

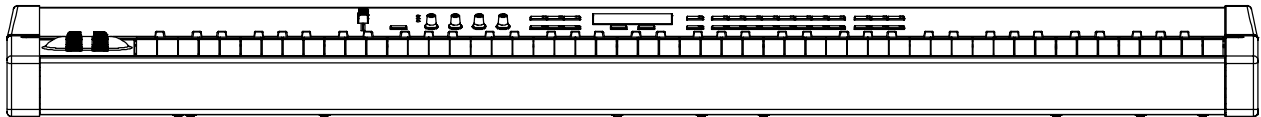
*Musician's Guide*

# **SP2**

***Synthesizer Performance***

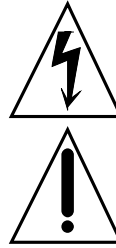
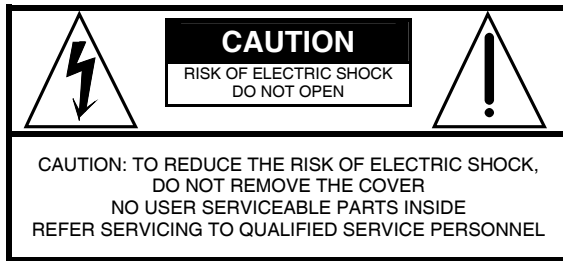
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- *Digital Multi-Effects*
- *Built-in USB Terminal*
- *Flexible MIDI Controller*
- *Award Winning Sounds*
- *60 Rhythm Patterns*



**KURZWEIL**

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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 présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère 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**

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Web : [www.youngchang.com](http://www.youngchang.com)

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

# World Wide Web Home Page

<http://www.kurzweilmusicsystems.co>



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# KURZWEIL *SP2* Quick Guide

## SP2 Quick Start Guide

Thank you for purchasing a Kurzweil/Young Chang SP2 stage piano. Here's a brief description of all the essential operations you need to know to get started with your SP2 immediately. Through this manual, [ ] means "Button". For an example, [Yes] means you need to press the "Yes" button from the front panel of your SP2.

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





# CHAPTER 1

## Introduction

Thank you for purchasing a Kurzweil/Young Chang stage piano SP2 instrument. With its 32 megabytes of high quality Kurzweil ROM sounds and an array of MIDI-control features, your SP2 is an ideal suit for both stage and studio work. The USB port on the rear panel enables the immediate use of your SP2 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 SP2

- check the components of the SP2 package

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

◀ Main features. ....	1-1
◀ Options. ....	1-2
◀ Do I Have Everything?. ....	1-3
◀ How to use this manual. ....	1-3

### For people who do not want to read manuals

We recommend that you read at least chapter 1&2, just to get comfortable with your SP2 more quickly. Even if you're an experienced keyboard player, you will learn about the advanced features of the SP2 and most likely, discover some new ideas. Also, the information about upgrades and service will be very valuable for you.

## Main Features

### The Sound

The SP2 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 includes 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 SP2 an amazingly flexible MIDI controller as well as a powerful live instrument. In this mode, you can divide the SP2'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 SP2 to start rhythm patterns automatically. The SP2 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 SP2 has a fully-weighted 88 key piano action. The array of physical controllers include 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 SP2 can be not only a performance keyboard, but also a MIDI controller in a studio. You can use the SP2 as a sound module receiving MIDI data from a computer based sequencer or external MIDI device, too.

## Effects

To perfect the ROM sounds, the SP2 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 SP2 can use various optional devices. Ask your Kurzweil dealer about the following options.

## Pedal

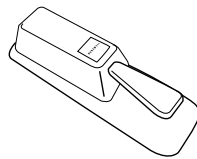
The SP2 has two jacks for optional pedals on the rear panel. One is for a switch pedal ( for functions like sustain or program change ) and the other is for a continuous control pedal ( for functions like volume/expression control ).

The compatible pedals from Kurzweil are;

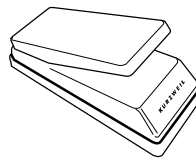
**FS-1 / Standard box-shaped switch pedal**

**KP-1 / Single piano-style switch pedal**

**CC-1 / Continuous pedal**



Kurzweil KP-1



Kurzweil CC-1

## Do I Have Everything?

Your SP2 carton should include all of the following components.

- The SP2 Stage Piano
- AC adapter (9VAC, 2.0A)
- Single Switch Pedal
- This manual
- Warranty Card
- Four adhesive-backed rubber feet

Be sure to keep the box and packing materials during the warranty periods, 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 SP2. 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 SP2’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 SP2 and other Kurzweil products, visit our web site.

<http://www.ycpiano.co.kr/>

<http://www.kurzweilmusicsystems.com/>

Above all, enjoy, and make great music with your SP2



# CHAPTER 2

## Getting Started

This chapter will help you hook up the SP2 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.....	2-1
◀ Basic Connections.....	2-2
◀ Powering UP.....	2-13
◀ Playing the Demo Songs.....	2-14
◀ Software Upgrades.....	2-15
◀ Troubleshooting.....	2-15

## 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 SP2 fits on your stand before attaching the rubber feet.



< Figure 2-1 Placement of Rubber Feet >

## Basic Connections

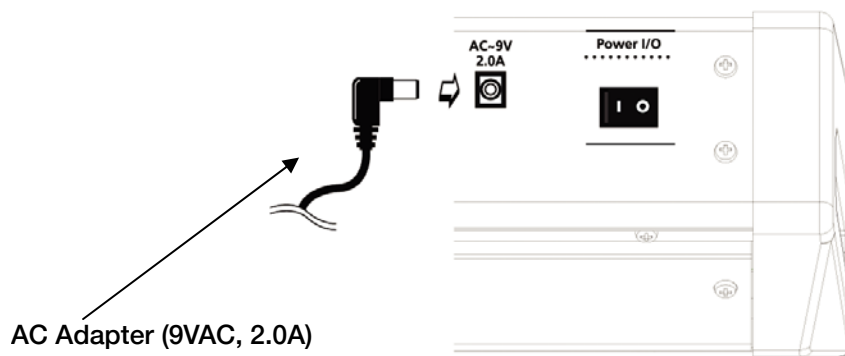
### Connecting Power Supply

Before connecting the power supply, make sure your SP2 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 SP2.

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



< Figure 2-2 > Connecting Power Supply

### Connecting to Your Audio System

The SP2 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 each 1/4 inch stereo ( tip-ring-sleeve ) plugs on one end to connect to the SP2 and the other end of cable should have the same 1/4 inch stereo plugs or XLR plugs. Using balanced cables will greatly reduces noise.

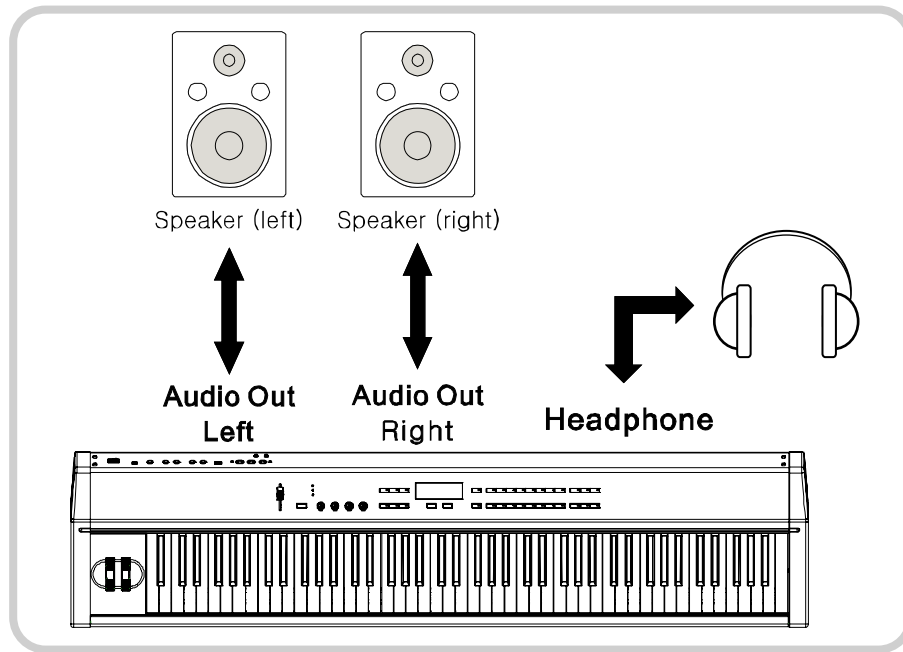
#### For the best audio quality

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 SP2's volume level to its maximum.

**☑NOTE** When you connect audio cables, make sure to turn down the level on your sound system.

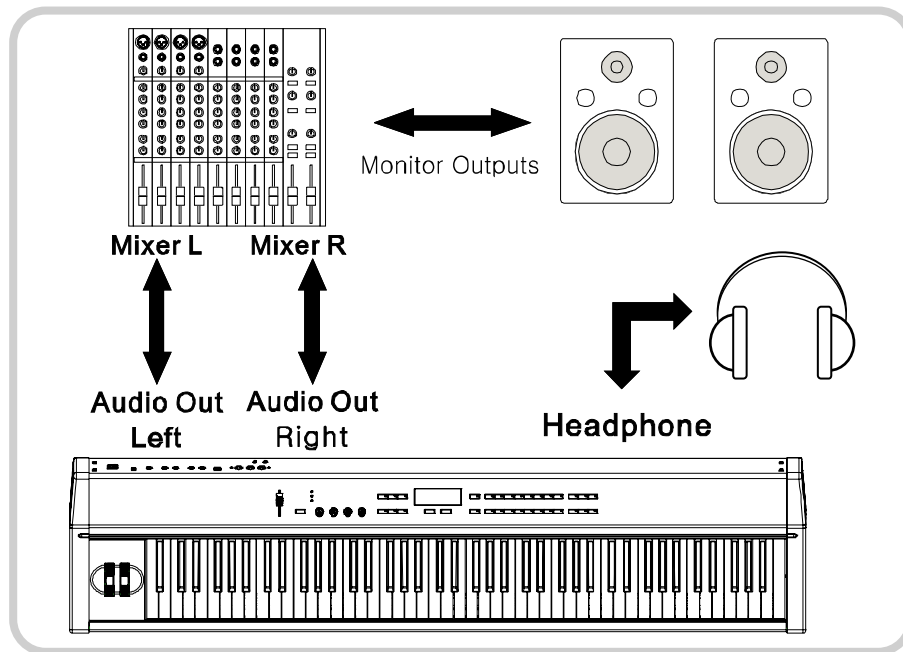
3. Adjust the volume of your sound system to the appropriate level.
4. The SP2 has a headphone jack which duplicates the signal from the main outputs. Plugging into the headphone jack does not mute the other audio outputs. You can also use the headphone jack as an unbalanced stereo line-level output. In this case, just connect a stereo cable from the headphone jack to a stereo input on any sound system.

