SP1

Musician's Guide

KURZWEIL®

It's the **sound**.®
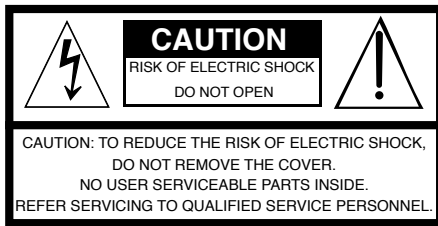
IMPORTANT SAFETY & INSTALLATION INSTRUCTIONS

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 the Safety and Installation Instructions and Explanation of Graphic Symbols before using the product.

2. This product must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a power supply cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet which is properly installed and grounded in accordance with all local codes and ordinances.

   DANGER: Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Do not modify the plug provided with the product – if it will not fit the outlet, have a proper outlet installed by a qualified electrician. Do not use an adaptor which defeats the function of the equipment-grounding conductor. If you are in doubt as to whether the product is properly grounded, check with a qualified serviceman or electrician.

3. 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.

4. This product should only be used with a stand or cart that is recommended by the manufacturer.

5. 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 a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.

6. This product should be located so that its location or position does not interfere with its proper ventilation.

7. The product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.

8. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.

9. 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.

10. 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.

11. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

12. The product should be serviced by qualified service personnel when:
    A. The power supply, power cord or plug have 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.

13. 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.

14. **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 the 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.

The normal function of the product may be disturbed by strong electromagnetic interference. If so, simply reset the product to resume normal operation by following the instructions in the manual. If normal function does not resume, please use the product in another location.

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

IMPORTANT SAFETY INSTRUCTIONS

1) Read these instructions.

2) Keep these instructions.

3) Heed all warnings.

4) Follow all instructions.

5) Do not use this apparatus near water.

6) Clean only with dry cloth.

7) Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.

8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet

10) Protect the power cord and power supply adapter from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11) Only use power adapters and attachments/accessories specified by the manufacturer.

12) Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.

13) Unplug this apparatus during lightning storms or when unused for long periods of time.

14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Warning: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. Do not expose this equipment to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the equipment.

To completely disconnect this equipment from the AC Mains, disconnect the power supply cord plug from the AC receptacle.

Kurzweil International Contacts

Contact the Kurzweil office listed below to locate your local Kurzweil representative.

US Customers:

American Music & Sound
925 Broadbeck Dr #220
Newbury Park, CA 91320

Tel: 800-431-2609
Fax: 818-597-0411
Email: info@americanmusicandsound.com

Customers outside the US:

Young Chang Co., LTD.
178-55, Gajwa-Dong, Seo-Ku
Incheon, Korea
Post Code: 404-714

Tel: +82-32-570-1576
Fax: +82-32-576-2340

www.kurzweil.com

support@kurzweil.com

www.facebook.com/kurzweilmusicsystems/

www.twitter.com/KurzweilMusic

www.youtube.com/user/KurzweilTutorials

Table of Contents

Features of the SP1

- 16 instrument sounds in 4 categories:
  - **Piano:** 4 Acoustic Piano sounds
  - **Keyboards:** 2 Electric Piano sounds, Clav, Organ
  - **Strings/Pads:** 2 String Section sounds, 2 Synthesizer Pad sounds
  - **Other:** Brass, Winds, Acoustic Bass, Electric Bass
- 5 Favorites buttons for saving your favorite instrument sounds, combinations, and EQ/FX settings
- 3 band Master EQ
- 4 FX with controls: Reverb, Chorus, Tremolo, Delay
- Split, Layer, and Dual instrument settings
- Audio In jacks for playing along with an MP3 player or other external audio device
- 256 voices of polyphony
- External Control section for controlling external MIDI instruments
- MIDI In/Out ports and Computer USB ports for connecting to external MIDI equipment

Quick Start

Be sure to check the Kurzweil website at www.kurzweil.com for new documentation and software updates.

Setting Up the SP1

1. If your SP1 has been out in the cold during shipping, give it time to warm up to room temperature before powering it on, since condensation may have formed inside.

2. Place the SP1 on a keyboard stand or on a hard, flat, level surface.

3. Connect the DC power adaptor to the SP1 DC Power jack.

4. Make sure your power outlet is compatible with the included power adaptor, then plug the power cable into the power outlet.

