIDI IN

The MIDI In port is for receiving MIDI data. When another MIDI device sends MIDI data to control the SP3, this makes the SP3 a MIDI slave, enabling you to use the SP3 as a sound module. The MIDI In port also can be used for upgrading software via system exclusive data.

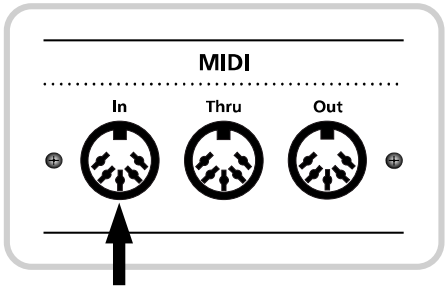


Figure 2-6 SP3 as a MIDI slave

MIDI OUT

The MIDI Out port is for transmitting MIDI data that the SP3 generates. MIDI data does not contain any audio signal. It carries digital "performance data" such as the pitch, note velocity, control signals, etc.

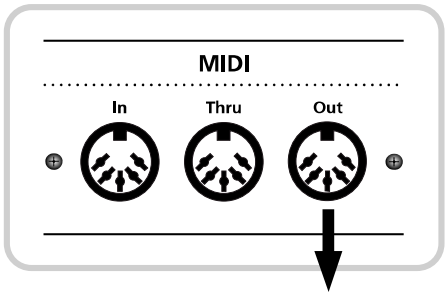


Figure 2-7 SP3 as a MIDI master

By connecting a MIDI cable from the MIDI Out port of the SP3 to the MIDI In port of another MIDI device, you can use the SP3 as a MIDI master to play and control its slaves.

MIDI Thru

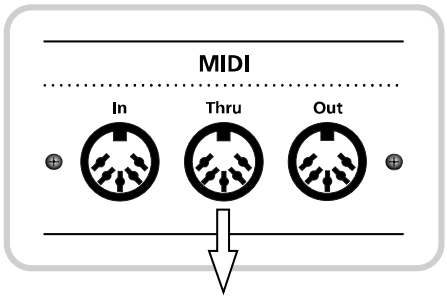


Figure 2-8 MIDI Thru jack

The MIDI Thru port resends MIDI data being sent to the SP3's MIDI In port. The MIDI Thru port does not transmit the MIDI information that the SP3 itself generates.

Basic MIDI connection

The simplest application of MIDI is to connect and control an external sound module for more sounds, more polyphony, and more timbre control than the internal sound module offers. The following figure shows how simple this can be.

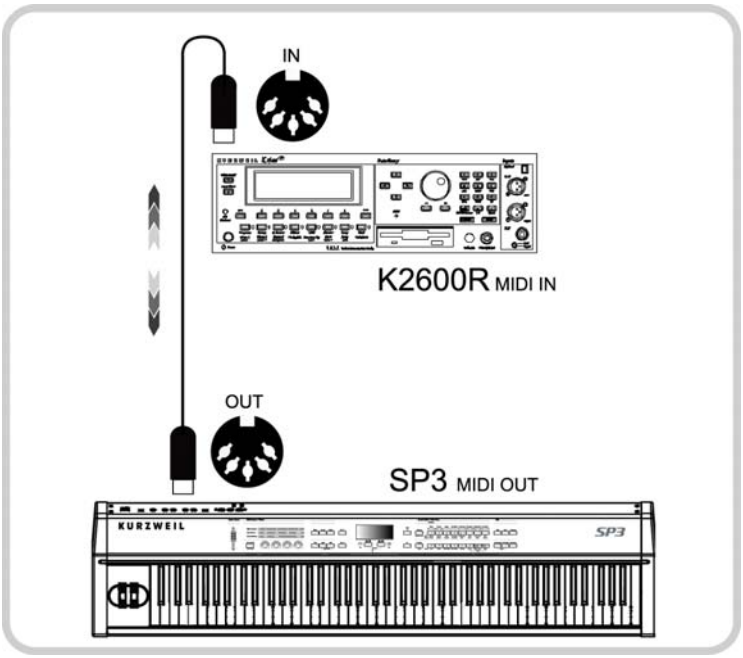


Figure 2-9 SP3 connected to an external sound module (K2600r) via MIDI

Connecting More Sound Modules

With MIDI, you are not limited to just one add-on sound module; You can connect 2, 3, or even more using the basic method illustrated below.

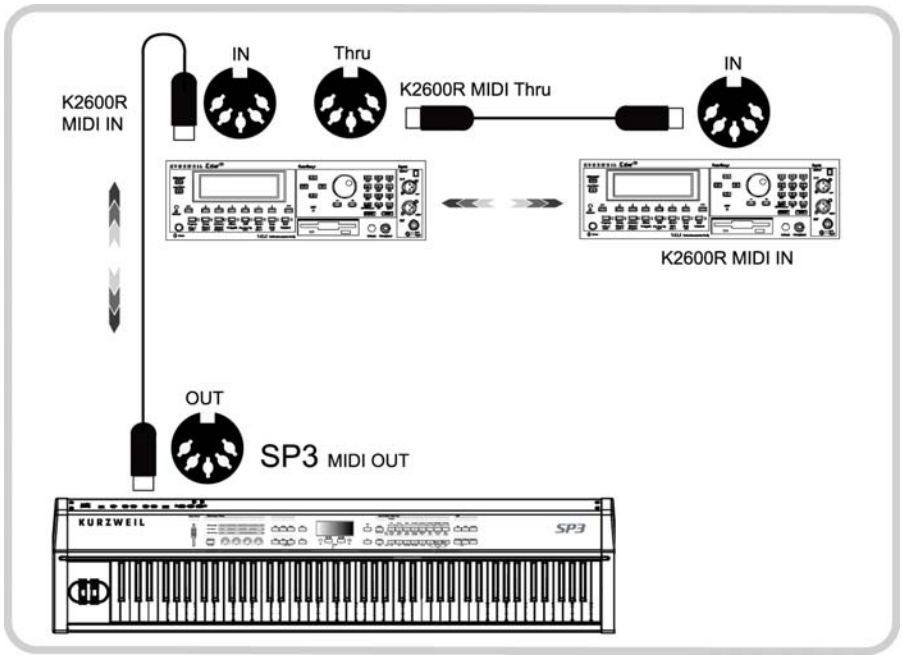


Figure 2-10 SP3 connected to Module A and Module B

Connecting to a Computer via USB

Without a MIDI interface, the SP3 can be connected to a computer via USB. A single USB cable can carry incoming and outgoing MIDI data between the SP3 and a computer.

☑**NOTE** **Though the SP3 can use the MIDI port and USB port at the same time, it may cause problems with running out of polyphony. So, we recommend you to use only one port at a time.**

What is USB?

USB is the abbreviation for **U**niversal **S**erial **B**us, which is a serial bus standard to interface devices. The SP3 supports the "Plug and Play" feature of Windows XP.

How to Install Device Driver?

What you need

1) Any PC, Windows XP installed. (Recommend Service Pack 2)

2) Working SP3 unit with OS V1.0 (or later) installed.

3) Type A to B, USB cable.

4) Go to our download page below, get “SP3Series.inf”.

http://www.kurzweilmusicsystems.com/downloads.html

How to install

1) Make sure where SP3Series.inf file located.

2) Power up SP3.

3) After power up and finish booting, connect USB cable between PC and SP3.

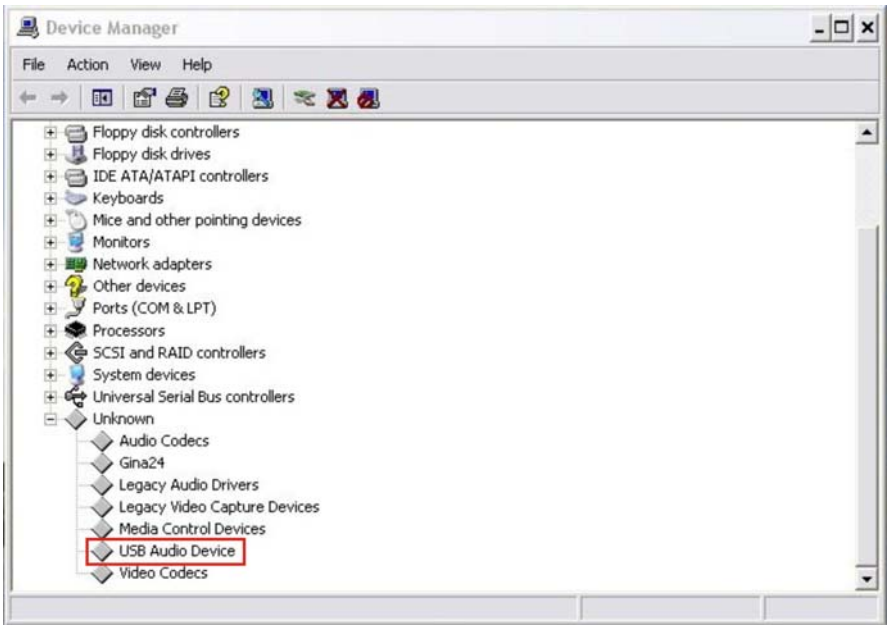
4) Shortly after, you might hear “ding” sound, and in the system tray :

“Found new hardware” popup opens.

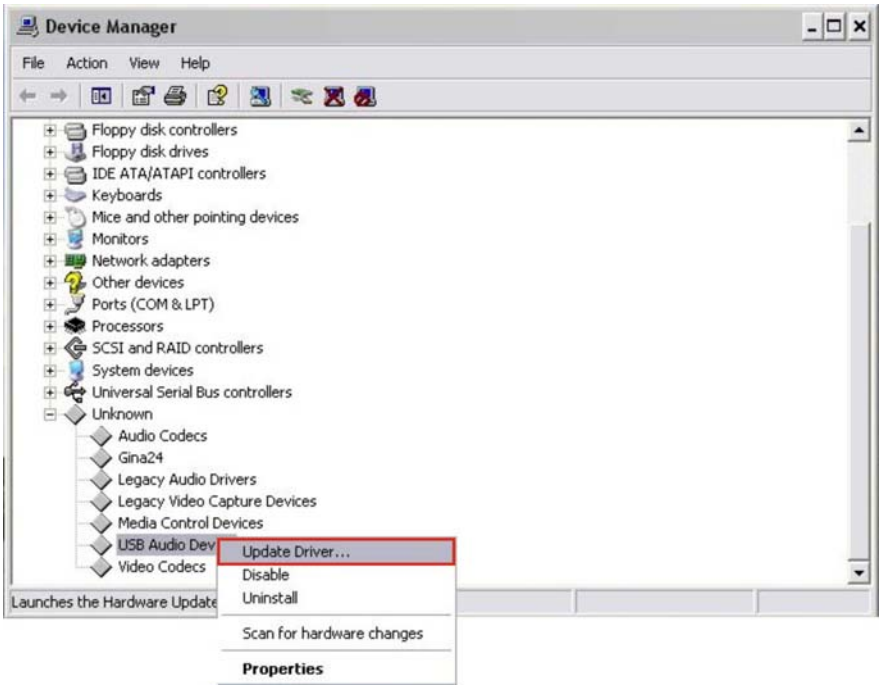
5) After a while, you can see another popup about new audio device.

6) After finished enumeration with host, PC displays following message.

7) As you see in the device manager, your SP3 connected as an “USB Audio Device”.

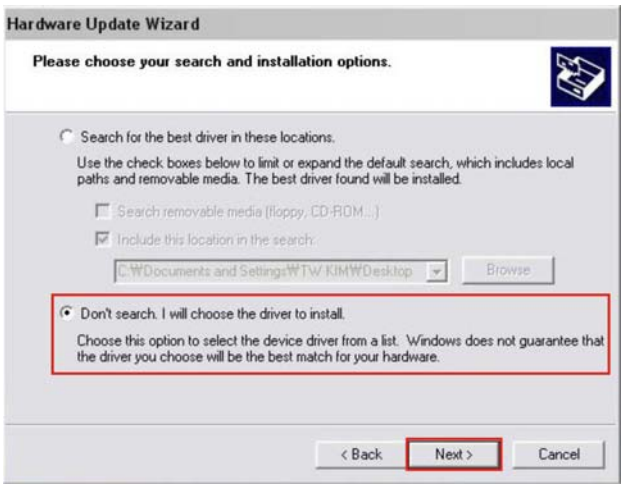


8) To install SP3 device driver, you need to update device driver “USB Audio Device”. Select “USB Audio Device” and press right mouse button and Select “Update Driver” popup menu.

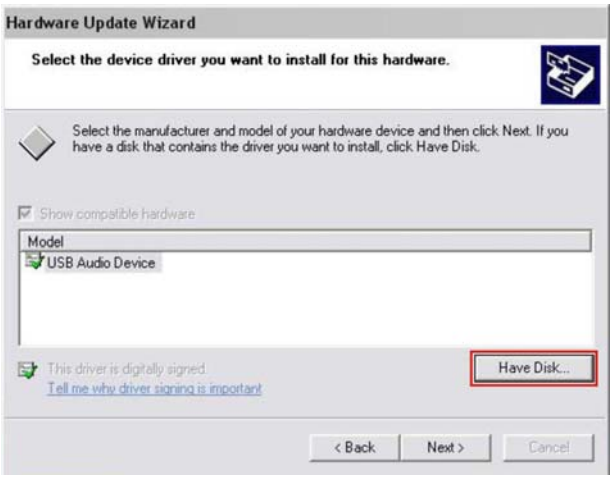


9) And next step, select "Install a list of specific location(Advanced)" radio button and click "Next".

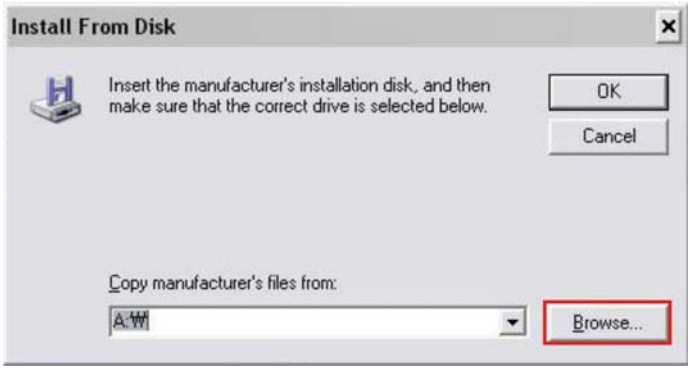
10) Now select "Don't search, I will choose driver to install" and click "Next".



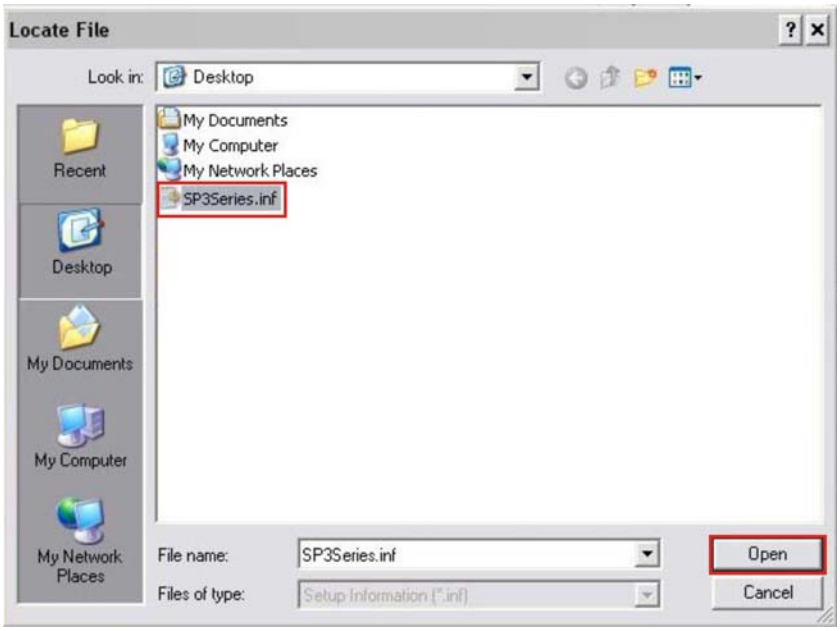
11) Click "Have Disk…" button.



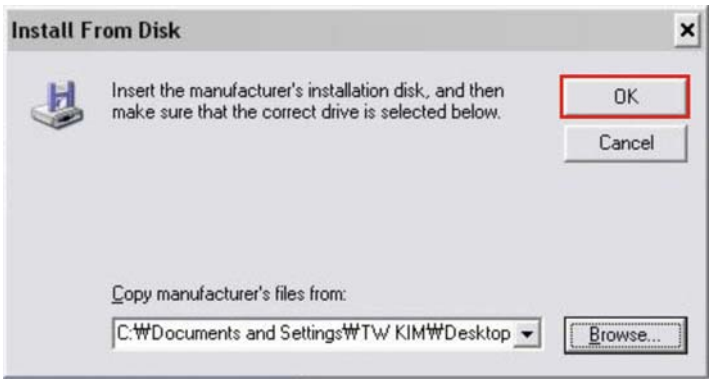
12) Ok, next press “Browse” button.



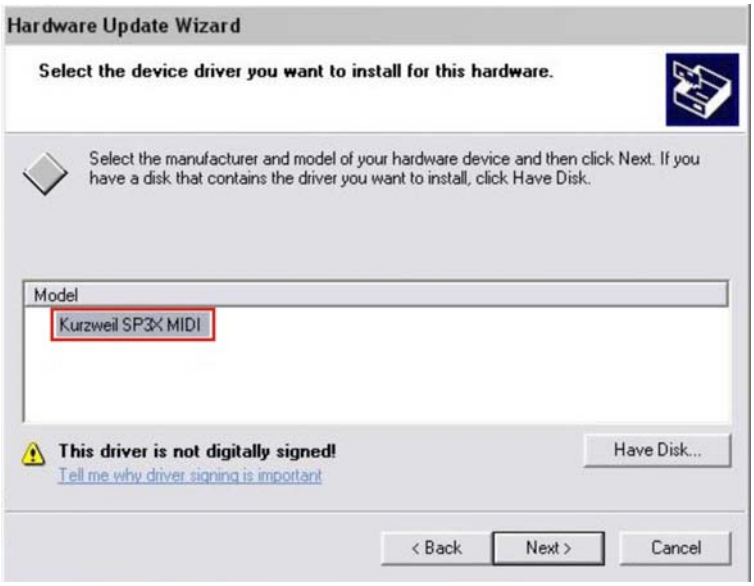
13) Browse to where “SP3Series.inf” located and press the “Open” button to open it.



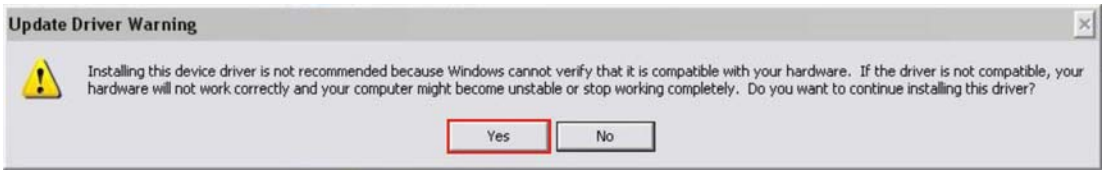
14) Press “OK” button again for further steps.



15) Now select “Kurzweil SP3X MIDI” for SP3X or select “Kurzweil SP3 MIDI” for SP3. Finally press the “Next” button.



16) You will see a warning window, because this driver is not signed by Microsoft, it’s ok to ignore it. Click the “Yes” button.

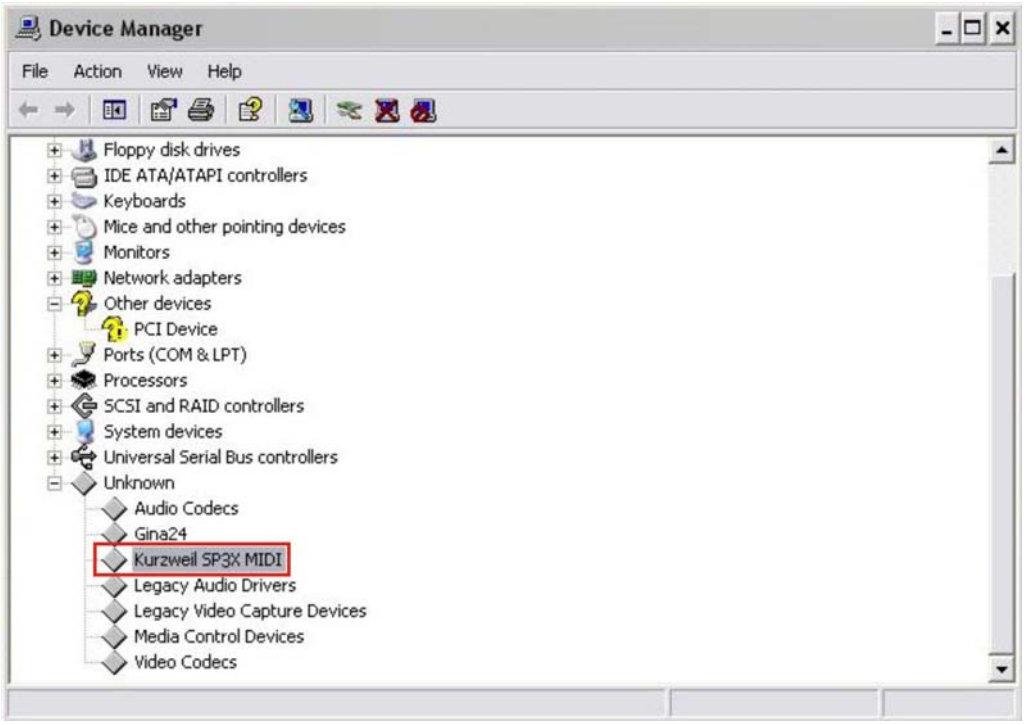


17) You may see the warning box again, press the “Continue Anyway” button.

18) Driver install is in progress.

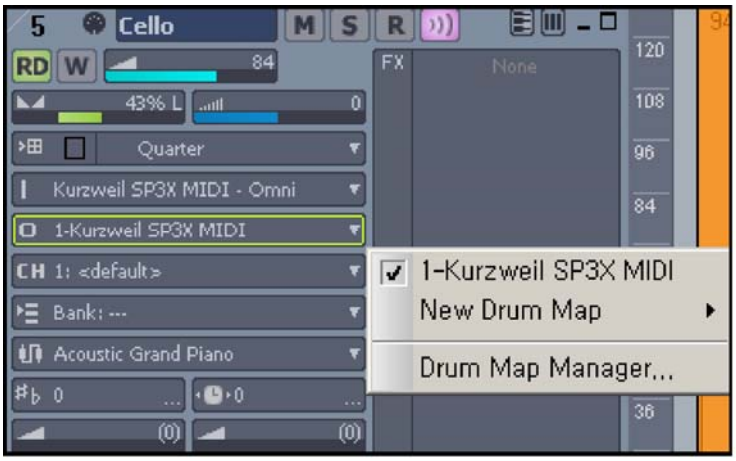
19) After a while, install finished, press the "Finish" button.

20) In the device manager, you can see the new device name "Kurzweil SP3 Series MIDI".



21) Now, you can also see a new device name in any sequencer software.

(Sonar in picture)



☑**NOTE** **Use USB Type A to Type B cable which is the most widely used type.**

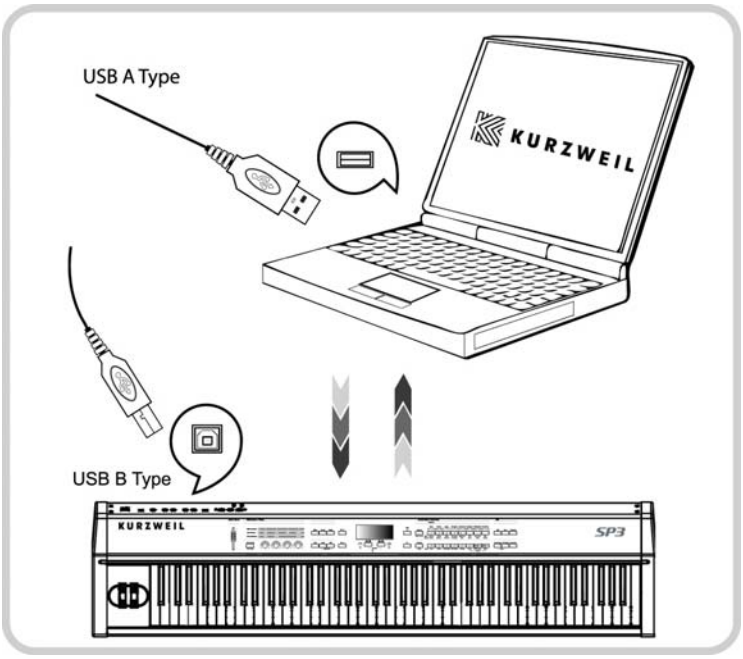
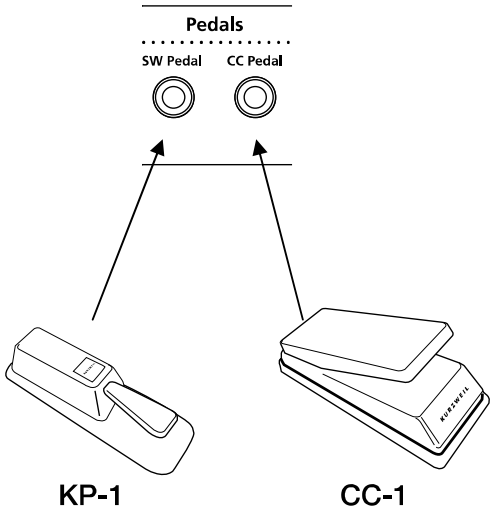


Figure 2-11 Connecting to a Computer via USB

Connecting Pedals

Plug your switch or continuous pedals into the corresponding jacks on the SP3's rear panel. Although we recommend using the Kurzweil pedals described on page 1-2, you can use almost any switch or continuous pedal, as long as it adheres to the following specifications..



- Switch pedals 1/4 inch tip-sleeve plugs
- Continuous pedals 10k Ohm linear-taper potentiometer 1/4 inch tip-ring-sleeve plug

☑**NOTE** **When using a non-Kurzweil pedal, make sure it's connected before you turn on your SP3. Also, do not press any of your pedals while powering up, or it might work backwards because the SP3 verifies each pedal's orientation during power up.**

Powering Up

When you've made all your connections, turn on the SP3. After the LEDs on the front panel flash, the LCD display on the front panel will show a series of messages. When the SP3 is ready to play, the display will look like following:

Figure 2-12 Initial Display

To prevent any damage to your sound system, set the SP3's master volume slider all the way down before you turn on the SP3. And then, gradually push up the slider while playing the keyboard to set the desired volume.

Playing the Demo Songs

1. Press the [+/-] button and [Enter] buttons simultaneously to enter Demo mode.

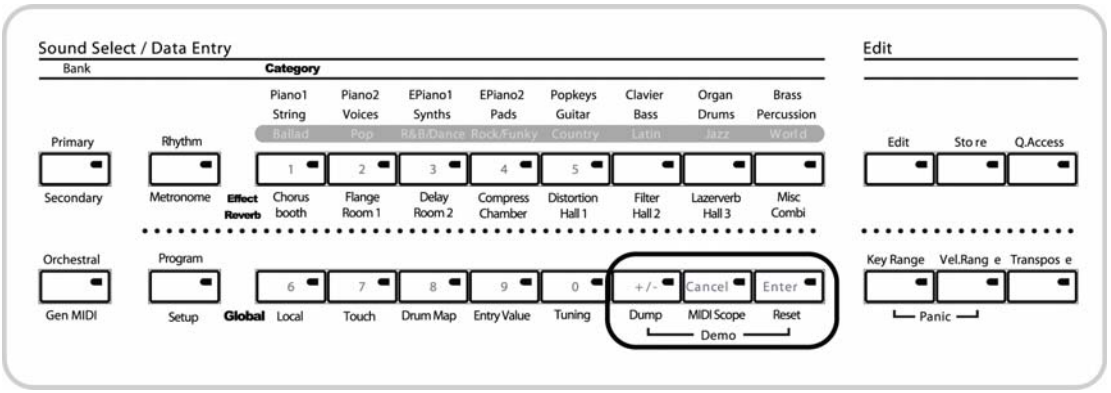


Figure 2-13 Demo mode

[Start/Stop] button on left side of the display starts the demo song. There are three demo songs. Press [-/No], [+/Yes] button or a numeric button in the Sound Select/Data Entry region to select one of the demo songs like Figure 2-14.

