# Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for ROLAND GAIA SH-01. You'll find the answers to all your questions on the ROLAND GAIA SH-01 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual ROLAND GAIA SH-01
User guide ROLAND GAIA SH-01
Operating instructions ROLAND GAIA SH-01
Instructions for use ROLAND GAIA SH-01
Instruction manual ROLAND GAIA SH-01
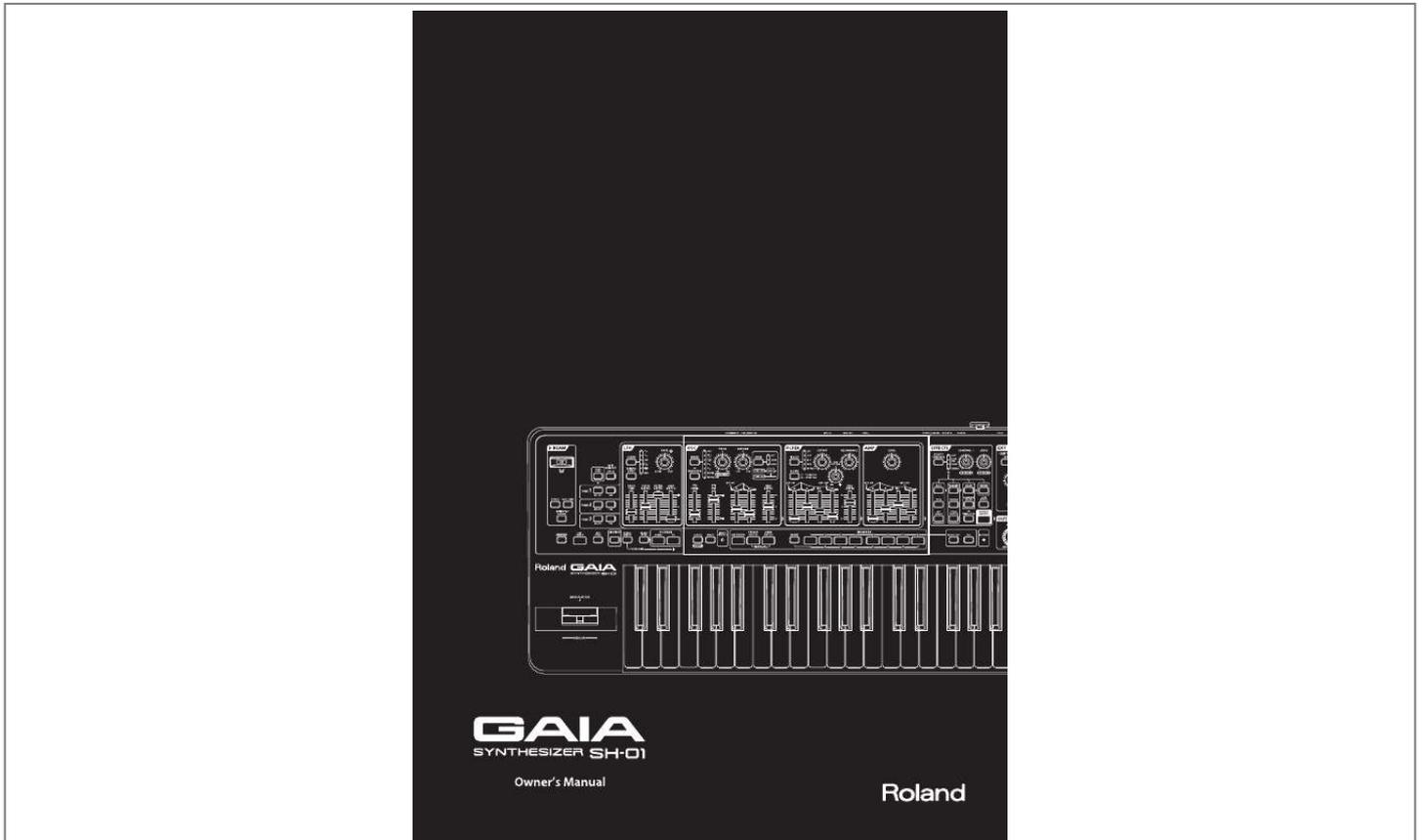
GAIA
SYNTHESIZER SH-01
Owner's Manual

Roland

Manual abstract:

32), AMP (p. 35), various ENV units (p. 32, p. 34, p. 35), and an LFO (p. 36). @@@@@@10). If you already have basic knowledge of analog synthesizers, you can easily access the parameters that you want to adjust. Effects section for even broader sound-creating potential A powerful effects section is provided, containing five effects that can be used simultaneously: distortion, modulation, delay, reverb, and low boost (p. 38).