5. Plug the included Switch Pedal into the SW1 (SUSTAIN) jack on the SP1 rear panel.

6. If you have a MIDI CC pedal (also known as a MIDI expression or volume pedal), plug it into the CC (VOLUME) jack for volume control.

7. If you are using speakers, turn the master volume all the way down on your amplifier or mixer. Using standard (1/4-inch) audio cables, first plug into the input jacks of your amplifier or mixer, then plug the other end of the cables into the SP1 AUDIO OUT jacks. (Connecting in this order minimizes the possibility of static discharge damage.) For a mono signal, only use the LEFT (MONO) jack, and leave the RIGHT jack unplugged.

8. If you are using headphones, connect stereo headphones to the headphone jack on the rear panel.

9. Turn the SP1 MASTER VOLUME knob (on the far left side of the front panel) counter clockwise to the minimum setting.

Powering On the SP1

1. Power on the SP1 by pressing and holding the POWER button on the right rear panel.

2. If you are using speakers, turn up the volume on your amplifier or mixer.

3. Slowly turn up the SP1 MASTER VOLUME knob and play some notes to check the volume level. (If you have a CC pedal plugged into the CC (VOLUME) jack, make sure it is set to the maximum volume position).

4. If you are using speakers and the SP1 is not loud enough, turn up the volume on your amplifier or mixer.

5. If you are using a mixer and hear distortion, reduce the gain level on the mixer, or use the mixer's Pad button if it has one (a button that typically decreases the audio input level by 20dB).

6. After using the SP1, if you are using speakers, turn the master volume all the way down on your amplifier or mixer before powering off the SP1.

Auditioning SP1 Sounds

Use the PIANO, KEYBOARDS, STRINGS/PADS, and OTHER sections to select single instruments to play. See Selecting Sounds on page 8 for details on playing a Split, Layer, or Dual sound.

Automatic Power Saving

The SP1 has an automatic power saving feature that will automatically power off the SP1 after 4 hours of inactivity, in order to conserve electricity.

The Front Panel

TRANSPOSE Buttons

MASTER VOLUME Knob

EXTERNAL CONTROL

DISPLAY

PIANO, KEYBOARDS, STRINGS/PADS, OTHER

FUNCTIONS

EQ, FX

FAVORITES

PITCH WHEEL and MODULATION WHEEL
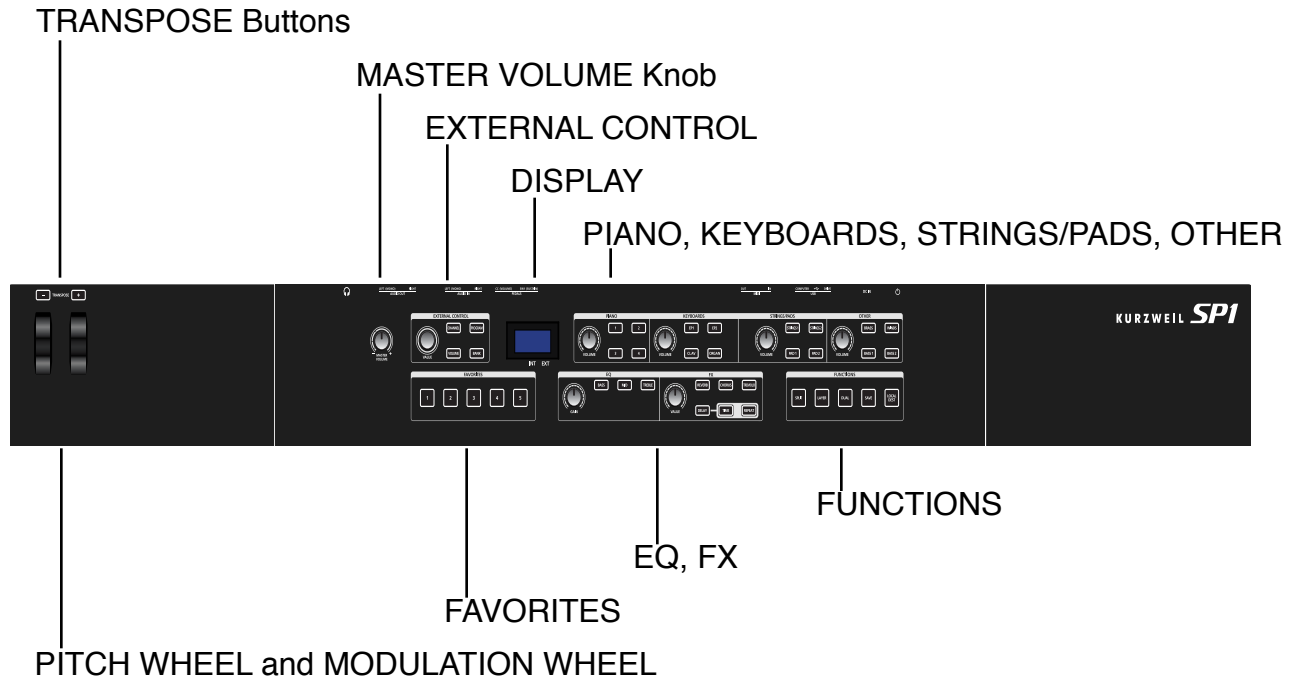
MASTER VOLUME Knob