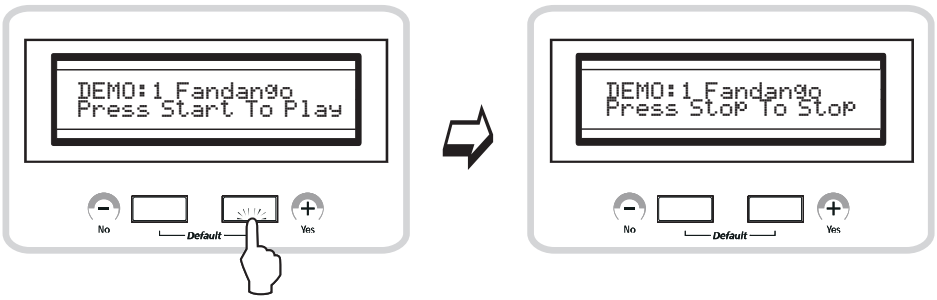


Figure 2-14 Starting Demo Songs

2. Press the [Start/Stop] button one more times to stop the demo song.
3. To exit Demo mode, press [+/-] button and [Enter] simultaneously when the demo songs are not playing.

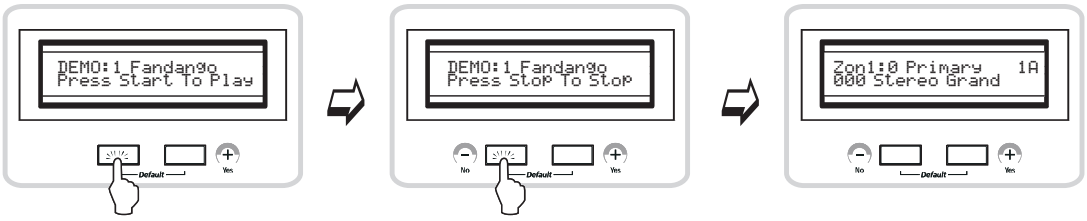


Figure 2-15 Stop and Exiting Demo mode

Software Upgrades

Because the SP3 contains flash ROM, the system software can be upgraded via MIDI. You can get software upgrades for your SP3 from authorized Kurzweil dealers or our home page (http://www.kurzweilmusicsystems.com/). For software installation instructions, refer to Chapter 6, Software Upgrades.

Troubleshooting

- No Text in Display

If no messages are displayed when you turn on the power on your SP3 and no LEDs light, check the power adapter connections at the AC outlet and the SP3 Adapter In jack. For more information about troubleshooting, see Chapter 9, Troubleshooting.

CHAPTER 3

Performance Features

In this chapter, you will learn how to get the most out of your SP3's internal voices. The overview introduces a few basic concepts and the important features of your instrument. The SP3 has two different types of internal voices: Programs and Setups. Use the following list to find specific information more quickly.

Overview

The SP3 provides a wide variety of features. For logical and friendly operation, the front panel is divided into three different regions.

- The **Performance / Effect** region provides real time controllers for modifying your sound as you play. You can control the volume level of each zone, MIDI control messages, effect wet/dry level and the tempo of rhythm patterns with 4 assignable Knobs.
- In the **Sound Select / Data Entry** region, you make selection of the desired instrumental category, sounds, rhythm patterns and metronome sounds. Also, the buttons in this region let you enter numeric values for Global parameters or MIDI control numbers.
- In the **Bank Select** region, you can manage program sounds more effectively. 1 bank has 128 program sounds. The SP3 has 4 banks total that include 512 program sounds.
- In the **Edit** region, you can modify the timbre of existing sounds to your taste and store them into the Quick Access bank for easy usage.

Performance / Effect

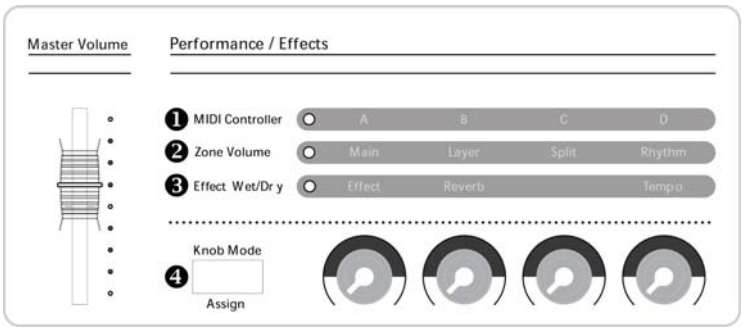


Figure 3-1

❶ MIDI controller mode

- Knobs A-D control MIDI control change depending on the current program.

❷ Zone Volume mode

- Knobs A-D control volume level of each layer.

❸ Effect Wet / Dry mode

- Knobs A-D control the wet / dry mix of FX blocks.

❹ Knob Mode / Assign Button

- Knob Mode / Assign button is used for selecting above ❶❷❸ mode.
- Knob Mode also allows you to change MIDI control messages. See 4-12 page Knob Assigning for more explanation.

-Assign mode allows you to change controller (Pedal, Knob, Wheel and etc) settings very quickly.

Global

The Global menu provides several parameters that you can control the SP3 with. In the Global menu, you can make changes that affect the entire SP3, for example, Local on / off, Drum Map, Drum Channel, Tuning, SysEX dump, MIDI scope, Reset, and more.

Effect (Effect, Reverb)

The SP3 provides more than 50 types of effects including reverb, delay, chorus, flanger, phaser, tremolo, panner, distortion, compressor, rotary speaker simulator, sound enhancer, waveform shaper, and more. There are 30 preset reverbs. For more detailed information, please read page 7-1

Front Panel

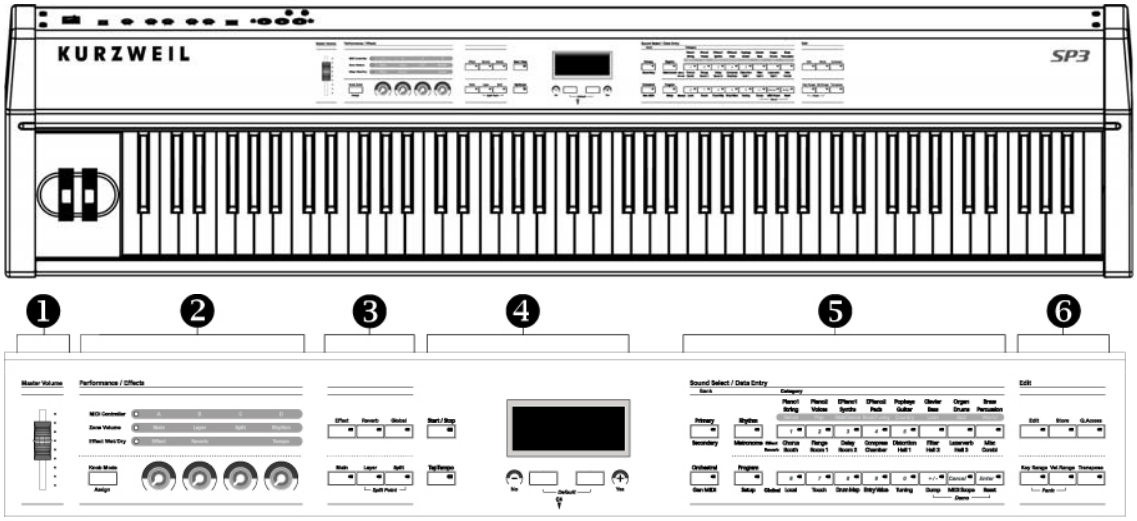


Figure 3-2 Front Panel

❶ Master Volume Slider

The Master Volume Slider is located on the leftmost side of the front panel. The slider adjusts the overall volume of the SP3's audio outputs. We recommend that you set this slider all the way down before you turn on your SP3.

❷ Performance / Effect 1-1

In this region, you can control the volume level of each layer, effect wet / dry mix or send MIDI control messages with the four knobs A-D. See page 3-1 for more information.

❸ Performance / Effect 1-2

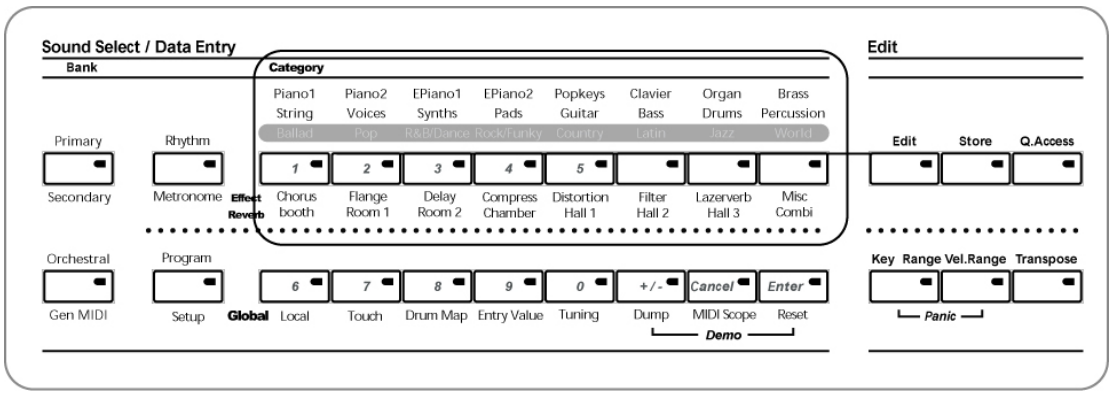
In this region, you can select effect presets. Also, you can use the auto layer and split feature. The Global button provides several system parameters that affect the entire system and the initializing function. See page 4-4 for more information.

❹ LCD Display

Basically, the display tells you what's going on, whether you're playing or editing. The information varies depending on which mode the SP3 is in. There are two buttons labeled [+/Yes] and [-/No] below the display. These buttons have multiple functions. For example, pressing the two buttons at the same time will reset any parameter change made to Transposition or Tuning to the default setting.

❺ Sound Select / Data Entry Region

The SP3's sounds and effects are organized by type into 8 categories with 16 variations each. The buttons in this region are used as Sound Select buttons. The upper 8 buttons are used to select the desired category of instruments, rhythm pattern or effects. The lower 8 buttons are used to make selections within the current category. The Primary/Secondary button selects the first or second 8 variations. These buttons also are used to select menus in Global mode. Depending on which mode the SP3 is in, these buttons can be used to enter numeric values for parameters. Pressing [Dump] and [Reset] button together will start Demo mode. See page 3-5 for more information.



❻ Edit

In this region, you can change the setup sounds and save the modified sounds easily. See page 4-2 for more information.

Rear Panel

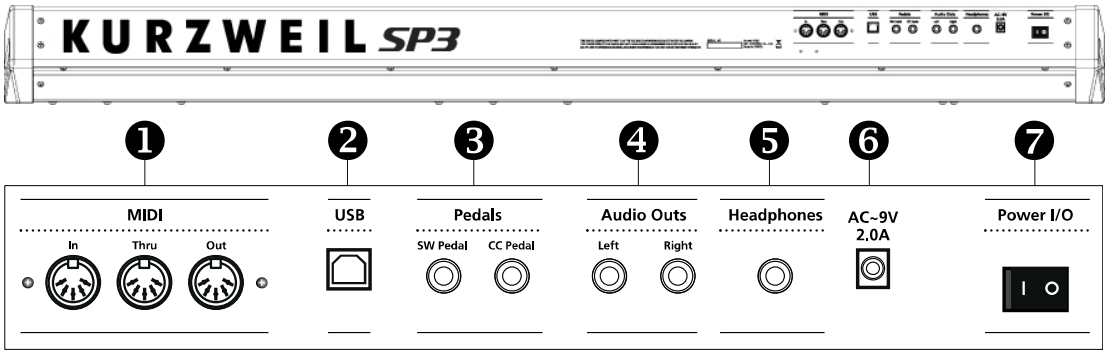


Figure 3-3 Rear Panel

❶ MIDI Ports

Use the MIDI Out and MIDI Thru ports to connect to an external sound module such as Kurzweil K2600R or PC2R. Use the MIDI In port when you are using the SP3 as a sound module for a sequencer application or another MIDI controller. See "Connecting MIDI" on page 2-4 for more information.

❷ USB Port

Use the USB port to connect to a computer. When the SP3 is connected to a computer via USB cable, it can transmit and receive MIDI data without using MIDI In and Out ports. See Connecting to a Computer via USB" on page 2-7 for more information.

☑**NOTE** **The USB port of the SP3 carries only MIDI data, not audio data.**
USB (Universal Serial Bus) is a serial bus standard to interface devices.

❸ Pedal Jacks

Continuous Control (CC) Pedal Jack

You can plug a control pedal in here. A control pedal is very useful when controlling volume, expression, vibrato, and more MIDI effects with your foot. You can use a Kurzweil CC-1 pedal of course, or just use a third-party control pedal for generic synthesizers. With some pedals, you may not be able to get the results that you want according to your control pedal setting. If you need more detailed information about control pedals or are having problems making it work properly, see "Control Pedal Problems" on page 9-4.

Switch (SW) Pedal Jack

Use this jack to plug in a switch pedal. You can plug the single piano pedal that came with your SP3 here. By default, it will perform a sustain (or damper) function. Of course, you can use Kurzweil KFP-1 or KFP-2 too. The KFP-1 will perform sustain and sostenuto function by default.

❹ Audio Outs

The left and right audio jacks are used to connect to your audio system. See "Connecting To Your Audio System" on page 2-2 for connection details.

❺ Headphone Jack

Plug your headphones in here. You'll need a "1/4 -inch to 1/8 -inch (or "phone-to-mini") adapter plug when using headphones that have a mini plug. See "Connecting to Your Audio System" on page 2-3 for more information.

❻ Power Jack

Plug the cord from the included power adapter into this jack. You must use the adapter that comes with your SP3. However, if it should become lost or forgotten, refer see page A-1 for information about possible substitutes.

❼ Power Switch

Press the white "I" to turn on the SP3 or the "O" to turn it off. If it will be off for a long period of time, unplug the power adapter from the wall.

Programs

Programs consist of 512 presets that include various instrumental sounds and 60 types of drum patterns. With such a variety of excellent sounds, the SP3 can be as many instruments as you want it to be; Be it a guitar, a bass or even a string ensemble. You can use those sounds for either performance or MIDI composition. Programs are also the sound source to build up your setups. You can modify them to your taste, of course.

To select a program, press the [Program/Setup] button. Pressing the button will toggle the small LED in the button between green and red. If the LED turns red, it means that the SP3 is in Program mode. The LED turns green when the SP3 is in Setup mode.

In Program mode, use a Sound Select button in the Sound Select / Data Entry region to select the desired instrumental category (Piano, E.Piano, etc.) and select a program by pressing one of the eight buttons below the category buttons as suggested in Figure 3-4.

❶ **Selecting Categories /** You can select the desired instrumental category in this region.

❷ **Selecting Programs /** You can select the desired program within the current category in this region.

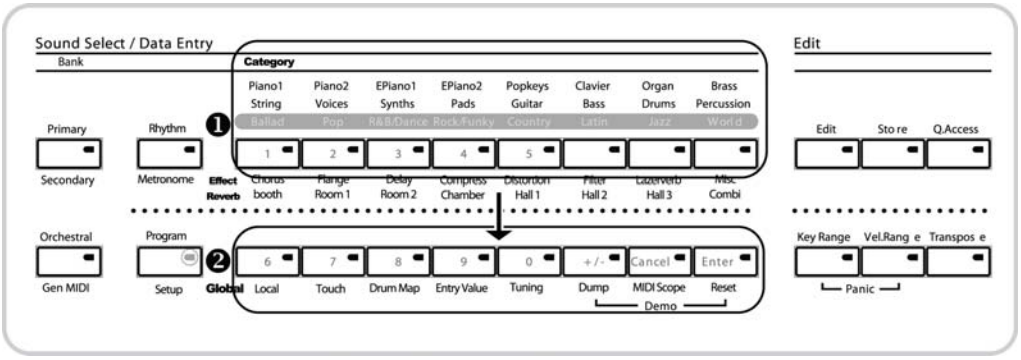


Figure 3-4

Setups

While you can play just one sound at a time within a program, a setup consists of two or more programs. Setup mode shines most during live shows. You can combine up to four distinct sounds in a single setup to suit your need for band or solo performance situations. The SP3 can store 16 setups which are assigned to each of Sound Select buttons.

☑**NOTE** **Although an SP3 setup can have up to four zones, the 4th zone is reserved for playing rhythm patterns.**

Selecting Setups

Press the [Program/Setup] button untill its LED changes to green. Press correspondingly numbered Sound Select buttons to select the desired one from the SP3's setups. The display will show the selected setup like Figure 3-5

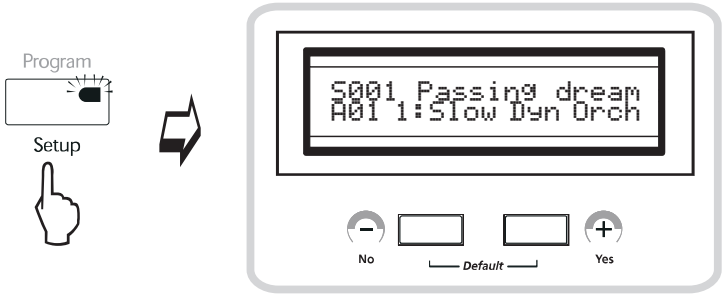


Figure 3-5 Selecting Setups

Rhythm Patterns and Metronome

Selecting Rhythm Patterns

The SP3 has 60 types of pre-recorded rhythm patterns, as well as a metronome. To select a rhythm pattern, press [Rhythm/Metronome] button to enter Rhythm Selection mode and use Sound Select buttons to select desired patterns.

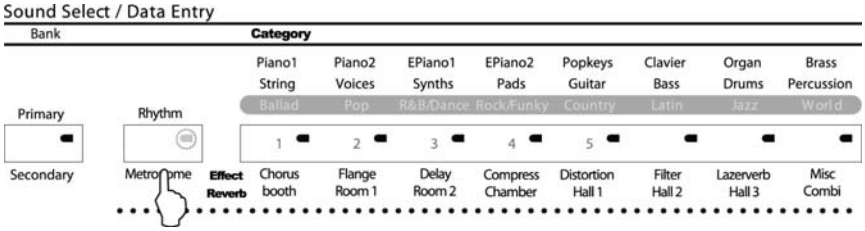


Figure 3-6

The upper 8 buttons in Category region are used to select the genre of the rhythm patterns and the lower 8 buttons are used to select 8 variations of each genre. The pattern list is like the following:

	1		2		3		4		5		6		7		8	
Ballad	1	Ballad 01	2	Ballad 02	3	Ballad 03	4	Ballad 04	5	Ballad 05	6	Ballad 06	7	Ballad 07	8	Ballad 08
Pop	9	Pop 01	10	Pop 02	11	Pop 03	12	Pop 04	13	Pop 05	14	Pop 06	15	Pop 07	16	Pop 08
R&B/ Dance	17	R&B 01	18	R&B 02	19	R&B 03	20	Dance 01	21	Dance 02	22	Dance 03	23	Dance 04	24	Dance 05
Rock/ Funky	25	Funky 01	26	Funky 02	27	Funky 03	28	Rock 01	29	Rock 02	30	Rock 03	31	Rock 04	32	Rock 05
Country	33	Country 01	34	Country 02	35	Country 03	36	Country 04	37	Country 05	38	Country 06	39	Country 07	40	Country 08
Latin	41	Latin 01	42	Latin 02	43	Latin 03	44	Latin 04	45	Latin 05	46	Latin 06	47	Latin 07	48	Latin 08
Jazz	49	Jazz 01	50	Jazz 02	51	Jazz 03	52	Jazz 04	53	Jazz 05	54	Jazz 06	55	Jazz 07	56	Jazz 08
World	57	World 01	58	World 02	59	World 03	60	World 04	M	2/4	M	3/4	M	4/4	M	6/8

Chart 3-1

When you select drum patterns, the display will look like Figure 3-7.

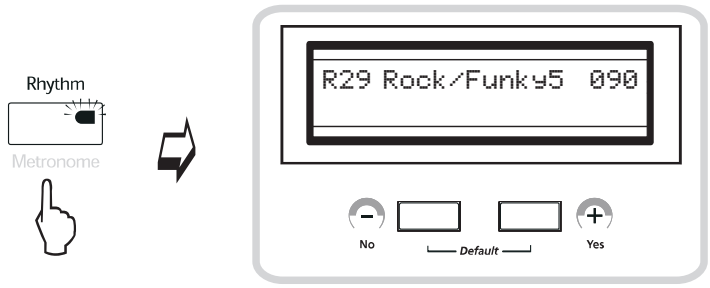


Figure 3-7 Drum Pattern Number Displayed

Pressing the [Start/Stop] button on the left side of the display will start the rhythm pattern and pressing [Start/Stop] again will stop the play. While playing rhythm patterns, the LEDs in those buttons blink red and green alternately.

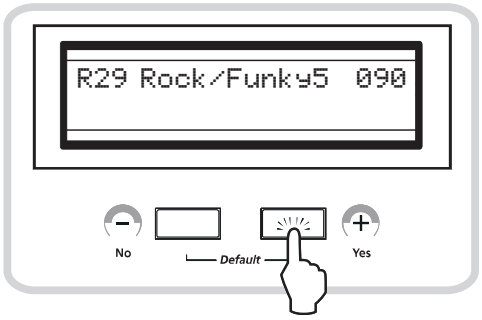


Figure 3-8

Setting the Tempo

♦ Using Knob D

You can change the tempo of the selected rhythm pattern in real time with knob D and the display will indicate the changed tempo. The tempo can be set from 40 to 280 bpm. Press the knob mode button until the "Effect Wet/Dry" lights then just moving the D knob allows you to adjust the tempo of the rhythm pattern or metronome easily.

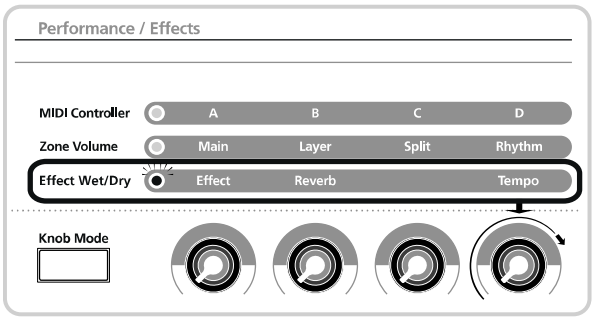


Figure 3-9 Changing Tempo

♦ Using The [Tap Tempo] Button

As you press a pedal four times along with the beat while pushing the [Knob Mode] button, the SP3 will determine the tempo automatically. During performance, tapping the [Tap Tempo] button two times will do the same thing.

☑**NOTE** **While patterns are playing, you can still play the keyboard and change programs using [Program/Setup] button.**

Metronome Feature

To activate the Metronome feature, press the [Rhythm/Metronome] button and select the "world" drum pattern category. And then, press [0], [+/-], [Cancel] and [Enter] button in order. The SP3 supports 4 types of time signature including 2/4, 3/4, 4/4 and 6/8. After you make a selection, the display will look like Figure 3-11. Use the Tempo Knob to control the tempo as you do with the rhythm patterns.

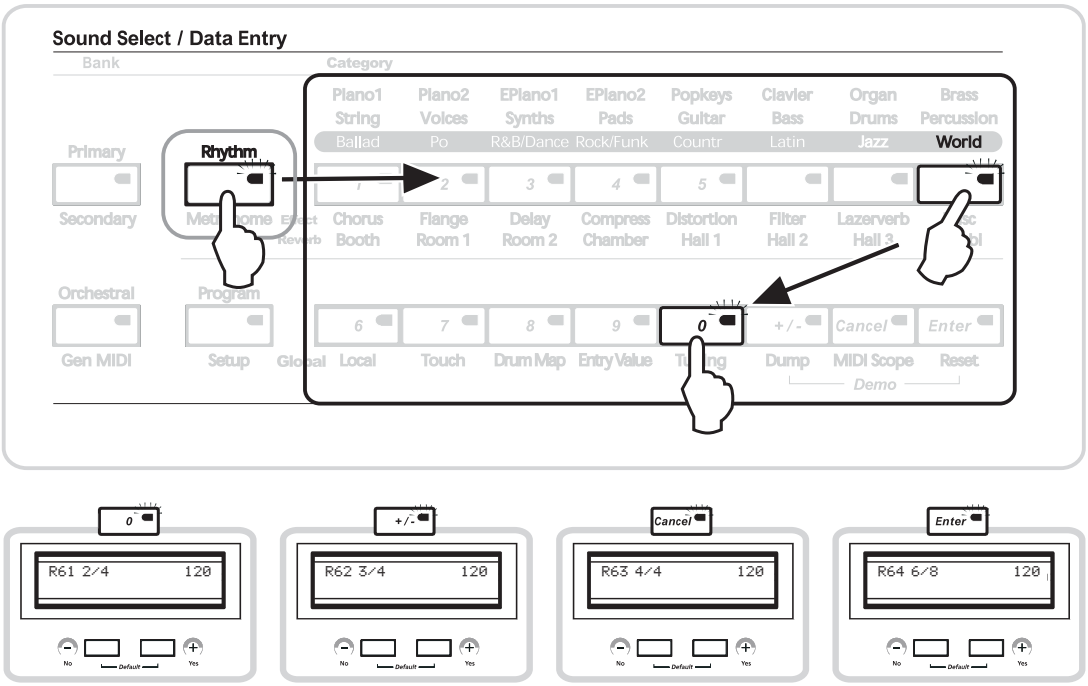


Figure 3-10

☑**NOTE** **Metronome On / Off**

Like rhythm patterns, the [Start/Stop] button will start the metronome and pressing this button again will stop it. While the metronome is running, you can still play the keyboard and change programs using the [Program/Setup] button.

Using The Quick Access Bank

The SP3 has 16 empty slots for storing frequently used sounds, or user created programs and setups. We call this the Quick Access bank. You can quickly save sounds to those slots within the Quick Access bank and later, select any of the stored programs or setups with a single press of a button. This is a very convenient feature, especially for a live show.

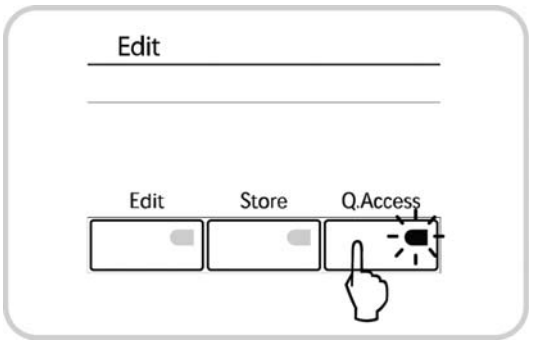


Figure 3-11

Editing The Quick Access Bank

If you need instant access to specific SP3 sounds frequently, that's what the Quick Access bank is for. Each of the 16 slots corresponds to the 16 buttons in the Sound Select / Data Entry section on the SP3's front panel.