◀ connecting powered speakers



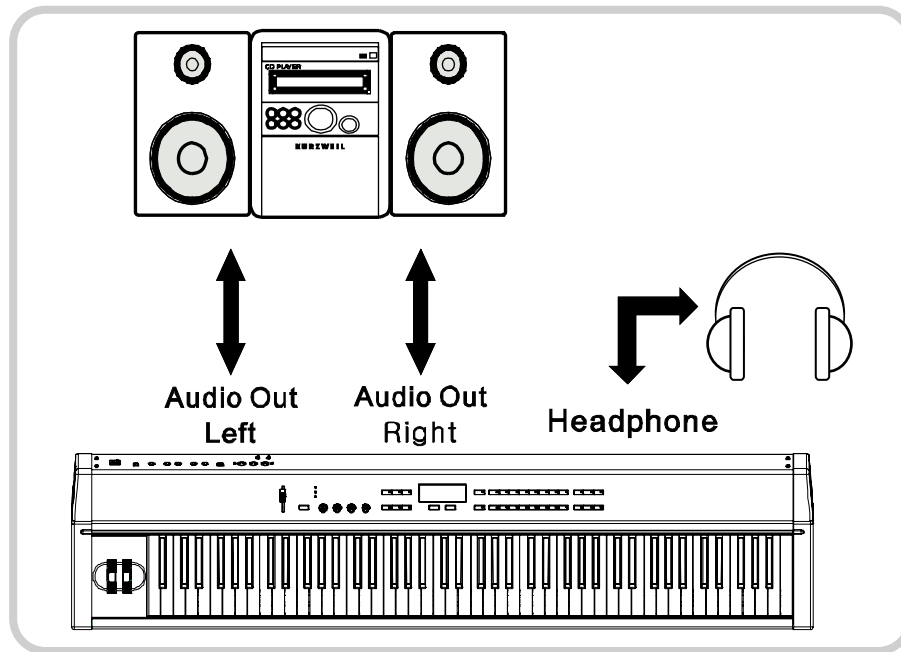
< Figure 2-3 connecting powered speakers >

◀ connecting an audio mixer



< Figure 2-4 connecting an audio mixer >

◀ connecting a home audio system

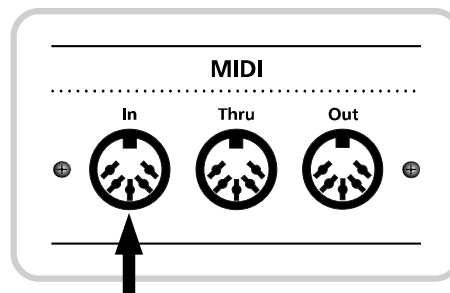


< Figure 2-5 connecting a home audio system >

## Connecting MIDI

### MIDI IN

The MIDI In port is for receiving MIDI data. When another MIDI device sends MIDI data to control the SP2, this makes the SP2 a MIDI slave, which enabling you to use the SP2 as a sound module. MIDI In port also can be used for upgrading software via system exclusive data.

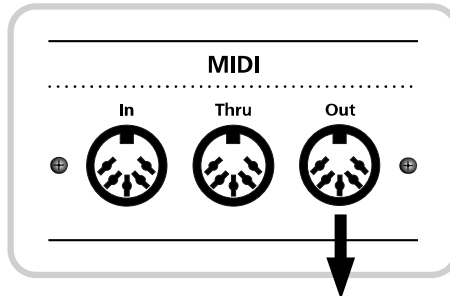


< Figure 2-6 SP2 as a MIDI slave >



## MIDI OUT

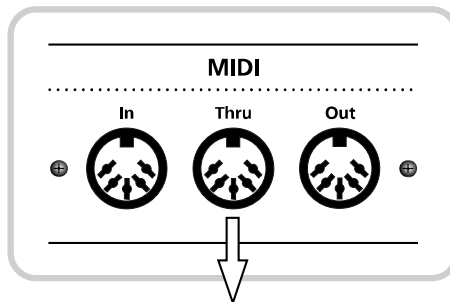
The MIDI Out port is for transmitting MIDI data that the SP2 generates. MIDI data does not contain any audio signal. It carries digital “performance data” such as the pitch, note velocity, control signals, etc.



< Figure 2-7 SP2 as a MIDI master >

By connecting a MIDI cable from the MIDI Out port of the SP2 to the MIDI In port of another MIDI device, you can use the SP2 as a MIDI master to play and control its slaves.

## MIDI Thru

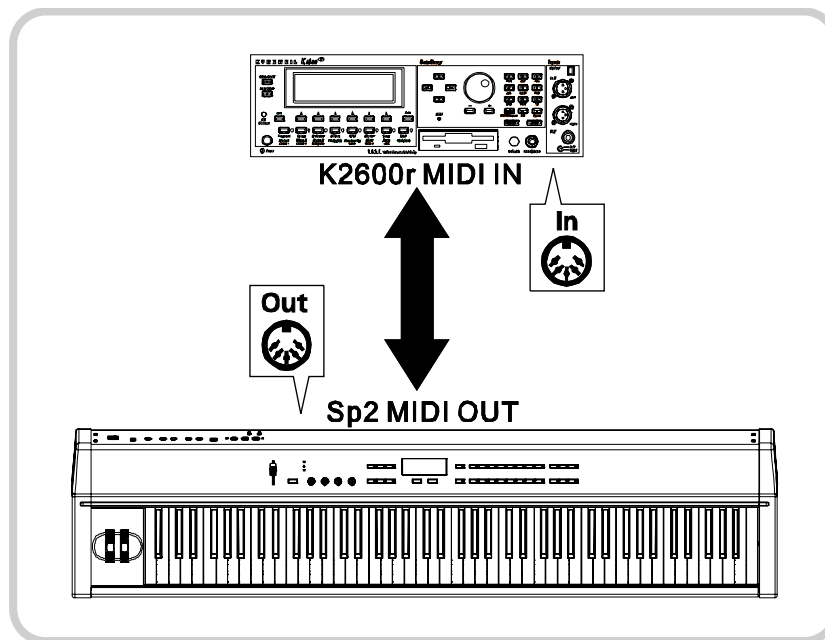


< Figure 2-8 MIDI Thru jack >

The MIDI Thru port sends MIDI data being sent to the SP2's MIDI In port. MIDI Thru port does not transmit the MIDI information that the SP2 itself generates.

## Basic MIDI connection

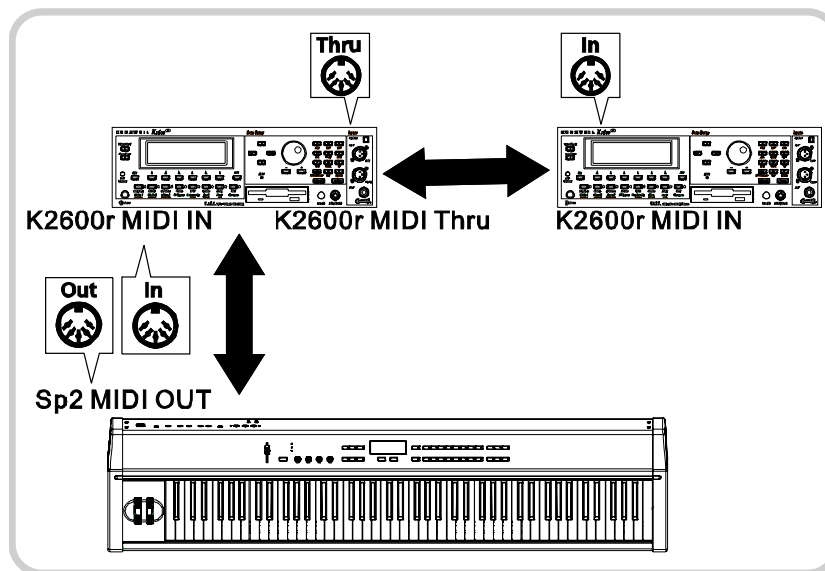
The simplest application of MIDI is to connect and control an external sound module for more sounds, more polyphony, and more timbre control than the internal sound module offers. The following figure shows how simple this can be.



< Figure 2-9 SP2 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. The SP2 can play independent sounds on 1 multi-timbral or 2 mono-timbral modules at once.



< Figure 2-10 SP2 connected to Module A and Module B >

## Connecting to a Computer via USB

Without a MIDI interface, the SP2 can be connected to a computer via USB. A single USB cable can carry incoming and outgoing MIDI data between the SP2 and a computer. You don't even need to install any additional driver.

**☑NOTE** Though the SP2 can use MIDI port and USB port at the same time, it may cause problems with running out of polyphony. So, we recommend you to use either MIDI port or USB 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 SP2 support "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 SP2 unit with OS V1.0( or later ) installed.
- 3) Type A, USB cable.
- 4) Go to our download page below, get "sp2series.inf".

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

## How to install

- 1) Make sure where sp2series.inf file located.
- 2) Power up SP2.
- 3) After power up, connect USB cable between PC and SP2.
- 4) Shortly after, you might hear "ding" sound, and in the system tray Found new hardware popup open.



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



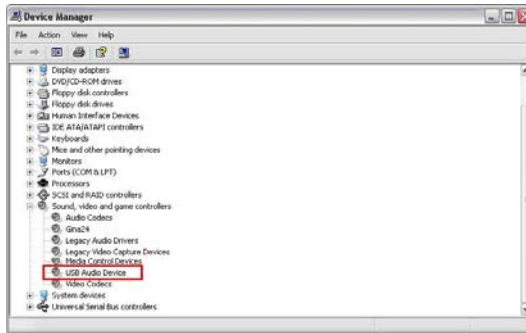
## Chapter 2

### SP2 Getting Started

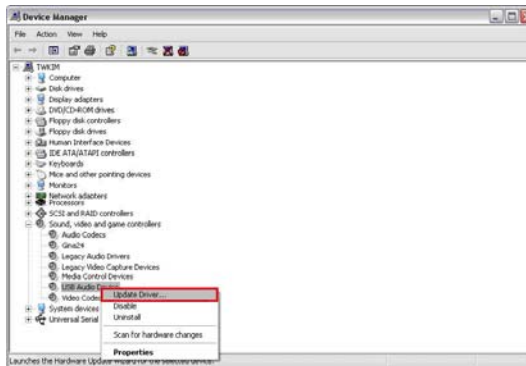
6) After finished enumeration with host, PC displays following message.



7) As you see in the device manager, SP2 connected as "USB Audio Device".



8) For install device driver, you need to update device driver of "USB Audio Device". Select "USB Audio Device" and press right mouse button and Select "Update Driver" popup menu.



9) Now, you might see new hardware wizard, select "No, not this time" radio button click next.



