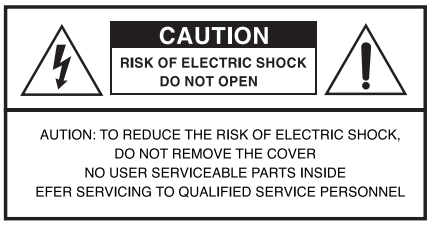
KURZWEIL®

SP7

MUSICIAN'S GUIDE

English Manual

HDC YOUNG CHANG



The lightning flash with the arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated ìdangerous voltageî within the productís 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 priod 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. This product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
7. This 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 be other). This is a safety feature. If you are unable to insert the pluginto 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 KURZWEIL 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:
The normal function of product may be disturbed by strong electro magnetic interference. If so, simply reset the product to resume normal operation by following the instruction manual.
In case the function could not resume, please use the product in other location.

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

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

AVIS : Le present appareil numerique n'semet 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.

PowerSupply&Precautions

Make sure your digital piano is rated for the AC voltage supplied in the area in which the piano will be used. The voltage rating appears on the name plate on the adaptor.

To ensure proper and safe operation of the instrument, please read the manual carefully and keep it for future reference.

WARNING

1)To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

2) Please connect the designated DC adaptor to an AC outlet of the correct voltage.

3) This product should only be used with a standard voltage, if not, please use an appropriate adaptor that is recommended by the manufacturer.

4) When opening and closing the key cover, be careful not to pinch hands or fingers.

CAUTION

1) Discharge static electricity by touching a metal surface before touching the instrument.

2) Protect the keyboard and switches when moving the instrument.

3) Ensure the volume is set to the minimum level before turning on the instrument.

4) Do not open the inside of the instrument. This instrument contains precision parts which should not be touched.

5) Turn off the power after use.

6) Unplug the instrument when unused for long periods of time.

7) Do not apply excess force to the buttons and switches.

Prop 65 Warning: This product contains chemicals known to the state of California to cause cancer, or birth defects or other reproductive harm. [As with most electronic equipment, the outer cables may contain phthalate and the copper alloy power plug contains lead. Wash hands after handling.]

Table of Contents

Chapter 1. Getting Started

1-1. SP7 Connection

What's Included

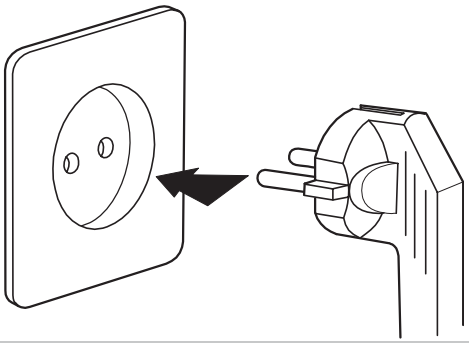
The SP7 carton packing contents are as follows.

- SP7 stage piano
- DC power supply, AC power cord
- Sustain pedal (switch type)
- Warranty card
- USB cable
- Balanced cables

If any of the above are missing, please contact your Kurzweil dealer. Always use the original packing carton to prevent damage during storage or transport.

Power Connection

The SP7's power is supplied by a DC power adaptor.
Before plugging the AC power cord into an AC receptacle, connect the DC power adaptor to the SP7 DC Power jack on the rear panel.



※ The AC plug shape will vary depending on location of use.

CAUTION : Be sure to use the supplied DC power adapter (15V, 2.5A) Using the wrong DC power adapter may damage the product.
If the adapter is damaged or the adapter is lost, please contact your KURZWEIL dealer.

Power on the SP7 by pressing the Power button on the right rear panel.

1-2. Main Features

Features

- Dual ATST synthesis platform
- Includes 2GB of high quality realistic instrument samples extracted directly from the K2700
- 480 x 282 pixel, high resolution, 4.3″ color LCD touch screen with GUI interface
- All controller knobs and buttons are equipped with programmable, full-color LEDs
- 256 voices of polyphony
- 512 factory Multis
- 301 factory Sounds
- 8 zone MIDI controller
- String and pedal resonance modeling
- Envelope/velocity controlled key-off samples
- Half-damper pedaling support
- Multi-effect system offering both insert and aux effects and features 21 effect algorithms
- Dual XLR combo jack mic/line audio input with dedicated DSP audio effects
- Built-in USB MIDI and audio interface
- 2 pairs of stereo 1/4" unbalanced outputs (Main, Monitor)
- 1/4″ headphone output

Keyboard and Controllers

The SP7 has an 88-key fully-weighted hammer action keyboard that provides you with a piano-like feel. The array of physical controllers includes:

- 8 assignable knobs
- 8 assignable buttons
- 1 assignable X/Y joystick
- 2 transpose buttons
- 2 assignable switch pedal jacks
- 1 assignable CC pedal jack

Pedals

The SP7 has 3 jacks on the rear panel for connecting optional pedal controllers.

Two switch pedal jacks are typically used to control two-state (i.e., on / off) parameters such as sustain and sostenuto. A Half Damper pedal (also known as a continuous switch pedal) can be used to allow for "half pedaling" sustain techniques when playing piano programs.

A continuous pedal (CC pedal) jack is typically used to control continuous parameters such as volume and wah.

Note: The SP7 ships with one switch/sustain pedal. Half-damper and CC Pedals are sold separately.

1-3. Firmware Updates

Be sure to check Kurzweil's website (www.kurzweil.com) for new updates. See the Info page in GLOBAL mode to check the currently installed firmware versions.

The SP7 system consists of 2 separate firmware components: the Engine and the LCD. Each component is updated individually. You will not necessarily always be updating both at the same time.

Preparing to Update

- The entire process requires the SP7, a Windows computer, a USB cable (A to B type), an SD card reader and SD card (SDHC type).
- The engine firmware is updated via USB cable connection to the computer.
- The LCD firmware is updated via SD card.
- Download the current update kit from http://kurzweil.com –〉 DOWNLOADS –〉 select the SP7 –〉 select DOWNLOADS –〉 Download the latest update kit posted and save it to your computer and unzip it.

Engine Firmware Updates

Important : Be sure the .exe and .dz files are located in the same directory path on your computer.

Installing the Engine Firmware

1. Turn off the SP7.
2. Connect the SP7 and computer with a USB cable (A to B type). The SP7 USB port is located on the rear panel.
3. While holding down the [DECREASE –] and [INCREASE +] buttons at the same time, turn on the SP7, wait for about 1 to 2 seconds, then release the [DECREASE –] and [INCREASE +] buttons.
4. After confirming that the [DECREASE –] and [INCREASE +] button LEDs are lit, run the SP7Update.exe program on the computer.
5. Check that [Kurzweil SP (Bootloader)] is displayed in the “Device” menu.
6. Press the [Start Program] button to start the update.
7. When the update is finished, a completion message will appear at the bottom of the screen.
8. Exit the program and reboot the SP7 to complete the installation.
9. To prevent conflicts with the existing firmware, perform a “Hard Reset” (Global mode / Info page).
10. If a problem occurs during firmware installation, try to repeat the installation process above again.

LCD Firmware Updates

Important : Be sure to copy the folder named [upgradeSP7] into the root directory path of the SD card. Do not rename the files or folder.

Installing the LCD Firmware

1. Insert the SD card into the SP7 SD card slot (located on the rear panel).
2. Press the [GLOBAL] button on the front panel to enter Global Mode.
3. Select the Info tab on the left side of the LCD screen.
4. Select the [LCD Firm Update] button under the current firmware version.
5. When the update page appears on screen, press the [UPDATE] button to start the update.

6. After the update is complete, remove the SD card and reboot.

Note : If the [LCD Firmware Update] button is not activated in step 4 above, you can update by putting the update.img file in the root path rather than the [upgradeSP7] folder of the SD card and rebooting to enter the update screen.

1-4. Quick Start

Setting Up the SP7

1. If your SP7 keyboard 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 SP7 on a keyboard stand or on a hard, flat, level surface.
3. Connect the DC power adaptor to the SP7 DC Power jack. (If you do not use the supplied power adapter, it may cause malfunctions.)
4. Plug the power cable into the power outlet.
5. Plug the included Switch Pedal into the SW1 (SUSTAIN) jack on the SP7 rear panel.
6. If you have an additional switch pedal, plug it into the SW2 jack for Sostenuto control.
7. 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.
8. 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 SP7 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.
9. If you are using headphones, connect stereo headphones to the ¼" headphone jack on the rear panel.

Powering On the SP7

1. Press the POWER button on the right rear panel.
2. If you are using speakers, adjust the volume of your amp or mixer appropriately.
3. Slowly turn up the SP7 MAIN VOLUME knob and play some notes to check the volume level. (If you have a CC pedal plugged into the CC jack, make sure it is set to the maximum volume position).
4. If using headphones, adjust the MONITOR knob to adjust the headphone volume appropriately.
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 pad button typically decreases the audio input level by 20dB).
6. It is recommended to turn down the volume to minimum before powering down the SP7.

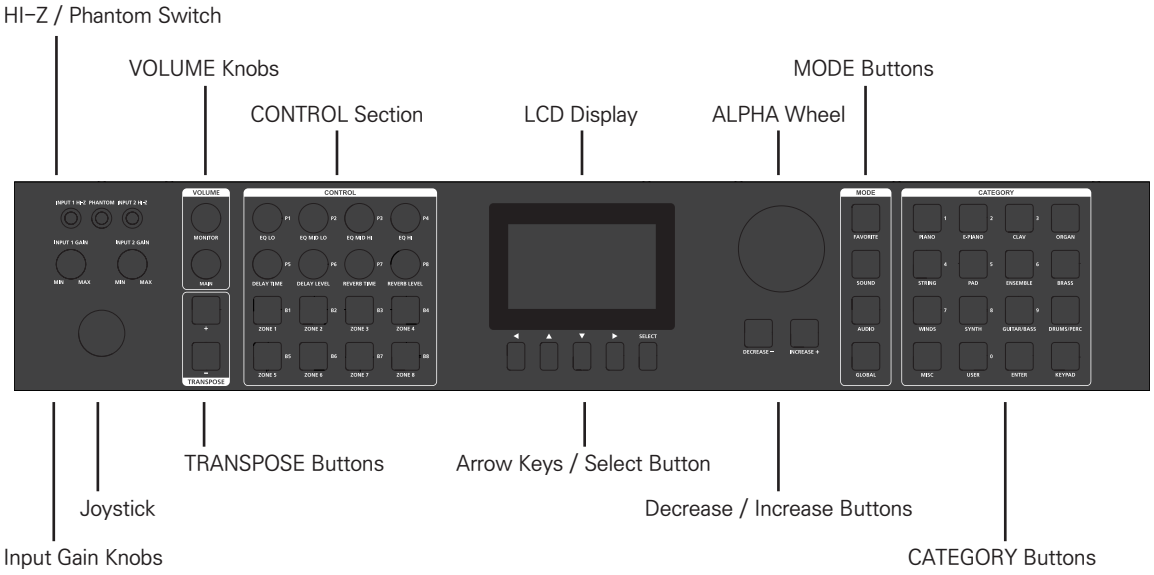
Auditioning SP7 Sounds

1. In SOUND Mode, select a Sound by tapping a preset name on screen, by using the [DECREASE -] and [INCREASE +] buttons, turning the Alpha Wheel or by pressing Category buttons.
   For details, see [1-7. SP7 Sounds] and [3-2. Select Sound Presets].
2. Listen to factory demo songs by pressing the GLOBAL button and then selecting Demo from the left on screen menu.

Automatic Power Saving

The SP7 has a power saving feature (Global mode / Auto Power Off) that can automatically power off the SP7 after a period of inactivity. The Auto Power Off feature is enabled by default and can be set to 15 minutes, 30 minutes, 1 hour, 2 hours, 4 hours, or 8 hours. If no activity is detected during the set period of time, the SP7 will automatically power off.

1-5. The Front Panel



LCD

The LCD display is the main user interface for the SP7. The status bar at the top of the screen displays information about the currently selected Mode, Transpose value, Auto Power off status (if enabled) and Tempo. The title bar just below the status bar shows the preset ID and name, Search button and Menu button.

Note : Depending on the selected function and page, the title bar will display different information.

VOLUME Section

The MAIN knob controls the volume level of the AUDIO OUT. The MONITOR knob controls the MONITOR and HEADPHONE outs.

TRANSPOSE Buttons

The TRANSPOSE buttons allow you to change the tuning of notes played in semitones (half steps). The current transpose amount is shown in the LCD display (the default is "Transpose: 0st"). Press both TRANSPOSE buttons simultaneously to reset the transposition to 0st.

CONTROL Section

The SP7's knobs, buttons, joysticks and pedals typically control various performance parameters, zone volume, synthesis and FX parameters. Controller assignments can be adjusted or set to user-assignable parameters in Global Mode.

CONTROL Knobs

There are 8 knobs with colored LEDs located in the upper half of the control section.
By default, the knobs are preset to: EQ Lo, EQ Mid Lo, EQ Mid Hi, EQ Hi, Delay Time, Delay Level, Reverb Time and Reverb Level. The function of each knob can be user customized on the Control page in Global Mode.

CONTROL Buttons

There are 8 buttons with colored LEDs on the lower half of the control section.
Each button defaults to turning on/off each Zone (1 to 8). The function of each button can be user customized on the Control page in Global Mode.

JOYSTICK

The joystick is on the lower left corner of the front panel.
The joystick defaults to pitch bend for the X axis (left and right) and modulation for the Y axis (up and down).
The function of the joystick can be user customized on the Control page in Global Mode.

CURSOR Buttons (Arrow / Select buttons)

The CURSOR buttons are the five buttons immediately below the display. The ARROW buttons move the on screen cursor (left/up/down/right) and the SELECT button invokes the selected item/field. Use the cursor buttons to move to any position on the LCD screen, select a function with the SELECT button, then use the ALPHA WHEEL or [DECREASE-]/[INCREASE +] buttons to change the parameter value of the currently selected function.

Note: The ARROW and SELECT buttons do not have LEDs.

ALPHA WHEEL

The large LED lit dial can be used to navigate through the list of Sounds as well as adjust various on screen parameters. Turning the ALPHA WHEEL counterclockwise works the same as [DECREASE -] and turning it clockwise works the same as [INCREASE +]. Turn the ALPHA WHEEL slowly to change the value by one increment, or turn it quickly to jump several increments.

DECREASE/INCREASE Buttons

The [DECREASE –] and [INCREASE +] button allows you to change the value of the selected parameter in single increments.

MODE Buttons

Press the MODE buttons to access the SP7's various operating modes: FAVORITE, SOUND, AUDIO and GLOBAL. See Modes on page 1–8 for a description of each Mode.

CATEGORY Buttons

In SOUND mode, on the SoundList page, the CATEGORY buttons allow you to select and browse Sounds in 13 instrument categories. The CATEGORY buttons can also be used as a numeric keypad for direct parameter value entry on various pages.

Note : The USER sound category houses Sounds that have been edited and saved by the user. If there are no saved USER Sounds, you cannot yet select the USER category.

Unlike other categories that can only exist within a single category, USER sounds can also be assigned an instrument specific category, such as PIANO or STRING etc., along with their USER designation. As such, they will display in both the USER and selected instrument category.

AUDIO INTERFACE Section

INPUT 1/2 GAIN Knobs

The INPUT GAIN knobs allow you to adjust the volume of the audio signal connected to the corresponding AUDIO INPUT jacks on the rear panel.

Note: If you turn up the INPUT GAIN knobs with nothing connected to the rear panel AUDIO INPUT jacks, unwanted noise may occur. As such, it is best practice to set the INPUT GAIN knobs to their minimum values when no audio source is connected.

INPUT 1/2 HI–Z Switches

The input impedance of each input channel can be switched to high impedance for electric guitar or bass, etc.

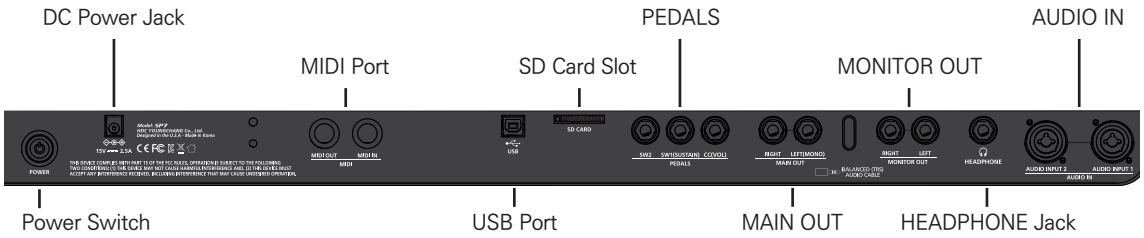
PHANTOM Power Switch

INPUT 1/2 GAIN Knobs

As needed, Phantom power can be supplied to both input channels. Use only when microphones which require phantom power are connected. Turn the switch off when phantom power is not needed.

Note : Phantom power cannot be turned on and off individually per channel. When enabled, both input channels are supplied with phantom power.

1-6. The Rear Panel



AUDIO INPUT Combo Jacks

Use the AUDIO IN jacks to mix external audio sources with the sounds of the SP7, apply effects to external audio sources, or route external audio sources to a computer for recording or processing in a DAW. This is useful for playing along with backing tracks from a portable music player, computer, or other electronic instrument.

Note : If you turn up the INPUT GAIN knobs with nothing connected to the rear panel AUDIO INPUT jacks, unwanted noise may occur. As such, it is best practice to set the INPUT GAIN knobs to their minimum values when no audio source is connected.

HEADPHONE Jack

Connect headphones to the 1/4-inch HEADPHONE jack located on the left rear panel. Headphone volume can be adjusted through the front panel MONITOR knob. You will need a 1/8-inch-to-1/4-inch adapter in order to use headphones that have a smaller mini plug connector.

Note : The HEADPHONE and MONITOR OUT share the same audio bus and are both controlled by the MONITOR volume knob.

MONITOR OUT – LEFT (MONO) and RIGHT jacks

Connect an amplifier or mixer to the MONITOR OUT 1/4-inch jacks.
The volume is adjusted using the MONITOR volume knob on the front panel.