The MASTER VOLUME knob controls the volume level of the AUDIO OUT and HEADPHONE jacks.

DISPLAY

Use the DISPLAY to view instrument numbers, or values for EQ, FX and EXTERNAL CONTROL. The INT and EXT indicators light up depending on whether an internal or external value is being displayed.

TRANSPOSE Buttons

The TRANSPOSE buttons can be used to change the tuning of notes played on the SP1 keyboard in semitones (also known as half steps). Press both TRANSPOSE buttons simultaneously to reset the transposition to 0.

PITCH WHEEL and MODULATION WHEEL

Use the PITCH WHEEL to bend the pitch of notes two half-steps up or down. Use the MODULATION WHEEL to adjust the vibrato amount.

PIANO, KEYBOARDS, STRINGS/PADS, OTHER

Use the PIANO, KEYBOARDS, STRINGS/PADS, and OTHER sections to select instruments to play. The VOLUME knob in each section can be used to adjust the volume of each instrument, when playing a Split, Layer, or Dual sound. See Selecting Sounds on page 8 for details.

FUNCTIONS

Use the FUNCTIONS section to create a Split, Layer, or Dual sound, and save the current settings of the SP1 to one of the five FAVORITES buttons. You can also adjust the SP1 MIDI destination. See FUNCTIONS on page 9 for details.

EQ, FX

Use the EQ and FX sections to adjust the EQ and FX settings for the currently selected instruments. See EQ on page 12 and FX on page 12 for details.

FAVORITES

The FAVORITES buttons allow you to save and recall five favorite settings. See FAVORITES on page 13 for details.

EXTERNAL CONTROL

The EXTERNAL CONTROL section allows you to control an external MIDI instrument connected by a MIDI cable to the SP1 MIDI OUT port. See EXTERNAL CONTROL on page 14 for details.

The Rear Panel

POWER Button

Press and hold the POWER button to power the SP1 on or off.

DC Power Jack

Plug the included power adaptor into the DC Power jack.

USB DRIVE Port

Use the USB DRIVE port to connect the SP1 to a USB hard drive in order to update the software of the SP1.

USB COMPUTER Port

Use the USB COMPUTER port to connect the SP1 to a computer in order to do the following:

- Use the SP1 as a MIDI controller to play software instruments on a computer.
- Use computer software to record and play MIDI songs using SP1 sounds.

MIDI IN and OUT Ports

Use the MIDI ports to communicate with other MIDI modules and controllers. The OUT port is the MIDI transmitting port, and the IN port is the MIDI receiving port.

To use the SP1 as a MIDI controller for another sound module, use a MIDI cable to connect the SP1's MIDI OUT port to the MIDI input port of the module that you want to control.

To control the SP1 using another MIDI controller, use a MIDI cable to connect the SP1's MIDI IN port to the MIDI output port of the controller that you will be using.

SW1 (SUSTAIN) Jack

Use the SW1 (SUSTAIN) jack to connect a switch pedal to control sustain. One switch pedal is included with the SP1.