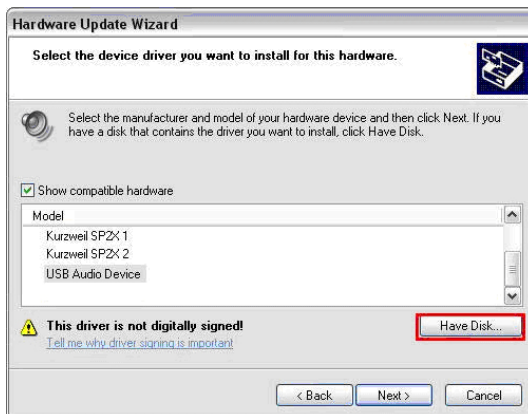
10) And next step, select “Install a list of specification(Advanced)” radio button and click next.



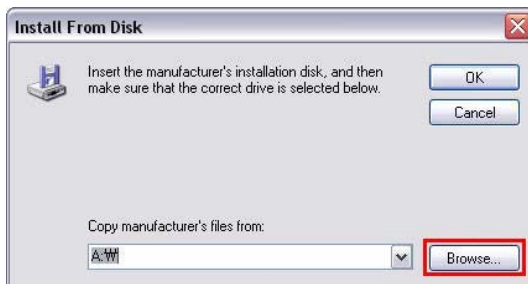
11) Now select “Don’t search, I will choose driver to install” and click next.



12) Click “Have Disk...” button.



13) Ok, next press “browse” button.

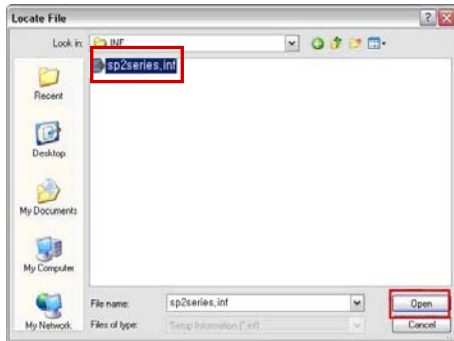


## Chapter 2

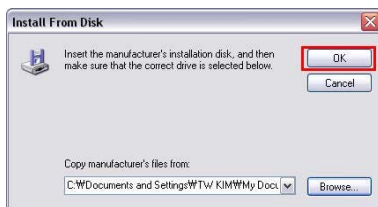
### SP2 Getting Started

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14) Find out where “sp2series.inf” located and press “Open” button for open it.



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



16) Now make sure uncheck “Show compatible hardware”. Select “Kurzweil” in manufacturer, and select “Kurzweil SP2X MIDI” for SP2X or select “Kurzweil SP2 MIDI” for SP2. Finally press “Next” button.



17) You can see warning window, because this driver is not signed by Microsoft, It's ok ignore it. Click “Yes” button.



18) You can see the warning box again, press “Continue Anyway” button.



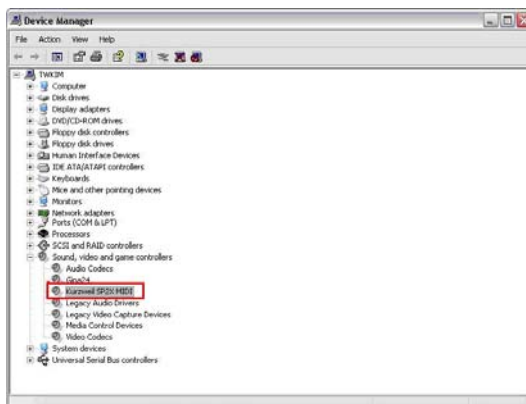
19) Driver install is in progress.



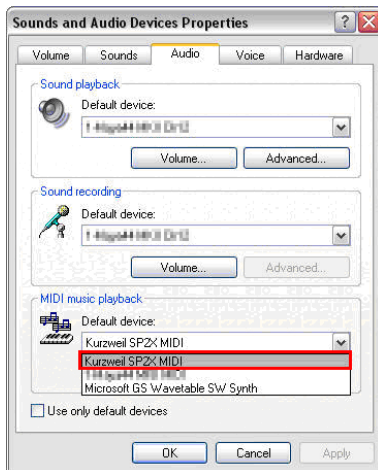
20) After a while Install finished, press “Finish” button.



21) In the device manager, you can see new device name “Kurzweil SP2 Series MIDI”.

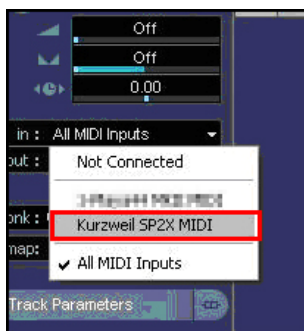


22) You can also see a new device name in “Sound and Audio Devices Properties”.

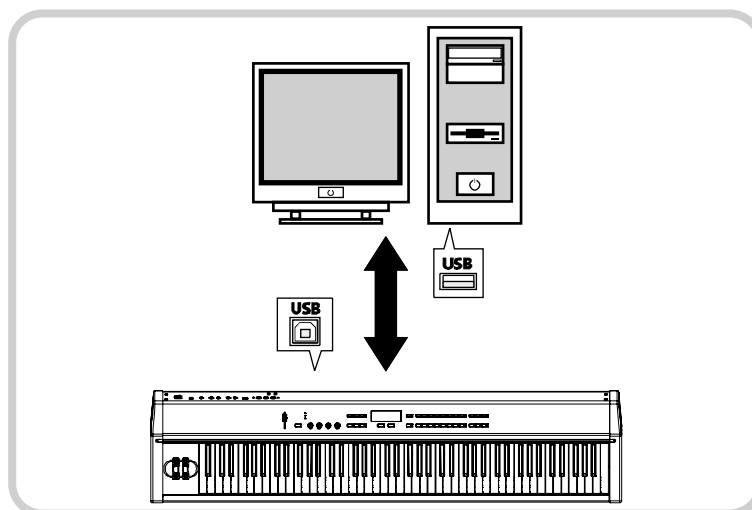


23) Now, you can also see a new device name in any sequencer software.

(Nuendo in picture)



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

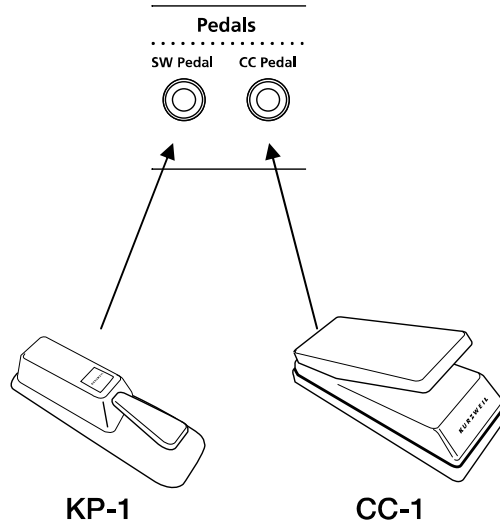


< Figure 2-11 Connecting to a Computer via USB >



## Connecting Pedals

Plug your switch or continuous pedals into the corresponding jacks on the SP2'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..

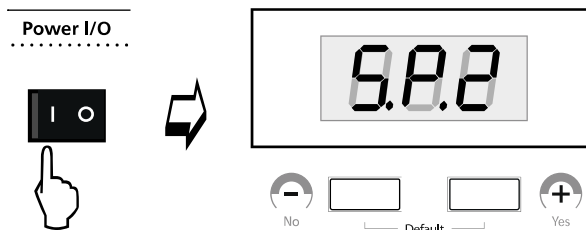


- switch pedals 1/4 inch tip-sleeve plugs
- continuous pedals 10k Ohm linear-taper potentiometer 1/4 inch tip-sleeve plug

**☑NOTE** When using non-Kurzweil pedal, make sure it's connected before you turn on your SP2. Also, do not press any of your pedals while powering up, or it might work backwards because the SP2 verifies each pedal's orientation during power up.

## Powering Up

When you've made all your connections, turn on the SP2. After the LEDs on the front panel flash, the numeric display on the front panel will show a series of information. When the SP2 is ready to play, the display will look like following:

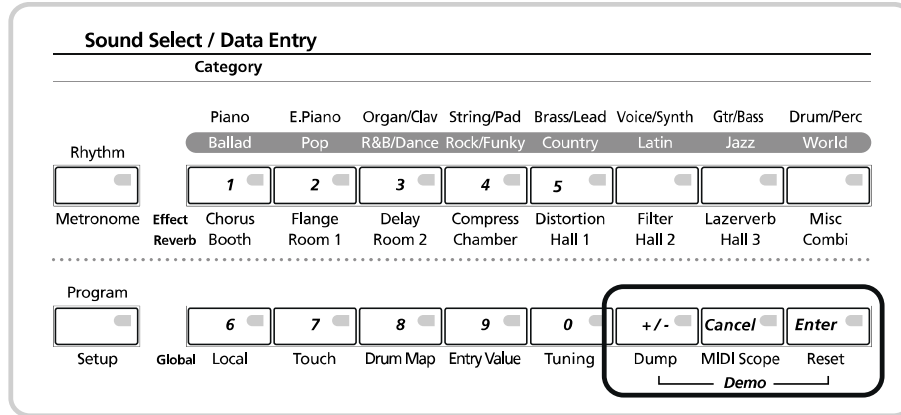


< Figure 2-12 Initial Display >

To prevent any damage to your sound system, set the SP2's master volume slider all the way down before you turn on the SP2. And then, gradually push up the slider while playing the keyboard

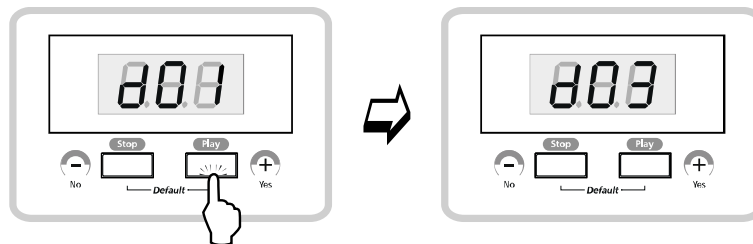
## Playing the Demo Songs

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



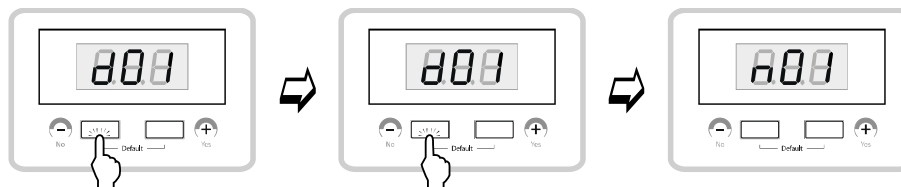
< Figure 2-13 Demo mode >

2. [Play] button below the display starts the demo song. There are three demo songs. Press numeric button in Sound Select/Data Entry region to select one of the demo songs like < Figure 2-14 >.



< Figure 2-14 Starting Demo Songs >

3. If you want to stop the demo before it finishes, press [Stop] button below the display to stop the demo song. To exit Demo mode, press [Stop] button when the demo songs are not playing.