Make one of your favorite programs or setups current and press the [Store] button. The program or setup will be stored in one of the empty slots and the SP3 will enter Quick Access mode. Pressing the [+/Yes] button completes the saving procedure. After saving completes, the display shows the slot number you just stored your sound in like Figure 3-12.

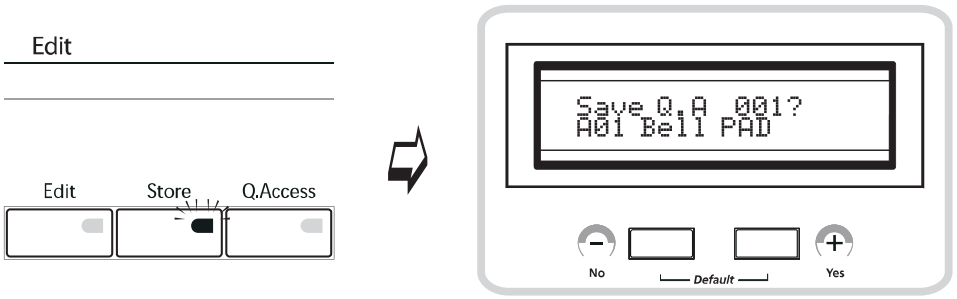


Figure 3-12

Quick Access mode is very useful in live situations. If your duty in a band is to make a variety of sounds, not just piano, arrange the sounds into your SP3's Quick Access bank in the order. Especially for situations when a few bands may share a single keyboard instrument such as church gigs or practicing rooms, having your own Quick Access bank will be really handy. You will never need to spend any time to search sounds.

Transpose

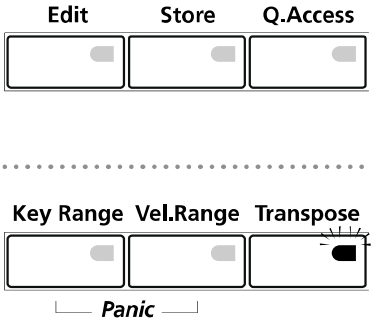


Figure 3-13

The SP3 offers a quick and easy transpose feature. While holding down the [Transpose] button, use the [+/Yes], [-/No] buttons below the display to add or subtract semitones. The SP3 can be transposed up to two octaves in both directions.

☑**NOTE** **Pressing [+/Yes] and [-/No] button at the same time will reset the transposition.**

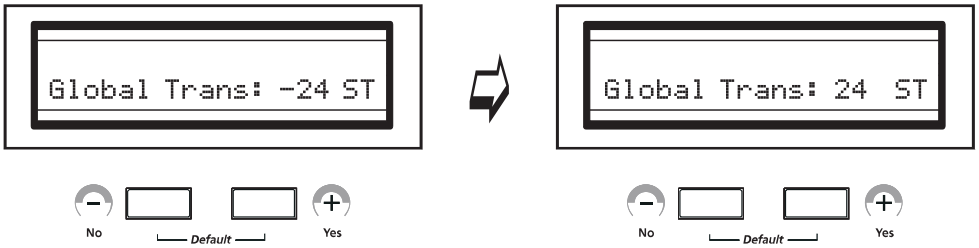


Figure 3-14

Using Multi Function Knobs

The SP3 has 4 multi-function knobs labeled A, B, C, D in the Performance/Edit Region. By using the [Knob Mode] button, various functions can be assigned to each knob, which include MIDI data, zone volume, effect wet / dry mix, and tempo control. The functions of Knobs A-D depend on the "Knob mode". Each time you press the [Knob Mode] button, the Knob mode will change and the corresponding LED will light.

◆ MIDI Controller Function

The SP3 can transmit four different kinds of MIDI message with the 4 knobs. These knobs are programmable and any MIDI control change number, from 0 to 127, can be assigned to them (MIDI control change number from 128 to 146 is only applied to SP3 Series). This feature is very powerful when controlling external MIDI devices, or when using with a computer based sequencer, especially when controlling virtual instruments in real time.

The default settings for the knobs are described in Figure 3-16.

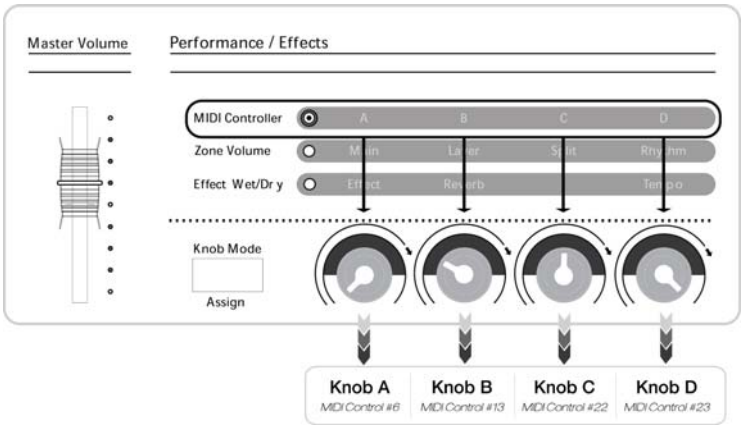


Figure 3-16

The SP3 shares the same MIDI CC assignment with other Kurzweil instruments. For example, the destinations of knobs A and B are MIDI CC 6 and 13 which PC-series instruments also assigned to slider/knob A and B. In addition, MIDI CC 6, 22, and 23 are assigned to slider B, C and D of K-series instruments. This makes the SP3 a good controller keyboard for other Kurzweil rack modules, such as PC2R, K2000R, K2500R, and K2600R.

If you want to change the default setting, see Assigning Knobs on page 4-12 in Chapter 4 : Programming Your SP3.

◆ Zone Volume

You can control the volume levels of main, layer, and split sounds and rhythm patterns with the 4 knobs. It is very useful for live performance, especially when playing with the internal rhythm patterns.

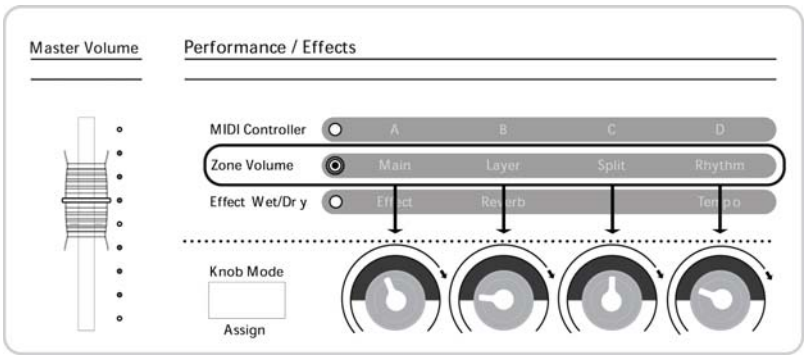


Figure 3-17

◆ Effect Wet / Dry Mix & Tempo Control

You can use the 4 knobs to control Effect Wet / Dry mix level and the tempo of rhythm patterns and the SP3's metronome. For more information about Effects, see Chapter 7.

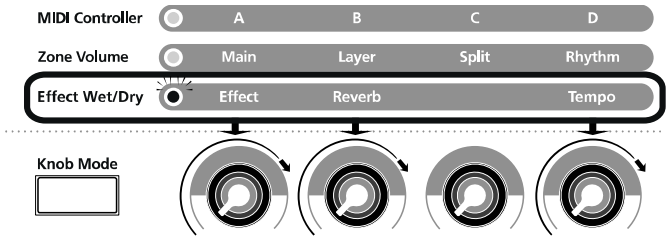
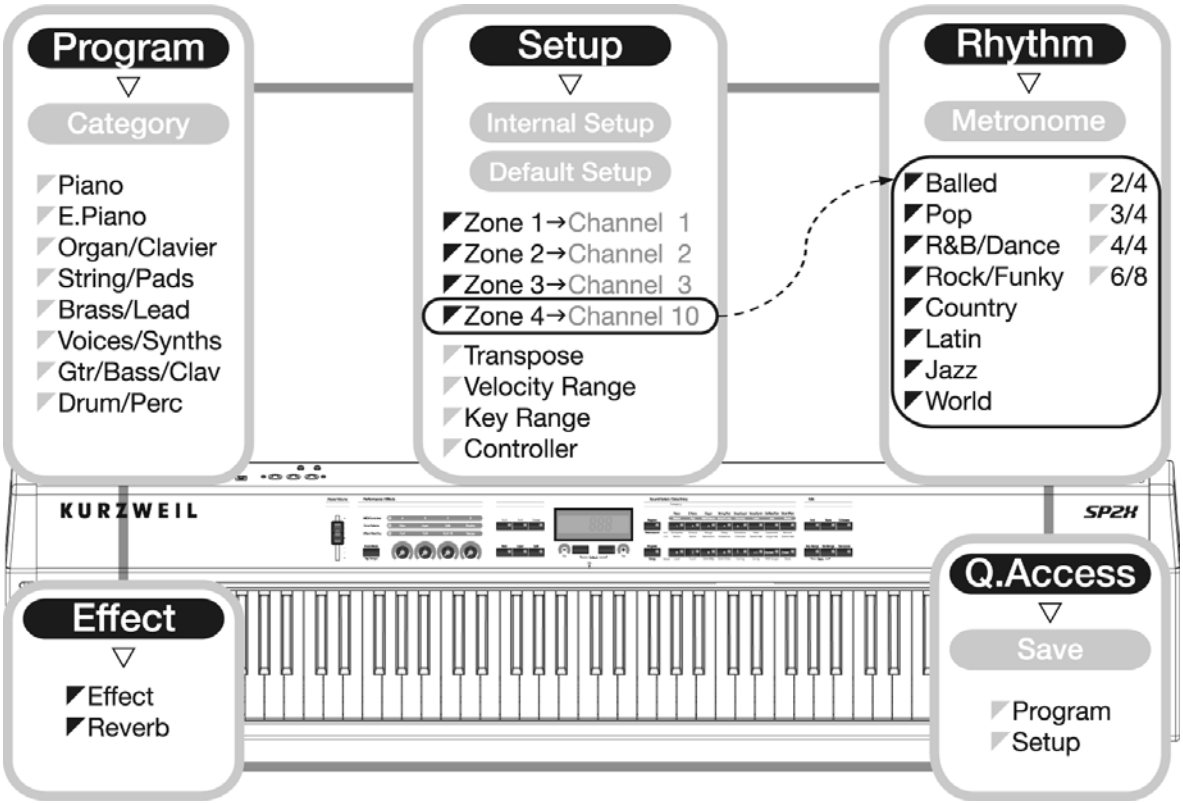


Figure 3-18

CHAPTER 4

Programming Your SP3

This chapter will show you how to modify existing programs, setups and effects to your own specific use or taste. Use the following list to find specific information more quickly.



SP3 Internal Structure Diagram

Easy Editing (Auto Layer / Split)

With the AutoSplit feature, users can create new setups very easily. Tasks such as mixing additional sounds with current ones or splitting the keyboard into multiple parts, each with a different sound, can be done in a very convenient way. Basically, current programs are set to Main sound. You can easily layer additional sounds on top of it or split keyboard into multiple zones with different programs in each, using [Layer] and [Split] buttons.

Layering

Layering is playing two sounds on the same part of the keyboard.

The procedure is as follows:

1. Select a program. If you want to mix another sound with it, press the [Layer] button.

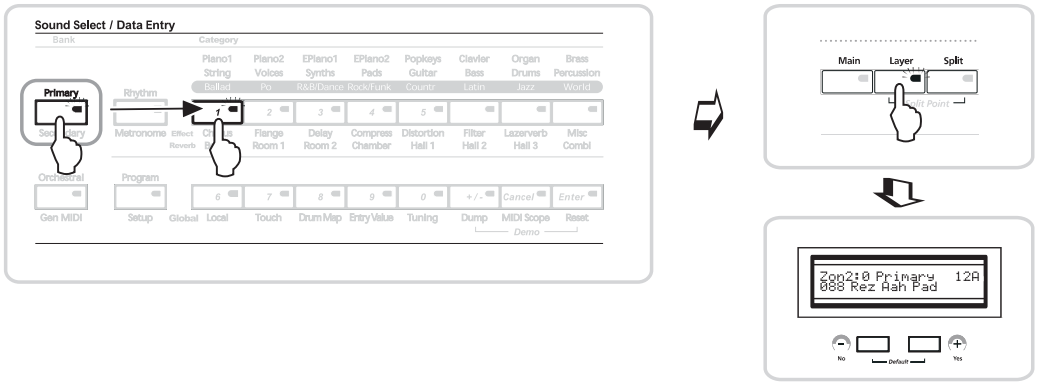


Figure 4-1

2. The LED on the [Layer] button will blink red and the display will look like Figure 4-1.
3. Then you can select another sound to be layered with the Sound Select button
4. If you want to change your Main sound, press the [Main] button and use Sound Select buttons. (In this case, the display will look like Figure 4-2)

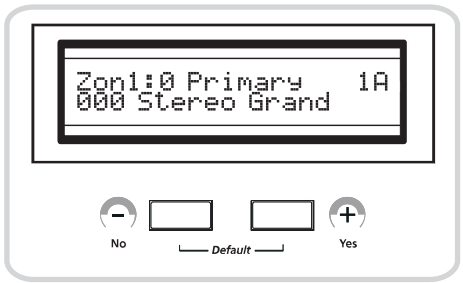


Figure 4-2

Split

Splitting is playing two or more programs on different parts of the keyboard. For example, using the split feature, you can play a piano sound in the upper register and a bass sound in the lower register with a single SP3 instrument. Pressing the [Split] button will flash the LED on it and the display will look like Figure 4-4.

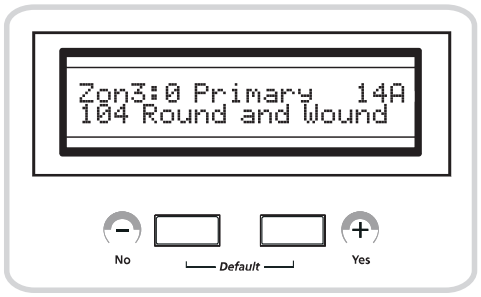


Figure 4-4 The display indicates that the added split is 053 Bass Guitar

You can select a split sound with the Sound Select button like when you select sounds for layering and the SP3 splits the keyboard at a predetermined point which by default, is F#3.

◆ Split Point

If you want to change this automatic split point, press and hold down the [Layer] and [Split] buttons at the same time. The SP3 will indicate "Split Point : F#3" on the display. Press a key which you want to be the new split point. That's it. You have a new split point. This function sets a split point and selects Split Keyboard mode simultaneously when you are not in split mode.

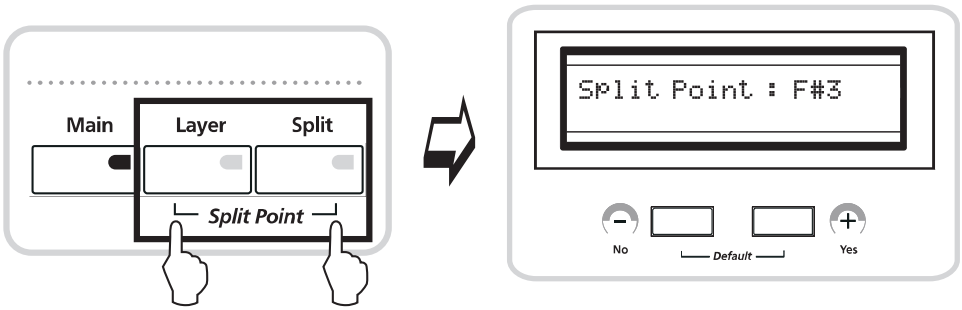


Figure 4-5 Split Point

Changing Effect Setting

In Program mode, users can change the effects associated with the current program or setup. The SP3 has two separate effect blocks called Effect and Reverb. The effects available for the Effect block include choruses, reverbs, distortions, etc. The Reverb block is mainly for reverberation adding dimension to sounds, so the effects for Reverb consist of presets such as Room, Hall, Chamber, etc. You can change effects for each block with the [Effect] and [Reverb] buttons in Program mode. The chart below shows the available effects.

	1	2	3	4	5	6	7	8
Effect	Chorus	Flange	Delay	Compress	Distotion	Filter	Lazerverb	Misc
Reverb	Booth	Room 1	Room 2	Chamber	Hall 1	Hall 2	Hall 3	Combi

Chart 4-2 Effect List

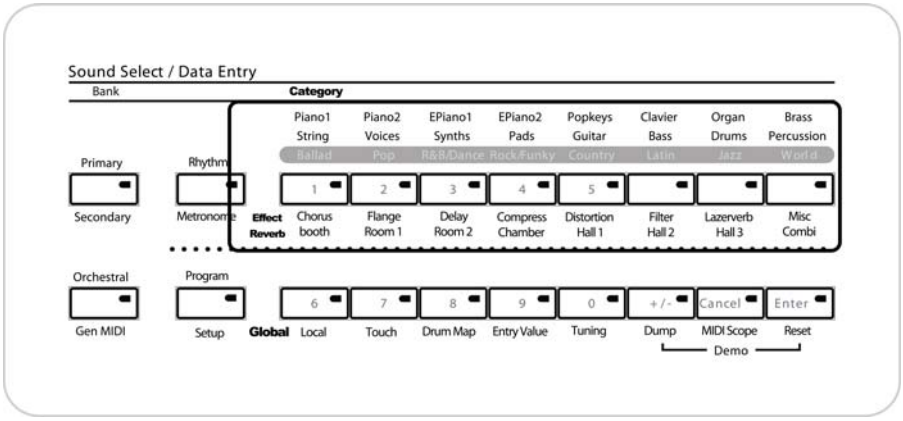


Figure 4-6

• Changing Effects

To change an effect, press the [Effect] button. The LED will light. Users can select types of effects with the upper set of Sound Select buttons and select variations with the lower set of Sound Select buttons. The same method will work for Reverb and you can store your changes in a Quick Access bank with the associated programs. You can use the two effect blocks at the same time.

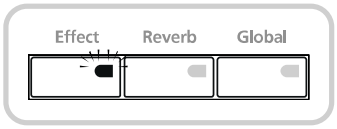


Figure 4-7 Buttons for Effect Setting

→ For this example, we're going to change the Effect associated with Program 0 Stereo Grand Piano.

1. Select Program 0 "000 Stereo Grand".
2. Press the [Effect] button. The display will show "1 Stereo Chorus 1" and the LED in the [Edit] button in the Edit region of the SP3's front panel will blink.

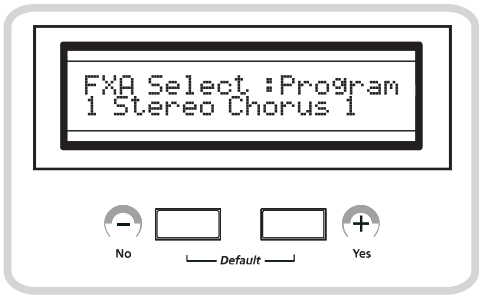


Figure 4-8 The display in Effect Editor mode

3. Select the desired type of effect with the upper set of Sound Select buttons in the Category region. The buttons are labeled Chorus, Flanger, Delay, Compressor, Distortion, Filter, LazerVerb, and Misc. (Rotary Speaker, Enhancer, Simple Motion, etc.) After making your selection, select the desired preset with one of the the lower 8 buttons. For more information about the effects and reverbs, refer to Appendix B-7, Effects and Reverbs.

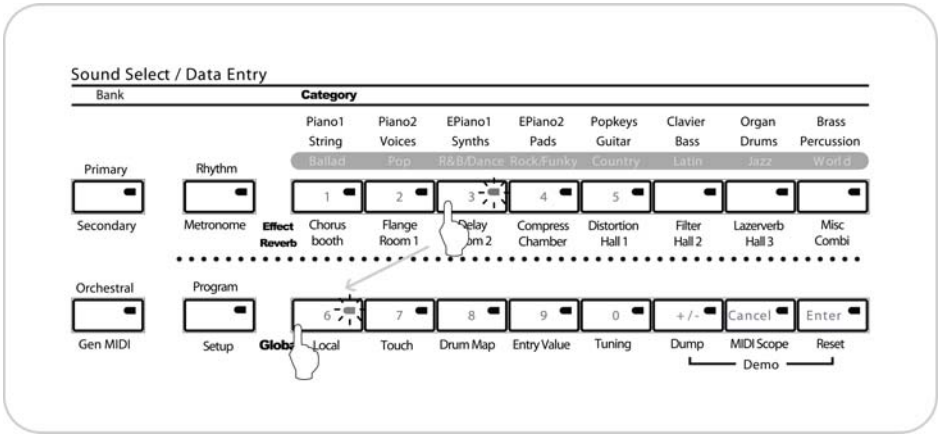


Figure 4-9 Selecting Effect Presets

4. Press [Store] in the Edit region. The SP3 will ask if you want to replace the effect setting of the current Program. Store the change with [+/Yes] and the procedure is completed. Now, the SP3 will return to Program mode.

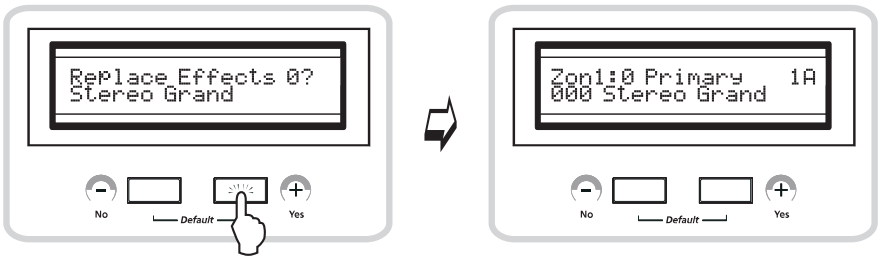


Figure 4-10 Storing Effect Setting

- Changing Reverbs

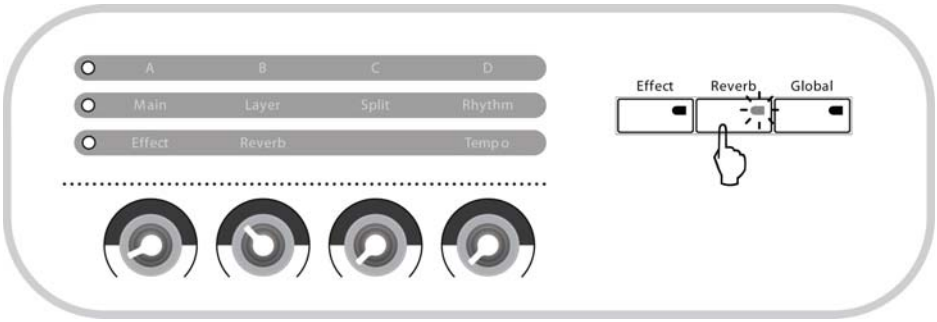


Figure 4-11 Reverb

→ For this example, we're going to change the reverb associated Program 0, Stereo Grand Piano.

1. Select Program 0 "000 Stereo Grand".
2. Press the [Reverb] button. The display will show "106 Semi Hall 24" and the LED in the [Edit] button in the Edit region of the SP3's front panel will blink. This means that the SP3 is now in Reverb Editor mode.

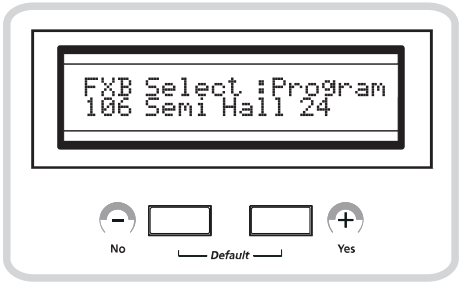


Figure 4-12 The display in Reverb Editor mode

3. Select the desired type of reverb with the upper set of Sound Select buttons in the Category region. The buttons are labeled Room1, Room2, Chamber, Hall1, Hall2, and Hall3. After making your selection, select the desired preset with one of the the lower 8 buttons. For more information about the reverbs, refer to Appendix B - 7, Effects and Reverbs.
4. Press [Store] in the Edit region. The SP3 will ask if you want to replace the effect setting of the current Program. Store the change with the [+/Yes] button and the procedure is completed. Now, the SP3 will return to Program mode.

• Changing Combination Effect

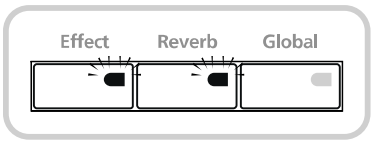


Figure 4-13 The Buttons Used within Combination Effect

→ For this example, we're going to change the Combination Effect applied to Program 19, Hard E Piano.

1. Select Program 19 "Hard E Piano".
2. Press the [Effect] button. The display will show "2 Stereo Chorus" and the LED in the [Edit] button in the Edit region of the SP3's front panel will blink. This means that the SP3 is now in Effect Editor mode.
3. Next, select the desired type of effect with the upper set of Sound Select buttons in the Category region. The buttons are labeled Chorus, Flanger, Delay, Compressor, Distortion, Filter, LazerVerb, and Misc.(Rotary Speaker, Enhancer, Simple Motion, etc.) After making your selection, select the desired preset with one of the the lower 8 buttons.
4. While holding down the [Effect] button, press [Reverb] button. Make sure that the LEDs in each button light.

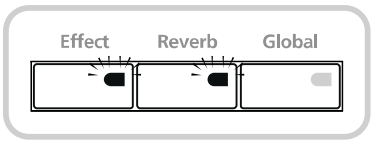


Figure 4-14 The LEDs blink together with Combination Effect

5. The display will show "87 Real Room" that indicates the current Combination Effect preset associated with the program.
6. Now, select the desired type of reverb with the upper set of Sound Select buttons in the Category region. The buttons are labeled Room1, Room2, Chamber, Hall1, Hall2, and Hall3. After the making your selection, select the desired preset with one of the lower 8 buttons.
7. Press the [Store] in the Edit region. The SP3 will ask if you want to replace the effect setting of the current Program. Store the change with the [+/Yes] button and the procedure is completed. Now, the SP3 will return to Program mode.

Editing Setups

This section will help you understand and tame the most powerful feature of the SP3, Setups, through a few examples.

• There are three basic steps in editing setups.

1. In Setup mode, press the [-/No] button and [+/Yes] button at the same time. The display will show "S128 Default Setup" which means the Default Setup is selected. Press the [Edit] button. The blinking LED in the button indicates that the SP3 is in Editing mode.

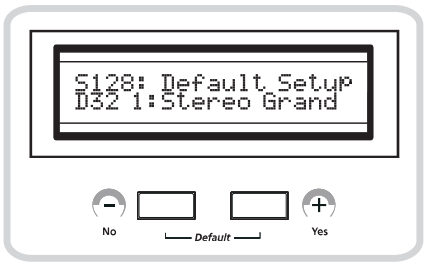


Figure 4-15 Default Setup is Selected

2. Using the [-/No] and [+/Yes] buttons, or Sound Select buttons in the Category region, select a setup to be edited and then edit parameters such as Key Range, Velocity Range or Transpose as necessary.
3. In Setup edit mode, the [Start/Stop] and [Tap Tempo] buttons can be used as Sub Menu select buttons for setting various controller values.
4. After editing, store the changes with the associated setup.

The Structure of a Setup

Before we begin with more details of setup editing, you may want to know how setups are constructed.

Basically, a setup is a combination of up to 4 distinct programs which can be individually played on different regions of the SP3's keyboard. Each region is called a "Zone". Each zone has its own parameter set which define MIDI transmit channel, controller assignment and key range of the assigned program.

Although the SP3 can receive MIDI data on only one channel at a time when used with external MIDI devices, the SP3 will remap the incoming data from the external devices so that you can use the setup's four zones together. The fourth zone is fixed to drum and percussion sounds.

The SP3 has two special setups you need to check out. They are template setups with basic settings, which are very convenient for creating new setups.

• Special Setups

Naturally, you can edit any setup you want, changing values of any of dozens of available parameters. However, the existing setups often have complex interaction between several parameters. Changing the value of one parameter can have greater impact than you anticipated. Consequently, we've made a very handy template setup for your convenience.