Note : The HEADPHONE and MONITOR OUT share the same audio bus and are both controlled by the MONITOR volume knob.

MAIN OUT – LEFT (MONO) and RIGHT jacks

Connect an amplifier or mixer to the MAIN OUT 1/4-inch jacks.
The volume is adjusted using the MAIN volume knob on the front panel. For a mono signal, only use the LEFT (MONO) jack and leave the RIGHT jack unplugged.

SW1 (SUSTAIN) and SW2 Jacks

Use the SW1 (SUSTAIN) and SW2 jacks to connect switch pedals. SW1 (SUSTAIN) defaults to controlling Sustain, and SW2 defaults to controlling Sostenuto. Pedal assignments can be customized using the parameters on the “Control” page in GLOBAL Mode.

A Half Damper pedal (also known as a continuous switch pedal) can be used to allow for “half pedaling” sustain techniques when playing piano programs.

Half-damper pedals are sold separately.

CC (VOLUME) Jack

Use the CC (VOLUME) jack to connect a MIDI CC pedal (also known as a MIDI expression or volume pedal). The CC jack defaults to controlling MIDI Expression (cc#11). You can customize the CC Pedal assignment using the parameters on the “Control” page in GLOBAL Mode.

CC Pedals are sold separately.

SD Card Slot

The SD card slot is used to update the LCD's firmware. Below are the recommended specifications for the SD card.

- Type : SDHC / Format type : FAT32 / Speed : 4C or more / Capacity : 16GB or more

USB Port

When a computer or tablet is connected to the USB port, the following operations are possible:

- Update the SP7 engine firmware and Sounds.
- Use the SP7 as a master MIDI controller to play virtual instruments.
- Use the the SP7 as a multitimbral slave for DAW/sequencer production.
- Use the SP7 as an audio interface to send/receive audio between your computer.

MIDI IN/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 SP7 as a MIDI controller triggering another sound module, use a MIDI cable to connect the SP7’s MIDI OUT port to the MIDI IN port of the module that you want to control.

To trigger the SP7 from another MIDI controller, use a MIDI cable to connect the SP7’s MIDI IN port to the MIDI OUT port of the controller that you will be using.

DC Power Jack

The SP7's power is supplied by a DC power adaptor. Before plugging the AC power cord into an AC receptacle, connect the DC power adaptor to the SP7 DC Power jack, located on the rear panel.

CAUTION : Please use the supplied DC power adapter. (15V, 2.5A). Using the wrong DC power adapter may cause damage to the product. If the adapter is damaged or the adapter is lost, please contact your Kurzweil dealer.

1-7. SP7 Sounds

The SP7 contains 512 high-quality multitimbral Sounds and 301 individual programs extracted from Kurzweil's flagship K2700. Capacity for 128 user-edited Sounds is also provided.

Each Sound preset consists of 16 Zones and, depending on how each Zone is edited, a wide variety of performance combinations can be realized.

Sound presets are divided into 13 categories based on instrument type. Sounds can be selected in a number of ways, all detailed below:

Selecting Sound Presets

In SOUND Mode, you can select a Sound by directly scrolling and tapping through the preset list on the display, or by using the ALPHA WHEEL and/or the [INCREASE +], [DECREASE -] buttons

Select a Sound by Category

The SP7 offers a total of 14 Sound categories, consisting of PIANO, E.PIANO, CLAV, ORGAN, STRING, PAD, ENSEMBLE, BRASS, WINDS, SYNTH, GUITAR/BASS, DRUMS/PERC, MISC, and USER.

In the SoundList page, you can scroll through and select from the list of categories displayed on the left side of the screen, or you can press one of the physical CATEGORY buttons on the right side of the front panel. Via either method, the first Sound in that category is automatically selected. Select a Sound from the current category by directly scrolling through the Sound List or by using the ALPHA WHEEL and/or the [INCREASE +] or [DECREASE -] buttons.

Select a User Sound

Tap the USER SOUND tab at the bottom of the categories listed down the left side of the Sound List screen, or by pressing the front panel USER category button.

Note : If there are no saved USER Sounds, you cannot yet select the USER category.

Select a Sound by ID Number

In SOUND mode, touch the "Search" button at the top of the screen to display a numeric keypad where you can input ID numbers to search by. Input digits either by tapping the on screen numeric pad or by using the front panel physical CATEGORY buttons (which also double as a numeric keypad and are each labeled with a number). After inputting the desired number, tap the on screen Return button or press the front panel ENTER button to perform the search. Scroll through the subsequent results list on screen and tap your desired selection.

Creating Splits and Layers

Each SP7 Sound consists of 16 independent zones as one performance "multi" preset. As such, splits and layers are inherent in the design and whether a given zone is a split or layer is determined by the assigned key range given to each zone.

To edit the zones directly, select a Sound and enter the "Edit" mode (accessible through the "Edit" button found on the Menu page) and then adjust the parameters on the "Overview" or "Zone Edit" pages as needed.

For details, refer to [3-4. Overview] and [3-5. Zone Edit] page.

1-8. Modes

The SP7 has 4 operating modes and defaults to SOUND mode when the power is turned on.

FAVORITE Mode

Favorite mode is used to conveniently store and recall your 64 most used sounds. Favorites are organized into 4 groups, 16 Sounds per group.

SOUND Mode

The SP7 always powers up in SOUND mode by default and is the mode for selecting and editing Sounds. You can edit the currently selected Sound by tapping the "Menu" button at the top of the screen, then selecting "Edit" in the subsequent array of options . An edited Sound can be saved by pressing the Save button, also found in the "Menu" page, or through the Save dialog presented when exiting the editor.

AUDIO Mode

Audio mode is used to control the audio interface section of the SP7. Adjust the routing and mix levels of the various inputs as well as apply effects chains to the live signals, including vocal-specific processing.

GLOBAL Mode

Use Global mode to adjust common settings that are shared between all modes, such as controller assignments, velocity sensitivity, auto power option, system Info display, perform a system reset, etc..

1-9. Menu

These functions appear when you touch the Menu button displayed at the top right of the screen.

Edit

Tap the "Edit" button to edit the currently selected Sound. When saving an edited factory preset, the new Sound will get saved to a User ID slot and not saved on top of the original factory ID location.

ARP

Tapping the "ARP" button is a shortcut switch, enabling/disabling the system's Arpeggiator engine.

Note : this will only engage arpeggiator activity if the current Sound has at least one arpeggiator assigned to one of its multi zones.

Tempo

Press "Tempo" to access the Tempo entry page. Set the system tempo by tapping the TAP button a few times at the desired rate and/or use the +1/+5/-1/-5 buttons displayed on screen, ALPHA WHEEL, or DECREASE / INCREASE buttons to set precise values.

Lock

Temporarily prevent accidental setting changes by engaging the “Lock” function. When activated, all on screen and front panel controls are locked out. Tap the “padlock” icon in the display to restore normal operation.

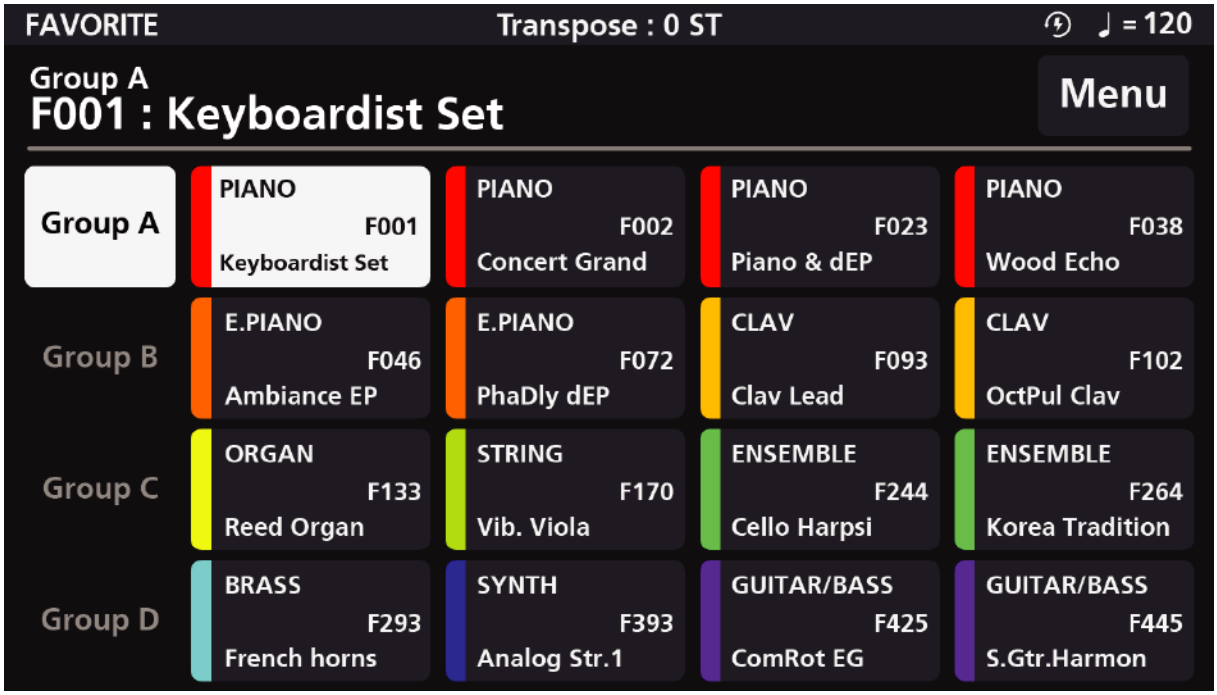
Settings

The “Settings” button is an on screen shortcut to accessing Global Mode. It duplicates the same function as the front panel GLOBAL mode button.

Panic

Panic deactivates all sounding notes and resets controller values by sending an “All Notes Off ” message and a “Reset All Controllers” message on all 16 MIDI channels.

Chapter 2. Favorite Mode



Press the FAVORITE mode button to access Favorite mode. Store your most needed 64 multi presets for quick and easy recall during performance.

Favorites are organized into 4 Groups, labeled A to D, with each group containing 16 Sound selections arranged in a 4x4 grid of tiles. Each tile displays the category/preset ID/ Sound name and color-coding corresponding to the category to which they belong for easy identification.

Chapter 2. Favorite Mode

2-1. Screen Layout

The status bar at the top of the FAVORITE mode screen displays the Transpose value, Auto Power off status (if enabled) and system Tempo.

Below the top row, you will see the ID and name of the currently selected Sound and "Menu" button off to the right.

The Favorite Group selection buttons, A-D, are displayed down the left side of the screen. On the right side you will see the Sound presets belonging to the currently selected Favorite Group.

2-2. Select a Favorite

Tap one of the 4 Group buttons on the left. The selected Group button is displayed as active in white, and its corresponding 16 members are displayed in a 4x4 grid on the right.

To select a specific Favorite either tap the desired Favorite tile on the right or use the front panel physical CATEGORY buttons to load the corresponding Sound.

2-3. Assign a Favorite

Select a Sound from the SoundList in SOUND Mode and then enter FAVORITE Mode.

Next, Select the desired Group (A-D).

Lastly, press and hold either:
a) one of the 16 tiles on the screen, or
b) one of the front panel physical CATEGORY buttons

Hold the button (approx. 2 sec) until you see that the Sound of the corresponding tile has changed to your new selection.

Sound mode is the most basic mode of the SP7, and can be entered by pressing the front panel SOUND mode button. A list of Sound presets are displayed on the screen. The name of the currently selected Sound preset and its ID appear in the title area at the top of the display.

3-1. Sound Preset List

The Sound Preset and Category list are displayed in a left and right column format. Category selections are displayed on the left and Sound presets are displayed on the right.

Each category has a designated color. Since the color of the category to which each Sound belongs is also displayed, it is easy to see at a glance which category a given Sound belongs to.

The Sounds built into the instrument are called Factory Presets, and as such they have a letter “F” in front of the Preset ID to help identify them. Sounds created by the user are called USER presets and they have a letter “U” in front of the Preset ID. These character markings help to distinguish whether a given Sound is a Factory Preset or User creation.

The SP7 Sound Categories consist of PIANO, E.PIANO, CLAV, ORGAN, STRING, PAD, ENSEMBLE, BRASS, WINDS, SYNTH, GUITAR/BASS, DRUMS/PERC, MISC, and the USER category is displayed at the end of the list.

3-2. Selecting Sound Presets

In SOUND mode, you can select a Sound in the following ways. The name of the selected Sound appears in the title area at the top of the display.

Note : Unlike other categories, the User Sound category is a category that displays only the Sounds created by the user. Since each User Sound preset can be assigned a specific category when editing, the USER preset may also be displayed when selecting a category such as PIANO or STRING that contains the User Sound.

Browse All Sound

In SOUND Mode, you can select a Sound by scrolling the Sound preset list on the display, using the ALPHA WHEEL, or the [INCREASE +], [DECREASE −] buttons.

Select a Sound by Category

There are total of 14 categories, including 13 basic categories and 1 USER category.

The basic categories consists of PIANO, E.PIANO, CLAV, ORGAN, STRING, PAD, ENSEMBLE, BRASS, WINDS, SYNTH, GUITAR/BASS, DRUMS/PERC, and MISC. The USER Sound category is displayed at the end.

In the Sound List page, you can scroll and select the categories displayed on the left, or you can select each category through the Category buttons on the right side of the front panel. When you select a category, the first Sound in that category is automatically selected. You can select a Sound by scrolling through the Sound List or using the ALPHA WHEEL or the [INCREASE +] or [DECREASE −] buttons.

Select a previously saved User Sound

You can access the User Sounds by touching the USER Sound at the bottom of the categories on the left side of the Sound List, or by pressing the USER Category button on the right side of the front panel. User Sounds can be edited through the EDIT function found under the Menu button selection at the top.

Select a Sound by ID number

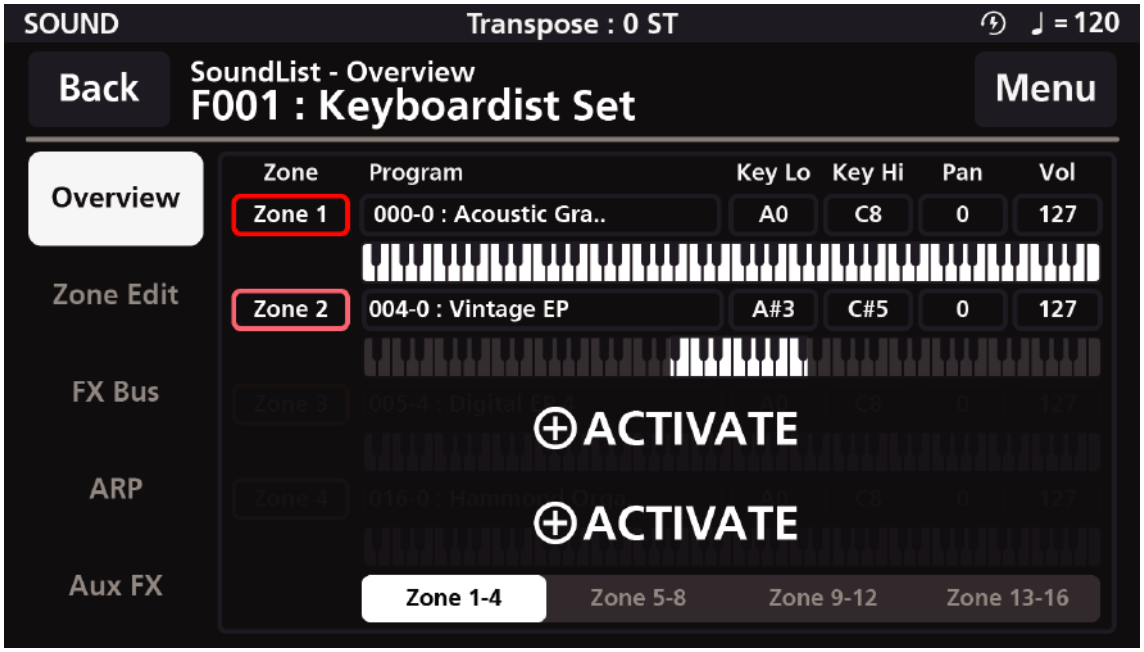
Touch the Search button at the top of the screen to display a screen where you can enter numbers. The Category buttons on the right side of the front panel are marked with a number, and you can use this number to find the ID of the Sound. After entering a number, click the Search button or press the Enter button in the category area to search.

3-3. Editing Sound Presets

Edit Sound presets to modify existing Sounds or create new ones. Modified Sound presets are saved as User Sounds. You can edit the selected Sound preset by pressing the Menu button and pressing the Edit button.

Note : When factory Sound presets are edited, they are saved as User Sound presets.

3-4. Overview



The overview page shows the basic parameters for the 16 Zones of the Sound preset.
You can check and edit the status of each Zone (assigned core voice, key range, panning value, volume, etc.).

Zone

Buttons to toggle active/inactive state. They have the same function as Activate in the Zone Edit menu on the left.

Program

Shows the core voices assigned to the Zone. It has the same function as the Program in the Zone Edit menu on the left. You can also use the ALPHA WHEEL or the [INCREASE +] and [DECREASE–] buttons to select a Core Voice.

Key Lo

This parameter sets the lowest Key value of each Zone.

Key Hi

This parameter configures the highest Key value of each Zone.

Pan

The Pan parameter sets the panning (left/right stereo placement) of each Zone.

Volume

The Volume parameter sets the volume for each Zone in a range of 0–127 values.