< Figure 2-15 Stop and Exiting Demo mode >

## Software Upgrades

Beause the SP2 contains flash ROM, the system software can be upgraded via MIDI. You can get software upgrades for your SP2 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 SP2 and no LEDs light, check the power adapter connections at the AC outlet and the SP2 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 SP2's internal voices. The overview introduces a few basic concepts and the important features of your instrument. The SP2 has two different type of internal voices: Programs and Setups. Use the following list to find specific information more quickly.

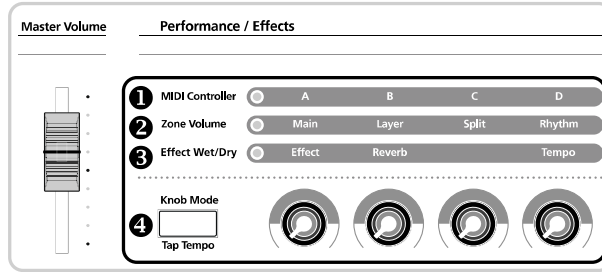
◀ Overview. ....	3-1
◀ Front Panel, Rear Panel. ....	3-2
◀ Programs. ....	3-5
◀ Setups. ....	3-6
◀ Rhythm Patterns and Metronome. ....	3-7
◀ Using Quick Access Bank. ....	3-10
◀ Transpose Function. ....	3-11
◀ Multi Function Knob. ....	3-12

## Overview

The SP2 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 desired instrumental category, sounds, rhythm patterns and metronome sounds. Also, the buttons in this region let you enter numeric values for Global parameter or MIDI control numbers.
- In the **Edit** region, you can modify the timbre of existing sounds to your taste and store them into 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 / Tap Tempo Button

- Knob Mode / Tap Tempo button is used for selecting Knob Mode or setting the tempo of the internal metronome / rhythm patterns in realtime by tapping it.

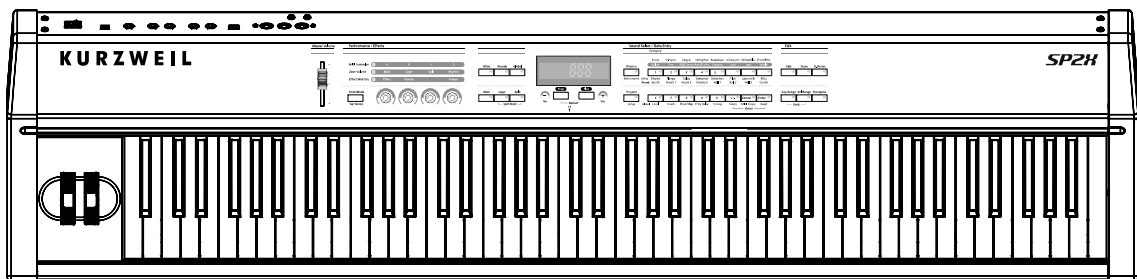
#### Global

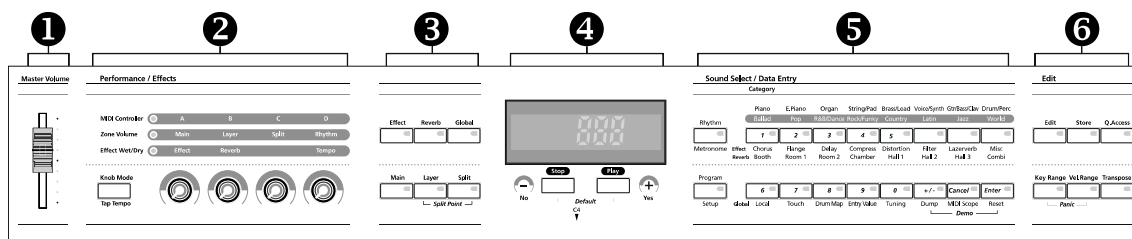
The Global menu provides several parameters that you can control the SP2 with. In the Global menu, you can make changes that affect the entire SP2, for example, Local on / off, Drum Map, Drum Channel, Tuning, SysEX dump, MIDI scope, Reset, and more.

#### Effect (Effect, Reverb)

The SP2 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 of preset reverb. For more detailed information, please read page 7-1

#### Front Panel





&lt; Figure 3-2 Front Panel &gt;

## 1 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 SP2's audio outputs. We recommend that you set this slider all the way down before you turn on your SP2.

## 2 Performance / Effect 1-1

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

## 3 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 initializing function. See page 4-4 for more information.

## 4 Display

Basically, the display tells you what's going on, whether you're playing or editing. The information varies depending on which mode the SP2 is in. There are two buttons labeled [+ / Yes] and [- / No] below the display. These buttons have multiple functions. For example, when playing rhythm patterns, pressing [+ / Yes] button means "Play" and pressing [- / No] button means "Stop". Or, pressing two buttons at the same time will reset any parameter change made to Transposition or Tuning to the default setting.

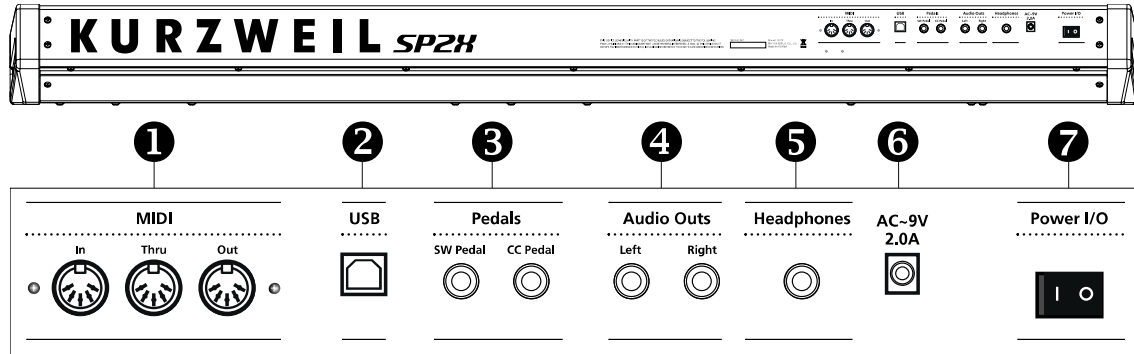
## 5 Sound Select / Data Entry Region

The SP2's sounds and effects are organized by type into 8 categories. 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. These buttons also are used to select menus in Global mode. Depending on which mode the SP2 is in, these buttons can be used to enter numeric values for parameters. [Enter] and [Cancel] buttons are used for storing setups. Pressing [Dump] and [Reset] button will start Demo mode. See page 2-14 discuss for more information.

## 6 Edit

In this region, you can change the timbre of the internal 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 SP2 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 SP2 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 SP2 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 pedal or 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 SP2 here. By default, it will perform a sustain ( or damper ) function. Of course, you can use Kurzweil KP-1, KP-2 or KP-3 too.

**NOTE** Kurzweil keyboards determine the polarity of the pedal when it is turned on.  
If your switch pedal works backwards, you can reverse the polarity by pushing it while turning on your instrument.



**④ 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.

**⑤ Headphone Jack**

Plug your headphone 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.

**⑥ Power Jack**

Plug the cord from the included power adapter into this jack. You must use the adapter comes with your SP2. However, if it should become lost or forgotten, refer see page 2-2 for information about possible substitutes.

**⑦ Power Switch**

Press the white “I” to turn on the SP2 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. The flash memory in the SP2 works like hard drive of a computer and need no power or battery to retain information. So there is no advantage to leaving the power on.

## Programs

Programs consist of presets that include various instrumental sounds and 60 types of drum patterns. With such a variety of excellent sounds, the SP2 can be many instruments 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 [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 SP2 is in Program mode. The LED turns green when SP2 is in Setup mode.

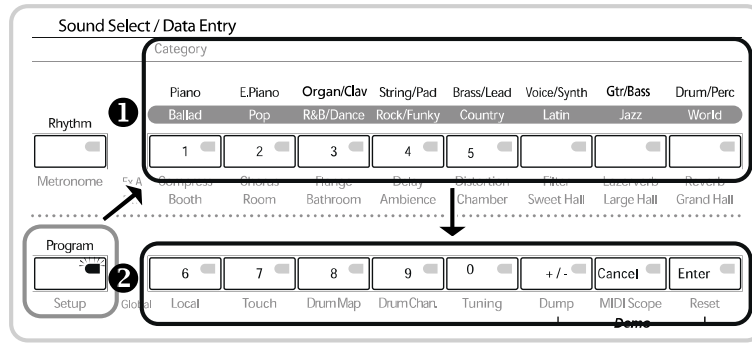
In Program mode, use the Sound Select button in the Sound Select / Data Entry region to select the desired instrumental category( Piano, E.Piano, etc. ) and select a program by pressing one of the eight buttons below the category buttons as suggested in < Figure 3-4 >.

**① Selecting Categories** / You can select the desired instrumental category in this region.

**② Selecting Programs** / You can select the desired program within the current category in this region.

## Chapter 3

### SP2 Performance Features



< Figure 3-4 >

### Program Sound Patch List

	1	2	3	4	5	6	7	8
Piano	1 Stereo Grand	2 Classic Grand	3 Dynamic Grand	4 Concert Grand	5 Yearning	6 Piano For Layers	7 HardRock Piano	8 Ragtime Piano
E.Piano	9 Studio Rhds	10 Fagen Phaser	11 Old Sly Rhds	12 Dyno My E.Pno	13 Digital E.Piano	14 FantAsm Atron	15 90's FM Ballad	16 Big Red Wurly
Organ/Clav	17 Pipes 16'8" Reed	18 Orgiano	19 Pipe Organ	20 Ballad of 3 Bar	21 Prog Rocker'sB	22 Clav Classic	23 Dual Wha Clav	24 Harpsichord
Strings/Pads	25 Film Strings	26 Touch Strings	27 Fast Strings	28 Octave Strings 2	29 Kupiter	30 Orch Pad	31 U Say Tomita ...	32 Spider's Web
Brass/Lead	33 Williams Brass	34 Synth Brass	35 Brass Section	36 Saxes X Trumpets	37 Indy Lead	38 Alazawi	39 Hybrid Pan	40 Old lead
Voice/Synths	41 Scatman	42 Bright Voices	43 Doo><Daa	44 The Croons	45 Eurythm	46 FLG Synth	47 Solar Lead	48 Attack Stack
Gtr/Bass	49 Acoustic Guitar	50 Chours Elec Guitar	51 Lead Rock Guitar	52 Jazz Frets	53 Round and Wound	54 Two Finger Bass	55 Slap Bass	56 Upright Bass
Drum.Perc	57 Studio Drum 1+2	58 Radio Kings /Rods	59 Dirt/ Triphop Kit	60 Electro Kit	61 Virtuoso Perc	62 Rhythm Maker	63 Dual Marimba	64 Vibes

< Chart 3-1 >

The display will shows the ID number of the current program. For example, P64 means that the current program is Vibes ( the 8th program of 8th category from the above chart ).