CC (VOLUME) Jack

Use the CC (VOLUME) jack to connect a MIDI CC pedal (also known as a MIDI expression or volume pedal), which can be used to control the volume of the SP1.

The optional Kurzweil CC-1 continuous control pedal will work best with the SP1, but it is also possible to use third-party continuous control pedals designed for keyboards. Compatible pedals should use a 10 kΩ linear-taper potentiometer, with a 1/4 inch tip-ring-sleeve (stereo) plug with the wiper connected to the tip.

AUDIO IN LEFT (MONO) and RIGHT Jacks

Use the AUDIO IN jacks to connect an MP3 player or other external audio device. Any audio signal plugged into these jacks will be output from the AUDIO OUT LEFT (MONO) and RIGHT Jacks, as well as the HEADPHONE Jack.

AUDIO OUT LEFT (MONO) and RIGHT Jacks

Use the AUDIO OUT jacks to connect to an amplifier or mixer. See for details.

HEADPHONE Jack

Use the HEADPHONE jack located on the left rear panel of the instrument to listen to the SP1 on stereo headphones. You will need a 1/8-inch-to-1/4-inch adapter in order to use headphones that have a smaller mini plug connector.

When headphones are plugged in, audio is still transmitted from the AUDIO OUT jacks.

Selecting Sounds

Play a Single Instrument

To play a single instrument sound, press any of the 4 instrument buttons in any of the 4 categories (PIANO, KEYBOARDS, STRINGS/PADS, OTHER).

If the SPLIT, LAYER, or DUAL buttons are turned on, you must turn these buttons off to play a single instrument.

Play a SPLIT, LAYER, or DUAL Instrument

The SPLIT function allows you to play multiple instruments, split between the left and right hand regions of the keyboard.

The LAYER function allows you to play multiple instruments layered on the keyboard, such that more than one instrument sound can be produced by playing one key.

The DUAL function allows you to split one instrument sound between the left and right hand regions of the keyboard, each transposed to the same range for 4-hand use (ideal for duets or instructors and students).

See below for details on using each of the FUNCTIONS.

FUNCTIONS

SPLIT

The SPLIT function allows you to play multiple instruments, split between the left and right hand regions of the keyboard.

Follow these steps to use the SPLIT function:

1. If the SPLIT, LAYER, or DUAL buttons are turned on, you must turn these buttons off to create a new Split.

2. Select an instrument sound for the right hand of the Split by pressing any of the 4 instrument buttons in any of the 4 categories (PIANO, KEYBOARDS, STRINGS/ PADS, OTHER).

3. Press and turn on the SPLIT button.

4. Select an instrument sound for the left hand region of the Split by pressing any of the 4 instrument buttons in an unused category.

5. Use the VOLUME knob in each used category to adjust the volume of each instrument in the Split.

6. You can change the Split Point (boundary between left and right hand regions of the keyboard) by holding the SPLIT button for a moment, then pressing a key. The pressed key will become the highest key of the left hand region.

7. You can save the Split to one of the FAVORITES buttons by turning on the SAVE button, then pressing one of the FAVORITES buttons.

8. Press and turn off the SPLIT button to exit SPLIT mode.

LAYER

The LAYER function allows you to play multiple instruments layered on the keyboard, such that more than one instrument sound can be produced by playing one key.

Follow these steps to use the LAYER function:

1. If the SPLIT, LAYER, or DUAL buttons are turned on, you must turn these buttons off to create a new Layer.

2. Select an instrument sound by pressing any of the 4 instrument buttons in any of the 4 categories (PIANO, KEYBOARDS, STRINGS/PADS, OTHER).

3. Press and turn on the LAYER button.

4. Select an instrument sound for the second layer by pressing any of the 4 instrument buttons in an unused category.

5. Use the VOLUME knob in each used category to adjust the volume of each instrument in the Layer.

6. You can add a Split to your Layer by pressing the SPLIT button, then selecting an instrument for the left hand region of the keyboard by pressing any of the 4 instrument buttons in an unused category.

7. You can save the Layer to one of the FAVORITES buttons by turning on the SAVE button, then pressing one of the FAVORITES buttons.