By combining these effects you can expand your sonic possibilities even farther. Simply pressing the LOW BOOST button will boost the low-frequency range--particularly effective for bass sounds. Compact, space-saving body The GAIA SH-01 newly features 37 keys, and a light-weight, compact body. Since battery operation is supported (p. 13), you can use it not only for practice at home or for live performance, but also for playing on the street.

EXT IN jack lets you mix in your favorite music The EXT IN jack (p. 40) allows you to connect a portable audio player or other device, and play back your favorite music without needing a mixer. This can expand your possibilities for practice or live performance. The CENTER CANCEL function lets you eliminate sounds that are localized in the center. While listening to a favorite song as backing, you can use this function to eliminate the solo part and perform it yourself on the GAIA SH-01.

Powerful capabilities for live performance D BEAM controller (p. 21) The D BEAM controller lets you apply various effects simply by moving your hand above the sensor. You can also assign it to control panel knobs. This gives you fresh new performance possibilities that are not typically available with conventional keyboard playing. Arpeggiator (p. 22) Sixty-four built-in arpeggio patterns let you produce arpeggios simply by pressing a chord. Since you can save an arpeggio pattern in a patch as part of your favorite sound settings, it's easy to instantly recall them during a performance. Phrase recorder (p. 24) In addition to recording your performance, you can also record and play back control actions, such as knob movements. For example, if you perform while playing back filter control data, a filter effect will automatically be applied to your performance.

2 USB memory for saving user data The USB MEMORY connector allows you to connect USB memory (sold separately) for storing user patches or phrases. This is also a good way to back up your important user data. Saved patches or phrases can be recalled directly from USB memory. It's also easy to recall a desired patch or phrase from USB memory, and then re-save it to internal memory. USB COMPUTER connector for connecting your computer Since the GAIA SH-01 supports USB MIDI/ AUDIO, you can use DAW software on your computer to record a performance from the GAIA SH-01 or to record the sound from the EXT IN jack. MIDI data played back by your DAW software can be sounded by GAIA SH-01's sound generator, or audio played back by your DAW software can be output via the GAIA SH-01. 201a Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" and "IMPORTANT NOTES" (p. 4; p. 6). These sections provide important information concerning the proper operation of the unit.

Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, Owner's manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference. 202 Copyright © 2010 ROLAND CORPORATION All rights reserved. No part of this publication may be reproduced in any form without the written permission of ROLAND CORPORATION. Roland and GAIA are registered trademarks or trademarks of Roland Corporation in the United States and/ or other countries.

3 About WARNING and CAUTION Notices About the Symbols The symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger. The symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle.

*In the case of the symbol at left, it means that the unit must never be disassembled. The symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet. Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly. Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets. ALWAYS OBSERVE THE FOLLOWING WARNING 002c 009 WARNING · Do not open (or modify in any way) the unit or its AC adaptor. 003 · Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.*

004 · Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards! 010 · Never install the unit in any of the following locations. · Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are · Damp (e.g., baths, washrooms, on wet floors); or are · Exposed to steam or smoke; or are · Subject to salt exposure; or are · Humid; or are · Exposed to rain; or are · Dusty or sandy; or are · Subject to high levels of vibration and shakiness. 005 · This unit, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the unit, and consult an audiologist. 011 · Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit.

012b · This unit should be used only with a rack or stand that is recommended by Roland. 006 · When using the unit with a rack or stand recommended by Roland, the rack or stand must be carefully placed so it is level and sure to remain stable.

If not using a rack or stand, you still need to make sure that any location you choose for placing the unit provides a level surface that will properly support the unit, and keep it from wobbling. 008c · Be sure to use only the AC adaptor supplied with the unit. Also, make sure the line voltage at the installation matches the input voltage specified on the AC adaptor's body.