Zone group buttons at the bottom

Selects and display Zones in groups of 4

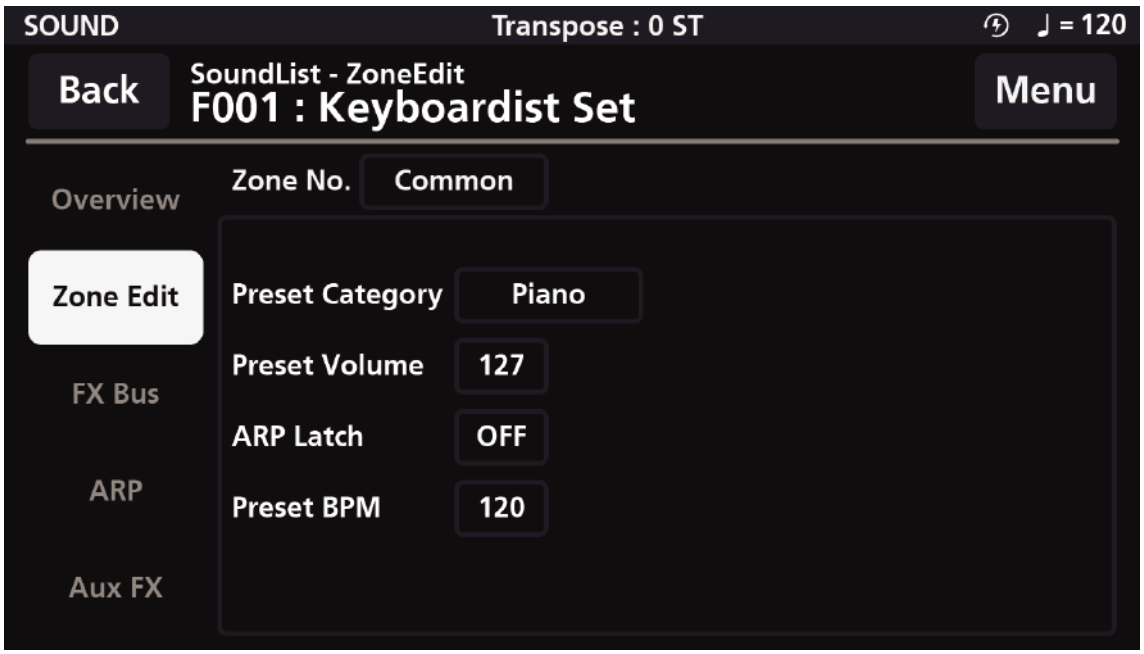
3-5. Zone Edit

Zone Edit allows you to edit detailed parameter values of each Zone, such as Envelope and Filter.

The Zone Edit page consists of Common, Zone1~Zone16, and the Common page is displayed by default. You can select a Zone through the Zone No. box.

Common

Common settings such as the category and preset volume, the status of using the latch function of the arpeggiator, and the BPM value of the Sound preset can be modified.



Preset Category

This field specifies the category of the current Sound preset. User presets are also displayed in the USER Sound category, but can also be displayed in the 13 instrument categories.

Preset Volume

Preset Volume adjusts the overall volume of Sound preset. You can set the value from 0 to 127.

ARP Latch

A “latched” arpeggiator allows an arp pattern, once initially triggered, to continue to run without manually holding the keys. The Common page “ARP Latch” function acts as a master switch, turning the arpeggiator latch on/off for the whole multi.

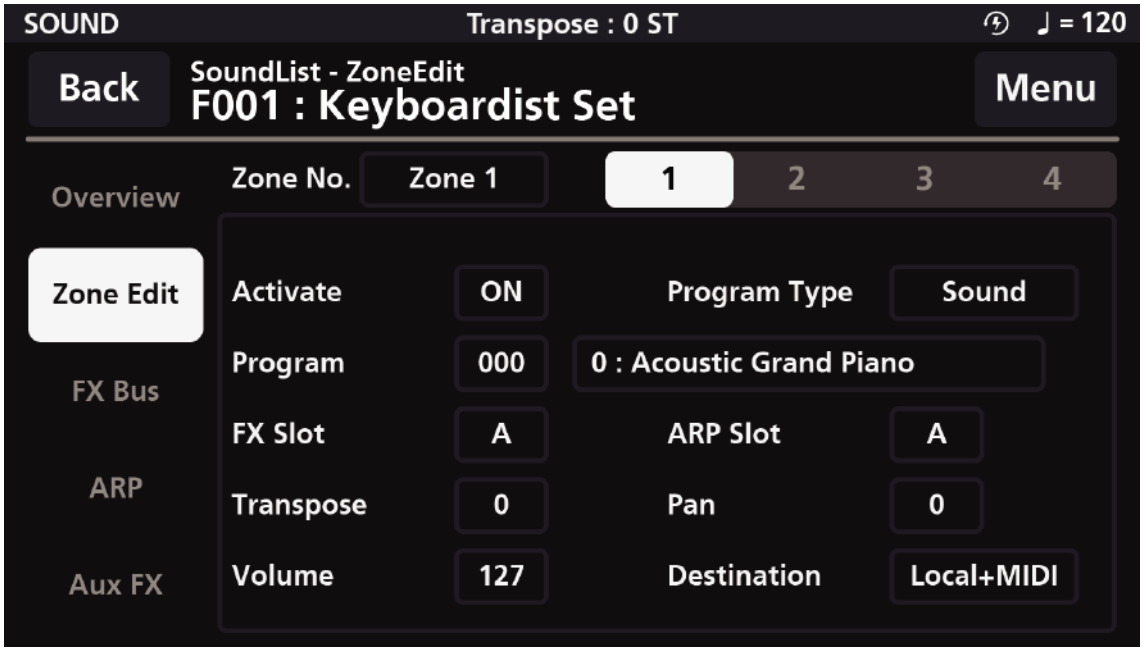
If you want to stop the arpeggiator while the arpeggiator latch is on, you must stop it by turning the arpeggiator off in the menu tab or turn off the latch setting.

Preset BPM

If the Tempo mode is set to Preset in GLOBAL Mode, the preset BPM (Preset BPM) is changed to the value set in the Common page for each Sound preset.

Zone Edit

For each zone, you can set Activate/Program Type/Program/FX Slot/ARP Slot/Transpose/Pan/ Volume/Destination.



Activate

Changes the on/off state of the selected Zone.

Program Type

Determines the type of Program.
You can select either a normal Program or a drum Program.
The list of Programs changes according to the selected type.

Program

Selects the Program (Core Voice) assigned to the selected Zone.
You can select Programs with the ALPHA WHEEL or the [INCREASE +] / [DECREASE –] buttons.

FX Slots

Select the FX Bus. You can select one of the effect buses from A to D, and select Bypass to disable effects.

ARP Slots

You can select the arpeggiator (ARP) from among 8 types from A to H. Selecting None will disable the arpeggiator.

Transpose

Transpose adjusts the pitch of the selected Zone. You can adjust transposition in semitones using the ALPHA WHEEL or the [INCREASE +], [DECREASE –] buttons.

Pan

Pan adjusts the left and right stereo balance of the selected Zone. Default value is 0.

Volume

Set the volume for the selected zone (range 0–127).

Destination

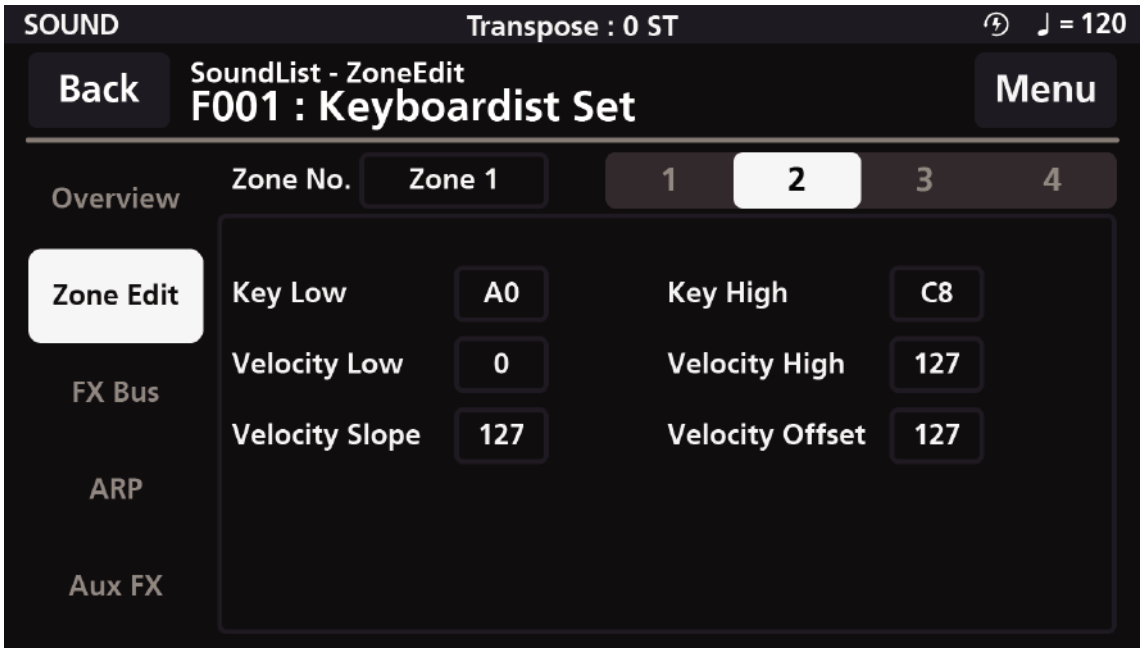
Destination selects the MIDI signal destination for the selected Zone.

You can set the destination to one of Local+MIDI (Internal+External MIDI), Local Only (Internal Only), or MIDI Only (External Only). Local means that sending MIDI signal to the internal sound module, and MIDI means sending MIDI signal to external device.

"When set to MIDI Only, no sound is produced from the audio output jack when playing the SP7's own piano keys. Sound can still be triggered via MIDI.

Zone Edit 2

This page allows you to set the key range/velocity range/velocity slope/velocity offset.



Key Low / Key High

The Key Low and Key High parameters set the keyboard ranges for each Zone. You can set the keyboard range by selecting the lowest note in Key Low and the highest note in Key High. Zones can be split or layered according to those key positions.

Velocity Low/High

The Velocity Low and Velocity High parameters set the playable velocity range of each Zone by setting the lowest and highest playable velocity of each Zone. Velocities within this range will trigger notes for the selected Zone.

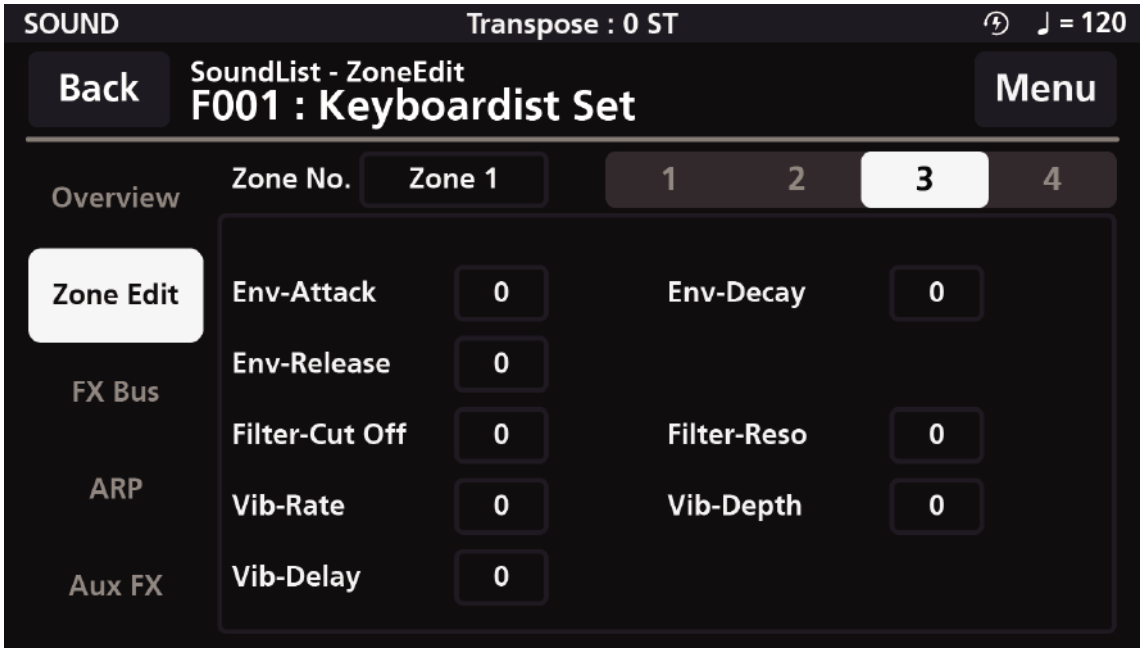
Velocity Slope

The Velocity Slope parameter allows scaling of the overall dynamic range of the layer. The default value is 64 (linear). Values above 64 increasingly amplify velocities (making the output louder with less effort) while values below 64 gradually diminish velocities (making the output quieter even with stronger velocities).

Velocity Offset

The Velocity Offset parameter also changes the velocity response, but in a more direct way, by adding or subtracting a constant value to the key velocity. When it is set higher than the reference value (64), it produces a louder sound than the actual performance. Conversely, when it is set smaller than the reference value, it produces a quieter sound than the actual performance.

This is the page where you can set parameters related to envelope, filter, and vibrato.



Env-Attack

Attack is the amount of time it takes for a note, when struck, to go from silence to full volume. The greater the value the slower the attack. Smaller values equal a faster attack.

Env-Decay

Decay is the amount of time it takes for a held note to transition from its maximum volume to a sustained level. The greater the value the slower the decay. Smaller values equal a faster decay.

Env-Release

Once a key is let go, Release is the the amount of time it takes for the note volume to drop from its sustained level to silence. The greater the value the slower the release time. Smaller values equal a faster release time.

Filter-Cut Off

The Cut Off parameter controls the frequency above which the signal is attenuated. Higher cutoff values allow higher frequencies to pass (be audible) and thus output a brighter sound. Lower cutoff frequencies gradually remove more of the upper frequency spectrum and produce darker tones.

Filter-Reso

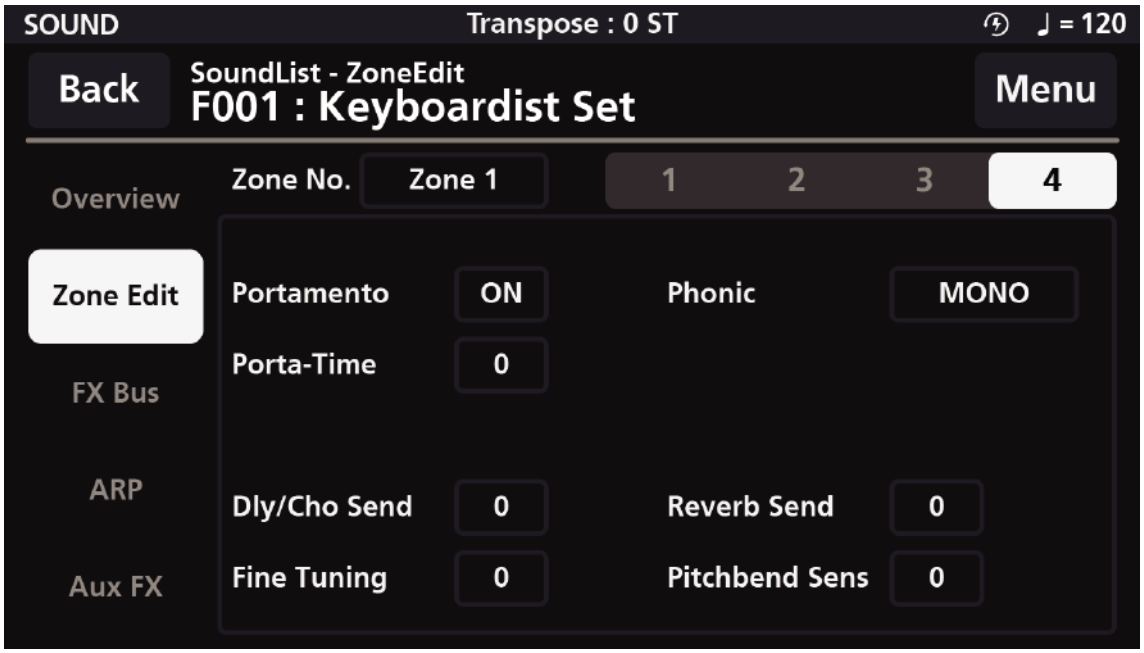
The Resonance parameter controls the amount of emphasis applied at the filter cutoff frequency (as set above) creating a distinct effect.

Vibrato

The Vibrato tab provides access to a variable low frequency oscillator (LFO) with Rate, Depth, and Delay parameters that affect the pitch of the sound. The Rate parameter sets the speed of the vibrato. The Depth parameter controls the amount of pitch variation. The Delay parameter lets you set the time interval between the start of the sound and the start of the vibrato effect.

Zone Edit 4

This page allows you to configure Portamento, Phonic, Porta-Time, Dly/Cho Send, Reverb Send, Fine Tuning, and Pitchbend Sens settings.



Portamento

Portamento is a smooth transition between notes played from the first played note to the next played note. You can turn it on and off by selecting Enable On/Off.

Phonic

For phonic, you can choose between Mono and Poly to decide whether to play one note or multiple notes at once.

Porta-Time

When Portamento is ON, Porta-Time determines the speed of transition between notes played.

Dly/Cho Send

The Dly/Cho Send determines how much of the Zone's audio signal is sent to the delay and chorus of the Aux FX.

Reverb Send

Reverb Send lets you determine how much of the Zone's audio signal is sent to the Aux FX's reverb.

Fine Tuning

Fine Tuning adjusts the pitch of the selected Zone in cents.

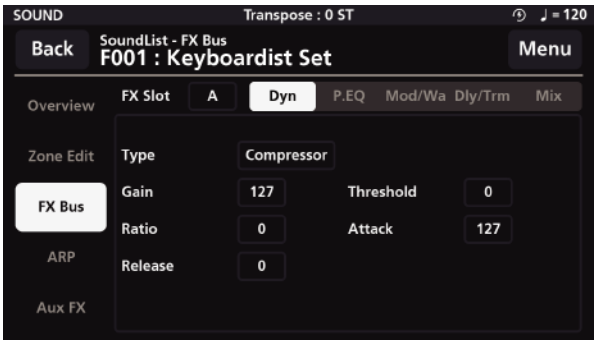
Pitchbend Sens

Pitchbend Sens lets you set how sensitive the selected Zone will be to pitch bend.