8. Press and turn off the LAYER button to exit LAYER mode.

DUAL

The DUAL function allows you to split one instrument sound between the left and right hand regions of the keyboard, each transposed to the same range for 4-hand use (ideal for duets or instructors and students).

Follow these steps to use the DUAL function:

1. If the SPLIT or LAYER buttons are turned on, you must turn these buttons off to use the DUAL function.

2. Select an instrument sound by pressing any of the 4 instrument buttons in any of the 4 categories (PIANO, KEYBOARDS, STRINGS/PADS, OTHER).

3. Press and turn on the DUAL button.

4. You can save a DUAL configuration to one of the FAVORITES buttons by turning on the SAVE button, then pressing one of the FAVORITES buttons.

5. Press and turn off the DUAL button to exit DUAL mode.

SAVE

The SAVE function allows you to save the current settings of the SP1 to one of the five FAVORITES buttons. This includes the current instrument selection, instrument volume, SPLIT/LAYER/DUAL configuration, EQ settings and FX settings.

Follow these steps to use the SAVE function:

1. Press the SAVE button.

2. Press one of the five FAVORITES buttons to save the current settings of the SP1 to the desired FAVORITES button.

LOCAL DEST

The LOCAL DEST button controls the destination of MIDI notes produced by playing the SP1 keyboard. Pressing the LOCAL DEST button will step through the options, **LOCAL + MIDI**, **LOCAL**, or **MIDI**. The color of the LOCAL DEST button changes depending on the current setting.

LOCAL + MIDI: When the LOCAL DEST button is off, MIDI notes will be sent to the local SP1 sound engine, as well as the MIDI OUT and USB Computer ports.

LOCAL: When the LOCAL DEST button is green, MIDI notes will only be sent to the local SP1 sound engine.

MIDI: When the LOCAL DEST button is red, MIDI notes will only be sent to the MIDI OUT and USB Computer ports.

EQ

The EQ section allows you to control the Gain of the Low, Mid, and Treble frequencies for the currently selected instruments.

When selecting a single instrument, the gain of each frequency is set to 0.

When saving a single, Split, Layer or Dual instrument to a FAVORITES button, the current EQ settings are saved.

LOW, MID, TREBLE

Press an EQ button (LOW, MID, or TREBLE) to see the current Gain setting of the selected frequency.

GAIN

Use the GAIN knob to change the Gain setting of the selected frequency. Negative values reduce the selected frequency. Positive values boost the selected frequency. A value of 0 causes no change to the selected frequency.

FX

The FX section allows you to control the amount of the Reverb, Chorus, Tremolo and Delay effects for the currently selected instruments. You can also control the Time and Repeat settings of the Delay effect.

FX settings can be saved to a FAVORITES button. See for details.

REVERB, CHORUS, TREMOLO, DELAY, TIME, REPEAT

Press an FX button (REVERB, CHORUS, TREMOLO, DELAY, TIME, or REPEAT) to select an effect parameter and see its current VALUE setting. The selected effect can be controled by the VALUE knob.

VALUE

Use the VALUE knob to change the settings of the selected effect parameter. VALUE can be set from 000 to 127.

When the **REVERB**, **CHORUS**, **TREMOLO**, or **DELAY** buttons are turned on, the VALUE knob controls each effect amount. A VALUE setting of 000 is the minimum amount of effect. A VALUE setting of 127 is the maximum amount of effect.

When the Delay effect is in use, turn on the **TIME** button to control the Delay Time by using the VALUE knob. A VALUE setting of 000 is the minimum Delay Time. A VALUE setting of 127 is the maximum Delay Time.

When the Delay effect is in use, turn on the **REPEAT** button to control the amount of Delay Repeats (also known as Delay Feedback) by using the VALUE knob. A VALUE setting of 000 is the minimum amount of Delay Repeats. A VALUE setting of 127 is the maximum amount of Delay Repeats.

FAVORITES

The FAVORITES buttons allow you to save and recall five favorite settings. Saved settings include the current instrument selection, instrument volume, SPLIT/LAYER/DUAL configuration, EQ settings and FX settings.

Press one of the five FAVORITES buttons to instantly recall your settings.