1. Internal Setup

You can consider Program Mode as a setup with only one zone. Thus, changing zone parameters can affect how the program works. For example, in program mode, pressing the [Split] button activates the Autosplit feature because the value for Autosplit parameter of the corresponding zone is set to ON by default. Thus, you can select any program or internal setup and make it a starting point for your own setup.

2. Default Setup

The Default Setup is a "blank" setup except for a handful of typical controller assignments with Autosplit Off. If you want to create a completely new setup from scratch, we recommend you use the Default Setup as a starting point.

Key Range

Key Range determines where the Main, or Split sound plays on the keyboard. For example, you need to set appropriate ranges for each of your basses, pads and leads to enjoy the real power of the split feature. To set Key Range, press the [Setup] button, [Edit] button, and the [Key Range] button in order. The LED in the [Key Range] button will flash. The display will look like Figure 4-16.

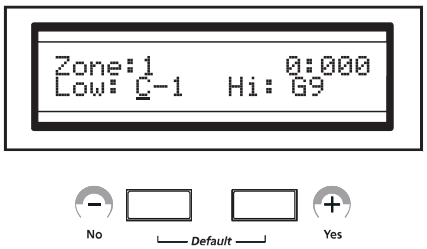


Figure 4-16 Setting the Lowest Note for the Zone

[-/No], [+/Yes] or numeric buttons allows you to set the lowest key.

Playing a key while holding the [Key Range] is the faster way to set the key.

If you want to change the high key, press [Start/Stop] to move the cursor to the right.

Now you can set the highest key just as the lowest key.

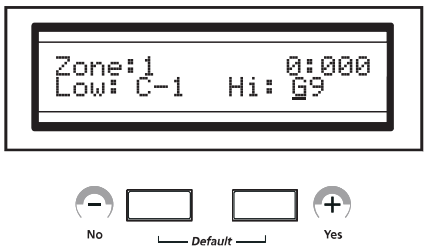


Figure 4-17 Setting the Highest Note for the Zone

Velocity Range

Velocity Range has the same meaning as Velocity Switching in the layering. With this, you can use your key-strike velocity (how hard you play) to change the timbre of sounds. For example, you can create a program which plays leads or pads when played normally and triggers percussion sounds, such as a ride cymbal when played harder.

To edit Velocity Range, press the [Setup] button and [Edit] buttons. Then, press [Velocity Range]. The LED in [Velocity Range] will flash and the display will look like Figure 4-18.

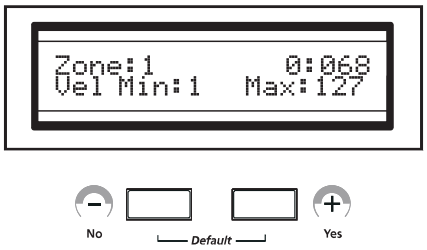


Figure 4-18 Setting the Velocity

Using the [-/No], [+/Yes] or numeric buttons, enter the lowest velocity for the sound you want to be triggered within the specific range.

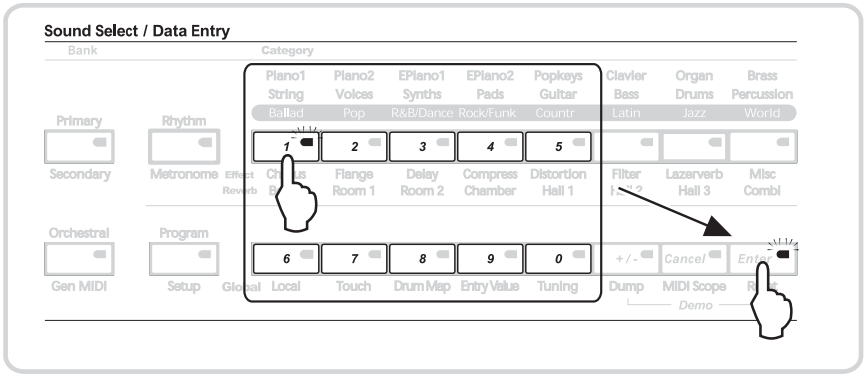


Figure 4-19 Entering Value for the Lowest Velocity with numeric buttons

Playing a key as desired while holding the [Vel.Range] button is the faster way to set velocity.

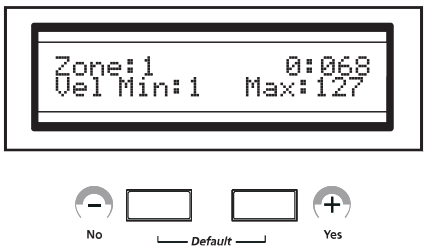


Figure 4-20 Setting the Highest Velocity

At this point, you can select other parameters with the [Start/Stop] and [Tap Tempo] buttons.

☑**NOTE** The values for Velocity Range should be from 0 to 127.

Transpose

You can use the [Transpose] button to set the amount of transposition for each zone. The method is:

1. Select any sound from the Main, Layer or Split sounds, which you want to transpose.

2. Press the [Setup] and [Edit] buttons.

3. Press the [Transpose] button.

4. Set a value of transposition with the [-/No], [+/Yes] or numeric buttons.

5. Holding the [Transpose] button and Playing a key is the faster way to do it.

Figure 4-21 shows an example of the transposition feature. Two kinds of piano sounds are layered and the second piano sound is transposed up an octave (12st). The result is called an "Octave Piano" sound, which plays in octave unison.

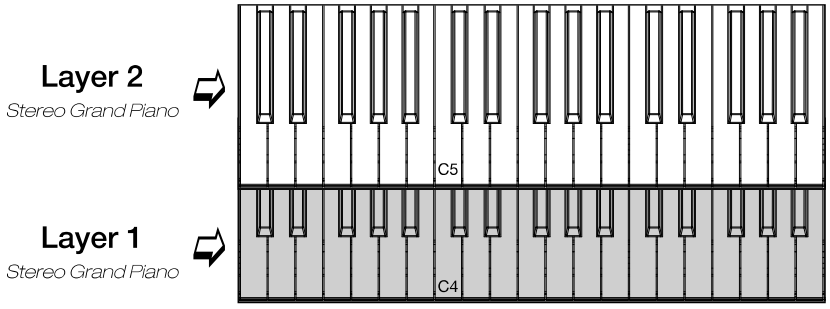


Figure 4-21 Transposition

Editing Effect Settings

You can change the effect setting for setups the same way as you do with programs. Without changing, the effect setting for Main sound will be applied to the entire setup.

Pedal Setting

Sometimes, you want to apply different pedal settings to different sounds, especially when you are in Split mode. For example, if you are playing a split with piano and bass sounds, you may not want to sustain your bass sound with a switch pedal as you do with piano. In this case, you will want your switch pedal to work for the piano sound but not for the bass. To do this, select a program press the [Setup] button and [Edit] button. While holding down the [Knob Mode] button, press your switch pedal to enable or disable the switch pedal for the selected program. The display will show whether the switch pedal is enabled or disabled. See Figure 4-22.

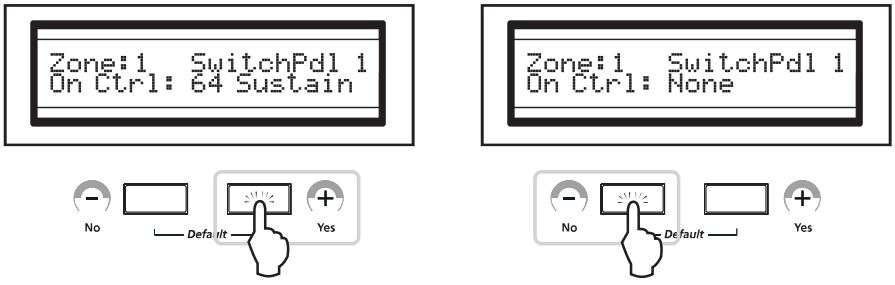


Figure 4-22 Turning On and OFF switch pedal

Assigning Knobs

You can program Knobs A-D to send any MIDI control change number. The procedure is like following:

Press the [Setup] button and [Edit] buttons. While holding down the [Knob Mode] button, turn one of the knobs you want to program.

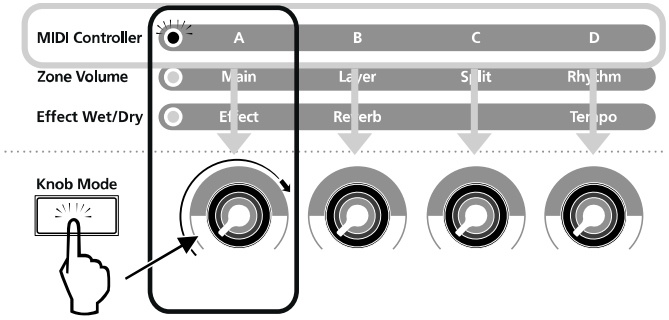


Figure 4-23 Selecting a Knob to be programmed

The display will show which knob will be programmed for a short while and then the MIDI control number currently assigned to it. See Figure 4-24. The Knob to be programmed is A and the assigned MIDI control number is 6.

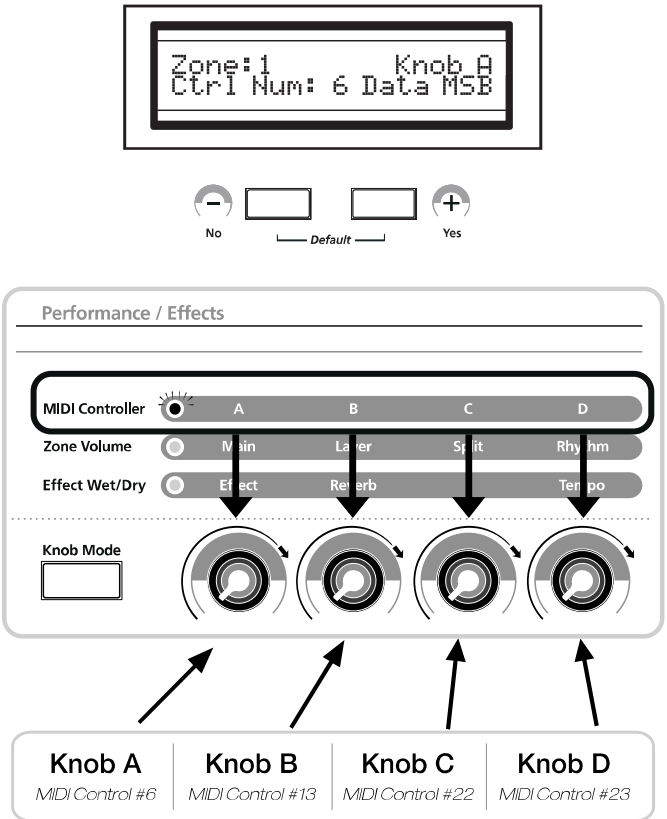


Figure 4-24

Assign the MIDI control number you want with the Sound Select buttons and press the [Enter] button. For more information about MIDI control number, refer to the MIDI Implementation Chart in Appendix A.

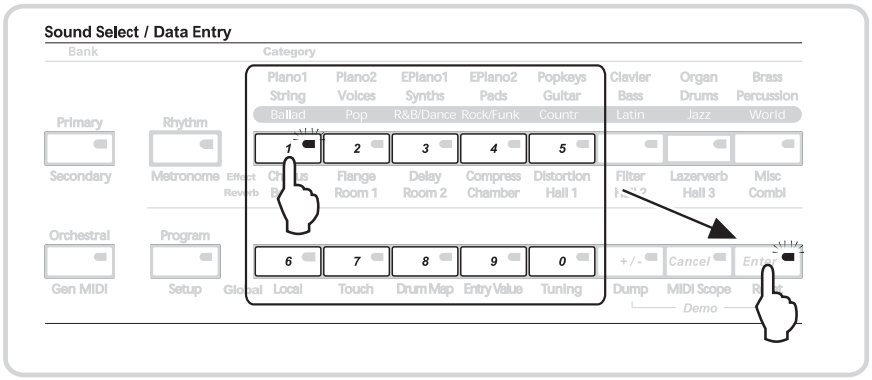


Figure 4-25 Assigning a MIDI control Number

CHAPTER 5

Global

Global parameters affect the operation of instrument-wide behavior. This chapter will help you understand what each parameter does. Also, you learn how to initialize the entire system in Global mode. To find subject-oriented information, use the following list.

Entering Global Mode

Press the [Global] button to enter Global mode.

After you enter Global mode, the display looks like Figure 5-1.

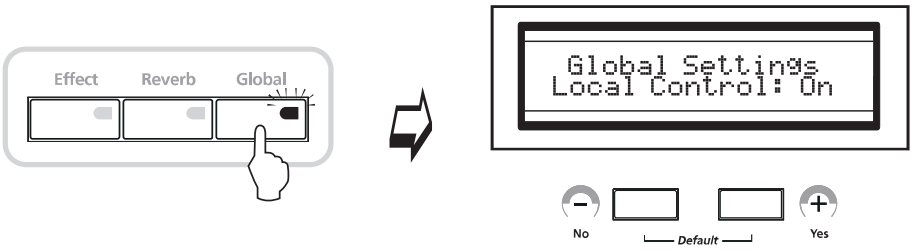


Figure 5-1 Entering Global Mode

In Global mode, you can select each of 8 global parameters using the lower row of Sound Select buttons as labeled below them.

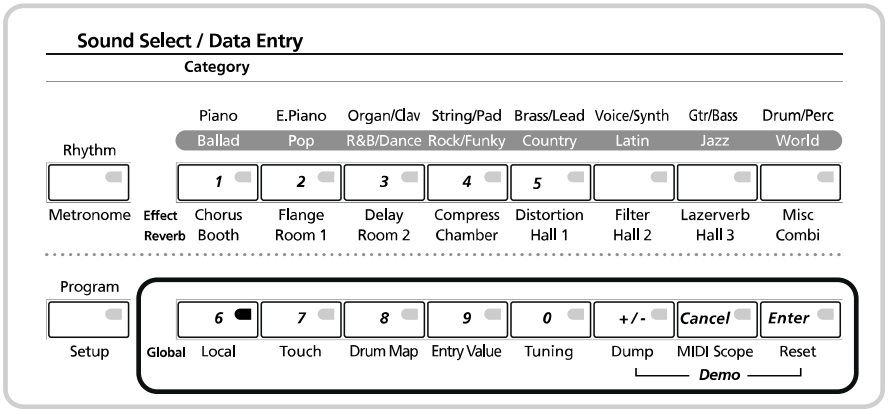


Figure 5-2 Selecting Global Parameters

Local

This parameter establishes (On) or breaks (Off) the internal link between the MIDI-generating components (keyboard and physical controllers) and the internal sound module. When you want to be able to play the SP3 from its own keyboard, set Local Control to On. When the SP3 is receiving MIDI from an external source, set Local Control to Off. Otherwise, MIDI looping (notes get doubled) might occur. This is particularly important when you're using the SP3 with a sequencer.

[+/Yes] and [-/No] buttons will turn on and off Local control. The term "Local" means connection between the internal sound generator and the triggering devices such as the keyboard part of your SP3. Generally, On is appropriate for standalone use and Off is used with a computer sequencer or external MIDI processor.

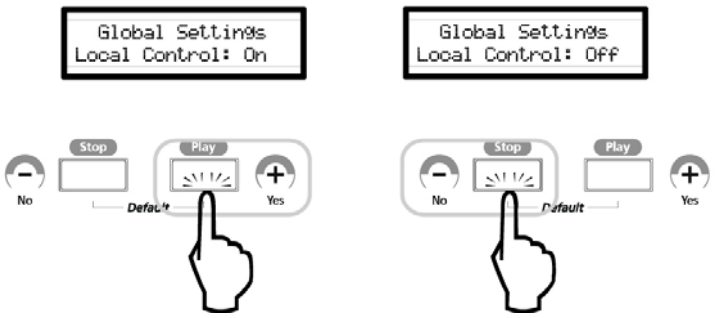


Figure 5-3

Touch

This parameter determines how sensitively the keyboard responses to your playing. By default, a value of Linear is the standard, unaltered level of keyboard sensitivity. Values of Light1 - Light3 are for players who prefer a light touch. You can play more lightly and still get the same attack-velocity values with these settings. The sensitivity level increases as the numeric number suggests.

Values of Hard1 - Hard3 are for players who have a heavier touch. You should play harder to get the same attack-velocity values. Also, the numeric number suggests the sensitivity level. Linear is less sensitive than Light1 and more sensitive than Hard1.

With [+/Yes] and [-/No] button, you can select one of those seven types of sensitivity level of your SP3's keyboard like Figure 5-4 .

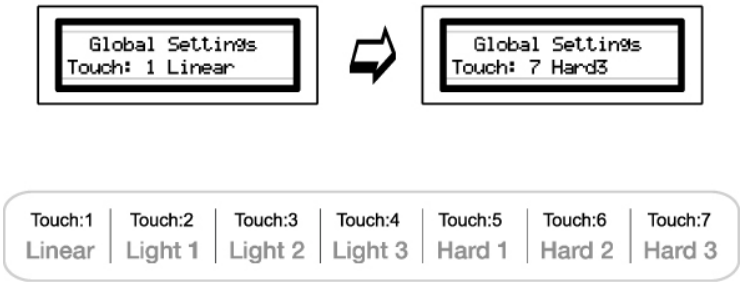


Figure 5-4 Selecting Velocity Sensitivity

Drum Map

This parameter determines the layout of percussion timbres in drum programs (Unlike other programs, drums or percussion programs should consist various percussion instruments within a single patch). You can select either General MIDI style layout (GM) or Kurzweil style layout (KRZ) with [+/Yes] and [- / No] button like Figure 5-5 . The default setting is KRZ.

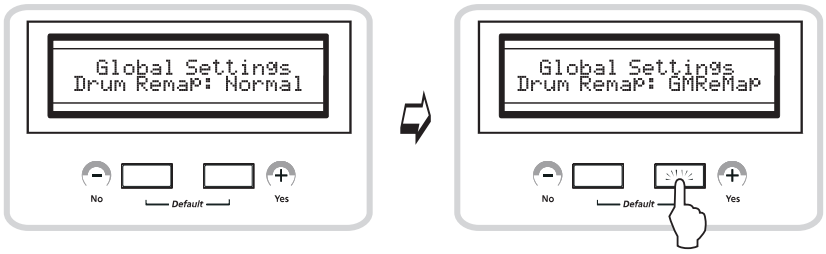


Figure 5-5

Entry Values

You can assign initial values for controllers if necessary. For example, when changing setups between songs at a gig, you want to specify initial settings for any controller such as effect wet / dry level or volume setting for each setup. You can activate this feature by setting the Entry Value parameter to ON. (See Figure 5-6 .) The default state is OFF. There are a few important points you need to understand about Entry Values.

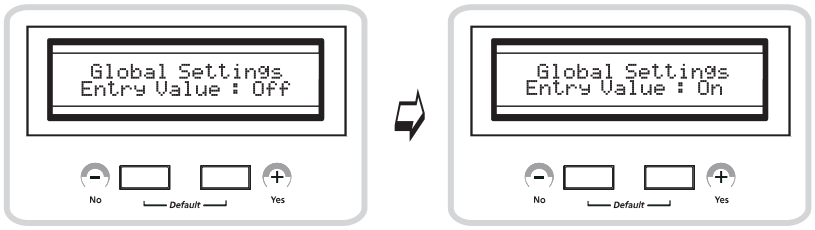


Figure 5-6

Crossing the Entry Value

Suppose that Knob A happens to be all the way to the left when you select a new setup and the entry value assigned to Knob A is 95. You don't want it to suddenly jump to the current value. Since the knob is all the way down (sending a MIDI Controller message with a value of 0), it would jump to a value close to 0. If Knob A controls effect wet/dry mix level, the moment you move the knob, the effect would suddenly disappear.

This is very common problem with generic MIDI controllers. To avoid this problem, the SP3 is designed so that once you set an entry value for a physical controller, it won't become active until you pass the point of the entry value. So, in the previous example, as you move Knob A up, nothing happens until you reach 95. At that point, the sliders begins to send MIDI controller message.

Avoid Extra Controller Motion

Now suppose you want to have a piano-and-strings setup with chorus effect, but you don't want to hear the effect at all when you select the setup. Instead, you want to bring it in later. To do this, you could set the entry value for Knob A in Zone 1 to 0.

Imagine that the knob is all the way to the left when you first call up the setup. Remember that the knob must go past the entry value before it becomes active. In this example the entry value is 0 and the current MIDI controller value sent by the knob is 0 (minimum). When you move the knob up, the MIDI controller value goes to 1, and therefore hasn't crossed the entry value, and therefore nothing happens as you continue to turn the knob. You'd have to turn the knob to the right slightly, then back to the left so that it goes to MIDI Controller value 0, then the next time you turn it to the right, the knob will be active. To avoid having to turn the knob right, left, and right again, set the entry value to a very low number other than 0, such as 5. The value is so low that you won't hear the effect, but as you turn the knob to the right the first time, it will go past value 5 and become active.

Tuning

The SP3 is tuned to 440 Hz. You can tune the SP3 up or down to -50 (Ab) ~ 50 (A#) in one-cent increments. To recall the default setting, press [+/Yes] and [-/No] button simultaneously. This can be useful if you are playing along with a recording, or playing with other acoustic instruments that can't be easily retuned. The default value is 0 cent.

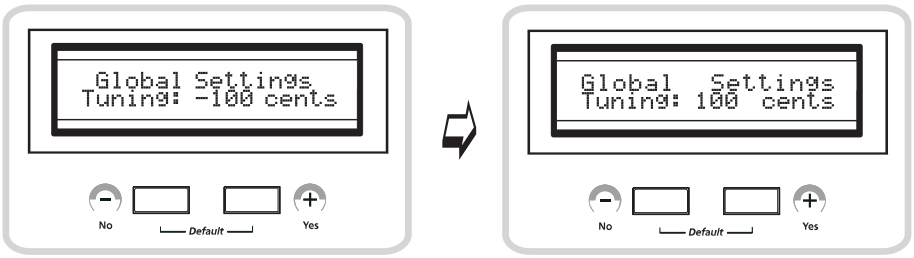


Figure 5-7

Dump

Use when you want to store all the data in memory externally as System Exclusive message. The data will be sent over a MIDI cable. Press [Dump] button and the display will show "Dump all object?" message. [+/Yes] button will start transmitting and the display will show "Q.A 001 dumped" message.

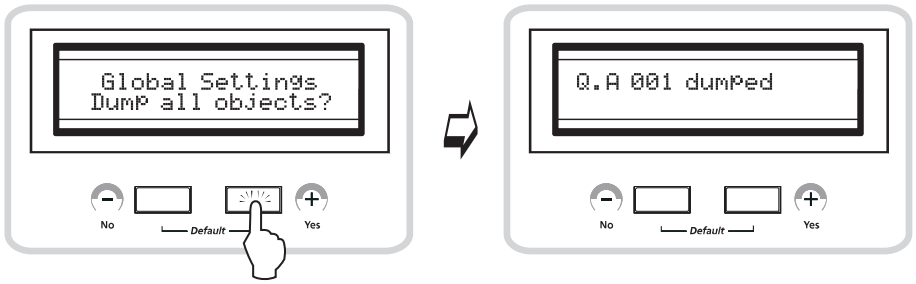
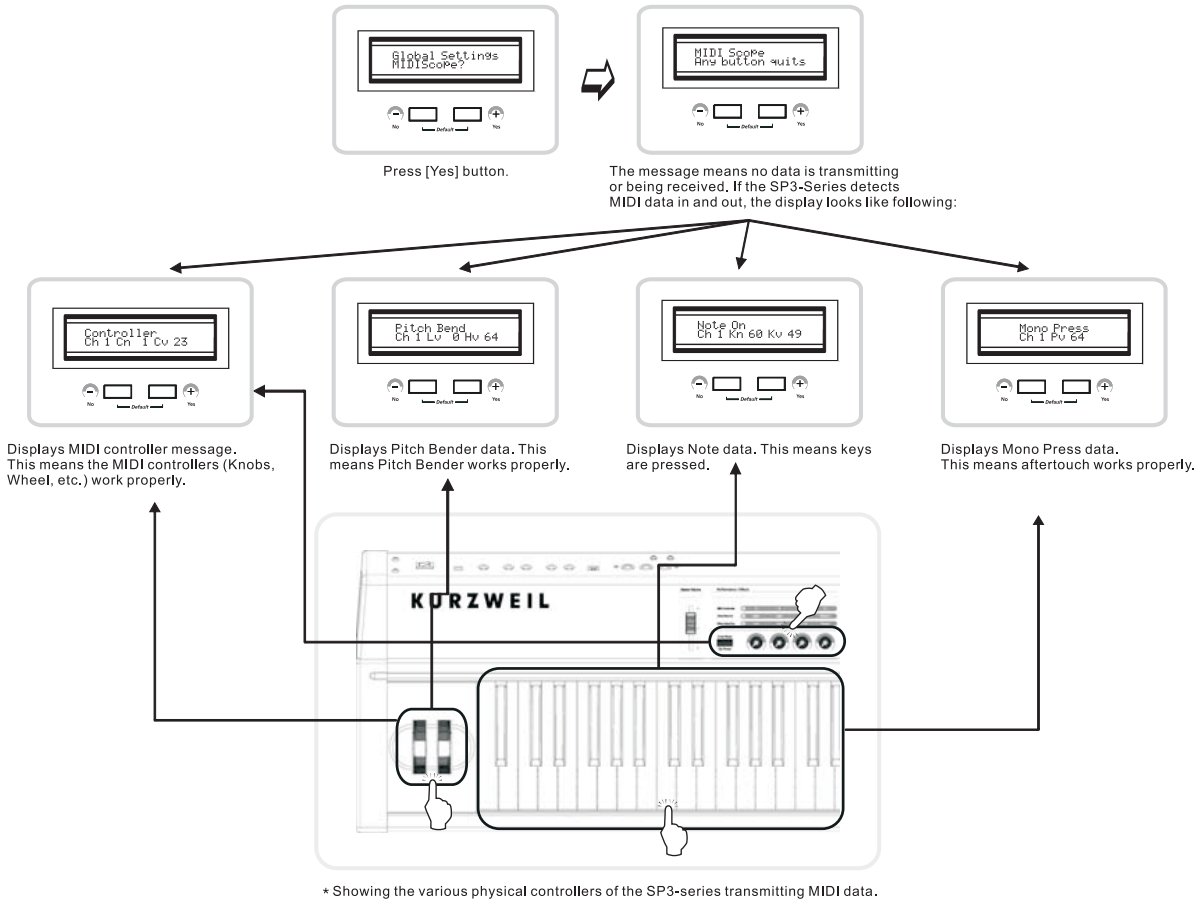


Figure 5-8

MIDI Scope

This small utility is used for monitoring MIDI data, either coming into the SP3 or being produced by the instrument itself. Whenever you play a key or controller or send and receive any MIDI data, the data show up on the display. You can monitor if the SP3 properly receives incoming MIDI data. When you select MIDI scope and then press the [+/Yes] button will show "MIDI Scope" and "Any button quits" on the display before SP3 get any MIDI message. You can monitor MIDI data flow on the display.



* Showing the various physical controllers of the SP3-series transmitting MIDI data.

Figure 5-9

Reset

This will initialize the SP3. When you select [Reset], the display will show “Reset SP3?”. Press [+/Yes] once again, and the SP3 will appear “Are you sure ?”. Press [+/Yes] button one more time and the you will see a prompt asking “Are you really ?” to be sure for the last time. This will prevents you from executing a hard reset inadvertently, which erases all user-stored data. One more push of the [+/Yes] button will initialize the SP3.