3-6. FX Bus (Zone Insert FX)

Dyn (Dynamics)

The "Dyn" (Dynamics) tab consists of a Compressor, a Distortion and a Bit Crusher.



Compressor

The Compressor offers adjustments for: Gain, Threshold, Ratio, Attack, and Release.

Gain

The Gain parameter amplifies the loudness of the signal post compression.

Threshold

Threshold determines the minimum level at which compression is applied.

Ratio

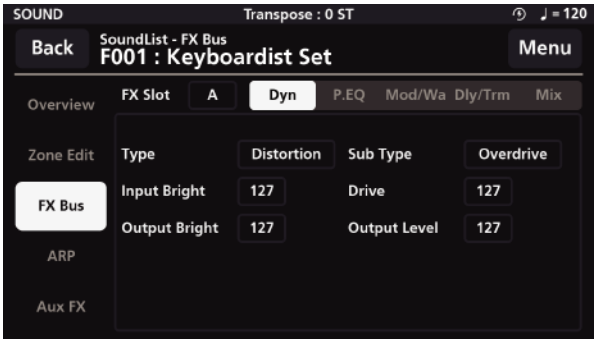
Ratio sets the amount of compression applied to the signal that surpasses the set Threshold.

Attack

The Attack parameter controls the time it takes for compression to begin once the signal level surpasses the threshold.

Release

The Release parameter controls how long it will take for the compression to relax once the signal has fallen below the threshold.



Distortion

There are 6 types of distortion available: Over-drive, Distortion, Fuzz, Fuzz2, Tube, and Asymmetrical. Each type offers 4 parameter adjustments: Input Brightness, Drive, Output Brightness and Output Level.

Input Brightness

Input Brightness provides a low-pass filter to the signal feeding into the distortion circuit.

Output Brightness

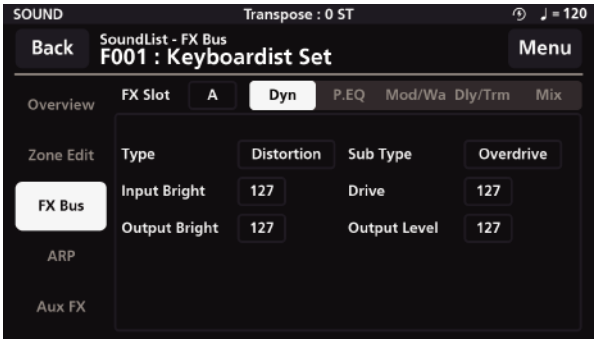
Output Brightness provides a low-pass filter to the signal following the distortion circuit.

Drive

Drive adjusts the amount of distortion applied.

Output Level

Output Level adjusts the amplitude of the signal post the distortion effect.



Bit Crusher

The Bit Crusher section is a digital degradation distortion. It intentionally introduces quantization noise and aliasing artifacts, allowing you to adjust the Bit Resolution, Down Sampling Factor, Output Brightness, and Output Level.

Bit Resolution

Allows you to set the bit depth of the signal, ranging from 24 bits down to 1 bit. Lower values increase the number of sampling errors, generating more distortion.

Down Sampling Factor

Reduces the sample rate, introducing aliasing. A value of 1 has no effect on the signal. Higher values increase the artifacts.

Output Brightness

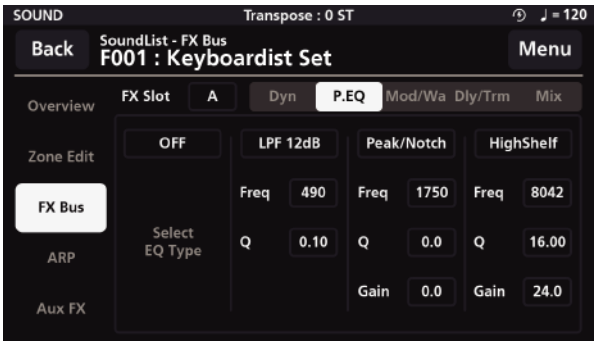
The Output Brightness control is a low pass filter allowing you to color the post bit-crushed signal.

Output Level

Controls the overall level of the post bit-crushed effects section.

Parametric EQ (P.EQ)

The EQ section is a 4-band parametric. With each band you can choose between 7 EQ types using the selector tabs at the top of each band: a LPF 6dB, LPF 12dB, LowShelf, Peak/Notch, HighShelf, HPF 6dB and HPF12dB. For each EQ type (excluding the LPF/HPF) you can set the frequency (Freq), quality factor (Q), and gain (Gain).



LPF 6dB and LPF 12dB

Low pass filters that reduce high frequencies above the set frequency. 6dB and 12dB slopes are available. The higher the slope, the steeper the cut off.

LowShelf

A low shelving filter that cuts or boosts frequencies below the set frequency.

Peak/Notch

A fully parametric filter with controls for specifying the center frequency (Freq), width of the frequency band around the center frequency (Q) and amount of boost/cut (gain) for the specified area.

HighShelf

A high shelving filter that cuts or boosts frequencies above the set frequency.

HPF 6dB, HPF 12dB

High pass filters that reduce low frequencies below the set frequency. 6dB and 12dB slopes are available. The higher the slope, the steeper the cut off.

Mod/Wah (Modulation/Wah-wah)

The Mod/Wah section offers separate modulation and "wah-wah" effects. Only one of these effects can be used at a time, so you must designate one or the other by way of the "Type" selector.

Modulation

The Modulation effect consists of 5 options: Chorus, Vibrato, Flanger, Phaser and Rotary. These are chosen using the "Sub Type" selector.

Chorus

The Chorus effect provides 5 parameter settings: Waveform, Rate, Depth, Delay, Dry/Wet.

Waveform

Select from 3 waveforms shapes: Triangle, Sine, and Async sine.

Rate

Determines the frequency of signal modulation. Higher values equal faster rates.

Depth

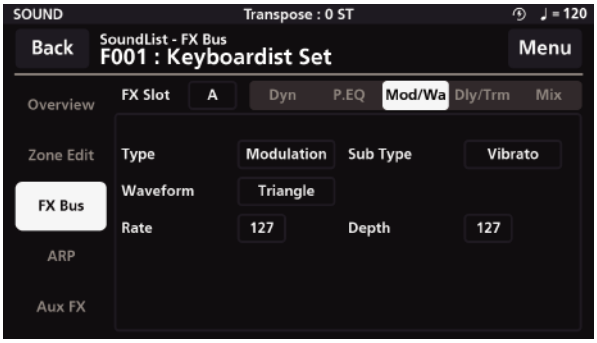
Sets the depth of the pitch modulation. Higher values equal wider pitch variations.

Delay

Adds delay in front of the modulated signal. Higher values equal longer delay line times and thus phase variations.

Dry/Wet

Determines the balance between unaffected (dry) and effected (wet) signals. Higher values equal a more effected signal.



Vibrato

The Vibrato effect provides 3 parameter settings:

Waveform

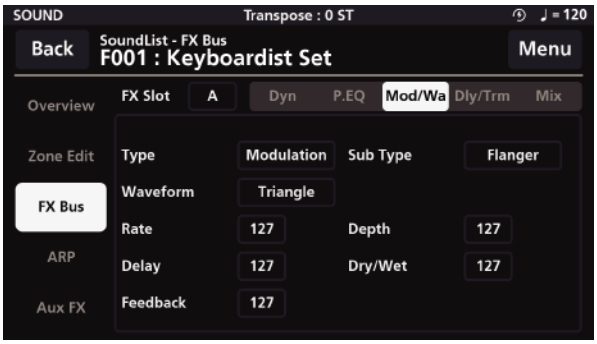
Select from 2 waveforms shapes: Triangle and Sine.

Rate

Determines the rate of vibrato. Higher values equal faster modulation rates.

Depth

Sets the depth of the pitch modulation. Higher values equal wider pitch variations.



Flanger

The Flanger effect provides 6 parameter settings:

Waveform

Select from 2 waveforms shapes: Triangle and Sine.

Rate

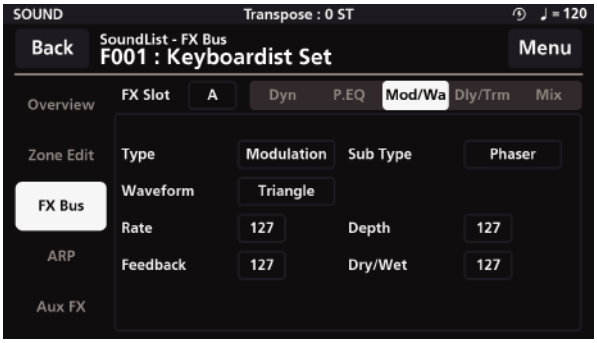
Determines the frequency of the LFO modulation. Higher values equal faster modulation rates.

Depth – Sets the range of delay time modulation. Higher values equal deeper comb filtering variations.

Feedback – Controls the amount of effected signal fed back into the input to intensify the flanging effect.

Delay – Adds delay in front of the modulated signal. Higher values equal longer delay line times and thus phase variations.

Dry/Wet – Determines the balance between unaffected (dry) and effected (wet) signals. Higher values equal a more effected signal.



Phaser

The Phaser effect provides 5 parameter settings:

Waveform

Select from 2 waveforms shapes: Triangle and Sine.

Rate

Determines the frequency of signal modulation. Higher values equal faster rates.

Depth

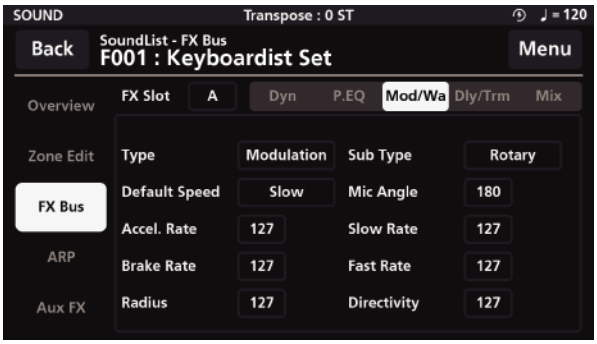
Sets the range of peaks and notches created in the modulated signal.

Feedback

Controls the amount of effected signal fed back into the input to intensify the phasing effect.

Dry/Wet

Determines the balance between unaffected (dry) and effected (wet) signals. Higher values equal a more effected signal.



Rotary

Rotary reproduces the effect of a rotating speaker and is commonly paired with classic tonewheel organ sounds. There are 8 detailed settings:

Default Speed

Select the default rotation speed of the speaker, Slow or Fast.

Mic Angle

Select the angle of the microphone relative to the front of the rotating speaker. It can be set to 45 degrees, 90 degrees, or 135 degrees.

Accel.Rate

The Acceleration Rate equals the time it takes for the speaker to transition from its Slow to Fast Rate settings.

Brake Rate

The Brake Rate equals the time it takes for the speaker to transition from its Fast to Slow Rate settings.

Slow Rate

The Slow Rate defines the rate of rotation for the speaker's Slow rotation speed. Lower values spin the speaker more slowly. Higher values equate to a faster rotation.

Fast Rate

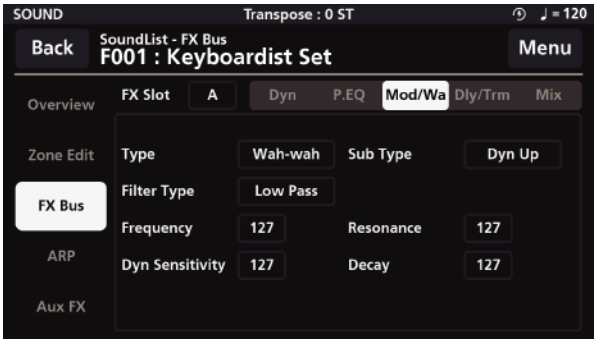
The Fast Rate defines the rate of rotation for the speaker's Fast rotation speed. Lower values spin the speaker more slowly. Higher values equate to a faster rotation.

Radius

Radius sets the effective sizes of the rotating speakers. Lower values equal a smaller size.

Directivity

Directivity is a function related to the dispersion of the horn. Lower values produce a narrower field where higher values generate an increasingly wider and more pronounced doppler effect.



Wah-Wah

There are 4 types of "Wah-Wah" effect available: Dynamic Up (Dyn Up), Dynamic Down (Dyn Down), Dynamic Up Sharp (DynUp Sharp), and Low Frequency Oscillator (LFO).

Dynamic Up (Dyn Up)

This flavor of wah-wah increasingly opens the filter with higher (harder) velocity playing.

Dynamic Down (Dyn Down)

'Dyn Down' behaves in reverse of 'Dyn Up' and increasingly opens the filter with softer (lighter) velocity playing. Harder playing increasingly closes the filter.

Dynamic Up Sharp (Dyn Up Sharp)

This is similar to 'Dyn Up' but with a sharper resonant response.

Low Frequency Oscillator (LFO)

The LFO option creates a tempo-sync'ed 'auto-wah' effect.

The editable wah-wah parameters are: Filter Type, Frequency, Resonance, Dyn Sensitivity (Dyn options only), Decay (Dyn options only), LFO Rate (LFO option only) and LFO Depth (LFO option only).

Filter Type

Select from Low Pass and Band Pass options. The 'low pass' filters out higher frequencies whereas the ' band pass' allows frequencies within a certain range to pass and rejects (attenuates) frequencies above and below that range.

Frequency

Sets the reference frequency of the above filter. For the Low Pass option this sets the frequency above which sound get attenuated. For the Band Pass, this defines the center of the frequency region allowed to pass through the filter.

Resonance

This adds emphasis to the filter cut-off frequencies.

Dyn Sensitivity (Dyn options only)

Determines the range that the filter cut-off increases/decreases due to note velocity. Higher values create a more pronounced wah-wah effect.

Decay (Dyn options only)

Determines the speed of the wah-wah envelope decay. Lower values create faster/snappier filter decay times whereas higher values create a slower/smoother response.

LFO Rate (LFO option only)

With the "LFO" wah-wah option selected, the "Dyn Sensitivity" dial is replaced with an LFO Rate parameter. Instead of velocity triggering the wah-wah effect, a low frequency oscillator (LFO) controls a sustained modulation of the filter, creating an auto-wah effect which is time sync'd to the value set for the LFO Rate parameter.

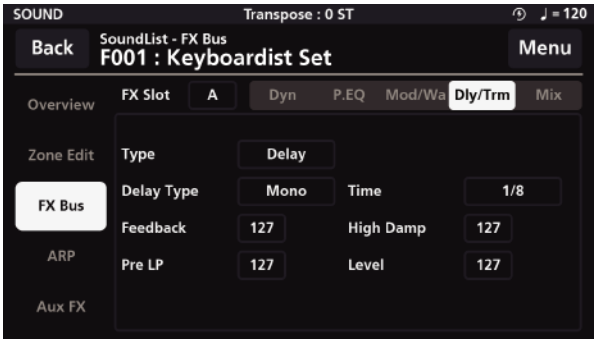
Available values are: 8 bar, 4 bar, 2 bar, 1 bar, 2d, 1/1t, 1/2, 1/4d, 1/2t, 1/4, 1/8d, 1/4t, 1/8. (Note: "d" = dotted values; "t" = triplet values). All rates are relative to the Preset BPM tempo (as set on the Zone Edit / Common page).

LFO Depth (LFO option only)

With the "LFO" wah-wah option selected, the "Decay" dial is replaced with an LFO Depth parameter which controls the range of filter modulation. Lower values create a subtler wah-wah effect whereas higher values create a more pronounced effect.

Dly/Trm (Delay/Tremolo)

The Delay/Tremolo section offers separate delay and tremolo effects. Only one of these effects can be used at a time, so you must designate one or the other by way of the "Type" selector.



Delay

The Delay effect provides 5 parameter settings: Type, Time, Feedback, High Damp, Pre LP and Level.

Type

Two types of delay are available: Mono and Stereo. Mono produces a mono-centered delay signal whereas Stereo produces a L/R "ping-pong" style delay.

Time

Sets the "delay time" based on note values: 1/2, 1/4d, 1/2t, 1/4, 1/8d, 1/4t, 1/8, 1/16d. 1/8t, 1/16, 1/32d, 1/16t, 1/32, 1/64d, 1/32t, 1/64 (Note: "d" = dotted values; "t" = triplet values). All values are relative to the Preset BPM tempo (as set on the Zone Edit / Common page).

Feedback

Set the amount of delayed signal that is routed back to the input. Set to the lowest possible value to generate a single echo. Set to the max value to endlessly repeat the signal.

High Damp

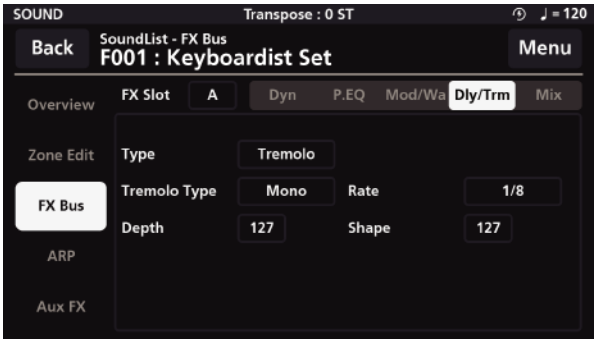
A lowpass filter placed after the delay line can be used to attenuate and color the high frequencies of the delayed signal.

Pre LP

A lowpass filter placed in front of the feedback loop can be used to attenuate the high frequencies of the signal. Lower values produce progressively darker echoes.

Level

Adjusts the volume level of the delayed signal.



Tremolo

The Tremolo effect provides 4 parameter settings: Type, Rate, Depth and Shape.

Type

Two types of tremolo behavior are available: Mono and Stereo. Mono produces a mono-centered effect whereas Stereo produces a L/R "ping-pong" style image.

Rate

Sets the tremolo speed based on note values: 1/4, 1/8d, 1/4t, 1/8, 1/16d. 1/8t, 1/16, 1/32d, 1/16t, 1/32 (Note: "d" = dotted values; "t" = triplet values). All values are relative to the Preset BPM tempo (as set on the Zone Edit / Common page).