See the SAVE function section above for details on saving the current settings of the SP1 to one of the five FAVORITES buttons.

EXTERNAL CONTROL

The EXTERNAL CONTROL section allows you to control an external MIDI instrument connected by a MIDI cable to the SP1 MIDI OUT port, or to control MIDI software on a computer connected by a USB cable to the SP1 USB COMPUTER port.

VALUE

Use the VALUE knob to change the value of the currently selected EXTERNAL CONTROL function (CHANNEL, PROGRAM, VOLUME, or BANK).

CHANNEL

When the CHANNEL button is turned on, use the VALUE knob to select a MIDI channel to be used to control an external MIDI instrument. When the CHANNEL button is pressed, the previously selected MIDI channel number is shown in the display.

The CHANNEL setting also determines which MIDI channel will be used for the PROGRAM, VOLUME, and BANK functions.

PROGRAM

When the PROGRAM button is turned on, use the VALUE knob to select a MIDI program (000-127) on an external MIDI instrument. (Programs are also known as instruments, presets, sounds, voices, or patches.) When the PROGRAM button is pressed, the previously selected MIDI program number is shown in the display.

The CHANNEL button determines which channel will be used to select a program. Make sure the desired channel is selected before using the PROGRAM button.

VOLUME

When the VOLUME button is turned on, use the VALUE knob to control MIDI channel volume (CC #7, values 000-127) on an external MIDI instrument. When the VOLUME button is pressed, the previously selected volume value is shown in the display.

The CHANNEL button determines which channel will be used to set a volume. Make sure the desired channel is selected before using the VOLUME button.

BANK

When the BANK button is turned on, use the VALUE knob to select a MIDI bank (CC #32, values 000-127) to be used to select programs on an external MIDI instrument. When the BANK button is pressed, the previously selected MIDI bank number is shown in the display.

The CHANNEL button determines which channel will be used to select a bank. Make sure the desired channel is selected before using the BANK button.

Note that after selecting a bank, you must use the PROGRAM button to select a program in that bank.

About BANK and PROGRAM messages

Most MIDI instruments contain a group of 128 programs in each bank (often numbered 0-127). MIDI bank messages allow you to select programs greater than 127.

For example, in most MIDI instruments, bank 0 contains programs 0-127, bank 1 contains programs 128-255, bank 2 contains programs 256-383, bank 3 contains programs 384-511, etc.

To select programs greater than 127, first select the appropriate bank for the desired program number range. After selecting a MIDI bank, use the PROGRAM button to select a program in that bank.

USB MIDI

Use the USB COMPUTER port to connect the SP1 to a computer in order to do the following:

- Use the SP1 as a MIDI controller to play software instruments on a computer.
- Use computer software to record and play MIDI songs using SP1 sounds.

When the SP1 USB COMPUTER port is connected to a computer with a USB cable, the SP1 MIDI inputs and outputs will appear in your music software as "Kurzweil SP1".

Physical Specifications

Keyboard:	88 note fully-weighted hammer-action with velocity sensitive keys
Display:	3 digit LCD
Polyphony:	256 Voice Polyphony
Quick Split / Layer / Dual:	Save settings to 5 Favorites
Programs:	16 Instruments (4 categories of 4 instrument sounds each)
Effects:	Reverb, Chorus, Tremolo, Delay
Controllers:	• Pitch wheel • Modulation wheel • 2 Transpose buttons • Master EQ section • FX section • 5 Favorites buttons • Master Volume knob • 4 category Volume knobs • Switch pedal input (Sustain) • Continuous control pedal input (Volume)
Analog Outputs / Inputs:	• Two 1/4" Outputs (Stereo Pair) • Two 1/4" Inputs (Stereo Pair)
Headphones:	1/4" Rear-Mounted Stereo Headphone Output
MIDI:	IN, OUT
USB:	• Complete MIDI functionality over USB • Software updates from USB Flash Drive
Height:	(5.2") (14.6cm)
Depth:	(15") (38.1cm)
Length:	(52.5") (133.35cm)
Weight:	(27.25 lb.) (12.36 kg)
Power:	External Power Supply, 15VDC 2.5A

Specifications subject to change without notice