Other AC adaptors may use a different polarity, or be designed for a different voltage, so their use could result in damage, malfunction, or electric shock. 008e · Immediately turn the power off, remove the AC adaptor from the outlet, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page when: · The AC adaptor, the power-supply cord, or the plug has been damaged; or · If smoke or unusual odor occurs · Objects have fallen into, or liquid has been spilled onto the unit; or · The unit has been exposed to rain (or otherwise has become wet); or · The unit does not appear to operate normally or exhibits a marked change in performance. 013 · In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit. 014 · Use only the attached power-supply cord. Also, the supplied power cord must not be used with any other device. · Protect the unit from strong impact. (Do not drop it!) 4 015 WARNING 106 CAUTION · Do not force the unit's power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords--the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through. 016 · Never climb on top of, nor place heavy objects on the unit.

107c · Never handle the AC adaptor or its plugs with wet hands when plugging into, or unplugging from, an outlet or this unit. 108b · Before using the unit in a foreign country, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page. 019 · Before moving the unit, disconnect the AC adaptor and all cords coming from external devices. 109b · Before cleaning the unit, turn off the power and unplug the AC adaptor from the outlet (p. 13). 110b · Batteries must never be recharged, heated, taken apart, or thrown into fire or water. · Whenever you suspect the possibility of lightning in your area, disconnect the AC adaptor from the outlet. 111: Selection 023 · DO NOT play a CD-ROM disc on a conventional audio CD player. The resulting sound may be of a level that could cause permanent hearing loss. Damage to speakers or other system components may result.

027 · If used improperly, batteries may explode or leak and cause damage or injury. In the interest of safety, please read and observe the following precautions (p. 13). 1 · Carefully follow the installation instructions for batteries, and make sure you observe the correct polarity. 2 · Never expose a nickel metal hydride batteries to excessive heat such as sunshine, fire or the like.

CAUTION 101b · Avoid using new batteries together with used ones. In addition, avoid mixing different types of batteries. 3 · The unit and the AC adaptor should be located so their location or position does not interfere with their proper ventilation. 101c · Remove the batteries whenever the unit is to remain unused for an extended period of time. 5 · This (GAIA SH-01) for use only with Roland stand KS-18Z.

Use with other stands is capable of resulting in instability causing possible injury. 101f · Please be sure to read and adhere to the cautionary notices contained in the instructions that came with this product. Please note that, depending on the manner in which keyboard performances are carried out, you may encounter situations where the keyboard falls off the stand or the stand topples over, even though you have followed all of the instructions and advice contained within the product's manual. For this reason, you should always perform a safety check each time you use the stand. 102c · If a battery has leaked, use a soft piece of cloth or paper towel to wipe all remnants of the discharge from the battery compartment. Then install new batteries. To avoid inflammation of the skin, make sure that none of the battery dischar farther away from the source of interference. 352a · This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers. 352b · Noise may be produced if wireless communications devices, such as cell phones, are operated in the vicinity of this unit.

Such noise could occur when receiving or initiating a call, or while conversing. Should you experience such problems, you should relocate such wireless devices so they are at a greater distance from this unit, or switch them off. 354a · Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the unit. 355b · When moved from one location to another where the temperature and/or humidity is very different, water droplets (condensation) may form inside the unit. Damage or malfunction may result if you attempt to use the unit in this condition. Therefore, before using the unit, you must allow it to stand for several hours, until the condensation has completely evaporated. 358 · Do not allow objects to remain on top of the keyboard. This can be the cause of malfunction, such as keys ceasing to produce sound. 360 · Depending on the material and temperature of the surface on which you place the unit, its rubber feet may discolor or mar the surface.

You can place a piece of felt or cloth under the rubber feet to prevent this from happening. If you do so, please make sure that the unit will not slip or move accidentally. 6 Additional Precautions 551 Before Using USB Memory 704 · Please be aware that the contents of memory can be irretrievably lost as a result of a malfunction, or the improper operation of the unit. To protect yourself against the risk of loosing important data, we recommend that you periodically save a backup copy of important data you have stored in the unit's memory on a computer. 552 · Carefully insert the USB memory all the way in--until it is firmly in place.

· Unfortunately, it may be impossible to restore the contents of data that was stored on a computer once it has been lost.

Roland Corporation assumes no liability concerning such loss of data. 553 · Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions. 556 705 · When connecting / disconnecting all cables, grasp the connector itself--never pull on the cable.

This way you will avoid causing shorts, or damage to the cable's internal elements. 558a · Never touch the terminals of the USB memory. Also, avoid getting the terminals dirty. 708 · To avoid disturbing your neighbors, try to keep the unit's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially when it is late at night). 559a · When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials. 561 · Use only the specified expression pedal (EV-5; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit. 562 · Some connection cables contain resistors.