Depth

Controls the range of amplitude modulation. Lower values equal less change; higher values equal larger swings in volume.

Shape

Controls the curvature of the modulation waveform. Lower values generate smoother/subtler (sine wave) shapes whereas higher values have a sharper, more abrupt character (square wave).

Mix

Mix is the final tab of the FX Bus and last process in the chain. The Mix settings govern the post FX Bus (pre Aux FX) sends for the aux Chorus/Delay and aux Reverb as well as Pan and Volume settings.

Chorus/Delay

This controls the amount of post FX Bus signal sent to the aux Chorus/Delay.

Reverb

This controls the amount of post FX Bus signal sent to the aux Reverb.

Pan

Balance the post FX Bus signal left to right in the stereo field.

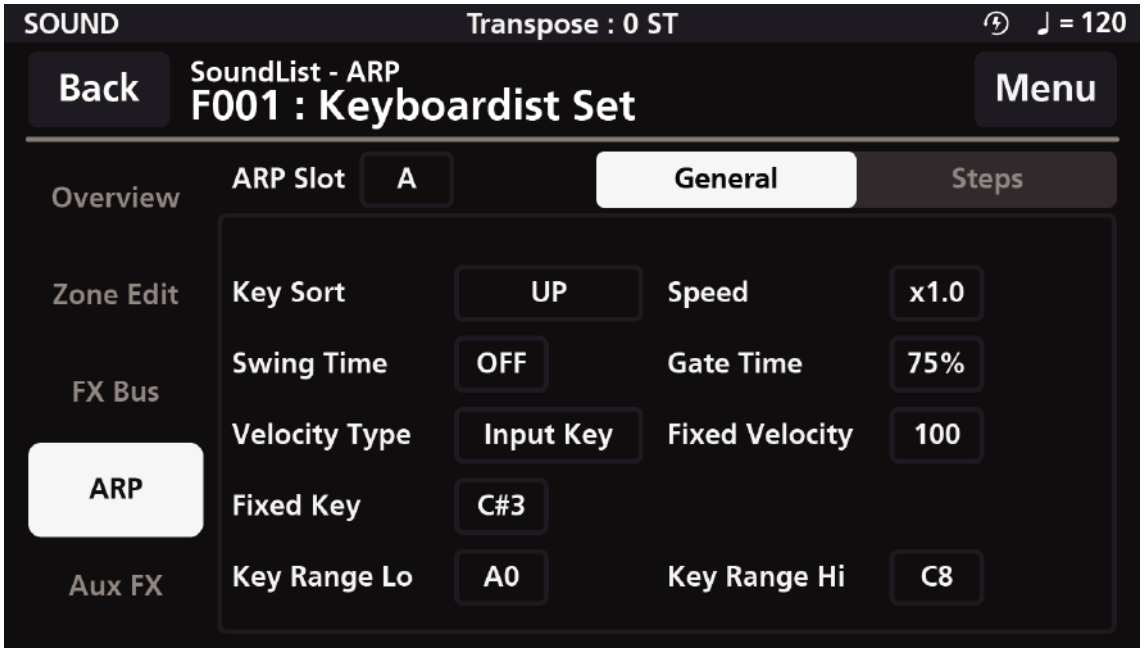
Volume

This controls the output level of the post FX Bus chain.

3-7. ARP(Arpeggiator)

The arpeggiator plays a rhythmic or melodic pattern repeatedly according to the notes being pressed. The SP7 has 8 arpeggiators from A to H and detailed settings are available in two tabs, General and Steps.

General



In the General tab, you can set 9 parameters – Key Sort, Speed, Swing Time, Gate Time, Velocity Type, Fixed Velocity, Fixed Key, Key Range Lo, and Key Range Hi.

Key Sort

Key Sort determines the note order in which the arpeggiator pattern will run.
The arpeggiator can run its patterns following one of 3 methods: as played (None), upwards (Up) or downwards (Down).

Speed

The arpeggiator plays at the root tempo specified on the Zone Edit Common page.
The Speed parameter provides 3 options that allow you to further scale the speed of the arp: x1 (no change) x0.5 (half-time) or x2.0 (double-time).

For example if the Common page tempo is set at 100 and you select x0.5 the resultant playback speed would be 50. Choose x2.0 and the resultant tempo would be 200.

Swing Time

Swing Time creates a swing rhythm by changing the note length and interval. It can be set to OFF, 25%, 50%, or 75%. The higher the value, the stronger the swing feel.

Velocity Type

The Velocity Type parameter controls the strength of the notes played by the arpeggiator.
When set to “InputKey” the velocity sounded by the arpeggiator is as played. When set to “Fixed”, each note sounded by the arpeggiator has the same velocity and that velocity is determined by the adjacent “Fixed Velocity” parameter. With the value of “Step” assigned, the velocity of each note in the pattern is determined by the individual steps of the step sequencer (Steps tab).

Gate Time

Gate Time is a function that modifies the duration of the notes played by the arpeggiator. Value setting choices are: 90%, 75%, 50%, and 25%. Higher percentages create more connected (legato-like) notes where smaller percentages create more staccato-like results.

Fixed velocity

When the Velocity Type is set to Fixed, the Fixed Velocity parameter determines the uniform velocity of all notes in the pattern. Higher values increase the intensity, while lower values decrease it.

Fixed Key

The Fixed Key field allows you to specify a single note pitch (A0-C8) that will trigger for any pattern step (Steps tab) whose “Key” parameter is set to a value of “Fixed”.

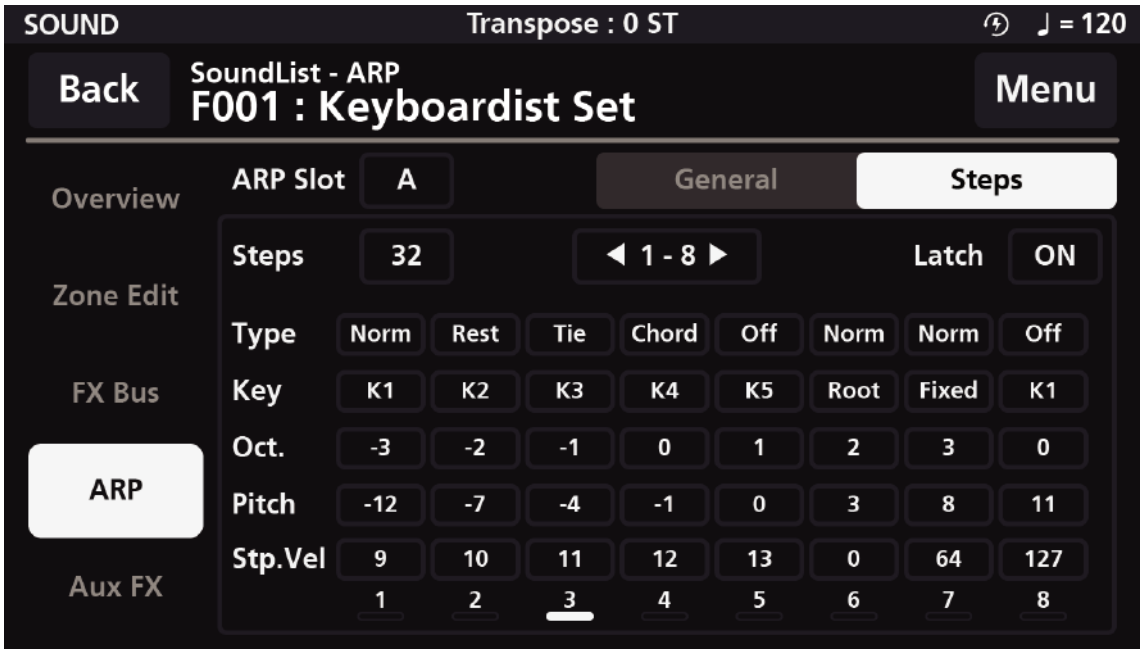
Key Range Lo

Key Range Lo determines the lowest note the arpeggiator can play.

Key Range Hi

Key Range Hi determines the highest note the arpeggiator can play.

Steps



On the Steps tab you will find a step-sequencer grid that forms the basis of the arpeggiator pattern to be triggered. The Steps tab displays settings for Steps, Latch, Type, Key, Octave, Scale and Step Velocity.

Steps

Arpeggiator patterns support up to 32 individual events (steps). The "Steps" parameter allows you to specify how many steps the pattern will contain (1–32). Note, the grid only displays up to 8 steps at a time, as such you choose which group of 8 steps you wish to view/edit at any given moment. The selector field to the right of the "Steps" parameter allows you to choose which group of 8 steps to view (1–8, 9–16, 17–24 or 25–32).

Latch

This is an on/off switch that activates the individual arpeggiator latch function. (Note: the Zone Edit/Common "ARP Latch" master switch must be 'On' for any Arp (A–H) in the multi to run). When Latch is engaged, this allows the given arpeggiator to continue to play its pattern even after all piano keys have been released.

Type

The Type parameter allows you to choose the type of performance for the designated step. There are 5 available types: Norm, Rest, Tie, Chord and Off.

Norm : Plays a single note.

Rest: Adds a musical rest (silence) at the specified step.

Tie: Creates a musical tie in relation to the previous note in the pattern. A new note attack is not struck unless the pitch itself changes.

Chord: Plays a chord instead of playing a single note for that specified step. OFF: Turns off the specified step.

OFF: Turns off the specified step.

Key

The Key parameter assigns the notes you play to the individual pattern steps. Up to 5 notes are possible, labeled K1 to K5. By assigning K1–K5 to the various steps, you determine which performed note(s) is triggered at each step in the pattern.

Select "Fixed" to trigger the note selected as the "Fixed Key" (General tab).

Oct. (Octave)

The Octave parameter sets the octave of the note of the specified step (+/– 3 oct).

Scale

The Scale parameter transposes the pitch of the note of the specified step (+/– 12 semitones).

Stp.Vel (Step Velocity)

When the Velocity Type parameter (General tab) is set to "Step", the Step Vel. Value becomes the note velocity of the specified step.

Step Indicator

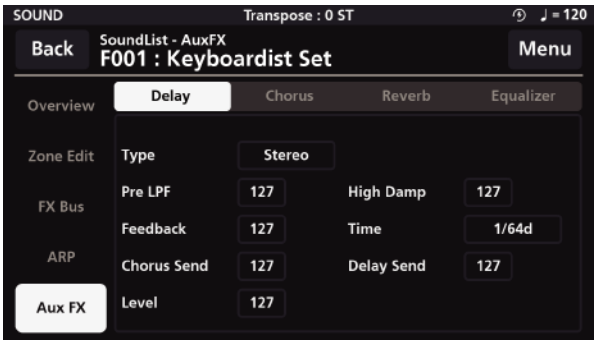
The Step Indicator is a visual aid located at the bottom of the step grid. When the arpeggiator is running, a white bar moves along in time, advancing with each pattern step, making for easier editing.

3-8. Aux FX (Preset Master FX)

The SP7 features a 4 part Aux FX section which is comprised of a separate Delay, Chorus, Reverb, and Equalizer. Adjust all parameter dials by touch, alpha wheel (once selected), Increase+/Decrease- buttons, or tap the value field to open a numeric keypad for more precise data entry.

Delay

The Delay tab consists of a Type selector, Pre LPF, High Damp, Feedback, Time, Chorus Send, Reverb Send, and Level parameters.



Type

There are various character types of Chorus available: Chorus 1, 2, 3, 4, Feedback Chorus (FB Chorus), Flanger,
Short Delay and Feedback Delay (FB Delay).

Waveform

Select from 3 waveforms shapes: Triangle, Sine and Async Sine.

Pre LPF

A lowpass filter placed in front of the feedback loop can be used to attenuate the high frequencies of the signal. Lower values produce progressively darker tones.

Rate

Determines the frequency of signal modulation. Higher values equal faster rates.

Depth

Sets the depth of the pitch modulation. Higher values equal wider pitch variations.

Delay Time

Adds delay in front of the modulated signal. Higher values equal longer delay line times and can color the chorusing effect.

Feedback

Controls the amount of effected signal fed back into the input to intensify the chorusing effect.

Reverb Send

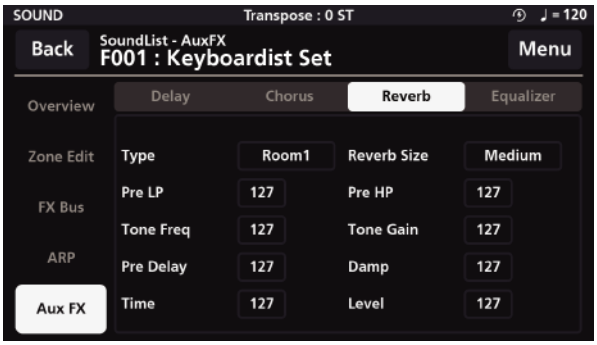
Controls the amount of chorus signal sent to the Reverb effect section.

Level

Adjusts the volume level of the chorus effect.

Reverb

The Reverb tab consists of a Type selector, Size selector, Pre LP, Pre HP, Tone Freq, Tone Gain, Pre Delay, Damp, Time and Level controls.



Type

There are various types of reverbs available: Room 1, 2, 3, Plate, Hall 1, and Hall 2.

Size

There are 3 reverb sizes available: Small, Medium, and Large.

Pre Low Pass (Pre LP)

A lowpass filter applied to the signal feeding the reverb. Lower values produce progressively darker colors by attenuating the high frequencies.

Pre High Pass (Pre HP)

A high pass filter applied to the signal feeding the reverb. Higher values progressively attenuate bass frequencies.

Tone Frequency (Tone Freq.)

Set the frequency for a high shelving filter that boosts reverb frequencies above the designated point.

Tone Gain

Determines the amount of gain applied at the chosen Tone Freq and above.

Time

This parameter controls the reverb decay time (RT60). Larger values equal longer reverb times.

Damp

This high frequency dampening control places a lowpass filter after the reverb and can be used to attenuate the high frequencies present in the reverb

Pre Delay

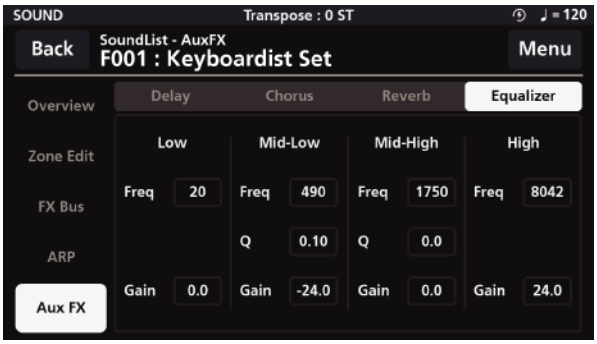
Set the time between the start of the original signal and early reflections.

Level

Adjusts the volume level of the reverb effect.

Equalizer

The Equalizer is a 4-band design consisting of Low (shelving), Mid-Low, Mid-High, and High (shelving) bands.



Low (Shelf)

A low shelving filter that cuts or boosts (Gain) frequencies below the set frequency (Freq).

Mid-Low / Mid-High (Peak/Notch)

Fully parametric bands with controls for specifying the center frequency (Freq), width of the frequency band around the center frequency (Q) and amount of boost/cut (Gain) for the specified area.

High (Shelf)

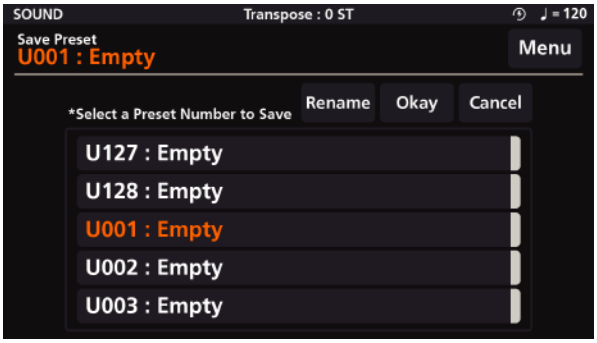
A high shelving filter that cuts or boosts (Gain +/-12dB) frequencies above the set frequency (Freq).

3-9. Saving User Sounds

Whenever changes are made to a sound within the Edit menu, it becomes possible to save that edited sound as a new User sound. To save, tap the MENU button in the upper right hand corner which reveals several options. Click the “Save" button.

Saving User Sounds

When you click the Save button, a save confirmation dialog window appears, “Do you want to save changes?” If you do not want to save the changes, press the “No” button. If you do want to save the changes, press the “ Yes” button. If you want to return to the previous step, press the “Back” button.



Specifying User Sound ID Numbers

If you select "Yes" in the save message window, you will next scroll the list of 128 available user ID locations and tap the ID where the User Sound will be saved to.

(Optional) To rename the new User Sound, tap the "Rename" button, to access a screen where you can edit the name of the Sound to be saved (see details below).

To store the preset, tap "Okay" and it will be saved to the selected ID.

If another Sound already exists at the selected ID, the "Okay" button changes to "Replace".
If you select "Replace", the user Sound already residing in that ID location will be overwritten.

If you select "Cancel", the saving process is canceled and you are returned to the page you were editing.

Naming User Sounds

To rename a Sound, tap the "Rename" button on the User ID save page. A naming screen will appear allowing you to input a new name of your choice.

Tap a character field and use the Alpha Wheel to scroll through the list of characters.

The name can contain up to 16 characters, including uppercase/lowercase letters, numbers, spaces, periods, and ampersands (&).

Use the "Delete" button to delete the current character. All the characters to the right will move one space to the left.

Use the "Insert" button to insert a blank space. The selected character and all characters to the right will move one space to the right. Any characters shifted beyond the 16th position will be deleted.