## 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 your need for band or solo performance situations. The SP2 can store 16 setups which are assigned to each of Sound Select buttons.

**NOTE** Although an SP2 setup can have up to four zones, the 4th zone is reserved for playing rhythm patterns.

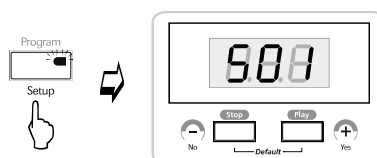
## Selecting Setups

### Setup List

Setup Sounds	1	2	3	4	5	6	7	8
	Piano+Pad	Get up	Acoustic+Synth	Crazy Jam	Yo! Hop	Slider Setup	Summer time	Diano
	9	10	11	12	13	14	15	16
	Baroque Split	Heavenly	Brass&Strings	Untitled	Chord	The Romancer	Clip	Voice / E.Pno

< Chart 3-2 >

Press [Program/Setup] button a few times till its LED changes to green. Press correspondingly numbered Sound Select buttons to select desired one from the SP2's 16 setups. The display will show the ID number of the selected setup (S01~S16) like <Figure 3-5>



< Figure 3-5 Selecting Setups >

## Rhythm Patterns and Metronome

### Selecting Rhythm Patterns

The SP2 has 60 types of pre-recorded drum patterns, as well as a metronome. When used with these features, the [+ / Yes] and [- / No] buttons below the display function as [Play] and [Stop] buttons. To select a drum pattern, press [Rhythm/Metronome] button to enter Rhythm Selection mode and use Sound Select buttons to select desired patterns.

Sound Select / Data Entry										
Category										
Rhythm	Piano	E.Piano	Organ/Clav	String/Pad	Brass/Lead	Voice/Synth	Gtr/Bass	Drum/Perc		
	Ballad	Pop	R&B/Dance	Rock/Funky	Country	Latin	Jazz	World		
	1	2	3	4	5					
Metronome	Effect	Chorus	Flange	Delay	Compress	Distortion	Filter	Lazerverb	Misc	
	Reverb	Booth	Room 1	Room 2	Chamber	Hall 1	Hall 2	Hall 3	Combi	

< Figure 3-6 >

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

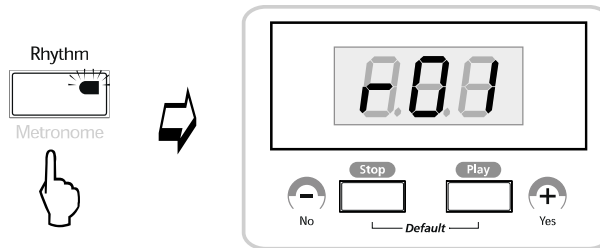
## Chapter 3

### SP2 Performance Features

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

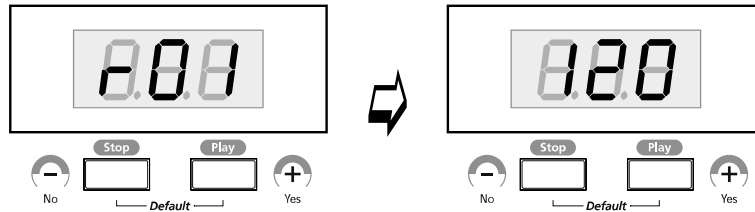
< Chart 3-3 >

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



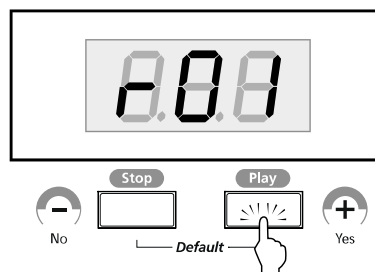
< Figure 3-7 Drum Pattern Number Displayed >

After you make selection, the display shows the ID number of the selected pattern for a few seconds, and then indicates the tempo like < Figure 3-8 >. The tempo can be set from 40 to 280 Beats per Minute (BPM).



< Figure 3-8 >

Pressing [Play] button below the display will start the rhythm pattern and [Stop] button will stop the play. While playing rhythm patterns, the LEDs in those buttons blink red and green alternately.

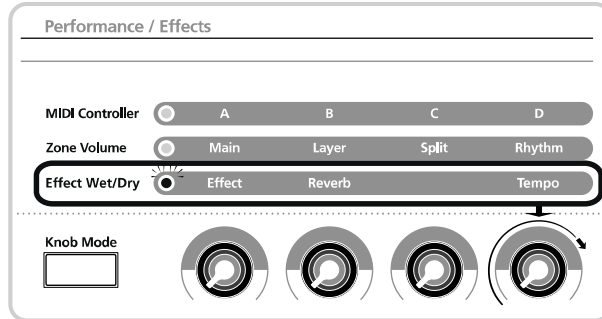


< Figure 3-9 >

## 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.



< Figure 3-10 Changing Tempo >

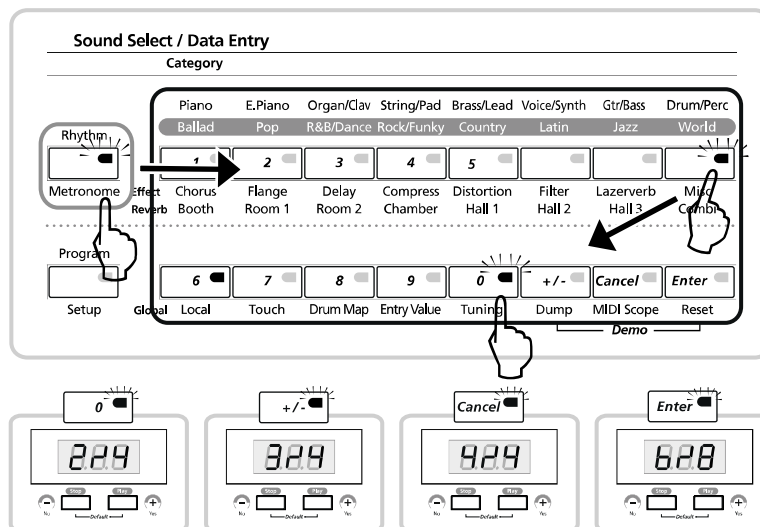
### ◆ Using [Tap Tempo] Button

As you tap a key four times along with the beat while pushing the [Knob Mode] button, the SP2 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. If you want to stop patterns playing during performance, enter Rhythm Selection Mode again by pressing [Rhythm/Metronome] button and press [No] button to stop it.

## Metronome Feature

To activate Metronome feature, press [Rhythm/Metronome] button and select “world” drum pattern category. And then, press [0], [+/-], [Cancel] and [Enter] button in order. Also, holding down [Rhythm/Metronome] button for a few seconds will do the same thing. The SP2 supports 4 types of time signature including 2/4, 3/4, 4/4 and 6/8. Use Sound Select button 1 through 4 to select time signature. After you make selection, the display will look like < Figure 3-11 >. Use Knob D to control the tempo as you do with the drum patterns.



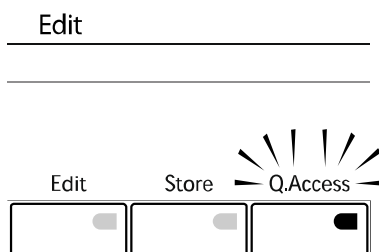
< Figure 3-11 >

**NOTE** Metronome On / Off

Like rhythm patterns, [Play] button will start the metronome and [Stop] button will stop it. While the metronome is running, you can still play the keyboard and change programs using [Program/Setup] button. If you want to stop the metronome during performance, enter Rhythm Selection mode again by pressing [Rhythm/Metronome] button and press [No] button to stop it.

## Using Quick Access Bank

The SP2 has 16 empty slots for storing frequently used sounds, or user created programs and setups. We call them Quick Access bank. You can quickly save sounds to those slots within 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.



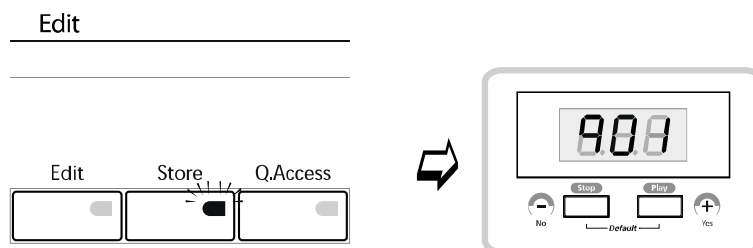
< Figure 3-12 >

## Editing Quick Access Bank

If you need instant access to specific SP2 sounds frequently, that's what Quick Access bank is for. Each of the 16 slots corresponds to the 16 buttons in the Sound Select / Data Entry section on the SP2's front panel.

Make one of your favorite programs or setups the current sound and press [Store] button. The sound will be stored in one of the empty slots and the SP2 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 3-13 >

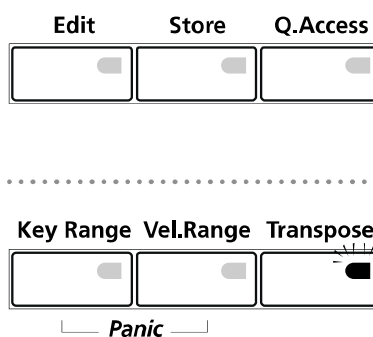


< Figure 3-13 >

### ◆ Using Quick Access Bank

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 SP2'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.

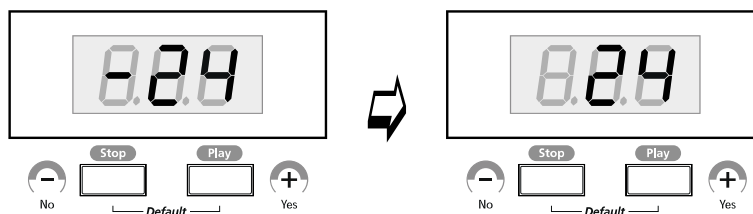
## Transpose



< Figure 3-14 >

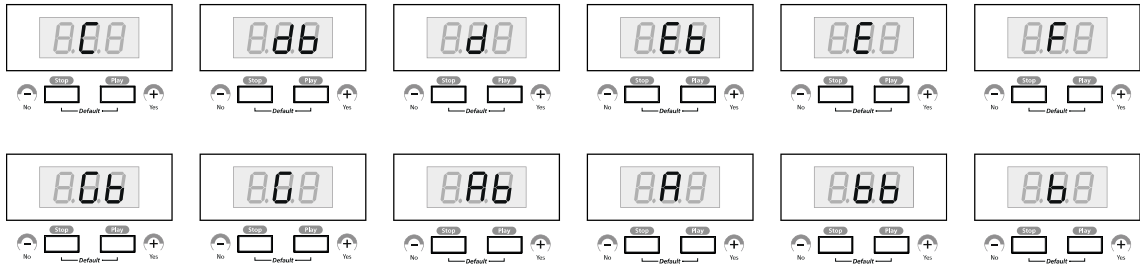
The SP2 offers a quick and easy transpose feature. While holding down [Transpose] button, use [+ /Yes], [- /No] button below the display to subtract or add semitones. The SP2 can be transposed up to two octaves in both directions.