Do not use cables that incorporate resistors for connecting to this unit. The use of such cables can cause the sound level to be extremely low, or impossible to hear. For information on cable specifications, contact the manufacturer of the cable. 566a · USB memories are constructed using precision components; handle the USB memories carefully, paying particular note to the following. · To prevent damage to the USB memories from static electricity, be sure to discharge any static electricity from your own body before handling the USB memories. · Do not touch or allow metal to come into contact with the contact portion of the USB memories. · Do not bend, drop, or subject USB memories to strong shock or vibration. · Do not keep USB memories in direct sunlight, in closed vehicles, or other such locations. · Do not allow USB memories to become wet. · Do not disassemble or modify the USB memories.

Handling CD-ROMs (DRIVER), DVD 801 · The usable range of D BEAM controller will become extremely small when used under strong direct sunlight. Please be aware of this when using the D BEAM controller outside. 566b · Avoid touching or scratching the shiny underside (encoded surface) of the disc. Damaged or dirty CD-ROM/DVD discs may not be read properly. Keep your discs clean using a commercially available disc cleaner.

· The sensitivity of the D BEAM controller will change depending on the amount of light in the vicinity of the unit. If it does not function as you expect, adjust the sensitivity as appropriate for the brightness of your location. Copyright 853 · Do not use this unit for purposes that could infringe on a copyright held by a third party. We assume no responsibility whatsoever with regard to any infringements of third-party copyrights arising through your use of this unit. 220 · All product names mentioned in this document are trademarks or registered trademarks of their respective owners.

ADD · MatrixQuestTM 2010 TEPCO UQUEST, LTD. All rights reserved. The GAIA SH-01's USB functionality uses MatrixQuest middleware technology from TEPCO UQUEST, LTD. ADD · MMP (Moore Microprocessor Portfolio) refers to a patent portfolio concerned with microprocessor architecture, which was developed by Technology Properties Limited (TPL). Roland has licensed this technology from the TPL Group. 7 Contents Main Features . . . . .

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http://yourpdfguides.com/dref/3013979

Names of Things and What They Do

Top Panel

1 2 4 5 6 7 8 9 3 10 11 12 13 14 15

1 D BEAM (p. 21) Here you can turn the D BEAM function on/off.

By moving your hand above the D BEAM controller, you can apply a variety of effects.

8 EFFECTS (p. 38) The GAIA SH-01 has five built-in effects: distortion, flanger, delay, reverb, and low boost. You can make settings independently for each effect.

2 [TONE COPY] Button (p. 30) This copies all of a tone's parameters to another tone.

9 EXT IN (External Input, p. 40) Here you can specify how the device connected to the INPUT jack will be heard. You can modify its sound; for example, by cancelling vocals or other sounds localized at the center.

USB MEMORY [PATCH] Button (p. 55) Here you can save patches or phrases to USB memory, or load them from USB memory into the GAIA SH-01.

3 TONE 13 (p. 29) Here you can select the tone you want to edit, and specify which tones will be heard.

4 LFO (Low-Frequency Oscillator) (p. 36) Here you can apply cyclic modulation to the pitch (producing vibrato), the volume (producing tremolo), or to the filter (producing a wah effect).

5 OSC (Oscillator) (p. 30) Here you can select the waveform that determines the basic character of the sound, and specify the pitch.

6 FILTER (p. 32) Allows you to modify the brightness or fatness of the sound. You can also create a distinctive tonal character that is typical of synthesizers.

7 AMP (p. 35) Here you can specify the loudness of the sound that has passed through the filter section.

10 10 [V-LINK] Button (p. 27) This button turns V-LINK on/off.

12 [BANK] Button (p. 18) Use this button in combination with the NUMBER [A][H] buttons to switch banks.

[TAP TEMPO] Button (p. 23) You can use this button to set the tempo of the arpeggio or phrase recorder.

NUMBER [1][8] Buttons (p. 18) Use these buttons to select patches or phrases.

[KEY HOLD] Button (p. 22) This button holds the notes even after you release your fingers from the keyboard.

13 PHRASE RECORDER (p. 24) Press this button to play or stop the phrase recorder.

[MONO] Button (p. 20) Use this button when you want to simulate the performance techniques of a solo instrument.