Chapter 4. Audio Mode

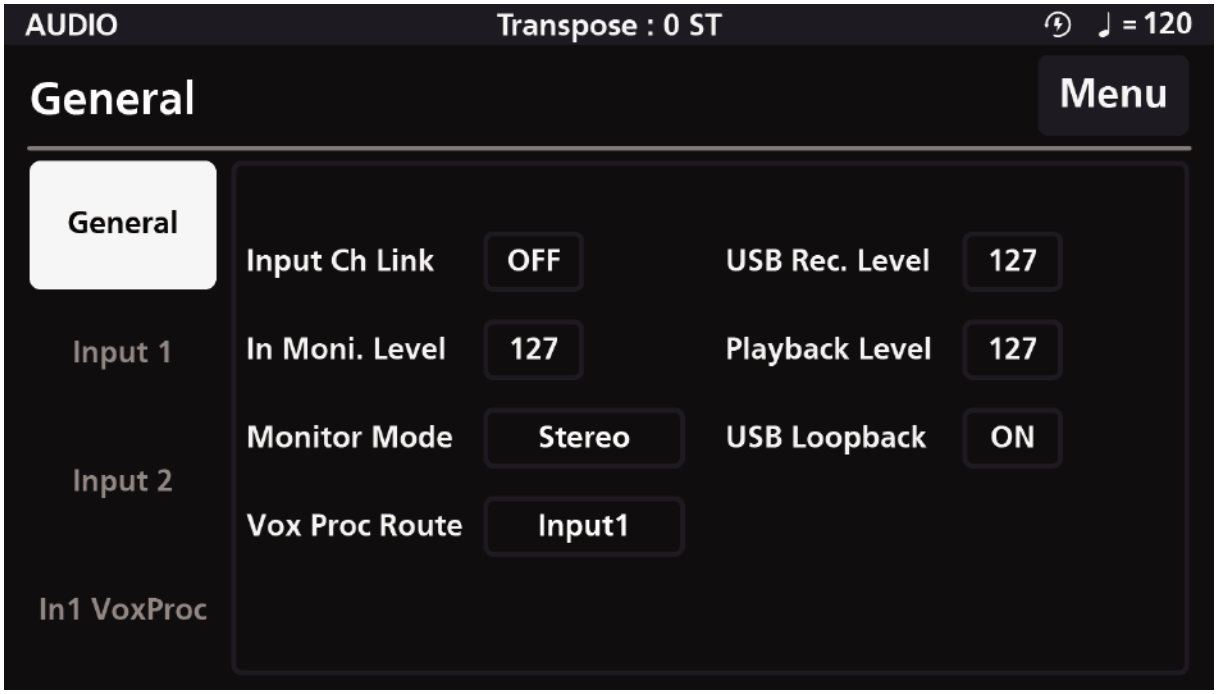
Audio Mode controls the SP7's audio input and audio interface.

Two XLR combo audio inputs with phantom power on the SP7 rear panel allow audio recording to DAWs. The SP7's audio interface has a DSP function, allowing you to apply dedicated vocal processing to incoming audio signals. This feature is useful in a variety of situations from live performances to personal recording studio environments.

Audio mode consists of “General”, “Input 1”, and “Input 2”. Depending on parameter settings, the input vocal processor (In VoxProc) can be configured.

4-1. General

General tab includes “Input Ch Link” (Input Channel Link), “‘In Moni. Level” (Input Monitor Level), “Monitor Mode”, “Playback Level”, “Vocal Proc. Route” (Vocal Processor Route), and USB settings.



Input Ch Link (Input Channel Link)

Sets inputs 1 and 2 to stereo channels. When “ON”, Input 1 and Input 2 are linked and these settings are applied equally to Inputs 1 and 2.

In Moni. Level (Input Monitor Level)

Controls the headphone and monitor jack volume for the input signal.

Monitor Mode

Mute: Makes the monitor sound silent.
Stereo: Allows the input signal to be monitored in stereo, with input 1 for the left and input 2 for the right.
Mono: Monitors the sound in mono without dividing the input signal into L/R.

Vocal Proc. Route (Vocal Processor Route)

No Vocal Proc.: Disables all vocal processing
VP on input1: The vocal processor is applied to the Input 1 signal VP on input2: The vocal processor is applied to the Input 2 signal

Note : The vocal processor can only be applied to one input at a time.

USB Rec Level

Controls the audio level being sent over USB from SP7 to your computer.

Playback Level

Controls the audio level being returned over USB from your computer to SP7

USB Loopback

When enabled, USB audio arriving at the SP7 input is fed back to the USB audio output. This can be useful for combining backing tracks from your computer/DAW with the output from the SP7 and sending them back to your computer for live recording/streaming.

Caution: Be sure to disable any input monitoring in your computer DAW/software to avoid feedback.

4-2. Audio Input

The input section consists of Input, Dynamics (Dyn), Parametric Equalizer (P.EQ), Modulation/Wah (Mod/Wah), Delay/Tremolo (Dly,Trm), and Mix. The dynamic (Dyn) and parametric equalizer (P.EQ) functions are the same as the FX Bus in the Sound mode. For details, refer to [3-6. FX Bus (Zone Insert FX)] page.

Input

Gain: The input signal level at the input jack.
Lo-Cut: When set to ON, it reduces the low frequencies.
Noise Gate: When set to ON, it reduces noise from the input audio signal
NG Threshold (Noise Gate Threshold): Sets the level at which the gate opens
NG Release (Noise Gate Release): Sets the time it takes for the gate to close

Dynamics

The Dynamics tab consists of Compressor, Distortion, and Bit Crusher.

Compressor

Gain : Amplifies the loudness of the post compression signal
Threshold : Determines the minimum level at which the compressor is applied
Ratio : Sets the amount of gain reduction caused by the operation of the compressor
Attack : Controls the compressor's attack time
Release : Controls the release time of the compressor

Distortion

There are 6 types of distortion : Overdrive, Distortion, Fuzz, Fuzz2, Tube, and Asymmetrical.
Input/Output Brightness : Changes the sound by filtering the high frequencies of the sound signal
Drive : Adjusts the distortion amount
Output Level : Adjusts the output level

Bit Crusher

Bitcrusher is an audio effect that creates distortion by altering a digital sound signal.
Bit resolution : Lower the value, stronger the effect
DownSampling Factor : Adjusts the sampling size
Output Brightness : Adjusts the high frequencies of the output sound signal
Output Level : Adjusts the output level

P.EQ

Parametric EQ (P.EQ) can be assigned to 4 frequency ranges. For each band, you can set the frequency (Freq), Q value (Q), and Gain parameters.

LPF 6dB: Reduces the high frequencies above the set frequency using a 6dB/oct slope LPF 12dB: Reduces the high frequencies above the set frequency using a 12dB/oct slope LowShelf: Reduces or boosts below a set frequency.
Peak/Notch: Reduce or boost the selected frequency band as the center HighShelf: Reduces or boosts the treble above a set frequency
HPF 6dB: Reduces the low frequencies below the frequency set using a 6dB/oct slope HPF 12dB: Reduces the low frequencies below the frequency set using a 12dB/oct slope

Note 1: LPF (Low Pass Filter) has the same meaning as HCF (High Cut Filter). It passes the low frequencies rather than reducing the low frequencies.
Note 2: HPF (High Pass Filter) has the same meaning as LCF (Low Cut Filter). It passes the high frequencies rather than reducing the high frequencies.

Mod/Wah

Modulation and WahWah effects cannot be used at the same time.

Modulation – Chorus

WaveForm : Selected from Triangle, Sine, and Async sine
Rate : Sets the signal modulation rate
Depth : Sets the depth of the chorus. Higher values increase the pitch change.
Delay : Adds a delay to the modulated sound signal
Dry/Wet : Sets how much the effect is applied

Modulation-Vibrato

Waveform: Select from Triangle and Sine
Rate: Sets the speed of vibrato
Depth: Sets the depth of vibrato and the amount of pitch change.

Modulation-Flanger

Waveform: Select from Triangle and Sine Rate: Sets the amount of sound modulation.
Depth: Sets the amount of pitch change of the modulated sound
Feedback: Enables the effect of generating noise through the feedback effect
Delay: Adds delay to the modulated sound signal
Dry/Wet: Sets how much the effect is applied

Modulation-Phaser

Waveform: Select from Triangle and Sine Rate: Sets the amount of sound modulation.
Depth: Sets the amount of pitch change of the modulated sound
Feedback: Enables the effect of generating noise through the feedback effect
Dry/Wet: Sets how much the effect is applied.

Modulation-Rotary

Rotary reproduces a rotating rotary speaker.

Default Speed: Select the rotation speed of the speaker as Slow or Fast
Mic Angle: Sets the angle of the microphone. Select from 0 degrees, 45 degrees, 90 degrees, 135 degrees, or 180 degrees.
Accel.Rate: Sets the acceleration time of the speaker rotation speed.
Brake Rate: Sets the time for the speaker to come to a complete stop
Slow Rate: Sets the slow speaker rotation speed
Fast Rate: Sets the fast speaker rotation speed Radius: Sets the rotational radius of the speaker.

WahWah-Dynamics

Dyn Up (Dynamic Up) : When the Wah effect starts, the volume increases from low to high
Dyn Down (Dynamic Down) : When the Wah effect starts, the volume decreases from loud to low Dyn Up
Sharp (Dynamic Up Sharp) : When the Wah effect starts, the volume rapidly increases
LFO (Low Frequency Oscillator) : Adjusts the low frequency of the Wah effect
Filter Type : Select "Low Pass" or "Band Pass" The Low Pass amplifies the sound based on the bass part and the Band Pass based on the specified frequency.
Frequency : Sets the reference frequency of the filter and adjusts the sound of the Resonance
Dyn Sensitivity : Adjusts the sound gap of the Wah effect
Decay : Adjusts the time difference in which the sound reduces after the maximum volume of the Wah effect.

WahWah-LFO

The low frequency oscillator (LFO) is a low frequency modulation effect. Unlike dynamic effects such as the Wah effect, it has the low frequency oscillator rate (LFO Rate) and low frequency oscillator depth (LFO Depth) parameter.

LFO Rate (Lowpass Oscillator Rate): Sets the sound modulation in bars
LFO Depth (Low Frequency Oscillator Depth): Adjusts the volume difference of the sound modulation

Dly/Trm

Delay (Dly) and Tremolo (Trm) cannot be used at the same time.

Delay

Delay can be selected from two types: mono and stereo.

Time: Select from 16 note lengths.
Feedback: Sets the number of repeats
High Damp: Controls the high frequency content of the delayed signal
LPF Freq (Low-pass filter frequency): Adjusts the reference frequency of the low pass filter
Level: Adjusts the amount of delay effect

Tremolo

There are 2 types of tremolo available, Mono and Stereo.

Rate: Select from 10 note lengths
Depth: Sets the depth of the tremolo effect
Shape: Sets the shape of the tremolo waveform

Mix

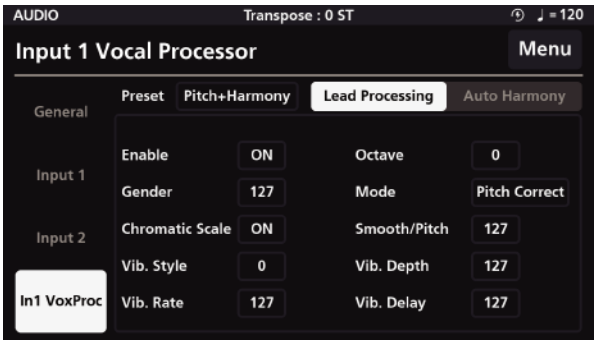
Mix is the last tab of the FX bus. It sets the amount of signal sent to Chorus/Delay or Reverb effects as well as Pan and Volume for the current Zone.

4-3. Vocal Processor

The SP7 Input 1 and 2 Vocal Processors (In 1, 2 Vocal Proc.) provide vocal-specific tools: pitch correction and auto-harmony generation.

The Vocal Processor tab appears when you set up the Vocal Processor in the General page. Vocal Processors include Pitch Correction (PchCor), Pitch Correction + Vibrato (PchCor + Vib), Pitch Correction + Harmony (PchCor + Har), Tight Pitch (Tight Pch), Digital Voice (DIGI Vox), Shaky Voice (Shaky Vox), Fixed Pitch (Fixed Pch), Robot Voice (Robot Vox), Robot Voice2 (Robot Vox2), OctaveUp, Flea, Select Harm, etc. The detailed settings tab consists of Lead Processing and Auto Harmony.

Lead Processing

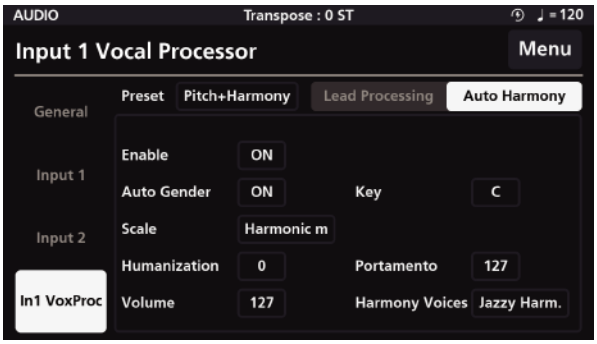


Enable: Determines whether Lead Processing is applied to input channels
Octave: Set to one of -1, 0, +1, +2, and +3, and the octave changes as much as you set
Gender: Lower values emphasize lower frequencies, and higher values emphasize higher frequencies
Mode: Select either Constant Pitch or Pitch Correction
Constant Pitch: The input signal is forced to a single fixed pitch specified

Pitch Correction: The input signal's pitch is auto-corrected to match the nearest absolute pitch.
Chromatic Scale: Attempts to quantize all pitches to the chromatic scale
Smooth/Pitch: Sets how smooth the pitch is corrected. The higher the value, the smoother (more natural) the pitch correction.
Vib. Style (In Vibrato Style): Select the vibrato shape from 0 to 9.
Vib. Rate (Vibrato Rate): Sets the speed of vibrato
Vib. Depth (Vibrato Depth): Sets the depth of the vibrato
Vib. Delay (Vibrato Delay): Sets the length of the vibrato

Auto Harmony

Auto Harmony is a function that automatically creates harmonies based on the pitch of the input signal.



Auto Harmony is a function that automatically creates harmonies based on the pitch of the input signal.

Enable: Determines whether Auto Harmony is applied to the input channel.
Auto Gender: When enabled, Auto Gender automatically recognizes the gender of the input voice and adjusts the formants of the generated harmonies to match.

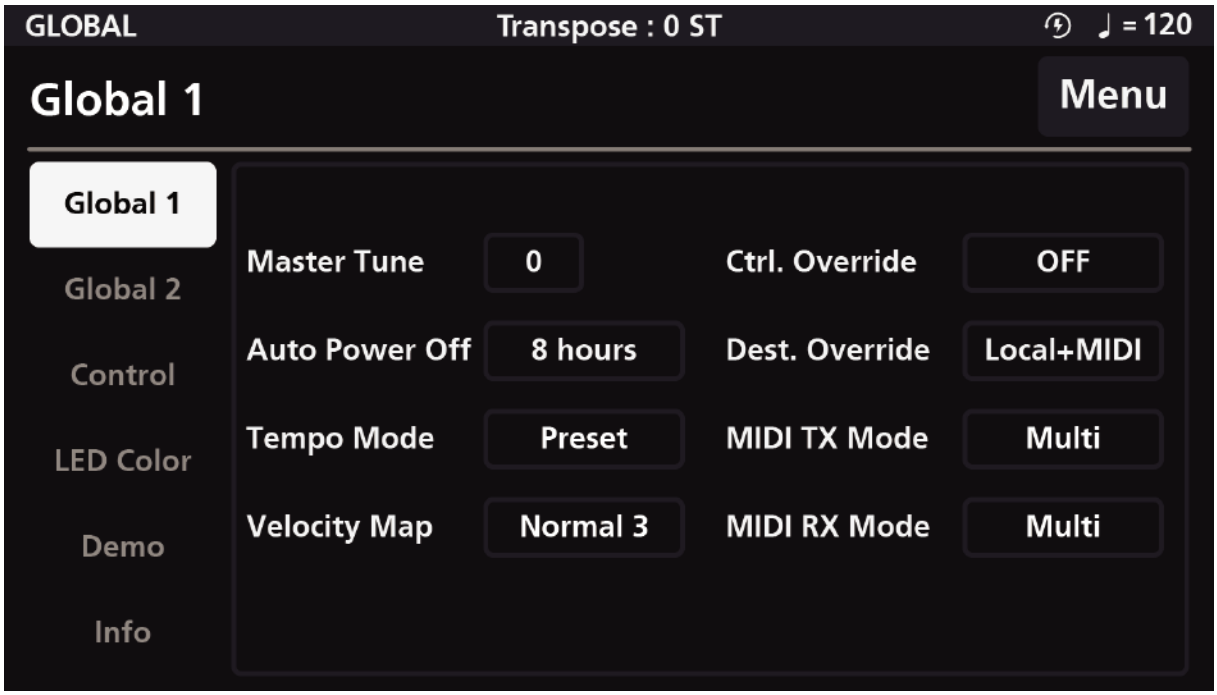
Key: Specifies the musical key center that the auto-harmonies will be built around
Scale: Sets the musical scale that the harmonies is generated in
Humanization: Intentionally creates random inaccuracies in the timing and pitch of the generated harmonies, giving the effect of a human-like performance
Portamento: Sets the smoothness of the transitions between notes
Volume: Sets the volume of the harmony
Harmony Voices: Determines the structure of the generated harmonies. Available parameter values are " Off", "Doubling", "Big Unison", "Harmonics1", "Harmonics2", "Jazz Harmonies", "Pure Harmonies", "Deep Harmonies", "Funny Choir", "Scary Choir", and "Vocoder".

Chapter 5. Global Mode

In GLOBAL Mode, you set common parameters for all modes including, but not limited to, Master Tune, Auto Power Off, LED settings, and more. GLOBAL Mode is also used to listen to demo songs included in SP7, view the manual via QR code, and restore factory settings.

5-1. Global 1

Global1 consists of the following parameters : Master Tune, Auto Power Off, Tempo Mode, Velocity Map, Controller Override (Ctrl. Override), Destination Override (Dest.Override), MIDI Transmit Data Mode (MIDI TX Mode), MIDI Receive Data Mode (MIDI RX Mode).