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



< Figure 3-15 >

Also, while holding down [Transpose] button, you can select a desired key signature by pushing a corresponding key from C to B. In this case, the display looks like < Figure 3-16 > according to the selected key signature.



< Figure 3-16 Transpose with keys >

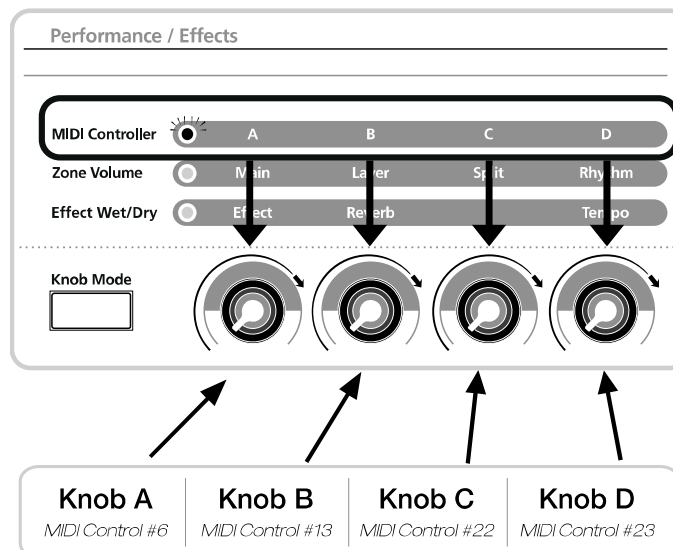
## Using Multi Function Knobs

The SP2 has 4 multi-function knobs labeled A, B, C, D in the Performance/Edit Region. By using [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 “Knob mode”. Each time you press [Knob Mode] button, Knob mode will be selected alternately and the corresponding LED will light.

### ◆ MIDI Controller Function

The SP2 can transmit four different kinds of MIDI message with 4 knobs. Those knobs are programmable and any MIDI control change number, from 0 to 127, can be assigned to them. This feature is very powerful when controlling external MIDI devices, or when using with a computer based sequencer, especially controlling virtual instruments in real time.

The default settings for knobs are described in < Figure 3-17 >



< Figure 3-17 >

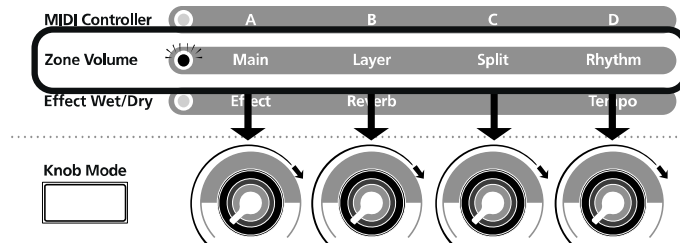


The SP2 shares the same MIDI CC assignment with other Kurzweil instruments. For example, the destinations of knobs A and B are MIDI CC 6 and 13 which PC-series instruments also assigned to slider/knob A and B. In addition, MIDI CC 6, 22, and 23 are assigned to slider B, C and D of the K-series instrument. This makes the SP2 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 SP2.

◆ Zone Volume

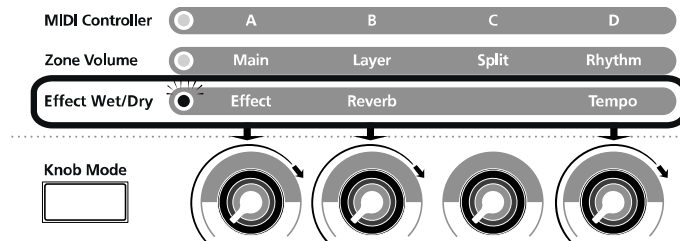
You can control the volume levels of main, layer, and split sounds and rhythm patterns with 4 knobs. It is very useful for live performance, especially when playing with the internal rhythm patterns.



< Figure 3-18 >

◆ Effect Wet / Dry Mix & Tempo Control

You can use 4 knobs to control Effect Wet / Dry mix level and the tempo of rhythm patterns and the SP2's metronome. For more information about Effects, see Chapter 7.



< Figure 3-19 >

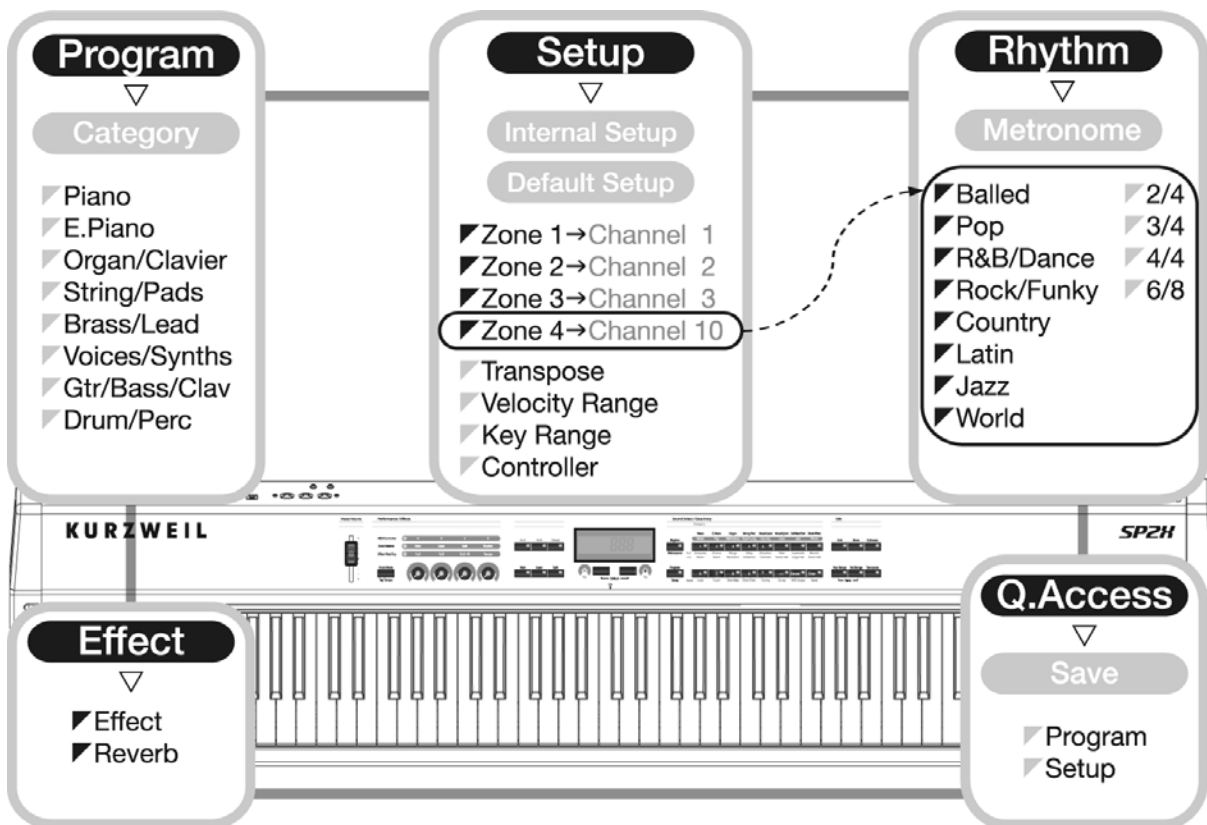


# CHAPTER 4

## Programming Your SP2

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.

◀ Easy Editing. ....	4-2
◀ Changing Effect Setting. ....	4-4
◀ Editing Setup. ....	4-8
◀ Knob Assigning. ....	4-12



< SP2 Internal Structure Diagram >

## Easy Editing (Auto Layer / Split)

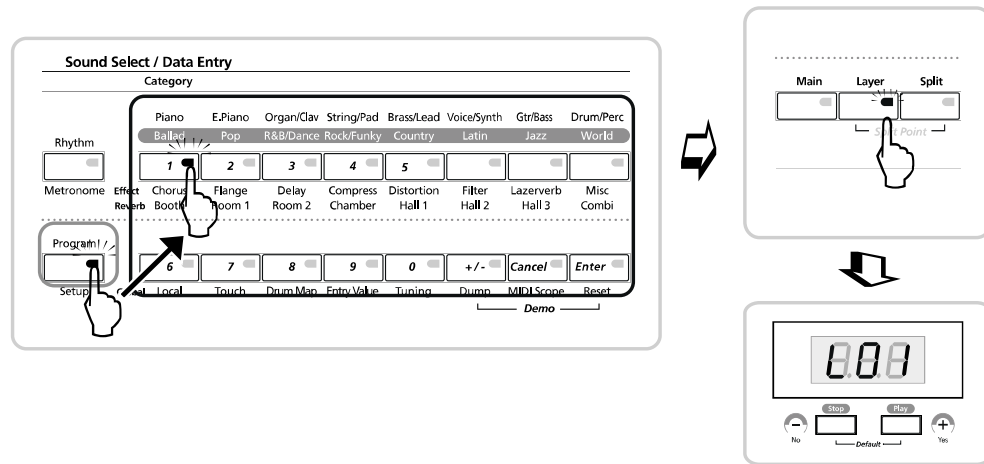
With the AutoSplit feature, users can create new sounds very easily. Tasks such as mixing additional sounds with current ones or splitting the keyboard into multiple parts, each with a different sound, can be done in a very convenient way. Basically, current programs are set to Main sound. You can easily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

### Layering

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

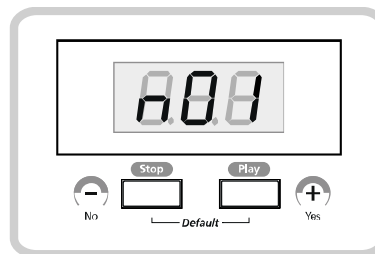
The procedure is as follows:

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



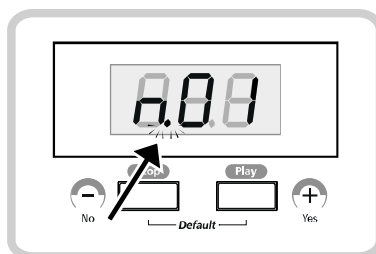
< Figure 4-1 >

2. The LED on the [Layer] button will blink red and the display will look like < Figure 4-1 >, which means the first sound from the first category will be layered. ("L"ayer Program "0" from Category "1")
3. Or, you can select another sound to be layered with the Sound Select button
4. If you want to change your Main sound, press [Main] button and use Sound Select button. (In this case, the display will look like < Figure 4-2 >)



< Figure 4-2 >

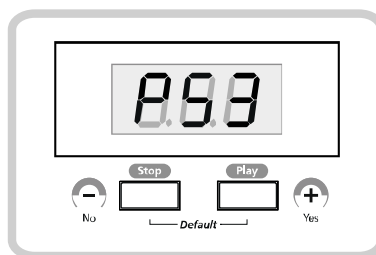
- One more push of [Main] button will turn off the LED on the button and the Main sound will be muted. The display will indicate this by showing a dot ( . ).