[PLAY/STOP] Button [REC] Button Press this button to record on the phrase recorder.

[PORTAMENTO] Button (p. 20) This button turns portamento on/off.

BATTERY Indicator (p. 14) When using batteries, this indicates the remaining battery power. Normally, this will be unlit. When the batteries run low, the indicator will light. If you continue operating the GAIA SH-01, the indicator will blink; stop use and charge the batteries. * If you continue playing even when the BATTERY indicator is blinking, the unit will eventually become inoperable.

[TRANSPOSE] Button (p. 20) By holding down the [TRANSPOSE] button and pressing the OCTAVE [UP/+] or [DOWN/-] button you can raise or lower the pitch of the keyboard in steps of a semitone (-5+6 semitones). OCTAVE [UP/+], [DOWN/-] Buttons (p. 20) Use these buttons to raise or lower the pitch of the keyboard in steps of an octave (-3+3). These buttons are also used in combination with other function buttons to edit parameters.
14 OUTPUT (p. 18) This knob adjusts the overall volume that is output from the OUTPUT jacks and PHONES jack on the rear panel. 11 [CANCEL/SHIFT] Button This button cancels the operation that's being executed. This button is also used in combination with other buttons to carry out various functions. [VOLUME] knob 15 Pitch Bend/Modulation Lever (p. 19) You can use this to modify the pitch or to apply vibrato. [WRITE] Button (p. 25, p. 39) Use this button to save patches or phrases. Holding down the [CANCEL/SHIFT] button while you press the [WRITE] button initializes the selected patch.

WRITE PROTECT Indicator (p. 39) This indicator will light if you've selected a patch that is write protected. To turn write protect on/off, hold down the [CANCEL/SHIFT] button and press the current NUMBER button. [ARPEGGIO] Button (p. 22) This button turns the arpeggio on/off. [PRESET PATCH] Button (p. 18) Use this button to select preset patches. [USER PATCH] Button (p. 18) Use this button to select user patches. By pressing the [PRESET PATCH] button and [USER PATCH] button simultaneously, you can activate the Manual function, which changes the parameter values so that they match the positions of the knobs and sliders (p.
30). 11 Rear Panel 16 17 18 19 20 21 988 16 Security Slot ( ) http://www.

kensington.com/ 19 PEDAL Connect an expression pedal (EV-5; sold separately) or pedal switch (DP series, FS-5U; sold separately) here. PEDAL Jack (p. 26) 17 [POWER] Switch (p. 15) This switch turns the power on/off. 20 MIDI Connectors (OUT/IN) (p. 43) Connect these when you want to transmit or receive MIDI messages to or from another MIDI device. DC IN (AC Adaptor) Connector (p. 13) Connect the included AC adaptor here. Cord Hook (p. 13) Fasten the cord from the AC adaptor here to prevent accidental disconnection. 21 USB This connector lets you use a USB cable to connect the GAIA SH-01 to your computer. USB COMPUTER Connector (p. 42) 18 PHONES (Headphones) Jack (p. 15) Connect your headphones (sold separately) here. USB MEMORY Connector (p. 55) Connect USB memory (sold separately) here. 930 OUTPUT L/MONO, R Jacks (p.

14) These jacks output the audio signal in stereo to your amp or mixer. To employ mono output, connect your equipment to the L jack. 931 * Connect USB memory after you've powered up the GAIA SH-01. Never disconnect USB memory while the power is turned on. * When inserting USB memory, make sure that the connector is oriented correctly, and insert the connector all the way in. Do not use excessive force. 12 Getting Ready Connecting the AC Adaptor Connect the included AC adaptor to the DC IN connector on the rear panel of the GAIA SH-01. Installing Batteries The GAIA SH-01 can operate on eight commercially available AA nickel-metal hydride batteries. 1. Press in the tabs of the battery compartment cover on the bottom panel of the GAIA SH-01, and remove the cover.

Cord hook NOTE Indicator Power cord NOTE 924 · Take care that foreign objects (flammable items, coins, pins, etc.) or liquids (water, juice, etc.) do not enter the unit while the battery compartment cover is removed. 928 · To prevent the inadvertent disruption of power to your unit (should the plug be pulled out accidentally), and to avoid applying undue stress to the AC adaptor jack, anchor the power cord using the cord hook, as shown in the illustration. 932 929 · When turning the unit upside-down, get a bunch of newspapers or magazines, and place them under the four corners or at both ends to prevent damage to the buttons and controls.