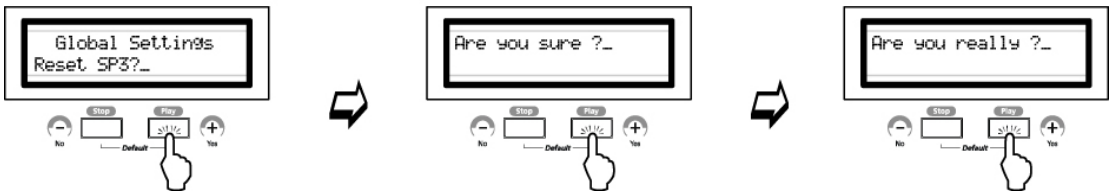


Figure 5-10 Resetting the SP3

CHAPTER 6

This chapter will help you understand how to upgrade the internal software of the SP3 as well as a few miscellaneous menus. Use the following list to find specific information more quickly.

Software Upgrades

You can get software upgrades for your SP3 from Kurzweil's FTP website or from your Kurzweil dealer. Because the software upgrades are encoded as one or more standard MIDI files containing MIDI Sysex, you need a computer (Mac or Windows PC) with a MIDI interface and sequencer to transfer the software to your SP3. Kurzweil's FTP website address is:

ftp://ftp:kurzweilmusicsystems.com/pub

Also, our download page will answer any questions you might have about how to download files and get them into your SP3.

http://www.kurzweilmusicsystems.com/downloads.html

You can also use this page to download using a web browser.

The software upgrades filenames are in the format SP3TP40Lvvv.MID, where vvv is the version number.

Setting Up For a Software Upgrade

Connect a MIDI cable from the MIDI Out of the MIDI interface to the MIDI In of the SP3.

☑**NOTE** **You need to set up your computer to transmit MIDI data properly. Follow the procedure described below. It is very easy.**

1. Open Control Panel
2. Open the Sounds and Audio Devices Properties
3. Click the Audio tab
4. Set the Default device for MIDI music playback to the MIDI interface connected to the SP3.
5. Close the dialog box and click OK to complete the setting.

☑**NOTE** **The following instructions are for PC & Mac**

Installing Software Upgrades

1. After powering on, when the display shows "Waiting for scanner", press the [Transpose] button.

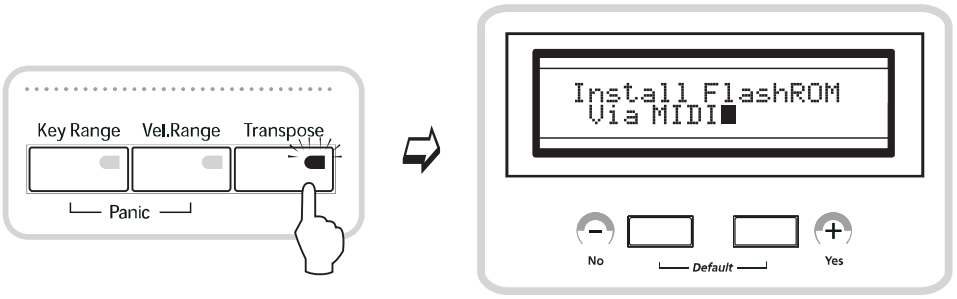


Figure 6-1

2. The display will show "Install FlashROM" (Update OS) message.
3. If you want to move to another menu, use [+/Yes] or [-/No] button.
4. From now on, pressing [Rhythm/Metro] button means "Yes" and pressing [Program] button means "No".

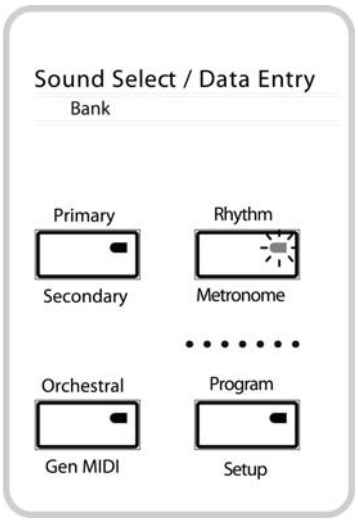


Figure 6-2

5. Thus, if you decide to install software upgrades, press [Rhythm/Metro] button while the display is showing "Install FlashROM".
6. Then, the display will show "Waiting for MIDI" which means the SP3 is now waiting for the data transmission.
7. Start playing the MIDI file containing new software from the sequencer, or a MIDI file player such as Windows Media Player.
8. If the SP3 is receiving the MIDI data correctly, the display will show "Segment 1 (1%)" like Figure 6-3.

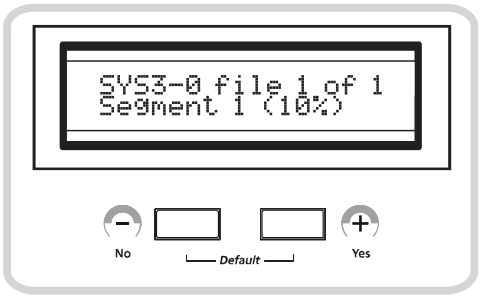


Figure 6-3

9. If you start the MIDI file player and still the display shows “Waiting for MIDI”, it means that the data is not being sent to the SP3 properly.
10. In this case, make sure the MIDI connection and the MIDI file player setting from the computer is correct one more time.
11. If everything works well, the loading may take up to 18 minutes. After the software loading is completed, the display will show “done” which means that the software upgrade has been successfully done.

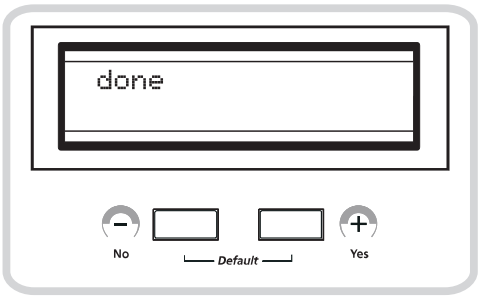
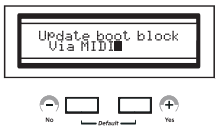


Figure 6-4 The “OK” message

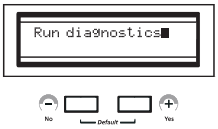
12. Turn power off for 5 seconds then on.
13. Now, the software upgrade is completed successfully and your SP3 will start with the new operating system and / or features. Please refer to the Read Me File included in the software upgrades for a list of new features and bug fixes.

Miscellaneous Menus

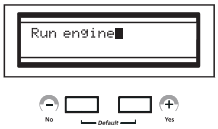
◄ As described above, when the display shows "Install FlashROM", you can select more menu options including diagnostics with the [-/No] and [+/Yes] buttons.



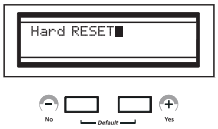
1. This memu is for updating the boot block.The boot block is a tiny piece of software with information that is needed to start the SP3-series's system software . The procedure is the same as software upgrades.Usually, customers don't need to update the boot block themselves.



2. This menu is for diagnostics. You can choose from a series of diagnostic tests for proper operation of important components inside your SP3's hardware inculding Flash ROM, RAM, sound generator, Delay RAM, etc.



3. This menu executes the engine software which is same as restarting your SP3.



4. This menu executes system initialization. Usually, customers don't need to use this menu.

CHAPTER 7

Why Use Effects?

You can enhance the SP3's sound even more with the internal effects. With reverbs, you can add depth and reality to the SP3's sound. Also, you can enjoy a variety of modulation effects which can dramatically change the timbre of internal sounds. By adding effects such as reverb or delay, you can make your SP3 sound like a grand piano in a concert hall. Exploring the sonic potential of your SP3 will be fun and most of all, your audience will be impressed with the full and rich sound of your instrument. For quick reference, use the following list.

Description

The SP3's digital multi-effects consist two independent effect blocks called Effect and Reverb. You can determine which effect block each program or setup goes through. We call it Signal Routing.

The SP3 has 64 preset effects. All of them are available for the Effect block. For the Reverb block, 56 Reverb and 8 Combi presets are available (the reverbs are also available for the Effect block). Thus, most programs are routed through the Effect block by default.

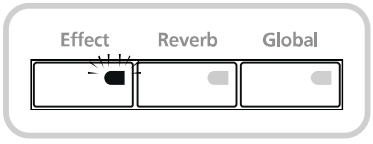


Figure 7-1 Effect, Reverb block button

Controlling Effects

Basically, most programs and setups have at least one assigned effect. The LEDs in the Effect and the Reverb block buttons come on and go off according to the settings for each program or setup. Activating one of those blocks will turn on the LED in the corresponding button. Of course, you can activate both blocks if needed. In this case, both LEDs are turned on. You can assign knobs to control the wet/dry mix of each block in the Performance / Edit region.

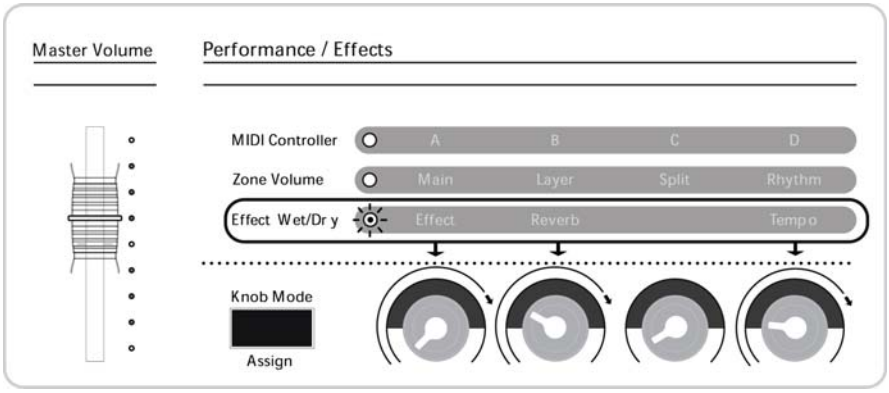


Figure 7-2 Effect Wet/Dry

MIDI Controller 93 and MIDI Controller 91 are assigned to control the wet/dry mix of the Effect and Reverb blocks respectively. The value of 0 means completely dry signal with no effect processing at all. The value of 127 is the opposite - processed signal only.

- MIDI91 / REVERB
- MIDI93 / EFFECT

Routing Effects

Routing Effects is determining which block the audio signal will pass through. Literally, the term "Routing" means selecting paths in the SP3's effects engine along which to send the audio signal generated by the sound engine. You can also make the audio signal temporarily bypass the effects engine without reprogramming the SP3. Figure 7-3

When you select a program or setup, the LEDs in the Effect and Global buttons will indicate the current effects routing.

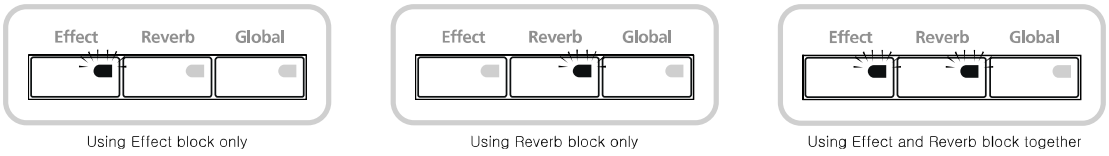


Figure 7-3 Routing Effect

Selecting Effects

1. Press [Effect] button
2. Make sure the LED in the [Edit] button is blinking, which means that you are in the Effect Editing mode.
3. Select the desired effect type from the category buttons (upper row). The category includes chorus, flanger, delay, compressor, distortion, filter, laserverb, misc. (rotary speaker, enhancer, simple motion, etc.) After you make your category selection, choose the desire preset with the Sound Select buttons (lower low).
4. Unless you store changes, the effect assignment reverts to its preset state as soon as you select another program or setup. If you change the effect routing for program or setup and want to preserve the changed setting, press the [Store] button
5. The display will ask if you are sure. Press the [+ / Yes] button to confirm.

Wet / Dry Mix

Most programs and setups are routed to the Effect block by default. The audio signal processed by the Effect block can be routed to the Reverb block before being sent to the main output.

The [Effect] and [Reverb] buttons in the Performance / Edit region of the front panel enable the "sends" to each block. When the button's LEDs are lit, you may control the send amount with knobs. The numeric value for each block means the following:

• The Effect knob controls how much of Effect block's effect gets applied to the dry signal coming from the sound engine.

• The Reverb knob controls how much of the processed signal coming from the Effect block goes to Reverb block and gets the Reverb block's effect applied to it.

Bypassing Effects

Sometimes, you need to mute all the effects. For example, when you're in the studio, your recording engineers may want to use their own external effects. You can easily silence all your effects and / or reverb temporarily without making any lasting changes to the programs or setups you're playing. Just deactivate each block with the corresponding button. The LEDs are turned off when they are deactivated. In this case, the effects engine is still active although the effects are muted. The audio signal simply bypasses the effects engine.

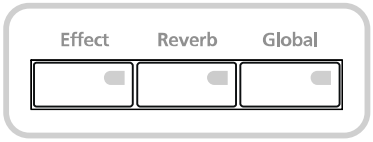


Figure 7-4 Effects Bypass

CHAPTER 8

Tutorials

This chapter provides a few programming examples for ensemble or solo performance situations, which users can easily follow step-by-step by themselves. Create some setups with two or more programs using layering, splitting and the velocity switching feature. With the internal rhythm patterns running, you can even perform an entire show alone which would otherwise need multiple players. While enjoying the tutorials, you will learn the advanced features of the SP3 quickly.

Programming with Layers

The most often used layering techniques are mixing two sounds (Piano with Strings or Pads) one with fast attack and the other with a slow attack for richer and punchier sounds, or layering a few similar sounding programs (Brasses, Strings, Analog Synths, etc.) to fatten the sound.

• Layering in Program mode

Program mode is automatically selected when power is turned on. In program mode, you can add another sound to the currently selected sound almost instantly without entering Setup mode. It is very useful when you are on stage because with a few button presses, you can easily create a layer without any actual editing through the display. We'll show you how to do this. Follow the tutorial below a couple of times and you will get the idea quickly.

Creating New Sounds with Layering

We are going to start with an existing electronic piano sound and layer it with vibes to create a new electric piano sound suitable for ballad tunes.

1. In Program mode, select 020 Lounge E Piano.

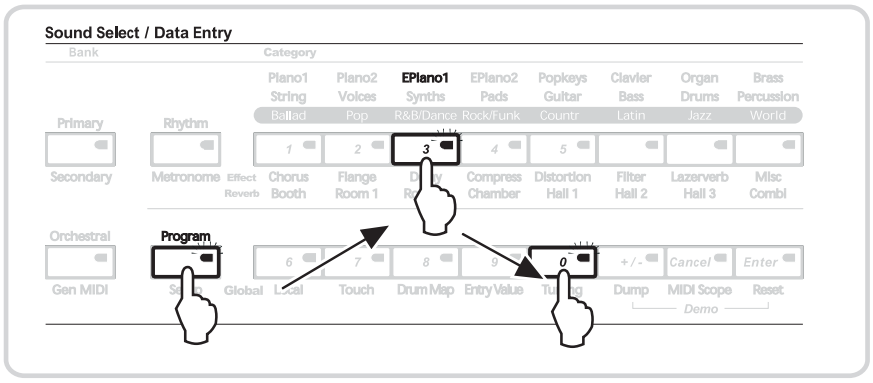


Figure 8-1

2. Press the [Layer] button located on the left side of the display. This will show"088 Rez Aah Pad" on the display.

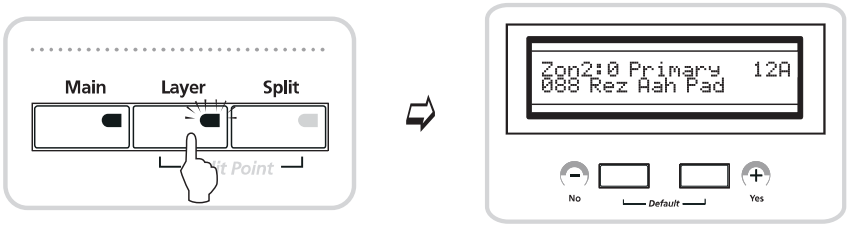


Figure 8-2

3. Press the [Percussion] button in the category region and press the [0] button. Now "124 Vibes" will appear on the display.

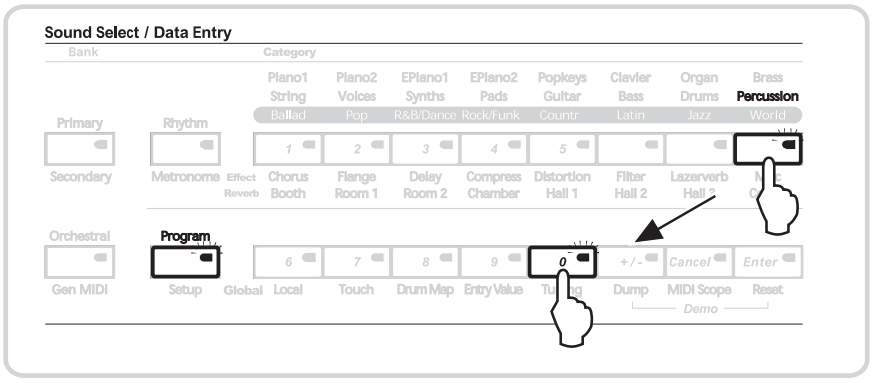


Figure 8-3

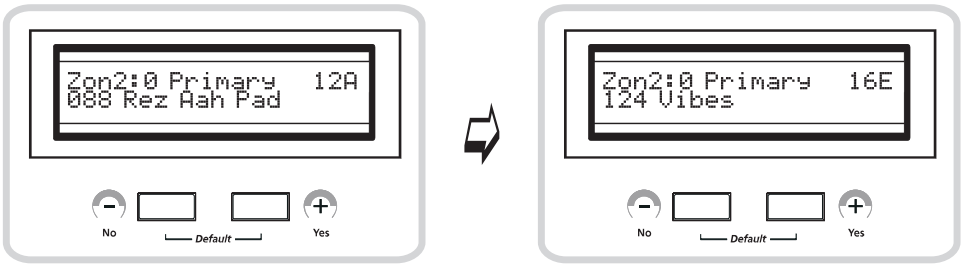


Figure 8-4

4. Select Zone Volume mode with the [Knob Mode] button. Use knob 1-2 to adjust the volume level of each sound. Set Main volume level to 110 and Layer volume level to 100.

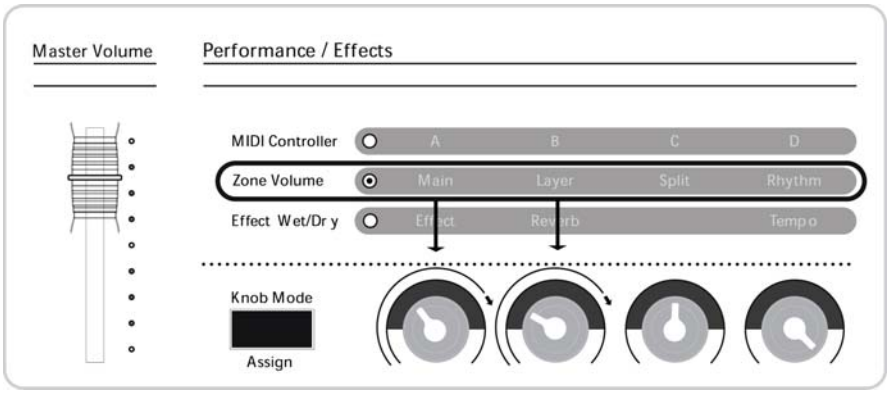


Figure 8-5

5. Press the [Store] button in the Edit region then press the [+/Yes] button below the display. The SP3 will ask you once more to be sure. One more press of [+/Yes] will complete the saving procedure and the display will show "Q.A 001 Saved". You can select one of the stored programs with the [Q.Access] button at any time.

Figure 8-6

Splitting in Program mode

When you need two sounds on different parts of the keyboard, splitting comes in handy. For example, when you want to play a flute melody part with your right hand while playing a piano accompaniment part with your left hand. Layering is playing two sounds on the same part of the keyboard and splitting is playing two sounds on different parts of the keyboard.

Creating New Sounds with Layering and Splitting

We are going to create a sound which combines a guitar sound in the upper register and a bass sound in the lower register of the keyboard.

1. In Program mode, select "100 Chorus Elec Gtr".

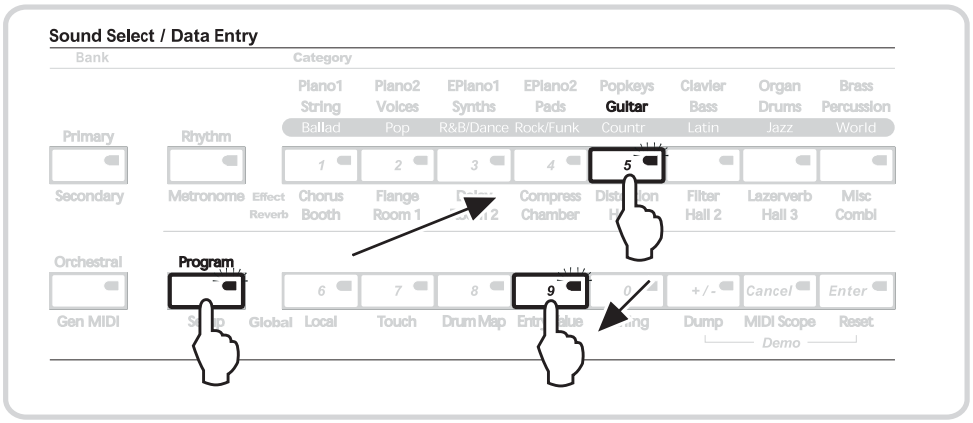


Figure 8-7

2. Press the [Layer] button located on the left side of the display. The "088 Rez Aah Pad" will appear on the display.

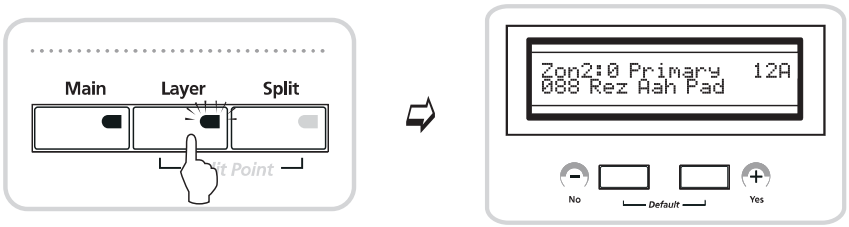


Figure 8-8

3. Press the [Voices] button in the category region and press the [+/-] button below. Now "077 Scatman" shows on the display.

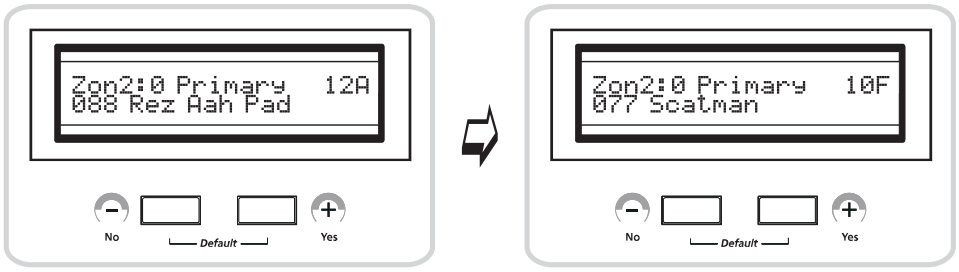


Figure 8-9

4. Press the [Split] button next to the [Layer] button. The display will show "104 Round and Wound". Now you have a bass sound assigned to the lower register of the keyboard.

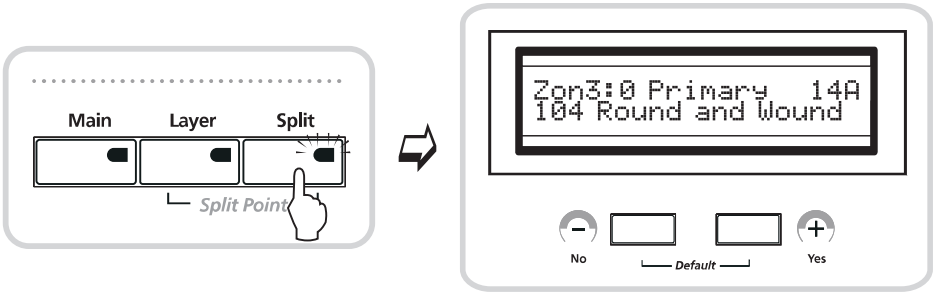


Figure 8-10

5. Select Zone Volume mode with the [Knob Mode] button. Set Main volume level to 110, Layer volume level to 90 and Split volume level to 120.

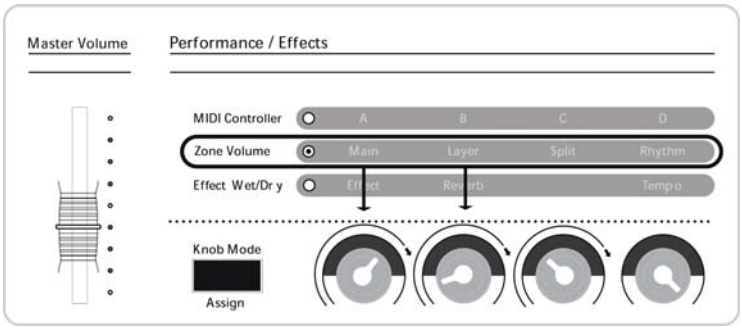


Figure 8-11

6. Press the [Store] button in the Edit region and press the [+/Yes] below the display. The SP3 will ask you once more to be sure. One more press of [+/Yes] button will complete the saving procedure and the display will show "Q.A 002 Saved!". You can select one of the stored programs with the [Q.Access] button at any time.

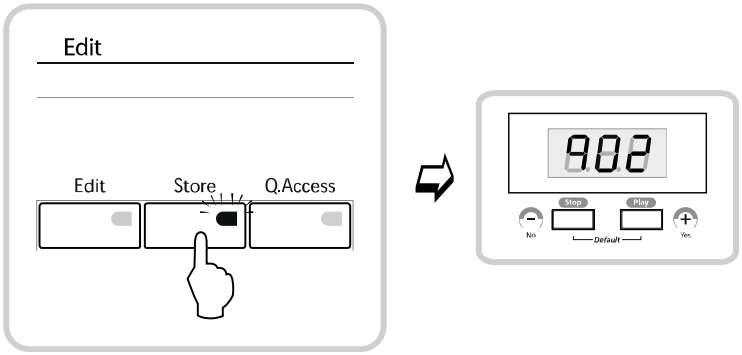


Figure 8-12

Using Layered Sounds with Rhythm Patterns

1. Press [Q.Access] in the Edit region and press [2] to load the sound that you've just stored as "Q.A 002" in the previous example.

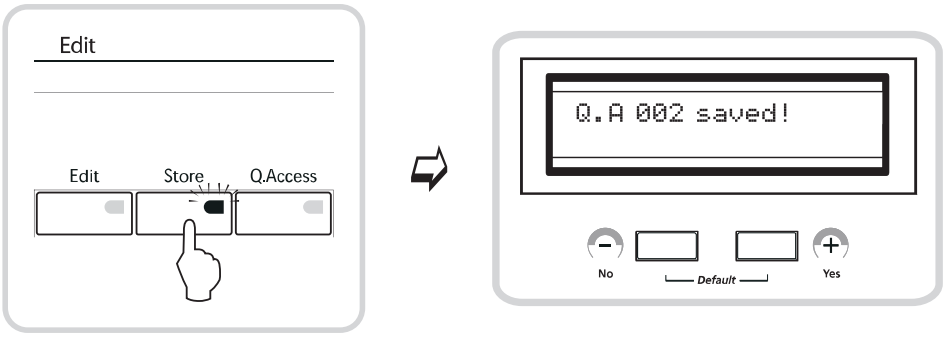


Figure 8-13

2. Press the [Rhythm] button below the display. Press the [Jazz] button in the Category region and then press the [6] button. The display will indicate "R49 Jazz1".