< Figure 4-3 >

## 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 bass sound in the lower register within a single SP2 instrument. Pressing [Split] button will flash the LED on it and the display will look like < Figure 4-4 >.

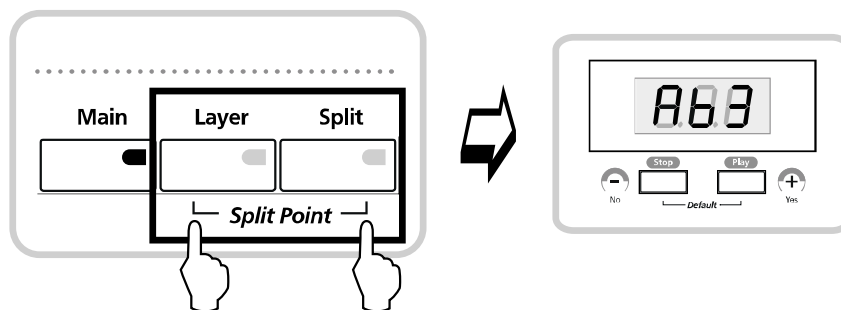


< Figure 4-4 The display indicates that the added split is 053 Bass Guitar >

You can select a split sound with Sound Select button like when you select sounds for layering and the SP2 splits the keyboard at a predetermined point which by default, is Ab3.

### ◆ Split Point

If you want to change this automatic split point, press and hold down [Layer] and [Split] button at the same time. The SP2 will indicate the current split point in the display. Trigger a key which you want to be a new split point. That's it. You have a new split point.



< Figure 4-5 Split Point >

Also, [Layer] button and [Main] button can be used to change or mute the corresponding sounds. As you see in < Chart 4-1 >, the display indicates mute status with a dot (.).

	Display	Button
Main Mute	n.01	OFF
Layer Mute	L.01	OFF
Split Mute	P.53	OFF

< Chart 4-1 Indication of Mute Status >

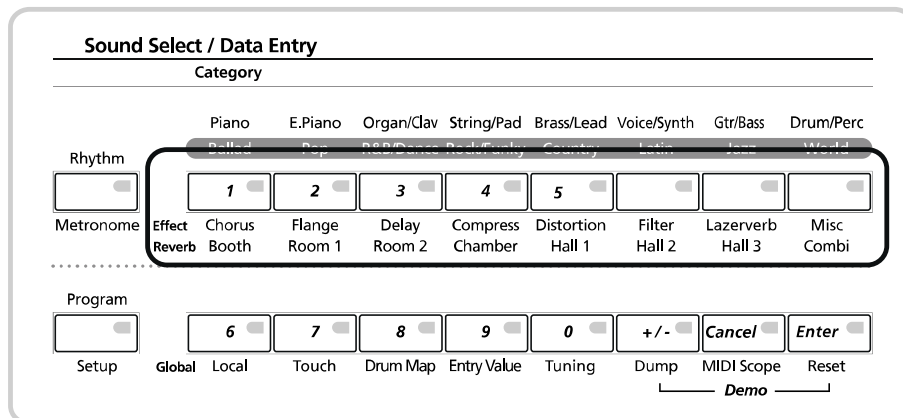
You can store user created sounds in Quick Access Bank. See page 3-10 for more information.

## Changing Effect Setting

In Program mode, users can change the effects associated with the current program or setup. The SP2 has two separate effect blocks called Effect and Reverb. The effects available for Effect block includes choruses, reverbs, distortions, etc. 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 [Effect] and [Reverb] button in Program mode. The chart below shows the available effects.

	1	2	3	4	5	6	7	8
<b>Effect</b>	Chorus	Flange	Delay	Compress	Distortion	Filter	Lazerverb	Misc
<b>Reverb</b>	Booth	Room 1	Room 2	Chamber	Hall 1	Hall 2	Hall 3	Combi

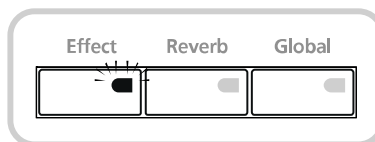
< Chart 4-2 Effect List >



< Figure 4-6 >

### • Changing Effects

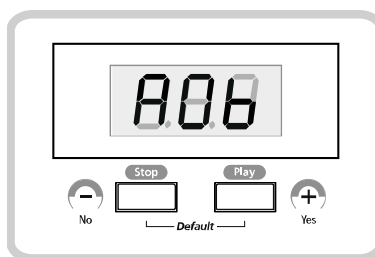
To change an effect, press [Effect] button. The LED in Effect button will light. Users can select types of effects with the upper part of Sound Select buttons and select variations with the lower part of Sound Select buttons. The same method will work for Reverb and you can store your changes in a Quick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



< Figure 4-7 Buttons for Effect Setting >

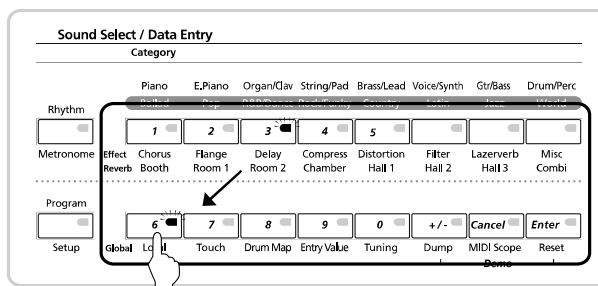
→ For this example, we're going to change the Effect associated with Program 1 Stereo Grand Piano.

1. Select Program 1 ( n01 ) Stereo Grand Piano.
2. Press [Effect] button. The display will show "E06" and the LED in [Edit] button in the Edit region of the SP2's front panel will blink. The capital "E" means that the SP2 is now in Effect Editor mode and the following two digits indicate the type and the variation number of the effect associated with the currently selected program. For more information about the effects and reverbs, refer to Appendix B-7, Effects and Reverbs.



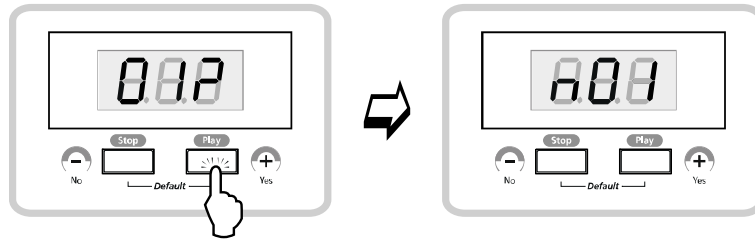
< Figure 4-8 The display in Effect Editor mode >

3. Select the desired type of effect with the upper part 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 selection, select the desired preset with one of the the lower 8 buttons.



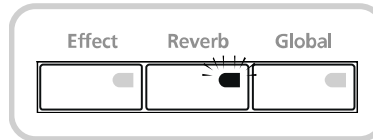
< Figure 4-9 Selecting Effect Presets >

4. Press [Store] in the Edit region. The SP2 will ask if you want to store the changed effect setting of the current Program. Store the change with [+ / Yes] button and the procedure is completed. Now, the SP2 will return to Program mode.



< Figure 4-10 Storing Effect Setting >

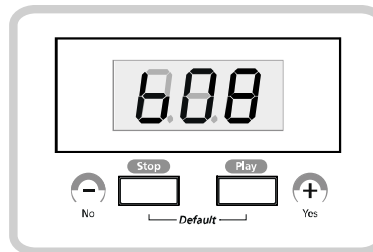
- Changing Reverbs



< Figure 4-11 Reverb button >

→ For this example, we're going to change the Reverb applied to Program 49, Acoustic Guitar.

1. Select Program 49 ( n49 ) Acoustic Guitar
2. Press [Reverb] button. The display will show "b08" and the LED in [Edit] button in the Edit region of the SP2's front panel will blink. This means that the SP2 is now in Reverb Editor mode. The capital "b" means that the SP2 is now in Reverb Editor mode and the following two digits indicate the type and the variation number of the reverb associated with the currently selected program.

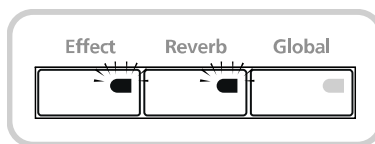


< Figure 4-12 The display in Reverb Editor mode >

3. Select the desired type of reverb with the upper part of Sound Select buttons in the Category region. The buttons are labeled Room1, Room2, Chamber, Hall1, Hall2, and Hall3. After making 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 SP2 will ask if you want to store the changed effect setting of the current Program. Store the change with [+ / Yes] button and the procedure is completed. Now, the SP2 will return to Program mode.



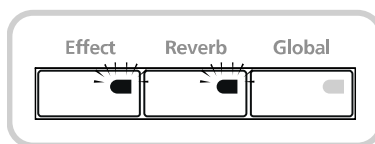
- Changing Combination Effect



< Figure 4-13 The Buttons Used within Combination Effect >

→ For this example, we're going to change the Combination Effect applied to Program 17, Pipe 16'8, reed organ.

1. Select Program 17 ( n17 ), Pipe 16'8, reed organ.
2. Press [Effect] button. The display will show "A55" and the LED in [Edit] button in the Edit region of the SP2's front panel will blink. This means that the SP2 is now in Effect Editor mode.
3. First, select the desired type of effect with the upper part 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 selection, select the desired preset with one of the the lower 8 buttons.
4. While holding down [Effect] button, press [Reverb] button. Make sure that the two LEDs in each button light.



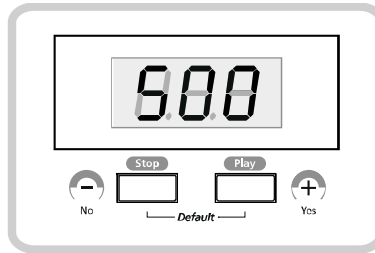
< Figure 4-14 The LEDs blink together with Combination Effect >

5. The display will show "b21" that indicates the current Combination Effect preset associated with the program.
6. Now, select the desired type of reverb with the upper part of Sound Select buttons in the Category region. The buttons are labeled Room1, Room2, Chamber, Hall1, Hall2, and Hall3. After making selection, select the desired preset with one of the the lower 8 buttons.
7. Press [Store] in the Edit region. The SP2 will ask if you want to store the changed effect setting of the current Program. Store the change with [+ / Yes] button and the procedure is completed. Now, the SP2 will return to Program mode.

## Editing Setups

This section will help you understand and tame the most powerful feature of the SP2, Setup, through a few examples.

- There are three basic steps in editing setups.
1. In Setup mode, press [-/No] button and [+ /Yes] button at the same time. The display will show “S00” that means Default Setup is selected. Press [Edit] button. The blinking LED in the button indicates that the SP2 is in Editing mode.