Also, you should try to orient the unit so no buttons or controls get damaged. · When turning the unit upside-down, handle with care to avoid dropping it, or allowing it to fall or tip over. · Place the AC adaptor so the side with the indicator (see illustration) faces upwards and the side with textual information faces downwards. · The indicator will light when you connect the AC adaptor to an AC outlet. · 2.

Insert the batteries into the battery compartment, taking care to observe the correct polarity (+/orientation). - + + - - + + - - + + - - + + NOTE · Insert the batteries correctly (be careful of +/- orientation), as indicated. 011 · Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit. 3. Close the battery compartment cover. NOTE · If you connect the AC adaptor and turn on the power when batteries are installed, AC adaptor operation will take priority. · If you want to operate the unit on batteries, disconnect the AC adaptor from the unit.

· If batteries are installed, the power will turn off if you disconnect the power cord from the AC outlet or disconnect the AC adaptor's DC plug from the unit while it is powered up. You must turn off the power before connecting or disconnecting the power cord or AC adaptor. - 13 Removing the Batteries If you want to remove the batteries, turn off power to the GAIA SH-01 first; then open the battery compartment cover, and take out the batteries. POWER SAVE MODE You can set the GAIA SH-01 so it will automatically enter power-save mode when a certain length of time has passed without any operation being performed. To return from power-save mode to normal operation, perform an operation such as turning a knob or playing the keyboard. You can set the amount of time that is to pass before the unit will enter Power Save mode. For details, see "Time setting for POWER SAVE MODE" (p. 54). When to Replace the Batteries (BATTERY indicator) When the batteries run low, the BATTERY indicator will light. If you continue using the unit, the BATTERY indicator will blink.

Cease operation, and charge the batteries. Connecting Headphones or Speakers The GAIA SH-01 does not contain speakers. In order to hear sound, you'll need to connect it to an audio device, such as monitor speakers or a stereo system, or connect headphones. 921 NOTE · If you continue to play the instrument even though the BATTERY indicator is flashing, eventually all the indicators on the panel will go out, and the instrument will become inoperable. · The BATTERY indicator is only an approximate indication.

* To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections. Connecting monitor speakers or a stereo system Use cables to connect the GAIA SH-01's rear panel OUTPUT jacks to your monitor speaker or stereo set. Batteries that can be used · When using nickel-metal hydride batteries, the battery life will be approximately five hours of continuous use at room temperature. However, if USB memory is connected, the battery life will be approximately four hours. The battery life for continuous use will depend on factors such as the conditions of use.

NOTE Do not use alkaline batteries or zinc-carbon batteries. Battery handling · Do not mix fresh batteries with partially used batteries or batteries of a different type. · If you won't be using the unit for an extended period of time, save your stored settings to USB memory, and remove the batteries. · Incorrect use of batteries, rechargeable batteries, or battery chargers can cause leakage, overheating, fire, or explosion. Before use, carefully read and observe the instructions that accompanied your batteries, rechargeable batteries, or battery charger. * In order to take full advantage of the GAIA SH-01's capabilities, we recommend that you use it in stereo. To use it in mono, connect to the OUTPUT L/MONO jack. 14 Using headphones Connect commercially available headphones to the PHONES jack on the rear panel. 3. Press the [POWER] switch on the rear panel to turn on the power.

* Sound will be output from the OUTPUT jacks even if headphones are connected. * When turning on the power, do not touch the pitch bend/modulation lever located at the left of the keyboard. If you turn on the power while touching this lever, the system may not operate correctly. Turning the Power On/Off 941 4.

*5. Switch on power to the connected equipment, and raise the volume to an appropriate level. While playing the keyboard, slowly turn the [VOLUME] knob toward the right to adjust the volume. * Once the connections have been completed (p. 13p. 14), turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices. 943 Turning the Power Off 1. Check the following before you turn off the power. · Have you minimized the volume of the connected equipment? · Have you saved any sound you've created? (p. 39) * Always make sure to have the volume level turned down before switching on power.*

Even with the volume all the way down, you may still hear some sound when the power is switched on, but this is normal, and does not indicate a malfunction. Turning the Power On 1. Check the following before you turn on the power. · Are your speakers or headphones connected correctly? · Is power to the connected equipment switched off? 2. 3.