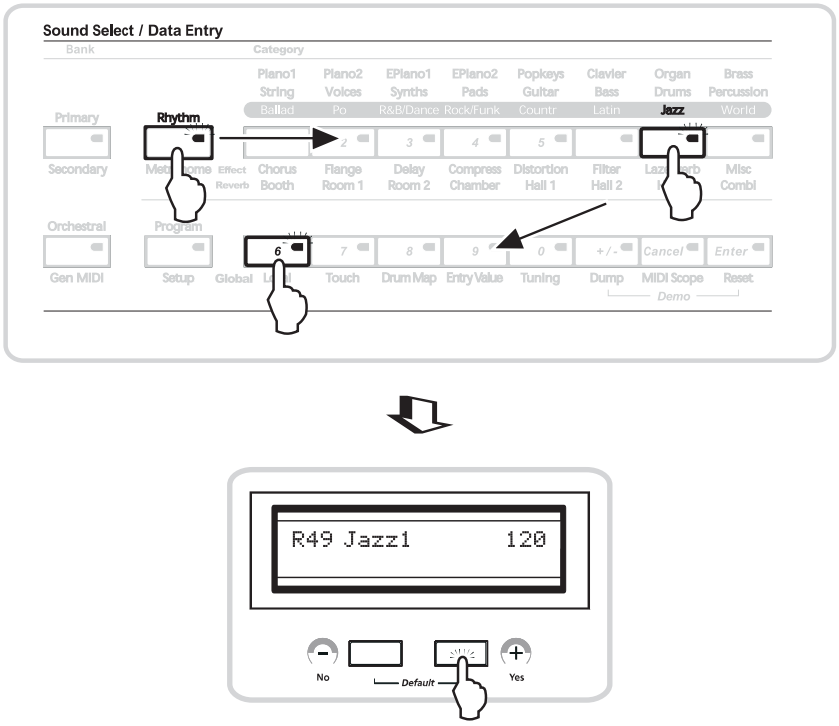


Figure 8-14

3. Select Effect wet/Dry mode with the [Knob Mode] button. Adjust the tempo of the rhythm pattern with knob 4.

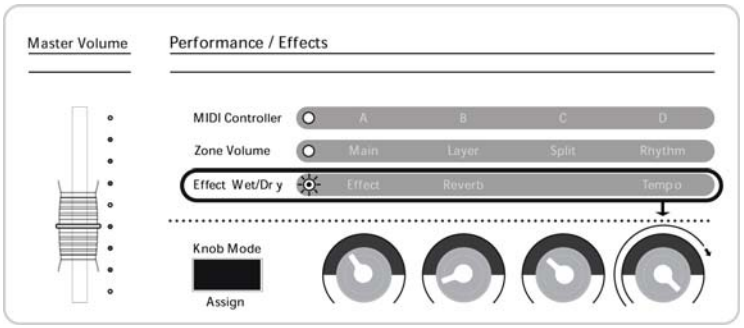


Figure 8-15

4. Select Zone Volume mode with the [Knob Mode] button. Adjust the volume level of the rhythm pattern with knob 4. For this example, set it to 100.

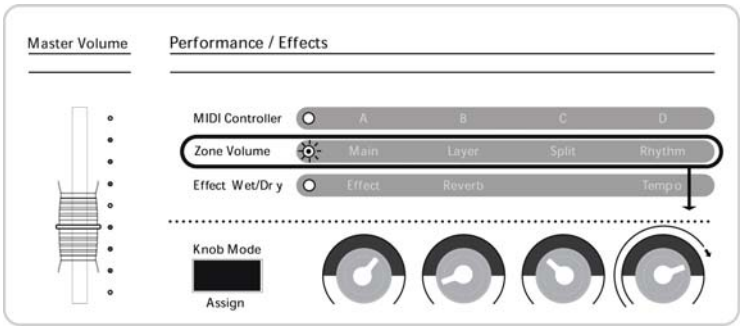


Figure 8-16

5. One more press of the [Rhythm] button and you will return to Program mode.

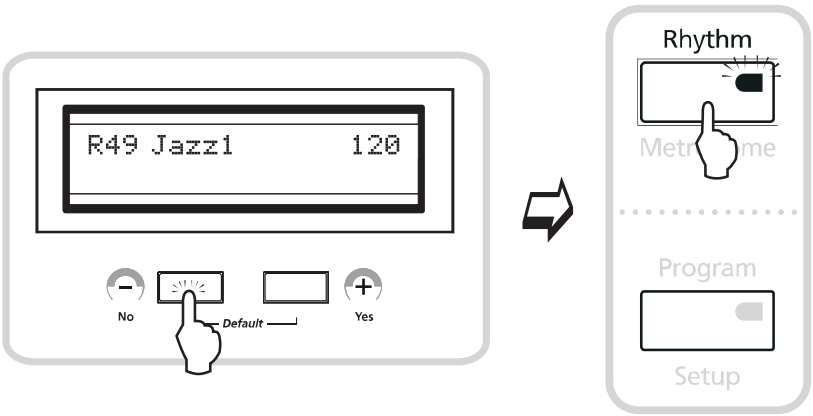


Figure 8-17

☑**NOTE** **When editing, always try to listen to the sounds closely. Also, comparing the edited sounds to similar sounds in commercial songs is a good way to be familiar with programming more quickly.**

CHAPTER 9

Troubleshooting / FAQ (Frequently Asked Questions)

Maintenance

Aside from normal care in handling and use, your Stage Piano requires no regular maintenance. Do not use abrasives or solvents as they may damage the unit's exterior such as paint, markings, and display lens, etc. Clean only with a soft cloth dampened with water.

Common Problems

Below is a list of the most commonly encountered problems and diagnoses for each.

Power Problems

☑**NOTE** **The normal power-up sequence should follows:**.

1. The display background lights up immediately.
2. About one second later the panel and button LEDs light once in a wave pattern for about 2 seconds.
3. During several more seconds, a series of text messages appear on the display.
4. The SP3 enters Program Mode and is ready to play.

If nothing at all happens when you turn on the power, check these items:

1. Power module not plugged securely in wall outlet.
2. Cord from power module not fully plugged into the SP3.
3. Input voltage rating of power module does not match your power system.
4. Incorrect or defective power module.
5. Dead wall outlet, power strip, or extension cord.

If all of the above are checked okay, yet you still don't see normal operation, check these items:

1. Incorrect of defective power module. For information about the power module specifications, see page A-1. Voltage or current rating less than specified will cause unusual or intermittent operation.
2. Power system voltage abnormally low. Try a different, unused outlet.
3. Intermittent operation can be caused by a replacement power module with the wrong size plug. The correct plug fits snugly into the jack, and doesn't wobble.

Audio Problems

Before diagnosing audio problems, make the SP3 play the demo songs. If there is no sound from your SP3, check the following:

1. Set the master volume slider all the way down. Gradually move the slider upwards.
2. Check the position of the MIDI controller foot pedal if connected.
3. Volume control on audio system or mixer turned down.
4. Signal source selection on audio system or mixer is incorrect.
5. Audio cables not securely plugged in at both ends.
6. Incorrect type of audio cable.

If you can hear sound but it is too low, look into these possibilities.

1. Audio cables not securely plugged in at both ends.
2. Low voltage output from power module. Check Power Problems above.
3. A received MIDI Volume or Expression message has specified a low volume.
4. Check the position of the MIDI controller foot pedal if connected.
5. Input to audio system is set for low impedance instead of high impedance.
6. Input trim to audio system or mixer is set too low.

MIDI Problems

If you connected your SP3 to a computer running a sequencer application, and are experiencing problems, check these:

1. MIDI cables not securely plugged in at both ends.
2. Wrong MIDI connections. To send MIDI, plug into the SP3's MIDI Out connector and the computer's MIDI In connector. See page 2-6.
3. Defective MIDI cable.
4. Check if the Global parameter "Local" is on. Setting this parameter to ON makes the SP3 send MIDI information to itself. The Local parameter must be set to OFF when you work with an external sequencer. For standalone use, set Local to ON; otherwise you won't hear any sounds from your SP3.

If you are trying to control the SP3 from an external MIDI device such as a drum machine, and the SP3 does not respond to incoming MIDI information properly, check following items:

1. Set the external device to transmit MIDI information on Channel 1.
2. MIDI cables not securely plugged in at both ends.
3. Wrong MIDI connections. To receive MIDI, plug into the SP3's MIDI In connector and the external device's MIDI Out connector.

Prerecorded General MIDI (or GS, or XG) sequences may not play correctly through the SP3 when played from a sequencer application because the SP3 is "NOT" a GM (General MIDI) compatible sound module. The differences between the SP3 and a typical General MIDI module are:

1. Most of the sound program numbers are different.
2. Effects setting messages are different.
3. The SP3's drum channel is not fixed to MIDI Channel 10.

Switch Pedal Problems

If you are having problems with the switch pedal, check these:

1. Be sure the pedal is plugged into the correct jack which has printed label “SW pedal” above it. Be cautious. Plugging into the wrong jack might cause damage to your instrument or strange operation of the wheels and knobs.
2. If Sostenuto is stuck, be sure the pedal is plugged in before switching on the power. Turn power off then on if necessary.
3. If the pedal is acting backward (active when up instead of down), turn power off then on. Be sure the pedal is plugged in before turning power on and don’t use the pedal until after the unit has completed its power up sequence.

Control Pedal Problems

If you are having problems making a control pedal work properly, check these:

1. Be sure the pedal is plugged into the correct jack which has printed label “CC pedal” above it.
2. Do NOT a use a Volume Pedal with a mono plug! This will cause system malfunctioning and might damage to your instrument.
3. If the pedal works backward, operates very abruptly, or not at all, it’s most likely a wiring problem. See below for more information.
4. When using adapter cables to adapt a pedal with two mono cables, make sure that the Y adapter is a stereo splitter type.

Kurzweil Service Centers

To locate the nearest Kurzweil Service Center for further assistance, please visit the following link.

http://www.kurzweilmusicsystems.com/

Appendix A

Specifications

Specifications are subject to change without notice

Physical Specification

	SP3	SP3X
Dimension(mm)	1247(L) X 337.5(W) X 126(H)	1412(L) X 337.5(W) X 126(H)
Weight	13 kg	22 kg

Electrical Specification

Voltage and Frequency Ranges

	120 VAC Adapter Model PM0023A	**230 VAC Adapter Model PM0024A**
Safe voltage range	100–125 Volts RMS	200–230 Volts RMS
Safe frequency range	58–65 Hz	48–65 Hz
Output Rating	9.0VAC ±10% 2.0A	9.0VAC ±10% 2.0A

Power Consumption

Voltage Level	**Power Consumption**
120 VAC	0.35 Amps
230 VAC	0.13 Amps

Environmental Specifications

	Minimum		**Maximum**	
Temperature Range for operation	40 F	5 C	104 F	40 C
Temperature Range for storage	13 F-	25 C	185 F	85 C
Humidity Range for operation	5%		95% (non-condensing)	
Humidity Range for storage	5%		95% (non-condensing)	

Audio Specifications

Line-Level Left and Right Analog Audio Outputs

Connectors	Balanced outputs using two 1/4-inch stereo (tip-ring-sleeve) phone plugs and shielded twisted pair cable or unbalanced using two 1/4-inch mono (tip-ring) phone plugs and coaxial cable.
Impedance	400 ohm, Balanced, nominal
	200 ohm, Unbalanced, nominal
Maximum output level	20.8 dBu (8.5 Volts RMS) Balanced, high-impedance load
	14.7 dBu (4.2 Volts RMS) Unbalanced, high-impedance load
Frequency Response	20Hz–20kHz +/– 0.6 dB
Idle channel noise	Less than -115 dBA, balanced, relative to full-scale signal
Dynamic Range	Greater than 112 dBA, balanced, using -60 dBFS signal
Stereo Channel Separation	96 dB

Headphone Output

Output impedance	47 Ohm, nominal
Maximum output level	-4 dBu (0.5 Volts RMS) with 32 Ohm load

Parameter Reference

Parameter Group	Subgroup (if any)	Parameter	Range of Values	Default
Key Range		Lo	C-1–G 9	G#3(Ab3)
		Hi	C-1–G 9	G 9
		Note Map	Linear	Linear
Transposition		Transpose	-24 to 24	0
Velocity		Vel Min	1–127	1
		Vel Max	1–127	127
Continuous controllers	Wheel 1 Up/Down		2 Semitone	Wheel 1 Up/Down Ctrl Num : Pitch Up
These controllers all have the same three Parameters, called the Basic Parameter Group. The Ctrl Num parameter is different for each but the other parameters are the same.	Wheel 2	Exit Value	None, 0–127 (default None)	Wheel 2 Ctrl Num: Mod Wheel
	Knob A			Ctrl Num : 6
	Knob B			Ctrl Num : 13
	Knob C			Ctrl Num : 22
	Knob D			Ctrl Num : 23
	Pedal 1			Ctrl Num : 11

MIDI Implementation Chart

Model: Kurzweil SP3
Manufacturer: ***Date:2007.5.25***
Kurzweil ***Version 1.0***
Digital Synthesizers

Function		*Transmitted*	*Recognized*	*Remarks*
Basic Channel	Default	1	1	
	Changed	X	1 - 16	
Mode	Default	Multi*	Multi*	
	Messages	Any	Modes 1	
	Altered	X		
Note Number	0–127	0–127	key range	
	True Voice	1–128	1–128	C 0–C 8
Velocity	Note ON	O	O	
	Note OFF	O	O	
After Touch	Keys	X	O	
	Channels	O	O	
Pitch Bender		O	O	
Control Change**	0 , 32	O	O	bank select
	1	O	O	mod wheel
	2	O	O	breath controller
	4	O	O	foot controller
	6, 38	O	O	data entry
	7	O	O	volume
	10	O	O	pan
	11	O	O	expression
	64	O	O	sustain pedal
	66	O	O	sostenuto pedal
	67	O	O	soft pedal
	91	O	O	Reverb Wet/Dry
	93	O	O	Effect Wet/Dry
	96	O	O	data increment
	97	O	O	data decrement
	98, 99	O	O	non-registered param num
	100, 101	O	O	registered param num
	120	O	O	all sound off
	121	O	O	reset all controllers
Program Change		1–128	1–128	
	True #	1–128	1–128	
System Exclusive		O	O	
Aux Messages	Local Control	X	O	
	All Notes Off	O	O	
	Reset	X	X	

Mode 1: Omni On, Poly Mode 2: Omni On, Mono O = yes
Mode 3: Omni Off, Poly Mode 4: Omni Off, Mono X = no

Appendix B

SP3 Series Programs and Controller Assignments

The following list describes the physical controller assignments for each program and setup. Because they are all realtime controllers, you can easily put expressiveness and variety in your performance with them. They are also very useful for sequencing applications.

☑NOTE
When knobs are in MIDI controller mode, the MIDI controller assignments for Knob A-D and the mod wheel are fixed to the factory setting. In program or setup mode, the presets have their own MIDI controller assignments

Programs and Controllers

Primary (Bank 0)

000 Stereo Grand

Knob B	Vibrato Rate
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

001 Classic Grand

Knob B	Vibrato Rate
MW	Vibrato Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

002 Dynamic Grand

Knob B	Vibrato Rate
MW	Vibrato Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

003 Warm Grand

Knob B	Vibrato Rate
MW	Vibrato Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

004 Solo Grand Piano

Knob B	Vibrato Rate
MW	Vibrato Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

005 Concert Grand

Knob B	Vibrato Rate
MW	Vibrato Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

SP3 Program and Effect List

006 Mono Grand Piano

Knob B	Vibrato Rate
MW	Vibrato Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

007 Piano for layers

Knob B	Vibrato Rate
MW	Vibrato Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

008 Hard Rock Piano

Knob B	Vibrato Rate
MW	Vibrato Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

009 Rock Grand

Knob B	Vibrato Rate
MW	Vibrato Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

010 Grand Piano 440

Knob B	Vibrato Rate
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

011 Mono Stage Piano

Knob B	Vibrato Rate
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

012 Dyn Stage Piano

Knob B	Vibrato Rate
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

013 Ragtime Piano

Knob B	Vibrato Rate
MW	Vibrato Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

014 Tack Piano

Knob A	Tack Level
Knob B	Vibrato Rate
MW	Vibrato Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

015 Piano & Strings

Knob A	LoPass Freq
Knob B	Strings Level
MW	Vibrato Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

016 Classic E Piano

Knob A	Timbre
Knob B	Tremolo Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

017 Serious Classic

Knob B	Tremolo Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

018 That 70's E Pno

Knob A	Timbre
Knob B	Tremolo Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

019 Hard E Pno

Knob A	Timbre
Knob B	Tremolo Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

020 Lounge E Piano

Knob A	Timbre
Knob B	Tremolo Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

021 Dyno My E Pno

Knob A	Hi Freq Cut
Knob B	Tremolo Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

022 Soft E Piano

Knob A	LoPass Freq Cut
Knob B	Tremolo Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

023 Hybrid E Piano

Knob A	Timbre
Knob B	Tremolo Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

024 My Best Wurly

Knob A	Timbre
Knob B	Tremolo Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

025 Big Red Wurly

Knob A	Timbre
Knob B	Tremolo Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

026 Brkfst In Korea

Knob A	Timbre
Knob B	Tremolo Rate
MW	Tremolo Depth

027 Soft Wurly

Knob A	Timbre
Knob B	Tremolo Rate
MW	Tremolo Depth

028 Wurly Road

Knob A	Timbre
Knob B	Tremolo Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

029 Pearly Keys

Knob A	Timbre
Knob B	Tremolo Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

030 Digital E Piano

Knob A	Timbre
Knob B	Tremolo Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Soft Pedal

031 Ballad E Piano

Knob A	Timbre
Knob B	Tremelo Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

032 C3PO

Knob A	Timbre
Knob B	Tremolo Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

033 Digital E Grand

Knob A	Timbre
Knob B	Tremolo Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

034 Rock E Grand

Knob A	Timbre
Knob B	Tremolo Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

035 FantAsmAtron

Knob A	Timbre
Knob B	Tremolo Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

036 AtmAz

Knob A	Timbre
Knob B	Attack Ctrl
MW	Vibrato Rate
Mpress	Vibrato Depth
CCPed	Expression
FtSw1	Sustain
CCPed	Expression

037 Celestial Comet

Knob A	Treble Cut
Knob B	Trem/Vib Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

038 Comp Time

Knob A	LoPass Freq
Knob B	Resonance
MW	Vibrato Rate, Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

SP3 Program and Effect List

039 Ruth Buzzy

Knob A	LoPass Freq Cut
Knob B	Tremolo+Rate
MW	Vibrato
Mpress	Vibrato
CCPed	Expression
FtSw1	Sustain
CCPed	Expression

040 Clav Classic

Knob A	Bass Level
Knob B	HiPass LFO Rate
MW	HiPass LFO Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

041 Touch Clav

Knob A	Timbre
Knob B	Impact
MW	BandPass LFO Rate
Mpress	Timbre
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

042 Dual Wah Clav

Knob A	Bandpass Width
Knob B	LFO2 Rate
MW	Bandpass Freq(SW4)
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

043 Harpsichord

Knob A	Timbre
Knob B	Sample Start
MW	Decay Control
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

044 Modrn Harpsi

Knob A	Timbre
Knob B	Decay Control
MW	LoPass Freq, Layer Detune
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

045 CrystalClavchd

Knob A	Treble Cut
Knob B	Sample Start
MW	Layer 1 Vibrato
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

046 Accordion

Knob A	Timbre
Knob B	Tremelo Rate
MW	Swell
Mpress	Swell
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

047 Celesta

Knob A	Timbre
Knob B	Tremelo Rate
MW	LoPass Freq
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

048 The Reverend's

Knob A	LoPass Freq
Knob B	Layer XFade
MW	FX/VAST Rotary Ramp Speed Ctl
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

049 Ballad Of 3 Bars

Knob A	Perc XFade
Knob B	Bass Cut
MW	FX/VAST Rotary Ramp Speed Ctl
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

050 Prog Rocker's B

Knob A	Perc XFade
MW	FX/VAST Rotary Ramp Speed Ctl
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

051 All Out Full On

MW	FX/VAST Rotary Ramp Speed Ctl
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

052 Grungy Overdrive

MW	FX/VAST Rotary Ramp Speed Ctl
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

053 Uptown Gospel

Knob A	Para EQ Freq
Knob B	Para EQ Cut
MW	FX/VAST Rotary Ramp Speed Ctl
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

054 Retro Roto

Knob A	Xtra Hi Freq
MW	FX/VAST Rotary Ramp Speed Ctl
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

055 Pipe Organ

Knob A	Layer XFade
Knob B	Layer XFade
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

056 Big Brass

Knob A	LoPass Freq
Knob B	Attack Control
MW	Vibrato Depth
Mpress	Swell Env & Pitch

057 Saxes/Trumpets

Knob A	LoPass Freq
Knob B	Attack Control
MW	Vibrato Depth
Mpress	Swell Env & Pitch

058 Split Section

Knob A	LoPass Freq
Knob B	Attack Control
MW	Vibrato Depth
Mpress	Swell Env & Pitch

059 Broadway Brass

Knob A	LoPass Freq
Knob B	Attack Control
MW	Vibrato Depth
Mpress	Swell Env & Pitch

060 Trombones

Knob A	Timbre
Knob B	Attack Control
MW	Vibrato Depth
Mpress	Swell Env & Pitch

061 Bari/Tenor Sect

Knob A	LoPass Freq
Knob B	Attack Control
MW	Vibrato Depth
Mpress	Swell Env & Pitch

062 Solo Tenor Sax

Knob A	LoPass Freq
Knob B	Attack Control
MW	Vibrato Depth
Mpress	Vibrato Depth

063 Williams Brass

Knob A	LoPass Envelope
MW	Vibrato Depth
Mpress	Swell Envelope

064 Lyrical Strings

Knob A	Brightness
MW	Attack Switch
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

065 Slow Strings

Knob A	Brightness (Cut)
Knob B	Attack Control
MW	Slow Vibrato
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

066 Marcato String

Knob A	Brightness (Cut)
Knob B	Envelope Control
MW	Envelope Switch
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

067 Layer Strings

Knob A	Brightness
Knob B	Release Control
MW	Attack Control
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

068 Fast Strings

Knob A	Timbre
Knob B	Release Control
MW	Layer Switch
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

069 Touch Strings

Knob A	Timbre
Knob B	Envelope Control
MW	Tremelo
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

070 Velocity Strings

Knob A	Timbre
MW	Layer Switch
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

071 Phantom Strings

Knob A	Timbre
Knob B	Attack Control
MW	Envelope Control
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

072 Ooh><Aah

Knob A	Timbre
Knob B	Layer XFade
MW	Vibrato
Mpress	Layer XFade

073 Doo><Daa

Knob A	Timbre
Knob B	Layer XFade
MW	Vibrato
Mpress	Layer XFade

074 Baa stacc. Bop

Knob B	Envelope Control
MW	Vibrato
Mpress	Swell

075 Doo stacc. Doop

Knob B	Envelope Control
MW	Vibrato
Mpress	Swell

076 Doo stacc. Dot

Knob B	Envelope Control
MW	Vibrato
Mpress	Swell

077 Scatman

MW	Vibrato
Mpress	Swell

078 The Croons

Knob A	Timbre
MW	Vibrato

079 Cathedral Vox

Knob A	Brightness (Cut)
Knob B	Envelope Control
MW	Brightness (Cut)

080 Solar Lead

Knob A	LoPass Freq
Knob B	LoPass Resonance
MW	Vibrato Rate, Depth
Mpress	Vibrato Rate, Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

081 Vox Lead

Knob A	LoPass Freq
Knob B	LoPass Resonance
MW	Vibrato Rate, Depth
Mpress	Vibrato Rate, Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

082 Alazawi

Knob A	LoPass Envelope
Knob B	LoPass Resonance
MW	Vibrato Rate, Depth
Mpress	Vibrato Rate, Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

083 Slo Wood Flute

Knob A	Breath Noise
Knob B	Chiff Noise
MW	Tremelo Depth (Cut)
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

084 Groove Bass

Knob A	LowPass Freq
Knob B	LoPass Resonance
MW	Vibrato Depth
Mpress	Vibrato Rate
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

085 1/3 Pulse Bass

Knob A	LowPass Freq
Knob B	LoPass Resonance
MW	Vibrato Rate, Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

086 Sweeper Bass

Knob A	LowPass Freq
Knob B	LoPass Resonance
MW	Vibrato Depth
Mpress	Vibrato Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

087 Lowdown Bass

Knob A	LowPass Freq
Knob B	LoPass Resonance
MW	Vibrato Rate, Depth
Mpress	Vibrato Rate, Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

088 Rez Aah Pad

Knob A	LoPass Freq
Knob B	LoPass LFO Rate
MW	Vibrato
Mpress	Swell (Layer 3)
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

089 Crypt

Knob A	Timbre
Knob B	Timbre
MW	Vibr, Pan/Fltr LFO
Mpress	Vibr, Pan/Fltr LFO
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

090 Meteor Strings

Knob A	LoPass Freq
Knob B	LoPass Resonance
MW	Vibrato, Trem Depth
Mpress	Brightness
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

091 Orch Pad

Knob A	Filter Freq
Knob B	Filter LFO Rate
MW	Vibrato
Mpress	Horn Layer Swell
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

092 Neptune

Knob A	"Chiff" Level
Knob B	Env Control
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

SP3 Program and Effect List

093 Analogy

Knob A	LoPass Freq
Knob B	LP Res & Release
MW	Vibrato Rate, Depth
Mpress	Swell
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

094 Dream Catcher

Knob A	LoPass Freq
Knob B	LoPass Resonance
MW	Filter LFO Depth
Mpress	Swell
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

095 U Say Tomita

Knob A	LoPass Freq
Knob B	LoPass Resonance
MW	Vibrato/Trem
Mpress	Vibrato/Trem
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

096 Acoustic Guitar

Knob A	EQ Ctr Freq
Knob B	EQ Cut/Boost
MW	Vibrato
Mpress	Vibrato Rate
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

097 Strummer 12 Str

Knob A	Brightness
Knob B	Vibrato Rate
MW	Vibrato
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

098 Rich 6 String

Knob A	Timbre
Knob B	Vibrato Rate
MW	Vibrato
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

099 12 String Guitar

Knob A	EQ Ctr Freq
Knob B	EQ Cut/Boost
MW	Vibrato
Mpress	Vibrato Rate
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

100 Chorus Elec Gtr

Knob A	Timbre
Knob B	Tremolo Rate
MW	Tremolo Depth
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

101 Elec 12 String

Knob A	Timbre
Knob B	Envelope Control
MW	Leslie Rate Switch
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

102 Jazzy Frets

Knob A	Attack Control
Knob B	Decay Control
MW	Vibrato
CCPed	Expression
FtSw2	Sostenuto

103 Lead Rock Gtr

Knob A	Timbre (Dist)
Knob B	Timbre (Tone)
MW	Vibrato
Mpress	Feedback Amount
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

104 Round and Wound

Knob A	LoPass Freq (Cut)
Knob B	Attack Control
MW	Ride Cymbal Volume
Mpress	Vibrato
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

105 Punch Bass

Knob A	LoPass Freq
Knob B	Attack Control
MW	Vibrato
Mpress	Vibrato
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

106 Two Finger Bass

Knob A	LoPass Freq (Cut)
MW	Ride Cymbal Volume
Mpress	Vibrato
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

107 Dual-Tri Bass

Knob A	Timbre
MW	Vibrato
Mpress	Vibrato
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

108 Clav o' Bass

Knob A	Timbre
MW	Vibrato
Mpress	Vibrato
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

109 Fret Not Bass

Knob A	Timbre
MW	Vibrato
Mpress	Vibrato
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

110 Upright Bass 1

Knob A	Timbre
Knob B	Timbre (Cymbal)
MW	Ride Cymbal Volume
Mpress	Vibrato
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