< Figure 4-15 Default Setup is Selected >

2. [-/No] and [+ /Yes] button, 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 if necessary.
3. After editing, store the changes with the associated setup.

## The Structure of Setup

Before we begin with the 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 SP2'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 SP2 can receive MIDI data on only one channel at a time when using with external MIDI devices, the SP2 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 SP2 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

In fact, you can consider a program as a setup with only one zone. Thus, changing zone parameters actually can affect how the program works. For example, in program mode, pressing [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

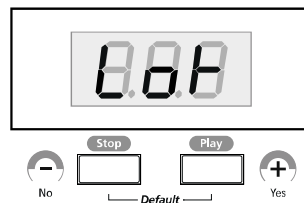
Default Setup is a “blank” setup except for a handful of typical controller assignments with Autosplit Off. If you want to create a completely new setup from scratch, we recommend you to use Default Setup as a starting point.

Now you’re ready to create new setups or edit existing setups and store them in Quick Access bank.

To make changes to setups, press [Setup] button and then, press [Edit] button. Pressing [Edit] button will light the LED in it and the display will show the information about Main sound. Users can edit parameters associated with those sounds with [Layer] or [Split] button. Select sounds you want to edit with [Main], [Layer] or [Split] button. Use [Key Range Button] to edit the key range for the selected sound.

## Key Range

Key Range determines where 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 [Setup] button, [Edit] button, and then press [Key Range] button in order. The LED in [Key Range] button will flash. The display will look like < Figure 4-16 >.



< Figure 4-16 Setting the Lowest Note for the Zone >

Trigger the key you want to be the lowest note for the zone. When you do, the display will look like < Figure 4-17 >.



< Figure 4-17 Setting the Highest Note for the Zone >

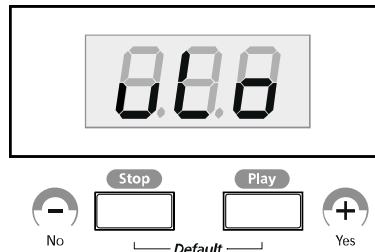
Trigger the key you want to be the highest note for the zone. When you do, the LED in [Key Range] button will be turned off, and setting the key range is done.

## 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 of drum kits when played at a greater velocity.

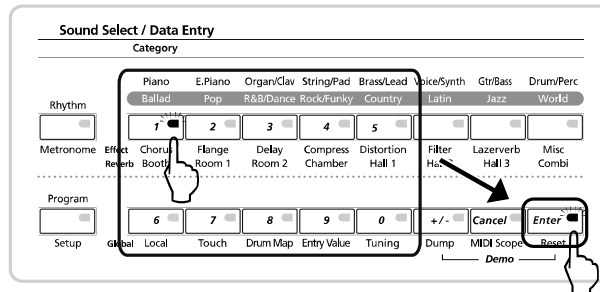
To edit Velocity Range, press [Setup] button and [Edit] button. Then, press [Velocity Range] button. The LED in [Velocity Range] will flash and the display will look like < Figure 4-18 >.

- Low Velocity
- High Velocity



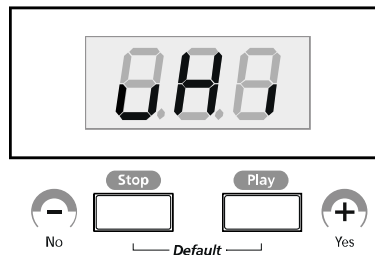
< Figure 4-18 Setting the Lowest Velocity >

Using Sound Select Buttons as numeric buttons, enter the lowest velocity for the sound you want to be triggered within specific range.



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

Press [Enter] button. Now, the display will set for the highest velocity input like < Figure 4-20 >



< Figure 4-20 Setting the Highest Velocity >

Using Sound Select Buttons as numeric buttons again, set the highest velocity this time. Press [Enter] to complete the procedure. The LED in the [Velocity Range] button will be turned off, and setting the velocity range is done.

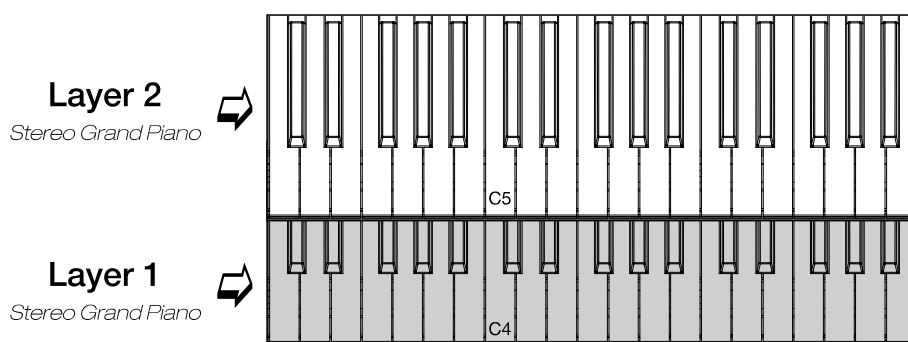
☑ **NOTE** The values for Velocity Range should be from 0 to 127.

## Transpose

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

1. Select any sound from Main, Layer or Split sounds, which you want to transpose.
2. Press [Setup] and [Edit] button.
3. Press [Transpose] button.
4. Set a value of transposition with Sound Select buttons.
5. Press [Transpose] button again to confirm.

< 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 so called an “Octave Piano” sound, which plays in octave unison.



< Figure 4-21 Transposition >

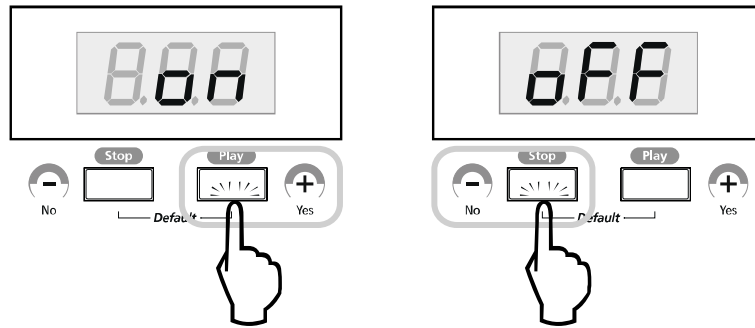
## Editing Effect Settings

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 globally 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 [Setup] button and [Edit] button. While holding down [Knob Mode] button, press your switch pedal to enable or disable the switch pedal associated with the selected program. The display will show whether the switch pedal is enabled or disabled.

See < Figure 4-22 >

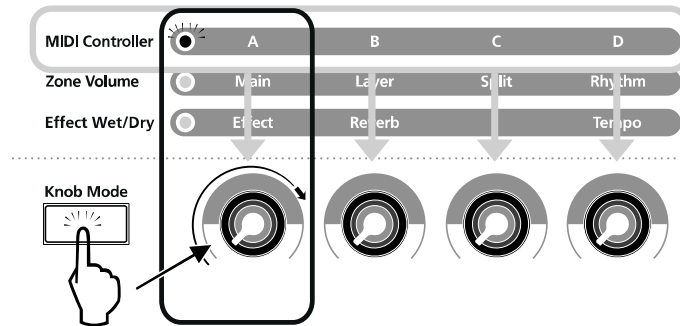


< Figure 4-22 Turning On and OFF switch pedal >

## Assigning Knobs

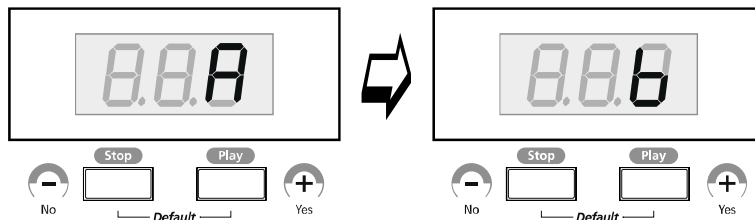
You can program Knobs A-D to send any MIDI control change number. The procedure is like following:

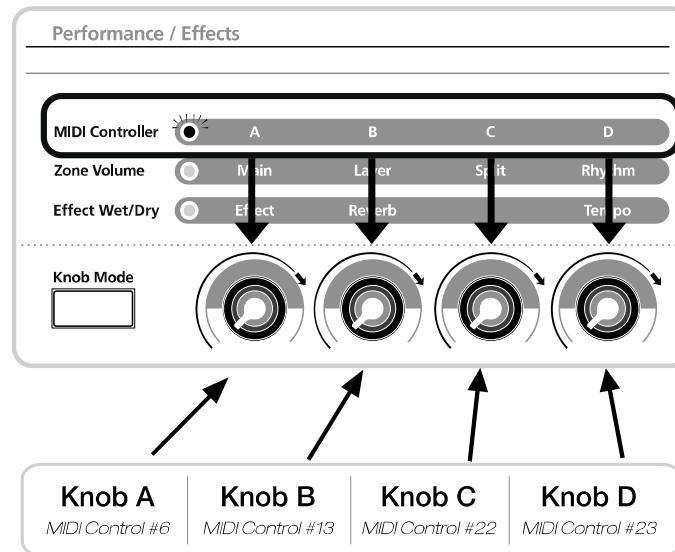
Press [Setup] button and [Edit] button. While holding down [Knob Mode] button, turn one of the knobs you want to program.



< Figure 4-23 Selecting a Knob to be programmed >

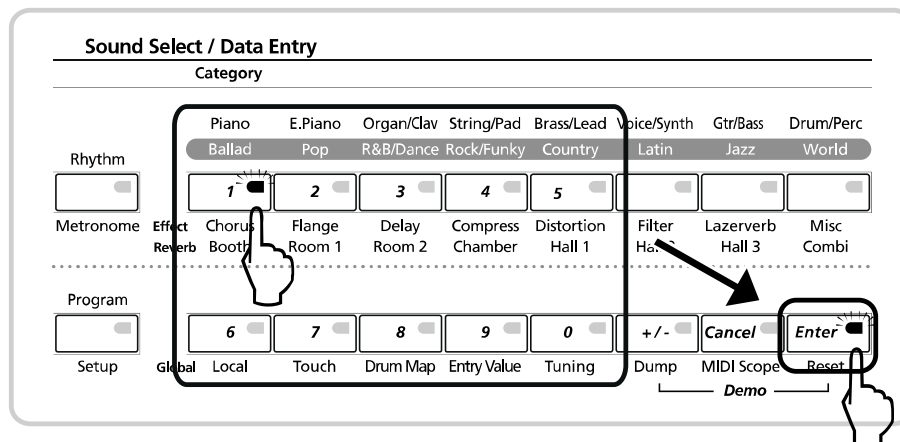
The display will show which knob will be programmed for a short while and then the MIDI control number currently assigned to it. See < Figure 4-24 >. The Knob to be programmed is A and the assigned MIDI control number is 6.





< Figure 4-24 >

Assign a MIDI control number you want with Sound Select buttons and press [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 >