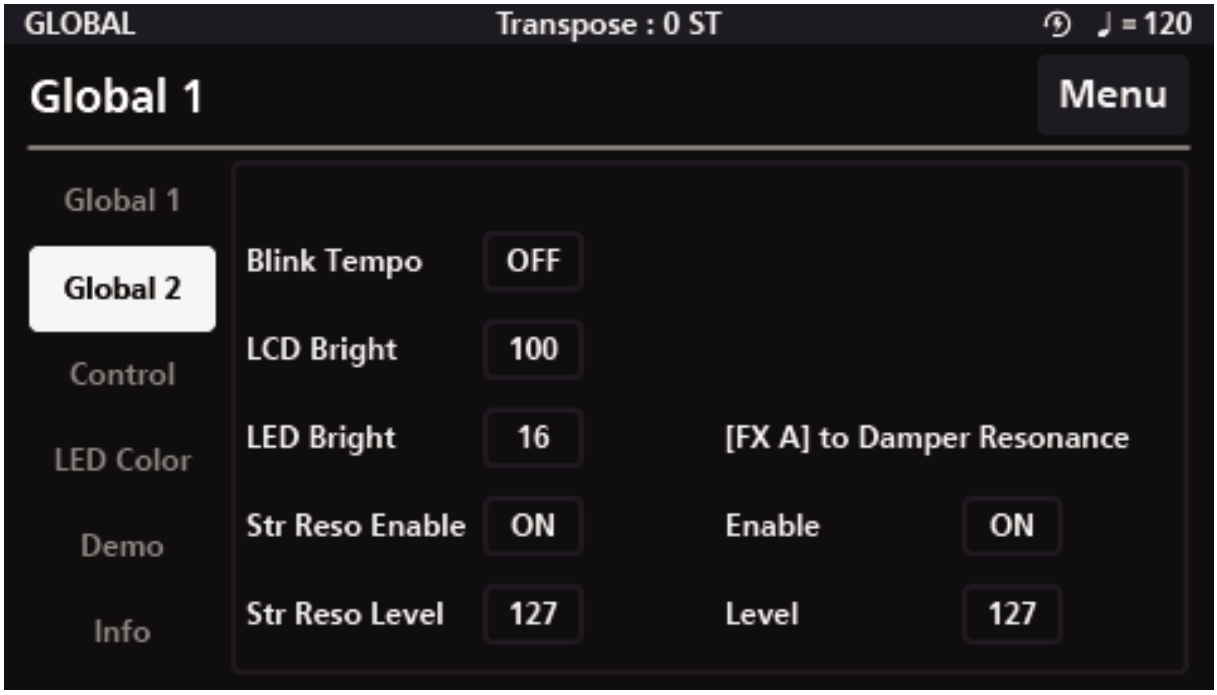
Master Tune: Fine-tunes the overall pitch of the SP7.
Auto Power Off: An automatic power off function to conserve electricity. After a period of inactivity, the power is automatically turned off. It can be set to OFF, 15 minutes, 30 minutes, 1 hour, 2 hours, 4 hours, or 8 hours.
Tempo Mode: Select either Preset or Global.
Preset: Apply the specified tempo in each Sound Preset
Global: Apply the tempo set in GLOBAL Mode to all Sound Presets
Velocity Map: Sets the velocity applied to the keyboard
You can set from hard touch to light touch (Hard 3/2/1, Normal 3/2/1, Light 3/2/1). "Fix" applies one velocity regardless of the actual velocity. (See [Appendix-C (Velocity Map)])
Ctrl. Override (Controller Override): A function that allows all Sound presets to use the same controller when using the controller sections (knobs, buttons, joysticks, pedals), rather than the parameters of the controller assigned to each Sound preset.
Note: If Override is on, Zone On/Off is applied equally when selecting a factory preset.
Dest. Override (Destination Override): A function that allows all Sound presets to have the same destination instead of the designated destination for each Zone of the Sound preset.
Destination selects the MIDI signal destination of the Sound preset.

Destination Override can be set to one of the following values.

OFF: Does not use the override function and uses the destination specified for each Zone of the Sound preset.
The Local+MIDI: Transmits both the internal sound module and the outgoing MIDI signal.
Local Only: MIDI signals are sent only to the internal sound module and not externally.
MIDI Only: No sound is produced from the audio output jack.
MIDI TX mode (MIDI Transmit Data Mode): Allows you to select between Single and Multi for output MIDI signals.
MIDI RX Mode (MIDI Receive Data Mode): Allows you to select between Single and Multi for input MIDI signals.

5-2. Global 2

Global2 consists of these parameters: Blink Tempo, LCD Bright, LED Bright, String Resonance (String Reso.), Damper Resonance of Effect A ([FX A] to Damper Resonance).



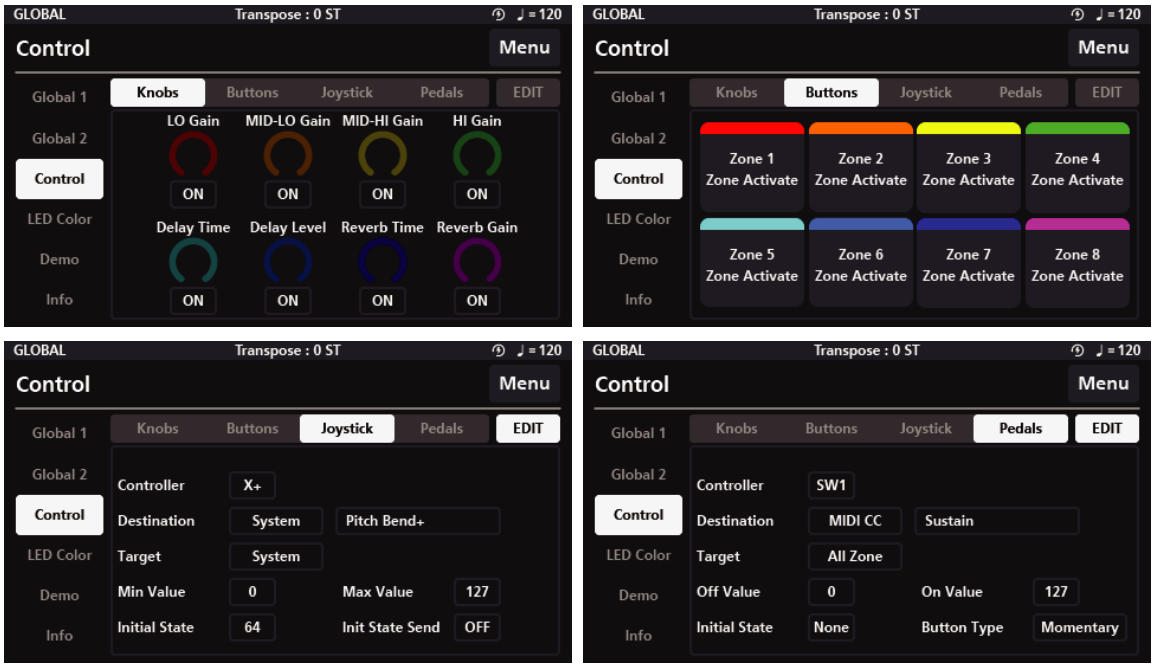
Blink Tempo: Enables the Alpha wheel LED ring to "blink" at the current Global BPM tempo value.
LCD Bright: Adjusts the screen brightness of the touch screen.
LED Bright: Adjusts the brightness of LEDs such as knobs and buttons.
Str Reso Enable (String Resonance Enable): Enable or disable the String Resonance feature
Str Reso Level (String Resonance Level): Adjusts the amount of string resonance
[FX A] to Damper Resonance
Enable: Turns ON/OFF this feature
Level: Adjusts the amount of resonance of the damper pedal

5-3. Control

The control page consists of Knobs, Buttons, Joystick, and Pedals. In the upper tab, you can check the currently assigned controller and parameter values. If you want to change it, click the EDIT button in the upper right corner to go to the controller editing page.

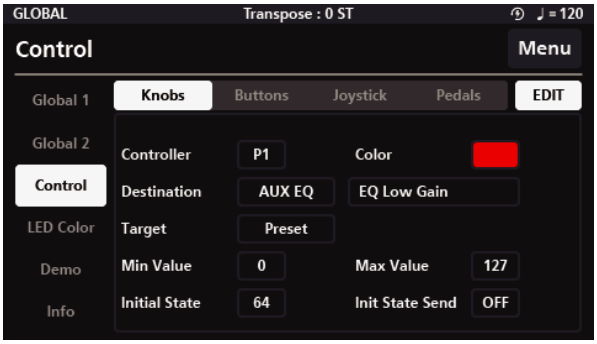
Note 1: The values of Knobs, Buttons, Joysticks, and Pedals that are not in the EDIT state only show the real-time values during performance and are not saved in the Sound preset even if they are changed. To save the controller settings, you must press the EDIT button before editing them.

Note 2: If you modify the controller value, the controller override (Ctrl. Override) on the Global1 page is automatically changed to On.



Knobs-EDIT

The control knob consists of eight colored LED knobs, numbered P1 through P8, in the upper left corner of the screen. The Knob Editing page lets you edit the Controller, Color, Destination, Target, Min Value, Max Value, Initial State, and Initial State Send parameters.



Controller

Select the knob to be edited from among the eight knobs, P1 to P8. Other knobs can be changed in the same way.

Color

You can change the color of the assigned knob by selecting a color from among 42 colors. Other knobs can be changed in the same way.

Destination

Destination specifies the function to be assigned to the controller.
Destination consists of 8 categories : System, MIDI CC, AUX Effect (AUX FX), AUX EQ (AUX EQ), Zone Insert Effect (Zone IFX), Audio Effect (Audio FX), Vocal Processor (Vocal Proc), and Notes. Within each category, you can specify detailed controllers. [See Appendix-A (Controller Destination), Appendix-B (MIDI Destination)]

Target

It can be specified differently depending on the selected destination. Depending on the destination assigned to each controller, you can select None, Preset, System, Zone1~16, Zone ALL, FX A~D, FX ALL, Input 1~2, Input ALL, etc.

Min Value

Set the minimum value of the controller knob from 0 to 127.

Max Value

Set the maximum value of the controller knob from 0 to 127.

Initial State

When a Sound is selected, the initial value of the controller to be loaded is set to a value between 0 and 127.

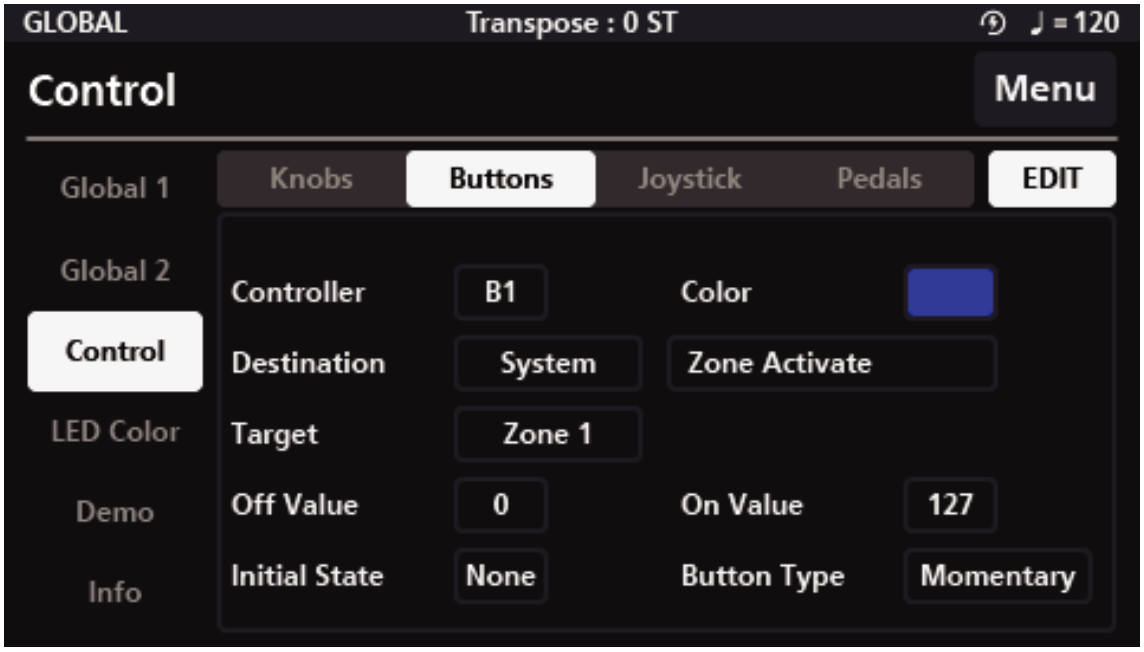
Initial State Send

Determines whether to load the initial state value when changing the Sound.

Buttons–EDIT

The control buttons consist of 8 colored LED buttons, numbered B1 through B8, below the control knob.

The Buttons Edit page lets you edit the Controller, Color, Destination, Target, Off Value, On Value and Initial State parameters.



Controller

Select the button to be edited from among the eight buttons, B1 to B8. Other buttons can be changed in the same way.

Color

You can change the color of the assigned buttons by selecting a color from the 42 available color palette. Other buttons can be changed in the same way.

Destination

Destination specifies the function to be assigned to the controller.
Destination consists of 8 categories : System, MIDI CC, AUX Effect (AUX FX), AUX EQ (AUX EQ), Zone Insert Effect (Zone IFX), Audio Effect (Audio FX), Vocal Processor (Vocal Proc), Notes. Within each category, you can specify detailed controllers. [See Appendix–A (Controller Destination), Appendix–B (MIDI Destination)]

Target

It can be specified differently depending on the selected destination.
Depending on the destination assigned to each controller, you can select None, Preset, System, Zone1~16, Zone ALL, FX A~D, FX ALL, Input 1~2, Input ALL, etc.

Off Value

Set the value from 0 to 127 when the controller button is off.

On Value

Set the value from 0 to 127 when the controller button is on.

Initial State

When a SOUND is selected, the initial value of the controller to be loaded is set to a value among None/On/Off.

None does not load the specified value.

On loads the value specified by On Value.

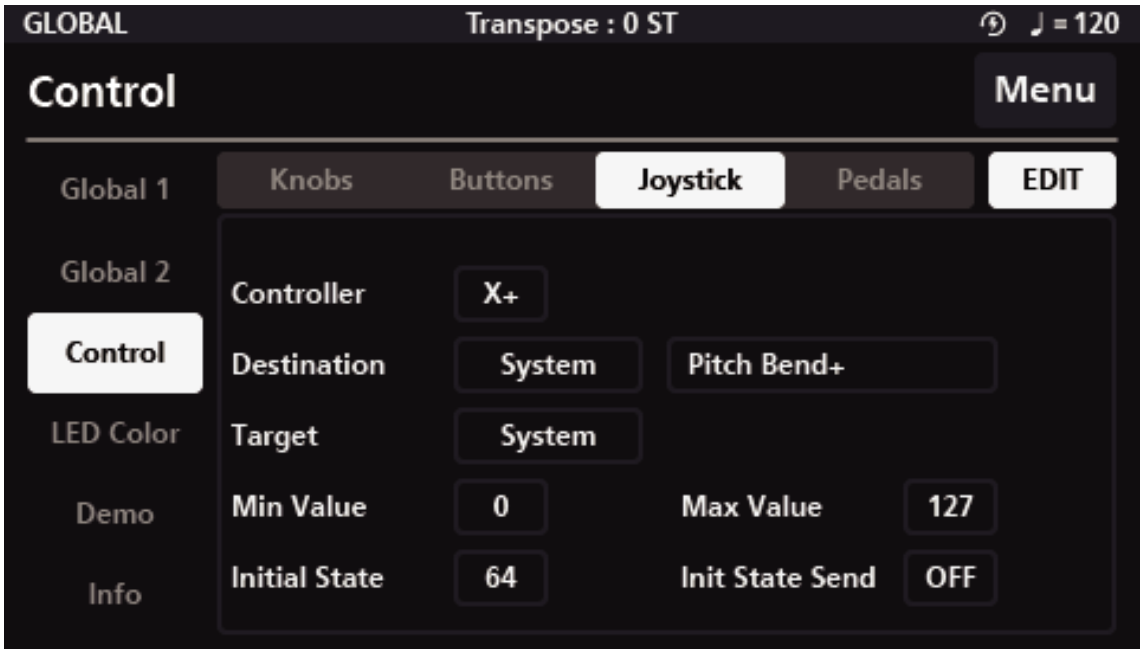
Off loads the value specified by Off Value.

Button Type

It determines how the button works when the button is pressed. Momentary turns on while pressed and turns off when released. Toggle alternates between On and Off whenever pressing it.

Joystick-EDIT

In the far left of the SP7 is an XY joystick that can be moved up, down, left, and right. The Joystick Editing page lets you edit the Controller, Color, Destination, Target, Min Value, Max Value, Initial State, and Initial State Send parameters.



Controller

Select the direction to edit: X+/X-/Y+/Y-. Other direction also can be changed one by one.

Destination

Destination specifies the function to be assigned to the controller.

Destination consists of 8 categories : System, MIDI CC, AUX Effect (AUX FX), AUX EQ (AUX EQ), Zone Insert Effect (Zone IFX), Audio Effect (Audio FX), Vocal Processor (Vocal Proc), Notes. Within each category, you can specify detailed controllers. [See Appendix-A (Controller Destination), Appendix-B (MIDI Destination)]

Target

It can be specified differently depending on the selected destination.

Depending on the destination assigned to each controller, you can select None, Preset, System, Zone1~16, Zone ALL, FX A~D, FX ALL, Input 1~2, Input ALL, etc.

Min Value

Set the minimum value of the controller knob from 0 to 127.

Max Value

Set the maximum value of the controller knob from 0 to 127.

Initial State

When a Sound is selected, the initial value of the controller to be loaded is set to a value between 0 and 127.