111 Upright Bass 2

Knob A	Timbre
Knob B	Timbre (Cymbal)
MW	Ride Cymbal Volume
Mpress	Vibrato
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

112 Studio Drums 1+2

Knob A	Timbre
Knob B	Pitch Control
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

113 Studio Drums 3+4

Knob A	Timbre
Knob B	Pitch Control
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

114 Ambient Rock Kit

Knob A	Timbre
Knob B	Pitch Control
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

115 Coliseum Kit

Knob A	Timbre
Knob B	Pitch Control
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

116 Resonant Traps

Knob A	Timbre
Knob B	Pitch Control
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

117 Tripkit/Trashkit

Knob A	Timbre
Knob B	Pitch Control
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

118 Beat Box

Knob A	Timbre
Knob B	Pitch Control
MW	Env/Lyr, Ptch LFO
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

119 Electro Kit

Knob A	Timbre
Knob B	Pitch Control
MW	Layer Enable
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

120 Virtuoso Perc

Knob A	Pitch Control
Knob B	Shaker Rate (f1-c2)
MW	Muting
Mpress	Moose Pitch/Mute
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

121 Rhythm Maker

Knob A	Pitch Control
Knob B	PitchCtrl Via MPrs
MW	Sample Start
Mpress	PtchCtl (Sw2/SosPed)
CCPed	Expression
FtSw1	Off
FtSw2	Off

122 Woody Marimba

Knob A	Sample Start
CCPed	Expression
FtSw1	Layr Sw to Round Marimba
FtSw2	Off

123 African Marimba

Knob B	Lyr Enable (Shaker)
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

124 Vibes

Knob A	Tremolo Rate
Knob B	Layer Switch
MW	Tremelo
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

125 New Fluid Vibes

Knob A	Tremolo Rate
MW	Tremelo
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

126 Aborigine Jam

CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

127 Drums 'n Bells

Knob B	PitchCtrl via MPrs
Mpress	PtchCtl (Sw2/SosPed)
CCPed	Expression
FtSw1	Sustain
FtSw2	Sostenuto

Secondary (Bank 6)

000 Sweet Ivories

MW	Vibrato (when SW4 is on)
Knob B	Vibrato rate

001 Nice Touch Grand

MW	Vibrato (when SW4 is on)
Knob B	Vibrato rate

002 Piano Solitude

MW	Vibrato (when SW4 is on)
Knob B	Vibrato rate

003 Piano Recital

MW	Vibrato (when SW4 is on)
Knob B	Vibrato rate

004 Full Bloom Piano

MW	Vibrato (when SW4 is on)
Knob B	Vibrato rate

005 Pianetta

MW	Vibrato (when SW4 is on)
Knob B	Vibrato rate
FtSw1	Enable ringy layer

006 Suite Piano

MW	Vibrato (when SW4 is on)
Knob B	Vibrato rate

007 Dreamy Piano

MW	Vibrato (when SW4 is on)
Knob B	Vibrato rate

008 Basement Upright

MW	Vibrato (when SW4 is on)
Knob B	Vibrato rate

009 Chiano

MW	Vibrato (when SW4 is on)
Knob A	Tone control: Notch
Knob B	Vibrato rate

010 Way Back Piano

MW	Vibrato (when SW4 is on)
Knob A	Envelope: decay rate
Knob B	Vibrato rate

011 Dance Piano

MW	Vibrato (when SW4 is on)
Knob A	Highpass filter
Knob B	Envelope: decay rate

012 Cloud Ride Piano

MW	Vibrato (when SW4 is on)
Knob A	Pad layer decay
Knob B	Vibrato rate

013 Organic Piano

Knob A	Duller Vox

014 Piano & Wash

MW	Increases volume of pad layer
Knob A	Cutoff, pad layer
Knob B	Resonance, pad layer

015 Piano & Vox Pad

MW	Fade volume of Vox layer
Knob A	Cutoff, Vox layer
Knob B	Attack Time: Vox layer

016 Mello E Piano

MW	Tremolo depth
Knob A	Timbre: cutoff
Knob B	Tremolo rate

017 Tines Square

MW	Tremolo depth
Knob A	Timbre
Knob B	Tremolo rate

018 Brunch In Seoul

MW	Tremolo depth
Knob A	Timbre: cutoff
Knob B	Tremolo rate

019 Classy Roadz

MW	Tremolo depth
Knob A	Cutoff & Resonance
Knob B	Tremolo rate

020 Barking Tines

MW	Tremolo depth
Knob A	Cutoff & Resonance
Knob B	Tremolo rate

021 Clean and Soft

MW	Treble control: : duller
Knob A	Cutoff
Knob B	Vibrato rate

022 Ballad Keys

MW	Tremolo depth
Knob A	Tremolo rate
Knob B	Envelope control

023 Lotus Keys

MW	Tremolo depth
Knob A	Tremolo rate
Knob B	Envelope control

024 Soft Ballad

MW	Tremolo depth
Knob A	Tremolo rate
Knob B	Envelope control

025 7'0s FM Tines

MW	Tremolo depth
Knob A	Cutoff & Resonance
Knob B	Tremolo rate; envelope: release

026 90's FM Ballad

MW	vibrato depth
Knob A	Para EQ freq
Knob B	Para EQ amp

027 Chorus Rock Pno

MW	vibrato (when SW4 is on)
Knob B	Vibrato rate

028 Bright Pianotone

MW	Tremolo depth
Knob A	Timbre: duller
Knob B	Tremolo rate

029 Family Portrait

MW	Tremolo depth
Knob A	Volume swell
Knob B	Tremolo rate

030 Harpsi-Piano

MW	vibrato/tremolo depth
Knob A	Timbre control
Knob B	Vibrato/tremolo rate

031 Fantasy Keys

MW	vibrato depth
Knob A	Timbre/Amp control
Knob B	Paramid Boost

032 Janet's Comp

MW	vibrato depth
Knob A	Timbre/Amp control
Knob B	Paramid boost

033 Mild Sheen

MW	vibrato/tremolo depth
Knob A	Timbre control
Knob B	Vibrato/tremolo rate

034 Scrape Glass

MW	vibrato depth
Knob A	Cutoff
Knob B	Resonance

035 Air Society

MW	vibrato/tremolo depth
Knob A	Timbre control
Knob B	Vibrato/tremolo rate

036 Push Air

MW	Filter LFO depth/rate
Knob A	Timbre control
Knob B	Tremolo control

037 Dronin'

MW	Bandpass width
Knob A	Bandpass frequency
Knob B	LFO rate

038 Alien Salt Mine

MW	vibrato depth
Knob A	Notch frequency
Knob B	Notch width

039 Imperfect Storm

MW	Resonance
Knob A	Cutoff frequency Layer 1
Knob B	LFO rate Layer 2

040 Mod Clavier

MW	Timbre: fade bright layer
Knob A	Timbre: Para EQ amp
Knob B	Envelope: decay rate

041 Belly Celeste

MW	Tremolo depth
Knob A	Tremolo rate
Knob B	Envelope control

042 Harpsichordion

MW	vibrato depth
Knob A	Timbre: Para EQ frequency
Knob B	Timbre: Para EQ amp

043 Circus Keys

MW	vibrato/tremolo depth
Knob A	LFO rate control
Knob B	Envelope control

044 Cosmic Calliope

MW	Tremolo/vibrato
Knob A	LFO rate
Knob B	Envelope: attack rate

045 Calliope Keys

MW	Tremolo; vibrato
Knob A	LFO rate
Knob B	Envelope: attack rate

046 Chiff Attack

MW	vibrato depth
Knob A	Timbre: Para EQ frequency
Knob B	Timbre: Para EQ Amp

047 Spaced Harmonix

MW	vibrato depth
Knob A	Timbre: Amp control
Knob B	Paramid boost

048 BackgroundOrgan

MW	vibrato/tremolo depth
Knob A	LFO rate control
Knob B	Envelope control

049 Mello Tone Wheel

MW	vibrato/tremolo depth
Knob A	LFO rate control
Knob B	Envelope control

050 Piped Organ

MW	vibrato depth
Mpressure (32)	Pitch bend
Knob A	Vibrato rate
Knob B	Envelope: attack rate

051 Playful Piper

MW	Delayed vibrato
Mpressure (32)	Pitch bend
Knob A	More breath
Knob B	Chiffier attack

052 Peter's Pan

MW	vibrato depth
Knob A	Timbre (air)
Knob B	Envelope: attack control; vibrato rate

053 Imaginary Flute

MW	Delayed vibrato
Mpressure (32)	Pitch bend
Knob B	Chiffier attack

054 Bright Koreana

MW	vibrato depth
Knob A	Timbre
Knob B	Envelope: attack control; vibrato rate

055 Bouncin'BassBall

MW	vibrato/tremolo depth
Knob A	LFO rate control
Knob B	Envelope: decay rate

056 Goosed Riff Sect

Mpressure (32)	Pitch bend

057 Fatso Sax

MW	Delayed vibrato
Mpressure (32)	Pitch bend
Knob A	Layer 3 Amplitude

058 Big&Beefy Saxes

MW	vibrato depth
Knob A	Envelope: decay rate
Knob B	Envelope: attack rate

059 Goosed Unison

Mpressure (32)	Pitch bend

060 Anabrass

MW	vibrato depth
Knob A	Timbre control
Knob B	Amp/envelope control

061 Honk'n Dyn Sax

MW	vibrato depth

062 Saxy Lush

MW	vibrato depth
Mpressure (32)	Vibrato

063 Classical Brass

MW	vibrato depth
Mpressure (32)	Envelope control
Knob A	Envelope control
Knob B	Envelope: release rate

064 Fast Vtrig Rosin

Knob A	Timbre: duller
Knob B	Envelope: attack rate

065 Emotional String

MW	Switches layers
Knob A	Timbre: duller

066 Octave Strings

MW	Disables lower-pitched layer
Knob A	Timbre: duller

067 Emphatic Strings

MW	Switches layers
Knob A	Timbre: duller

068 Rosin Section

MW	Switches layers
Knob A	Timbre: duller

069 Resolute Section

MW	Switches layers

070 Tender Strings

MW	Switches layers
Knob A	Timbre: duller

071 Flute & Strings

MW	Modulation sweep
Knob A	Resonance, brightness
Knob B	Envelope control: Strings

072 Bright Voices

MW	vibrato depth
Knob A	Timbre
Knob B	Envelope: attack control; vibrato rate

073 Crystal Voices

MW	vibrato/tremolo depth
Knob A	LFO rate control

074 Vox & Organ

Knob B	Envelope: release rate

075 BIG Ooh Voices

MW	vibrato depth
Knob B	Vibrato rate

076 BIG Voices

MW	vibrato depth
Knob B	Vibrato rate

077 Bright Syn Vox

MW	vibrato depth
Knob A	Timbre
Knob B	Envelope: attack control; vibrato rate

078 Vox Orgel

MW	vibrato depth
Knob A	Timbre control
Knob B	EQ gain

079 Vox & Strings

MW	vibrato depth
Knob A	Vibrato rate
Knob B	Envelope: attack rate

080 Subdivide

MW	vibrato depth
Knob A	Filter cutoff
Knob B	LFO rate, tremolo depth, envelope control

081 Rezzy Bass/Poly

MW	vibrato depth
Knob A	Filter cutoff
Knob B	Resonance

082 Technicolor

MW	vibrato depth
Knob A	Filter cutoff
Knob B	Transposes one layer down five octaves

083 Elan Lead

MW	vibrato depth
Mpressure (32)	Vibrato
Knob A	Filter cutoff
Knob B	Resonance

084 Sun Spot Lead

MW	vibrato depth
Mpressure (32)	Vibrato
Knob A	Filter cutoff
Knob B	Resonance

085 Dinosaur's Lead

MW	vibrato depth
Mpressure (32)	Vibrato
Knob A	Filter cutoff/resonance Envelope: release rate
Knob B	Crossfade

086 Sawyer's Bomb

MW	Vox pitch bend
Knob A	Filter sweep range
Knob B	Bandpass width

087 Reverse Feedback

MW	vibrato depth
Knob A	Filter cutoff
Knob B	Resonance

088 Poseidon

MW	Tremolo depth
Mpressure (32)	vibrato
Knob A	Filter cutoff, treble boost
Knob B	Envelope control

089 Analogica

MW	vibrato depth
Mpressure (32)	Filter cutoff
Knob A	Filter cutoff
Knob B	Resonance

090 Anti Rez

MW	vibrato depth/rate
Knob A	Filter cutoff
Knob B	Resonance

091 Spider' Web

MW	Filter sweep
Mpressure (32)	Volume
Knob A	Filter cutoff
Knob B	Resonance

092 Ethereal Strings

MW	Bandpass width & frequency
Knob A	Filter cutoff in Layer 2
Knob B	Envelope control

093 FreeResAhh Notch

MW	Crossfade, layer detune
Mpressure (32)	Treble boost
Knob A	Filter cutoff
Knob B	Envelope control, LFO rate

094 Ooh><Ahh Pad

MW	vibrato depth
Mpressure (32)	Filter cutoff, layer crossfade
Knob A	Resonance
Knob B	Filter cutoff, layer crossfade

095 Vocalicious

MW	Different envelope
Knob A	Timbre: duller
Knob B	Different envelope

096 Titanium Guitar

MW	Muted Guitar
Knob A	More body
Knob B	Fret snap

097 Latin Lover

MW	Muted Guitar

098 Roto 12 String

MW	Rotary Fast/Slow
Knob A	Filter cutoff
Knob B	Envelope control

099 Electric 12

Knob A	Filter cutoff
Knob B	Envelope: decay

100 Twangy Guitar

MW	vibrato depth
Knob A	Filter cutoff
Knob B	EQ gain

101 Chr Elec & Mute

MW	vibrato depth
Knob A	Filter cutoff
Knob B	Impact

102 Comp Chr E Gtr

MW	vibrato depth
Knob A	Filter cutoff
Knob B	Impact

103 Trashed Tubes

MW	vibrato depth
Mpressure (32)	Fade-in feedback
Knob A	Distortion amount
Knob B	Filter cutoff

104 Gimme The Finger

MW	vibrato depth and ride cymbal vol
Mpressure (32)	Vibrato depth
Knob A	Filter cutoff
Knob B	Envelope: attack rate

105 Bright E Bass

MW	vibrato depth
Mpressure (32)	Pitch bend
Knob A	Timbre: more low end
Knob B	Vibrato rate

106 Bright A Bass

MW	vibrato depth
Mpressure (32)	Pitch bend
Knob A	Less Body, more tacky
Knob B	Vibrato rate

107 Triangle Bass

MW	vibrato depth
Mpressure (32)	Vibrato
Knob A	Cutoff frequency: deeper
Knob B	Vibrato rate

108 Yow Bass

MW	vibrato depth
Mpressure (32)	Vibrato depth/rate
Knob A	Filter cutoff
Knob B	Resonance

109 Mono Synth Bass

MW	vibrato depth
Mpressure (32)	Vibrato depth/rate
Knob A	Filter cutoff
Knob B	Resonance

110 400 HP Bass

MW	vibrato depth
Mpressure (32)	Vibrato depth
Knob A	Filter cutoff
Knob B	Resonance

111 Base in Face

MW	vibrato depth
Mpressure (32)	Vibrato depth
Knob A	Filter cutoff
Knob B	Resonance

112 Radio Kings/Rods

Knob A	Timbre
Knob B	Pitch control

113 Ripper Kit/Vinyl

Knob A	Shaper; timbre
Knob B	Pitch control

114 LA Drums/Brk Bt.

Knob A	Timbre
Knob B	Pitch control

115 Compact/Raw Kit

Knob A	Shaper; timbre
Knob B	Pitch control

116 TubeTraps/lb.der

Knob A	Shaper; timbre
Knob B	Pitch control

117 Acoustric/HiPKit

Knob A	Shaper; timbre
Knob B	Pitch control

118 Dirt/Triphop Kit

Knob A	Timbre
Knob B	Pitch control

119 SumPumpKit MWsus

MW	Drone layer
Mpressure (32)	Drone layer
Knob A	Timbre
Knob B	Pitch control

120 Marimba

MW	Alternative attack
Knob A	Timbre: duller
Knob B	Vol Adjust for attack layer

121 Milky Way Vibes

MW	Tremolo depth
Knob A	Tremolo rate

122 Percussionist

MW	Alternative attack
Knob A	Timbre

123 Carnival

MW	Alternative attack
Knob A	Timbre
Knob B	Muted, faster decay

124 Primitive Perc

MW	Alternative attack
Knob A	Different attack for some instruments

125 Bunch of Perc

MW	Alternative attack
Mpressure (32)	Pitch bend with Sostenuto or Knob B
Knob A	Pitch change
Knob B	Enables MPressure pitch bend
FtSW2	Enables MPressure pitch bend

126 Perc Party

MW	Alternative attack
Mpressure (32)	Pitch bend with Knob B
Knob A	Transpose 2 Layers; timbre
Knob B	Enables MPressure pitch bend
FtSW2	Enables MPressure pitch bend

127 Perc Circle

MW	Alternative attack
Mpressure (32)	Pitch bend with Sostenuto or Knob B
Knob A	Pitch Change in 1 layer
Knob B	Enables MPressure pitch bend
FtSW2	Enables MPressure pitch bend

Orchestra (Bank 2)

000 Fast Violin prs

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

001 Med Violin vib

This program has no specific controller assignments.

002 Slow Violin pv

MW	Increases vibrato rate and depth
Mpress	Increases vibrato rate and depth

003 Fast Viola prs

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

004 Med Viola prs

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

005 Slow Viola pv

MW	Increases vibrato rate and depth
Mpress	Increases vibrato rate and depth

006 Fast Cello prs

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

007 Med Cello p/v

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

008 Slow Cello vib

FtSw 2	Increases release time

009 Studio Cello

MW	Vibrato

010 Studio Bass

MW	Vibrato
Mpress	Vibrato

011 Recital Bass

Knob B	Timbre control: slightly brighter
MW	Vibrato
Mpress	Vibrato

012 Slow Bass prs

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

013 Slow Bass vib

FtSw 2	Increases release time

014 Slow String Orch

MW	Controls expression
Mpress	Controls expression

015 Studio Strings

MW	Controls expression
Mpress	Controls expression

016 Chamber Strings

Knob B	Controls volume of Layer 3 (string section)
MW	Controls expression
Mpress	Controls expression

017 Baroque Strings

Knob A	Controls filter
Knob B	Controls volume of Layer 3 (string section)

018 Intense Strings

Knob A	Amplitude control for Tremolo layer
Knob B	Increases tremolo sustain
MW	Amplitude control for Layer 2 (sustaining strings)

019 Staccato Strings

Knob A	Controls attack envelope when MIDI 12 or Soft pedal is ON
Knob B	Controls decay rate of velocity-trigge tremolo layer
MW	Amplitude control for Layer 1 (tremolo)
VTrig	Triggers tremolo at forte when MIDI 13 is ON

020 Fast Tremolando

MW	Controls swell

021 Med Tremolando

MW	Controls swell
Mpress	Controls swell

022 Slow Tremolando

MW	Controls expression
Mpress	Controls expression

023 VTrig Tremolando

MW	Controls expression
Mpress	Controls expression
VTrig	Changes strings to sfz tremolando at fortissimo

024 Full Pizzicato

Knob B	Shortens decay time

025 Medium Pizzicato

Knob B	Shortens decay time

026 Dry Pizzicato

Knob B	Shortens decay time

027 Solo Flute prs

Knob A	Adds brightness
Knob B	Shortens attack time
MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

028 Solo Flute vib

Knob A	Adds brightness
Knob B	Shortens attack time

029 sfz Ens Flute

MW	Vibrato swell
Mpress	Vibrato swell
Attack Velocity	Controls articulation

030 Solo Oboe

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

031 Slow Oboe

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

032 Ensemble Oboe

MW	Swell
Mpress	Swell

033 Solo Eng Hrn prs

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

034 English Horn vib

This program has no specific controller assignments.

035 Slow EngHorn prs

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

036 Solo Clarinet

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

037 Slow Clarinet

MW	Vibrato rate and depth; swell
Mpress	Vibrato rate and depth; swell

038 Ens Clarinet

MW	Vibrato swell
Mpress	Vibrato swell

039 Solo Bassoon

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

040 Solo Bassoon vib

MW	Swell
Mpress	Swell

041 Ens BassoonOboe

MW	Vibrato swell
Mpress	Vibrato swell

042 Solo Dbl Reeds

Mpress	Vibrato rate and depth
Knob A	Fades and
Knob B	Slows attack

043 Soft Trumpet

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

044 Slow Soft Trp

MW	Vibrato rate and depth; swell
Mpress	Vibrato rate and depth; swell

045 Hard Trumpet

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

046 Slo Hard Trumpet

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

047 Slow Horn & Trp

Mpress	Vibrato rate and depth

048 Solo Fr Horn

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

049 Ensemble Fr Horn

MW	Vibrato swell
Mpress	Vibrato swell

050 Fr Horn Sect 1

MW	Swell
Mpress	Swell

051 Fr Horn Sect 2

MW	Slight swell
Mpress	Slight swell

052 Horn Section

MW	Slight swell

053 Solo Trombone

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

054 Ensemble Bone

MW	Vibrato swell
Mpress	Vibrato swell

055 Solo Tuba

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

056 sfz Orch Tuba

MW	Swell
Mpress	Swell

057 Jazz Harmon Trp

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

058 Ballad Harmon Trp

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

059 sfz SoftTrp Sect

MW	Putting Mod Wheel partway up changes articulation
Mpress	Controls expression

060 St Jazz Brass sw

MW	Controls expression
Mpress	Controls expression

061 sfz Jazz Brass

MW	Brightens
Mpress	Brightens

062 Stereo Brass sw

MW	Controls expression
Mpress	Controls expression

063 Solo Sax

MW	Vibrato rate and depth
Mpress	Vibrato rate and depth

064 Stolen Moments

MW	Controls expression
Mpress	Controls expression

065 Harmon Band

MW	Controls expression
Mpress	Controls expression

066 Slow Dyn Orch

MW	Controls expression
Mpress	Controls expression

067 Fast Dyn Orch

MW	Controls expression
Mpress	Controls expression
VTrig	Triggers timpani, C 2,G 3

068 Total Orch 1

Knob A	Volume of strings layer
Knob B	Shortens decayrelease time for strings (envelope control)
MW	Vibrato control to 0 for reeds layer
VTrig	Enables Brass
Entry Values	MIDI 6 = 127; MIDI 13 = 40
Mpress	Slight swell of reeds

069 Total Orch 2

Knob A	Volume of strings layer
Knob B	Envelope swell for strings (envelope control)
MW	Vibrato control to 0 for winds
Entry Values	MIDI 6 = 127; MIDI 13 = 40
VTrig	Enables timpani and percussion, A 0?G 3

070 sfz Orch prs

MW	Controls swell
Mpress	Controls swell
FtSw 2	Disables brass
VTrig	Triggers timpani at mezzoforte, cymbals at fortissimo, B 1,G 3

071 Winds & ChmbStr

MW	Controls expression
Mpress	Controls expression

072 Winds & Strings

MW	Controls expression
Mpress	Controls expression

073 Horns & Strings
This program has no specific controller assignments.

074 Woodwind Section

MW	Controls swell
Mpress	Controls swell

075 Reeds & Bells

MW	Controls swell
Mpress	Controls swell

076 Pizz & Timp

VTrig	Triggers timpani at mezzoforte

077 Cathedral Choir

Knob A	Lowers filter
Knob B	Lengthens attack significantly

078 Aah Choir prs

MW	Controls swell
Mpress	Controls swell

079 Mixed Choir

MW	Changes timbre
Knob B	Envelope control: slows attack
Mpress	Controls filter and amplitude Disables layers 1 and 2 (full choir)

080 Choir from Above
This program has no specific controller assignments.

081 DivineInterventn

MW	Controls expression
Mpress	Controls expression

082 Chapel Organ
This program has no specific controller assignments.

083 Cathedral Organ
This program has no specific controller assignments.

084 Pipes 16'8',reed
This program has no specific controller assignments.

085 Full Pipes
This program has no specific controller assignments.

086 Orch Harp
This program has no specific controller assignments.

087 Stereo Solo Harp
This program has no specific controller assignments.

088 Harp Oasis

Knob A	Pitchslide down an octave in delayed harp layer
Knob B	Timbre control: slightly darker
MW	Controls delay rate of second harp layer when MIDI 29 is ON
Entry Values	MIDI 29 = 127; MW

089 Under Harp

Knob A	Moves filter cutoff
MW	Adds filter modulation

090 Classical Guitar

Release velocity	Controls finger artifact on note release

091 Silky Nylons

MW	Slightly softer

092 Romantic Nylon

Knob A	Pitchslide up an octave in layer 3 (nylon string gtr)
Knob B	Pitchslide up an octave in Layer 2 (delayed harp)
MW	Controls delay rate of harp layer when MIDI 29 is ON
Entry Values	MIDI 13 = 127; MIDI 29 = 127; MW= 8

093 Mando-Lute
This program has no specific controller assignments.

094 Orch Chimes

Knob B	Shortens decay time

095 Stereo Chimes

Knob B	Shortens decay time

096 Chime Bell

Knob A	Pitchslide up an octave in Layer 1
Knob B	Envelope control: faster decay
MW	LFO rate control to 0

097 ChimesGlock

Knob B	Envelope control: shortens decay

098 Glockenspiel

Knob A	Timbre control: duller
Knob B	Envelope control: quicker decay and release
MW	Pitchslide down two octaves
FtSw1 (Sustain, 64)	Enables reverse trigger rolling when MIDI 12 is ON
Entry Values	MIDI 12 = 127

099 Orch Celeste

Knob A	Brightens
Knob B	Shortens decay time
MW	Adds tremolo

100 Xylophone

Knob A	Timbre control: duller
Knob B	Envelope control: quicker decay and release
MW	Slight delay for Marimba layer when MIDI 29 is ON
FtSw1 (Sustain, 64)	Enables reverse trigger rolling when MIDI 12 is ON
Entry Values	MIDI 12 = 127

101 Orch Percussion

Knob A	Pitchslide up 850ct
Knob B	Pitchslide down 850ct
MW	Amplitude control
FtSw1 (Sustain, 64)	Opens up VTrig Crash envelope for an Open Crash sound.
Entry Values	MIDI 12 = 127; MIDI 29 = 127

102 Orch Timpani

Knob A	Brightens

103 Solo Timpani

Knob A	Envelope control: shorter release
Knob B	Envelope control: longer release
Entry Values	MIDI 12 = 127

104 Dynamic Timpani

Knob A	Envelope control: shorter release
Knob B	Envelope control: longer release

105 Temple Blocks

This program has no specific controller assignments.

106 Stereo Tam-tam

Knob A	Moves filter cutoff
MW	Adds filter modulation

107 Trap Set

Knob A	Controls filter
Knob B	Pitch control
Mpress	Controls amplitude of long brush stir G 3) and C# 4

108 Modern Blockage

Knob A	Pitchslide up two octaves in Layer 3
Knob B	Pitchslide down 600ct in Layer 1

109 Beaty Drum

Knob B	Pitch control (not all layers)

110 Cage's Ensemble
This program has no specific controller assignments.

111 New Touch Perc
This program has no specific controller assignments.

112 Perc & Blocks
This program has no specific controller assignments.

113 Puppet Show Perc

Knob A	Pitchslide up an octave in Layer 3
Knob B	Pitchslide up an octave in Layer 4
Entry Values	MIDI 29 = 127

114 Pop Can Perc

Knob A	Pitchslide up an octave in Layer 1
Knob B	Envelope control: drier
Entry Values	MIDI 12 = 127

115 Onklungy Perc

Knob A	Pitchslide up an octave in Layer 3
Knob B	Envelope control: drier
MW	Disables Temple Block layer
Entry Values	MIDI 13 = 25

116 Skullophones

Knob A	Pitchslide up an octave in Layer 2
Knob B	Pitchslide up 1600ct in Layer 3
MW	Alt attack
Entry Values	MIDI 29 = 127

117 Exotic Mallets
This program has no specific controller assignments.

118 Acoustic Mbira

Knob B	Shortens decay time

119 St Elec Mbira

Knob B	Shortens decay time

120 Perc Harp
This program has no specific controller assignments.

121 Pluck & Block
This program has no specific controller assignments.

122 Hybrid Pluck
This program has no specific controller assignments.

123 BellsMark Tree

Knob A	Pitchslide up an octave in Layers 2 and 3
Knob B	Pitchslide up an octave in Layers 1 and 4
MW	LFO rate control to 0

124 Circus Glitter

Knob A	Pitchslide up two octaves in sine layer
Knob B	Envelope control: quicker decayrelease
MW	Pitchslide up an octave in glockenspiel layer
Entry Values	MIDI 29 = 127

125 Swing'n Chimes

Knob A	Pitchslide up two octaves in Layer 1, up an octave in Layer 2
Knob B	Pitchslide up two octaves in Layer 3
MW	LFO rate control to 0

126 Crystal Lagoon

Knob A	Pitchslide up 700ct in Glockenspiel layer
Knob B	Envelope control: quicker decay release
MW	Detunes
Entry Values	MIDI 13 = 40; MIDI 9 = 127

127 Clang Clang

Knob A	Brightens

Controllers for GM Programs (Bank 4)

Category	ID	Sound Name	Mod Wheel (MIDI 1)	Other Controllers
Piano	000	Grand Piano		
	001	Bright Grand		
	002	Electric Grand	Tremolo	
	003	Honky Tonk Piano		
	004	Elec Piano 1	Tremolo	
	005	Elec Piano 2		
	006	GM Harpsichord		
	007	Clavinet	Tremolo	
Chromatic	008	GM Celesta		
	009	Glockenspiel		
	010	Music Box	Vibrato	
	011	Vibraphone	Tremolo	
	012	Marimba		
	013	Xylophone		
	014	Tubular Bells		
	015	Dulcimer		
Organ	016	Drawbar Organ	Rotary Speed	
	017	Percussion Organ	Rotary Speed	
	018	Rock Organ	Rotary Speed	
	019	Church Organ	Vibrato	
	020	Reed Organ	Tremolo	
	021	GM Accordion	Vibrato	
	022	Harmonica	Vibrato	
	023	Bandoneon	Tremolo	
	024	Nylon Guitar	Vibrato	
Guitar	025	Steel String Gtr	Vibrato	
	026	Jazz Guitar	Vibrato	
	027	Clean Elec Guitar	Vibrato	
	028	Muted Guitar	Vibrato	
	029	Overdrive Guitar	Vibrato	
	030	Distortion Guitar	Vibrato	
	031	Guitar Harmonics	Vibrato	

Category	ID	Sound Name	Mod Wheel (MIDI 1)	Other Controllers
Bass	032	Acoustic Bass	Vibrato	
	033	Finger Bass	Vibrato	
	034	Picked Bass	Vibrato	
	035	Fretless Bass	Vibrato	
	036	Slap Bass 1	Vibrato	
	037	Slap Bass 2	Vibrato	
	038	Synth Bass 1	Vibrato	
	039	Synth Bass 2	Vibrato	
Strings	040	Violin	Vibrato	
	041	Viola	Vibrato	
	042	Cello	Vibrato	
	043	Contrabass	Vibrato	
	044	Tremolo Strings		
	045	Pizzicato Strings		
	046	Harp	Vibrato	
	047	Timpani		
Ensenbles	048	Ensemble Strings	Vibrato	
	049	GM Slow Strings	Vibrato	
	050	Synth Strings 1	Vibrato	
	051	Synth Strings 2	Vibrato	
	052	Choir Aahs	Vibrato	
	053	Voice Oohs	Vibrato	
	054	Synth Vox	Vibrato	
	055	Orchestra Hit		
Brass	056	Trumpet	Vibrato	
	057	Trombone	Vibrato	
	058	Tuba	Vibrato	
	059	Muted Trumpet	Vibrato	
	060	French Horn	Vibrato	
	061	Brass Section	Vibrato	
	062	Synth Brass 1	Vibrato	
	063	Synth Brass 2	Vibrato	
Reed	064	Soprano Sax	Vibrato	
	065	Alto Sax	Vibrato	
	066	Tenor Sax	Vibrato	
	067	Baritone Sax	Vibrato	
	068	Oboe	Vibrato	
	069	English Horn	Vibrato	
	070	Bassoon	Vibrato	
	071	Clarinet	Vibrato	

Category	ID	Sound Name	Mod Wheel (MIDI 1)	Other Controllers
Pipe	072	Piccolo	Vibrato	
	073	Flute	Vibrato	
	074	Recorder	Vibrato	
	075	Pan Flute	Vibrato	
	076	Bottle Blow	Vibrato	
	077	Shakuhachi	Vibrato	
	078	Whistle	Vibrato	
	079	Ocarina	Vibrato	
Synth Lead	080	Square Wave	Vibrato	
	081	Sawtooth Wave	Vibrato	
	082	Synth Calliope	Vibrato	
	083	Chiffer Lead	Vibrato	
	084	Charang	Vibrato	
	085	Solo Vox	Vibrato	
	086	5th Saw Wave	Vibrato	
	087	Bass & Lead	Vibrato	
Synth Pad	088	Fantasia	Vibrato	
	089	Warm Pad	Vibrato	
	090	Polysynth	Vibrato	
	091	Space Voice	Vibrato	
	092	Bowed Glass	Vibrato	
	093	Metal Pad	Vibrato	
	094	Halo Pad	Vibrato	
	095	Sweep Pad	Vibrato	
Synth FX	096	Ice Rain	Vibrato	
	097	Soundtrack	Vibrato	
	098	Crystal	Vibrato	
	099	Atmosphere	Vibrato	
	100	Brightness	Vibrato	
	101	Goblins	Vibrato	
	102	Echo Drops	Vibrato	
	103	Star Theme	Vibrato	
Ethnic	104	Sitar	Vibrato	
	105	Banjo	Vibrato	
	106	Shamisen	Vibrato	
	107	Koto	Vibrato	
	108	Kalimba	Vibrato	
	109	Bagpipe	Vibrato	
	110	Fiddle	Vibrato	
	111	Shanai	Vibrato	

Category	ID	Sound Name	Mod Wheel (MIDI 1)	Other Controllers
Percussion	112	Tinkle Bell	Vibrato	
	113	Agogo	Vibrato	Knob C: Random Pitches
	114	Steel Drums	Vibrato	
	115	Wood Block	Vibrato	Knob C: Random Pitches
	116	Taiko	Vibrato	
	117	Melodic Tom	Vibrato	
	118	Synth Drum	Vibrato	
	119	Reverse Cymbal	Vibrato	
Sound FX	120	Guitar Fret Noise	Vibrato	
	121	Breath Noise	Vibrato	
	122	Seashore	Vibrato	
	123	Bird	Vibrato	
	124	Telephone	Vibrato	Knob C: Switch Phones
	125	Helicopter	Vibrato	
	126	Applause	Vibrato	Knob C: Bravo!
	127	Gunshot	Vibrato	

GM Drum Kits

The eight GM drum kits are stored in Bank 7. Also in Bank 7 is a program called 008 Sine, which the SP3-series use for some of its internal diagnostic testing.

ID	Name
000	GM Standard Kit
001	GM Room Kit
002	GM Power Kit
003	GM Elec Kit
004	GM Synth Kit
005	GM Jazz Kit
006	GM Brush Kit
007	GM Orch Kit

Setup List

1 Passing Dream

SP3 Program	66
SP3 Program	47
SP3 Program	14
SP3 Program	63
SP3 FX A	55
SP3 FX B	21

2 Sun down

SP3 Program	91
SP3 Program	93
SP3 Program	66
SP3 Program	29
SP3 FX A	63
SP3 FX B	18

3 Fire Bird

SP3 Program	69
SP3 Program	67
SP3 Program	101
SP3 Program	62
SP3 FX A	121
SP3 FX B	28

4 Kyrie

SP3 Program	79
SP3 Program	68
SP3 Program	66
SP3 Program	103
SP3 FX A	120
SP3 FX B	22

5 Idle Trip

SP3 Program	68
SP3 Program	46
SP3 Program	111
SP3 Program	122
SP3 FX A	121
SP3 FX B	26

6 Falling Leave

SP3 Program	91
SP3 Program	79
SP3 Program	82
SP3 Program	95
SP3 FX A	204
SP3 FX B	22

7 The Belliano

SP3 Program	33
SP3 Program	88
SP3 Program	47
SP3 Program	0
SP3 FX A	4
SP3 FX B	28

8 Bell PAD

SP3 Program	91
SP3 Program	80
SP3 Program	86
SP3 Program	120
SP3 FX A	22
SP3 FX B	91

9 Jaztic

SP3 Program	77
SP3 FX A	121
SP3 FX B	22

10 Heavenly

SP3 Program	55
SP3 Program	44
SP3 Program	64
SP3 Program	92
SP3 FX A	55
SP3 FX B	22

11 Piano Trio

SP3 Program	111
SP3 Program	10
SP3 Program	60
SP3 Program	56
SP3 FX A	55
SP3 FX B	22

12 One Man Trio

SP3 Program	0
SP3 Program	120
SP3 Program	109
SP3 Program	55
SP3 FX A	22
SP3 FX B	0

13 Dr. Crane's

SP3 Program	124
SP3 Program	110
SP3 FX A	121
SP3 FX B	14

14 Moon.Song

SP3 Program	66
SP3 Program	81
SP3 Program	69
SP3 Program	87
SP3 FX A	120
SP3 FX B	22

15 Gate of Magic

SP3 Program	66
SP3 Program	47
SP3 Program	24
SP3 Program	83
SP3 FX A	120
SP3 FX B	22

16 Synth / E Piano

SP3 Program	17
SP3 Program	87
SP3 Program	84
SP3 Program	2
SP3 FX A	121
SP3 FX B	22

SP3-Series Effects and Reverbs

Effect

	1	2	3	4	5	6	7	8
Chorus	1 Stereo Chorus1	2 Stereo Chorus2	3 Basic Chorus	4 Chorus Comeback	5 Everyday Chorus	6 Thick Chorus	7 Chorusier	8 Rock Chorus
Flange	9 Sweet Flange	10 Big Slow Flange	11 Throaty Flange	12 Squeeze Flange	13 Simply Flange	14 Wetlip Flange	15 Flange Delay	16 Flange Booth
Delay	17 Complex Echo	18 Stereo Echoes	19 4-Tap Delay	20 8-Tap Delay	21 Spectral 4-Tap	22 Astral Taps	23 BasicChorusDelay	24 Chorus PanDelay
Compressor	25 HKCompressor 3:1	26 DrumKompress 5:1	27 SKFdbks Comp 6:1	28 SKCompressr 12:1	29 SKCompressr 9:1	30 SKCompressr 18:1	31 HKCompressor 9:1	32 HKComprsor Inf:1
Distortion	33 Subtle DrumShape	34 Subtle Distortion	35 Dist Cab EPiano	36 Distortion +EQ	37 Super Shaper	38 2 Band Shaper	39 Shaper ->Reverb	40 Quantize +Flange QuantizLvl
Filter	41 Phunk Env Filter	42 Trip Filter	43 LFO Sweep Filter	44 Bass Env Filter	45 EPno Env Filter	46 LFO Sweep Filt2	47 DoubleRise Filter	48 Circle Bandsweep
LazerVerb	49 Cheap LaserVerb	50 Spry Young BoyFdbk	51 LaserDelay ->Rvb	52 Lazerfazer EchoesF	53 Drum Neurezonate	54 Flange ->LaserDly	55 Lazertag Flange	56 LaserVerb Loop
Misc	57 VibChor +Rotary2	58 VibChor +Rotary1	59 VC +Dist +Rotary2	60 3 Band Enhancer	61 Extreem Enhancer Hi/Md Xovr	62 Tremolo	63 Simple Panner	64 Dual Panner
	Rotary Speaker			**Enhancer**		**Simple Motion**		

Reverb

	1	2	3	4	5	6	7	8
Booth	1 Nice LittleBooth	2 Viewing Booth	3 Drum Booth	4 Drum Room	5 Drum Room B	6 Natural Room	7 Small Wood Booth	8 Half Bath
Room 1	9 Add Ambience	10 SmallStudio Room	11 The Real Room	12 With A Mic	13 Pretty SmallPlace	14 Real Niceverb	15 ClassRoom	16 Big Studio Room
Room 2	17 BrightSmall Room	18 Tight Perc Room	19 Small DarkRoom	20 Bassy Room	21 Percussive Room	22 Bathroom	23 Real Room	24 Large Room
Chamber	25 Brass Chamber	26 Sax Chamber	27 Plebe Chamber	28 Live Chamber	29 Small Chamber	30 SmallDrum Chamber	31 Small Hall	32 My Garage
Hall 1	33 Sweet Hall	34 Semisweet Hall	35 Classic Chapel	36 Medium Hall	37 Ball Hall	38 Small Hall	39 Reflective Hall	40 Smoooth Hall
Hall 2	41 Grandiose Hall	42 Elegant Hall	43 Bright Hall	44 Medium Hall Too	45 School Stairwell	46 Large Hall	47 Real Big Room	48 Sweet Hall
Hall 3	49 Spacious Hall	50 Opera House	51 Real Niceverb	52 Splendid Palace	53 Weighty Platey	54 Classic Plate	55 Gated Reverb	56 Gate Plate
Combi	57 Chorus SmallRoom	58 Chorus Delay Hall	59 ChorDlyRvb Lead	60 Deep ChorDly Hall	61 FlangeDelay Room	62 FlangeDelay Hall	63 Slo FlangeDly Room	64 FlangeDly BigHall

MIDI Controllers

	None						
0	Bank MSB	32	Bank LSB	64	Sustain	96	DataInc
1	Mod Wheel	33	Mod Wheel LSB	65	Port Switch	97	DataDec
2	Breath	34		66	Sosten	98	NRg LBS
3		35		67	Soft	99	NRg MSB
4	Foot Control	36		68	Legato	100	Rg LSB
5	Port Time	37	Port Time LSB	69	Hold2	101	Rg MSB
6	Data	38	Data LSB	70	SndCtl1	102	
7	Volume	39	Volume LSB	71	SndCtl2	103	
8	Balance	40	Balance LSB	72	SndCtl3	104	
9		41		73	SndCtl4	105	
10	Pan	42	Pan LSB	74	SndCtl5	106	
11	Expression	43	Expression LSB	75	SndCtl6	107	
12	EfxCt 1	44		76	SndCtl7	108	
13	EfxCt 2	45		77	SndCtl8	109	
14		46		78	SndCtl9	110	
15	AuxBnd2	47		79	SndCt10	111	
16	Gen 1	48		80	Gen 5	112	
17	Gen 2	49		81	Gen 6	113	
18	Gen 3	50		82	Gen 7	114	
19	Gen 4	51		83	Gen 8	115	
20		52		84	PortCtl	116	
21	AuxBnd1 MSB	53	AuxBnd1 LSB	85		117	
22		54		86		118	
23		55		87		119	
24		56		88		120	SndOff
25		57		89		121	RstCtl
26		58		90		122	LclCtl
27		59		91	FXBWet	123	NtsOff
28		60		92		124	OmniOf
29		61		93	FXAWet	125	OmniOn
30		62		94		126	MonoOn
31		63		95		127	PolyOn

Special Controllers

SP3-Series Only Message.

128	Pitch Bend	133	Tempo	138	Goto Prog	143	Seq Stop
129	Rev Bnd	134	Key Number	139	Setup Inc	144	Seq Cont
130	Pitch Up	135	Key Veloc	140	Setup Dec	145	Trans Up
131	Pitch Down	136	Prog Inc	141	Goto Setup	146	Trans Down
132	Pressure	137	Prog Dec	142	Seq Start		

Appendix C

SP3 Drum Map

The drum map defines the placement of the various percussion sounds at key locations. The MIDI data generated by key triggering (or MIDI note data received from the MIDI In port) does not contain any information about timbre. They just determine which note will sound. So, changing a drum map will change the timbre assigned to each key. Simply put, the drum map defines the placement of percussion sounds.

The SP3 supports three kinds of drum maps. Drums and percussion sounds are differently mapped in accordance with each drum map. There is an advantage in using different kinds of drum maps.

You can select either General MIDI style layout (GM) or Kurzweil style layout (KRZ) in the Global menu. Choose the layout that is most suitable for your performance style. For example, the General MIDI map is useful for playing back General MIDI format MIDI files.

The next page shows how percussion timbres are assigned to each key in each map. The left side description is the mapping for white keys and the right side is for black keys.

There are some keys unlabeled. For General MIDI style layout, they are not assigned to any timbres. For Kurzweil style layout, their timbres change on a program basis.

Panic

When you use MIDI devices, sometimes you may have MIDI note-on commands producing 'stuck' notes which drone on and on. In this case, don't "Panic". Pressing [Key Range] and [Vel Range] button will transmit All Note Off message and Reset All Controller message to shut down the unwanted stuck notes and set the SP3 back to normal. This is what "Panic" function does.

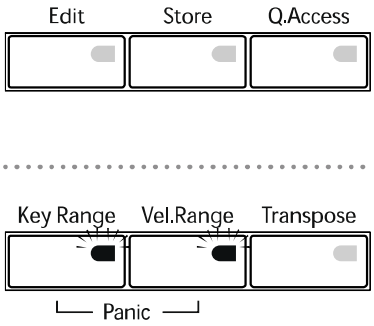
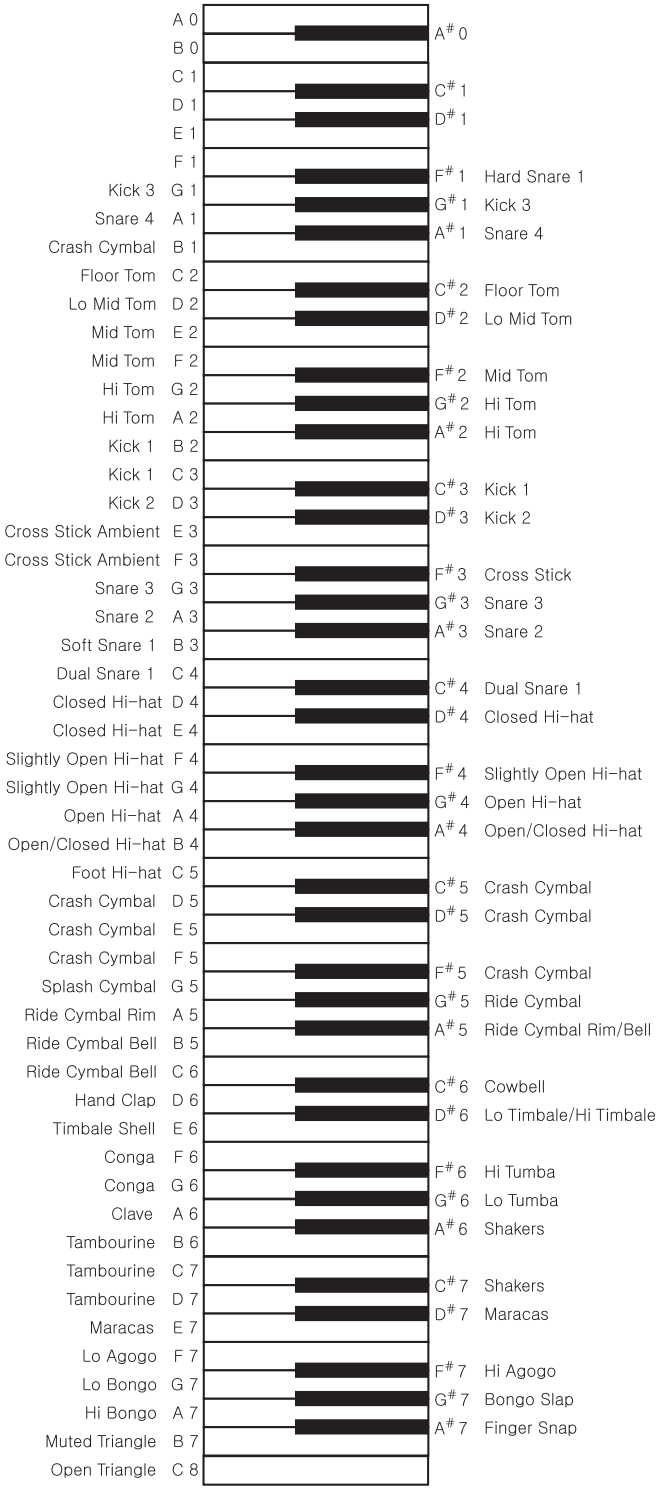
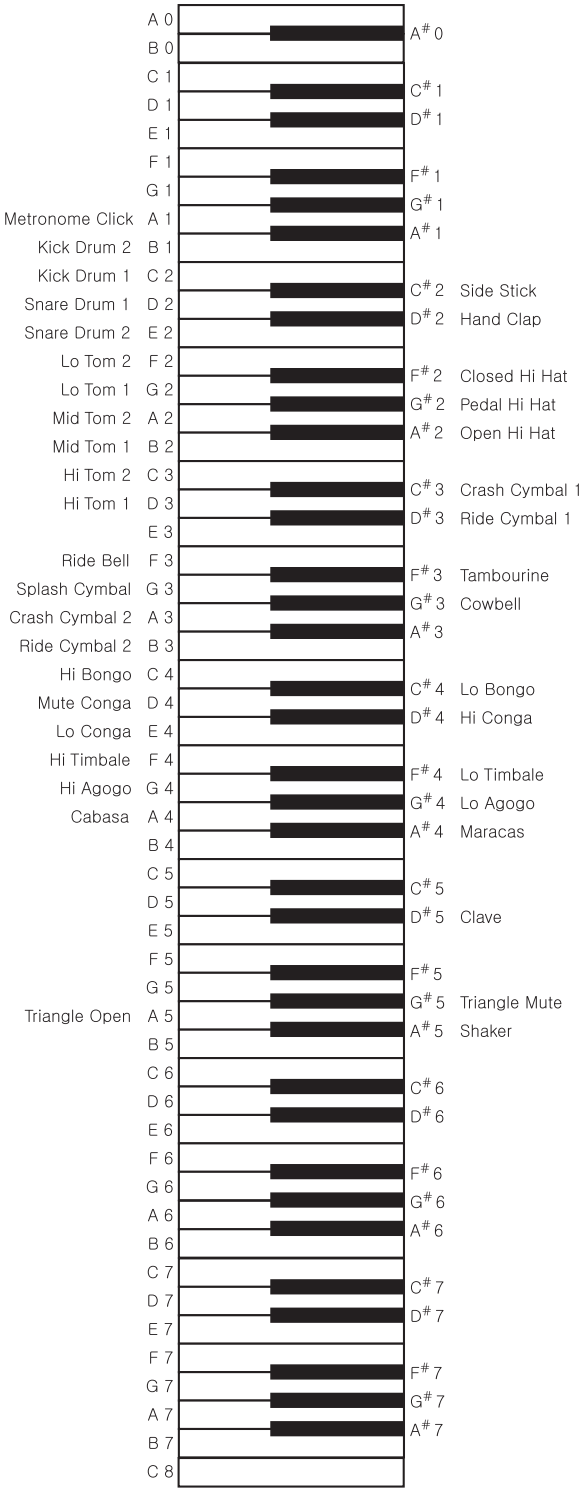


Figure C-1

Normal


A 0
B 0
C 1
D 1
E 1
F 1
Kick 3 G 1
Snare 4 A 1
Crash Cymbal B 1
Floor Tom C 2
Lo Mid Tom D 2
Mid Tom E 2
Mid Tom F 2
Hi Tom G 2
Hi Tom A 2
Kick 1 B 2
Kick 1 C 3
Kick 2 D 3
Cross Stick Ambient E 3
Cross Stick Ambient F 3
Snare 3 G 3
Snare 2 A 3
Soft Snare 1 B 3
Dual Snare 1 C 4
Closed Hi-hat D 4
Closed Hi-hat E 4
Slightly Open Hi-hat F 4
Slightly Open Hi-hat G 4
Open Hi-hat A 4
Open/Closed Hi-hat B 4
Foot Hi-hat C 5
Crash Cymbal D 5
Crash Cymbal E 5
Crash Cymbal F 5
Splash Cymbal G 5
Ride Cymbal Rim A 5
Ride Cymbal Bell B 5
Ride Cymbal Bell C 6
Hand Clap D 6
Timbale Shell E 6
Conga F 6
Conga G 6
Clave A 6
Tambourine B 6
Tambourine C 7
Tambourine D 7
Maracas E 7
Lo Agogo F 7
Lo Bongo G 7
Hi Bongo A 7
Muted Triangle B 7
Open Triangle C 8
A# 0
C# 1
D# 1
F# 1 Hard Snare 1
G# 1 Kick 3
A# 1 Snare 4
C# 2 Floor Tom
D# 2 Lo Mid Tom
F# 2 Mid Tom
G# 2 Hi Tom
A# 2 Hi Tom
C# 3 Kick 1
D# 3 Kick 2
F# 3 Cross Stick
G# 3 Snare 3
A# 3 Snare 2
C# 4 Dual Snare 1
D# 4 Closed Hi-hat
F# 4 Slightly Open Hi-hat
G# 4 Open Hi-hat
A# 4 Open/Closed Hi-hat
C# 5 Crash Cymbal
D# 5 Crash Cymbal
F# 5 Crash Cymbal
G# 5 Ride Cymbal
A# 5 Ride Cymbal Rim/Bell
C# 6 Cowbell
D# 6 Lo Timbale/Hi Timbale
F# 6 Hi Tumba
G# 6 Lo Tumba
A# 6 Shakers
C# 7 Shakers
D# 7 Maracas
F# 7 Hi Agogo
G# 7 Bongo Slap
A# 7 Finger Snap

GM ReMap


A 0
B 0
C 1
D 1
E 1
F 1
G 1
Metronome Click A 1
Kick Drum 2 B 1
Kick Drum 1 C 2
Snare Drum 1 D 2
Snare Drum 2 E 2
Lo Tom 2 F 2
Lo Tom 1 G 2
Mid Tom 2 A 2
Mid Tom 1 B 2
Hi Tom 2 C 3
Hi Tom 1 D 3
E 3
Ride Bell F 3
Splash Cymbal G 3
Crash Cymbal 2 A 3
Ride Cymbal 2 B 3
Hi Bongo C 4
Mute Conga D 4
Lo Conga E 4
Hi Timbale F 4
Hi Agogo G 4
Cabasa A 4
B 4
C 5
D 5
E 5
F 5
G 5
Triangle Open A 5
B 5
C 6
D 6
E 6
F 6
G 6
A 6
B 6
C 7
D 7
E 7
F 7
G 7
A 7
B 7
C 8
A# 0
C# 1
D# 1
F# 1
G# 1
A# 1
C# 2 Side Stick
D# 2 Hand Clap
F# 2 Closed Hi Hat
G# 2 Pedal Hi Hat
A# 2 Open Hi Hat
C# 3 Crash Cymbal 1
D# 3 Ride Cymbal 1
F# 3 Tambourine
G# 3 Cowbell
A# 3
C# 4 Lo Bongo
D# 4 Hi Conga
F# 4 Lo Timbale
G# 4 Lo Agogo
A# 4 Maracas
C# 5
D# 5 Clave
F# 5
G# 5 Triangle Mute
A# 5 Shaker
C# 6
D# 6
F# 6
G# 6
A# 6
C# 7
D# 7
F# 7
G# 7
A# 7

Index

V

W

X