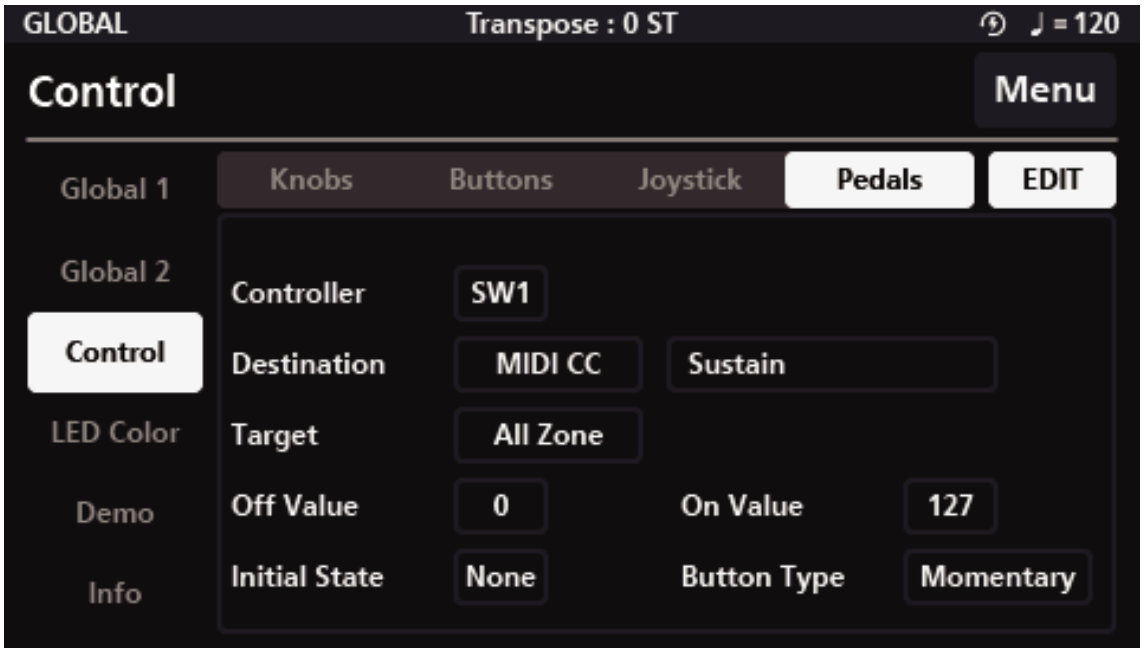
Initial State Send

Determines whether to load the initial state value when changing the Sound.

Pedals

Pedal can be connected to the 1/4" jack on the back of the SP7.

The Pedal Edit page lets you edit the Controller, Destination, Target, Off Value, On Value and Initial State, Button Type parameters



Controller

Select the pedal to be edited from SW1, SW2, or CC. Other pedals can be changed individually.

Destination

Destination specifies the function to be assigned to the controller.
Destination consists of 8 categories : System, MIDI CC, AUX Effect (AUX FX), AUX EQ (AUX EQ), Zone Insert Effect (Zone IFX), Audio Effect (Audio FX), Vocal Processor (Vocal Proc), Notes. Within each category, you can specify detailed controllers. [See Appendix-A (Controller Destination), Appendix-B (MIDI Destination)]

Target

It can be specified differently depending on the selected destination.
Depending on the destination assigned to each controller, you can select None, Preset, System, Zone1~16, Zone ALL, FX A~D, FX ALL, Input 1~2, Input ALL, etc.

Off Value

Set the value from 0 to 127 when the controller button is off.

On Value

Set the value from 0 to 127 when the controller button is on.

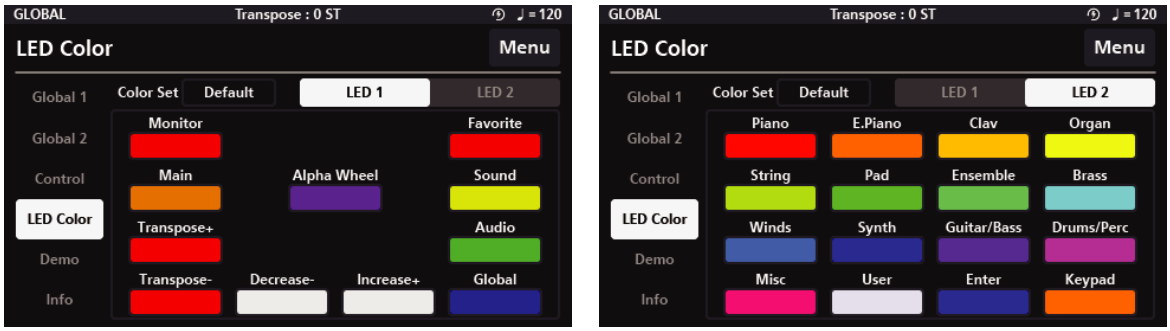
Initial State

When a Sound is selected, the initial value of the controller to be loaded is set to a value among None/On/Off.
None does not load the specified value. On loads the value specified by On Value. Off loads the value specified by Off Value.

Button Type

It determines how the button works when the button is pressed.
When set to "Momentary", "On Value" is sent when pressed and "Off Value"is sent when released.
When set to Toggle, each pedal press alternates between sending its "On Value" and "Off Value"

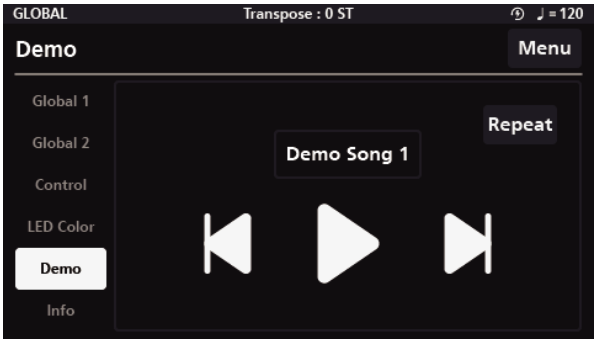
5-4. LED Color



You can change the LED color of the knobs and buttons on the front panel. Whenever the default color configuration is changed, it is saved as Custom.

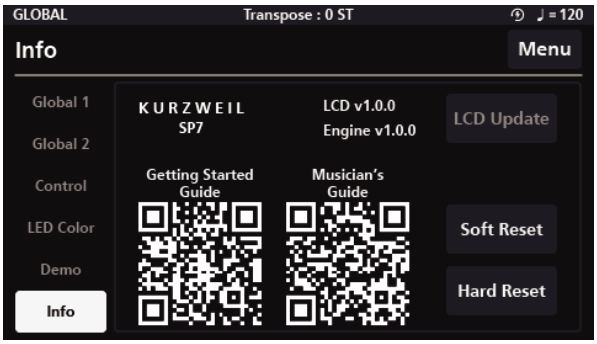
The LED1 screen is for the controller LED colors on the left side of the display while the LED2 screen is for the controller LED colors for the Category buttons. One of a total of 42 colors can be assigned to each LED.

5-5. Demo



In Demo, you can listen to 9 demo songs made with the SP7 factory sounds. In the box at the top, the number of the currently playing demo song is displayed. Demo songs can be played repeatedly with the Repeat button on the right side of the box.The left button moves to the previous song and the right button moves to the next song. You can play or stop demo songs with the center button.

5-6. Info



In Info, you can check the firmware version information of LCD and Engine. You can update the LCD firmware with the LCD Update button.For details, see [1-3. Firmware Update] page.

Soft Reset and Hard Reset initialization settings.

Soft Reset: Restores the factory default system settings while maintaining user presets.
Hard Reset: Erases all information including user presets and completely resets the SP7 Grand to its factory default settings.

If you press the Reset button, a pop-up information appears. If you select OK, the reset is completed and the unit powers down. Press the power button to restart SP7.

Manuals

You can download the Getting Started Guide and Musician's Guide by scanning the QR code. Please check the latest firmware versions at www.kurzweil.com website.

Supplementary Provision

Supplementary Provisions–A(Controller Destination)

off	None
System	Blink Tempo
	ARP Enable
	ARP Latch
	Global BPM
	Pitch Bend+
	Pitch Bend–
	Program Change
	Zone Active
MIDI CC	Bank Select
	Mod Wheel
	CC 2
	CC 3
	CC 4
	Porta.Time
	Data Entry
	Zone Volume
	CC 8
	CC 9
	Pan
	Expression
	CC 12
	CC 13
	CC 14
	CC 15
	CC 16
	CC 17
	CC 18
	CC 19
	CC 20
	CC 21
	CC 22
	CC 23
	CC 24
	CC 25
	CC 26
	CC 27
	CC 28
	CC 29
	CC 30
	CC 31
	CC 32
	CC 33
	CC 34
	CC 35
	CC 36
	CC 37
	CC 38
	CC 39
	CC 40
	CC 41

	CC 42
	CC 43
	CC 44
	CC 45
	CC 46
	CC 47
	CC 48
	CC 49
	CC 50
	CC 51
	CC 52
	CC 53
	CC 54
	CC 55
	CC 56
	CC 57
	CC 58
	CC 59
	CC 60
	CC 61
	CC 62
	CC 63
	Sustain
	Porta.On/Off
	Sostenuto
	Soft Pedal
	CC 68
	CC 69
	CC 70
	Resonance
	Env release
	Env attack
	Cutoff
	Env decay
	Vib rate
	Vib depth
	Vib delay
	CC 79
	CC 80
	CC 81
	CC 82
	CC 83
	CC 84
	CC 85
	CC 86
	CC 87
	CC 88
	CC 89
	CC 90
	Reverb send
	CC 92
	Cho/Dly Send

Supplementary Provision

	CC 94
	CC 95
	CC 96
	CC 97
	NRPN Low
	NRPN High
	RPN Low
	RPN High
	CC 102
	CC 103
	CC 104
	CC 105
	CC 106
	CC 107
	CC 108
	CC 109
	CC 110
	CC 111
	CC 112
	CC 113
	CC 114
	CC 115
	CC 116
	CC 117
	CC 118
	CC 119
	All sound off
	Controller Reset
	CC 122
	All notes off
	CC 124
	CC 125
	Mono On
	Poly on
AUX FX	Reverb Size
	Reverb Level
	Reverb Time
	Chorus Level
	Chorus Feedback
	Chorus Rate
	Chorus Depth
	Cho to Rev
	Delay Level
	Delay Time
	Delay Feedback
	Dly to Rev
	Dly to Cho
AUX EQ	EQ Low Gain
	EQ Mid Low Gain
	EQ Mid High Gain
	EQ High Gain
Zone IFX	Output Volume

	Pan
	Reverb Send
	Cho/Dly Send
Audio FX	Output Volume
	Pan
	Reverb Send
	Cho/Dly Send
Vocal Proc	Lead Process On/Off
	Auto Harm On/Off
	Auto Harm Volume
Note	Note # 0
	Note # 1
	Note # 2
	Note # 3
	Note # 4
	Note # 5
	Note # 6
	Note # 7
	Note # 8
	Note # 9
	Note # 10
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Supplementary Provision

	Note # 43
	Note # 44
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	Note # 118
	Note # 119
	Note # 120
	Note # 121
	Note # 122
	Note # 123
	Note # 124
	Note # 125
	Note # 126
	Note # 127

Supplementary Provision

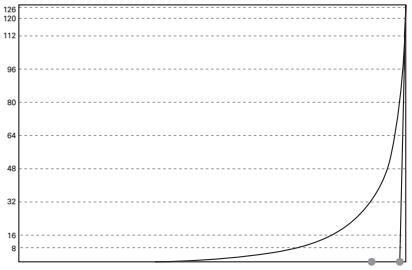
Supplementary Provision–B(MIDI Destination)

MIDI CC	Note	MIDI CC	Note	MIDI CC	Note
0	Bank Select	43	CC 43	86	CC 86
1	Mod Wheel	44	CC 44	87	CC 87
2	CC 2	45	CC 45	88	CC 88
3	CC 3	46	CC 46	89	CC 89
4	CC 4	47	CC 47	90	CC 90
5	Porta.Time	48	CC 48	91	Reverb send
6	Data Entry	49	CC 49	92	CC 92
7	Zone Volume	50	CC 50	93	Cho/Dly Send
8	CC 8	51	CC 51	94	CC 94
9	CC 9	52	CC 52	95	CC 95
10	Pan	53	CC 53	96	CC 96
11	Expression	54	CC 54	97	CC 97
12	CC 12	55	CC 55	98	NRPN Low
13	CC 13	56	CC 56	99	NRPN High
14	CC 14	57	CC 57	100	RPN Low
15	CC 15	58	CC 58	101	RPN High
16	CC 16	59	CC 59	102	CC 102
17	CC 17	60	CC 60	103	CC 103
18	CC 18	61	CC 61	104	CC 104
19	CC 19	62	CC 62	105	CC 105
20	CC 20	63	CC 63	106	CC 106
21	CC 21	64	Sustain	107	CC 107
22	CC 22	65	Porta.On/Off	108	CC 108
23	CC 23	66	Sostenuto	109	CC 109
24	CC 24	67	Soft Pedal	110	CC 110
25	CC 25	68	CC 68	111	CC 111
26	CC 26	69	CC 69	112	CC 112
27	CC 27	70	CC 70	113	CC 113
28	CC 28	71	Resonance	114	CC 114
29	CC 29	72	Env release	115	CC 115
30	CC 30	73	Env attack	116	CC 116
31	CC 31	74	Cutoff	117	CC 117
32	CC 32	75	Env decay	118	CC 118
33	CC 33	76	Vib rate	119	CC 119
34	CC 34	77	Vib depth	120	All sound off
35	CC 35	78	Vib delay	121	Controller Reset
36	CC 36	79	CC 79	122	CC 122
37	CC 37	80	CC 80	123	All notes off
38	CC 38	81	CC 81	124	CC 124
39	CC 39	82	CC 82	125	CC 125
40	CC 40	83	CC 83	126	Mono On
41	CC 41	84	CC 84	127	Poly on
42	CC 42	85	CC 85		

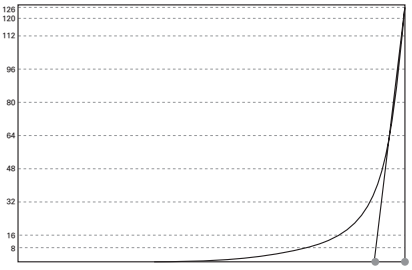
Supplementary Provision

Supplementary Provision-C(Velocity Map)

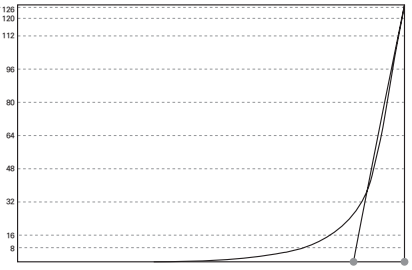
Preset : 0: Hard 3



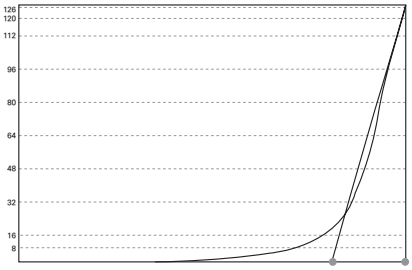
Preset : 1: Hard 2



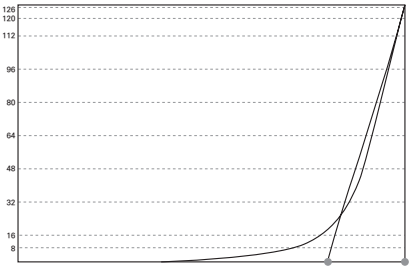
Preset : 2: Hard 1



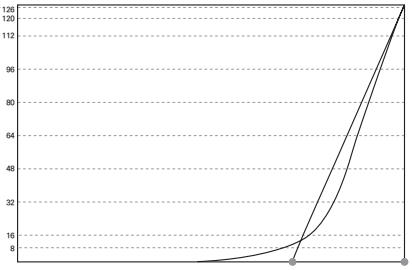
Preset : 3: Normal 3



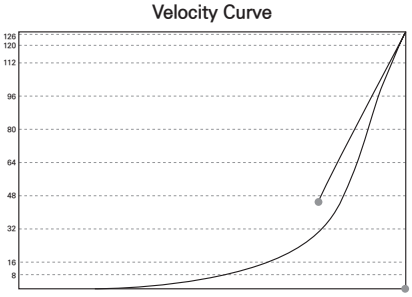
Preset : 4: Normal 2



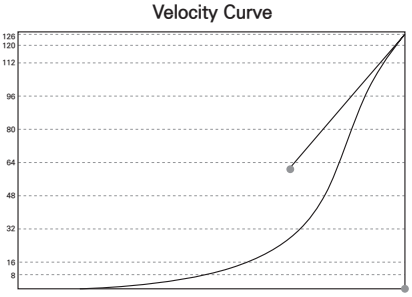
Preset : 5: Hard 1



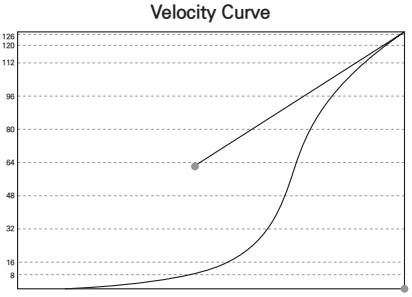
Preset : 6: Light 3



Preset : 7: Light 2



Preset : 8: Light 1



Product Specification

Keyboard	88 Full weighted hammer action
Display	480x272 Resolution 4.3" color LCD touch screen
Polyphony	256
Programs	512 factory multis.
USB	MIDI & Audio Interface
Line I/O	2 XLR combo inputs
Headphone output	1/4" stereo headphone output.
Pedal Input	2 Switch pedal inputs; supports a single half-damper pedal (1 switch/sustain pedal is included; half-damper pedals sold separately) 1 Continuous Control Pedal Input (pedal sold separately)
Additional accessories	Acrylic music board (sold separately)
Product size	1350mm X 384mm X 148mm
Weight	12.5Kg
Power	DC Power adapter : 15V , 2.5A

Memo

https://kurzweil.com/
https://www.instagram.com/kurzweilmusic/
https://www.youtube.com/user/KurzweilTutorials
https://www.facebook.com/kurzweilmusicsystems/

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