Switch off power to the connected equipment. Press the GAIA SH-01's [POWER] switch to turn off the power. 2. Turn the [VOLUME] knob on the top panel all the way to the left. 15 How the GAIA SH-01 is Organized Basic Structure Broadly speaking, the GAIA SH-01 consists of a controller section, a sound generator section, and effects. Performance Functions The GAIA SH-01 contains a variety of effects, and each can be adjusted independently. Controller section The controller section is what you play. For example, the performer's actions, such as "playing the keyboard" are conveyed by the controller section to the sound generator section, causing it to produce sound. The GAIA SH-01's controller section consists of the keyboard, the pitch bend/modulation lever, the D BEAM controller, the panel buttons and knobs, and pedals connected to the rear panel. Arpeggiator (p.

22) This allows you to produce arpeggios simply by pressing a chord on the keyboard. Tempo (p. 23) You can easily change the tempo of the arpeggiator or phrase recorder by pressing the [TAP TEMPO] button several times in rhythm with the desired tempo. Sound generator section This section produces the sound. It receives the performance data sent by the controller section, electronically creates the basic waveform, and modifies the brightness and loudness of the sound to create a broad range of tonal characteristics. The GAIA SH-01's sound generator section allows you to instantly adjust numerous elements that determine the sound's character (waveform, pitch, brightness, loudness, etc.) using the knobs and buttons of the panel. Octave (p. 20) You can shift the keyboard's pitch range in steps of an octave, for a maximum shift of three octaves upward or downward. Transpose (p.

20) This function shifts the keyboard's pitch range in steps of a semitone, for a maximum shift of -5+6 semitones. Phrase recorder (p. 24) This allows you to record a phrase of several measures. By recording only control operations such as knob movements, you can also make the knobs operate automatically. Effects The GAIA SH-01 contains a variety of effects, and each can be adjusted independently.

Basic structure of the GAIA SH-01 Phrase recorder Arpeggiator Octave Transpose Sound generator section Effects Controller section Control signals Audio signals 16 About Memory Memory provides storage locations where patches (p. 18) and other settings are stored. There are three types of memory: "temporary memory," "rewritable memory," and "non-rewritable memory." Temporary memory Temporary area Data for the patch you select via the front panel buttons is called up to this area. When you play the keyboard or play back the phrase recorder, sounds are produced according to the settings that are in the temporary area.

When you edit a patch, the changes you make do not directly modify the data in memory; rather, the data is read into the temporary area, then modified. The settings in the temporary area will be lost when you turn off the power or call up other settings. If you want to keep the data that's in the temporary area, you must store it into rewritable memory. Non-rewritable memory Preset memory 64 arpeggios 64 patches Rewritable memory (Internal memory) User memory 8 phrases 64 patches System memory Rewritable memory System memory System memory contains system parameter settings that specify how the GAIA SH-01 is to operate. Temporary memory (Temporary area) Phrase Patch Arpeggio User memory Patches and phrases can be stored in user memory. USB memory (p. 55) Patches and phrases can be stored in USB memory in the same way as in user memory. Rewritable memory (USB memory) User memory 8 phrases 64 patches System memory Non-rewritable memory Preset memory The data in preset memory cannot be rewritten. If you've edited data that was recalled from preset memory, you can store it in rewritable memory (user memory or USB memory). 17 Performing Adjusting the Volume (VOLUME) Here's how to adjust the overall volume of the GAIA SH-01's sound, which is output from the OUTPUT jacks on the rear panel and the PHONES jack.

*Turning the knob toward the right will increase the volume, and turning it toward the left will decrease the volume. There will be no sound if you turn the knob all the way to the left. * This knob does not affect the output volume of USB audio (p. 42). About Patches The GAIA SH-01 lets you store the sounds that you create. A sound you create is called a "patch"; you can use the buttons to recall a patch and then play it. Patches are organized into a "preset group" and a "user group." If you use USB memory (sold separately), you'll also be able to use the "USB memory group." Each group contains 64 patches, organized into eight banks with eight numbers in each bank. Preset group (PRESET) This group contains 64 patches that are already created for your use.*

*Although you cannot rewrite the contents of this group, you are free to create new sounds based on these patches. To put the instrument in a special mode in which it functions as a PCM sound generator, hold down the [PRESET PATCH] button while you press a NUMBER [1]--[8] button. While in this mode, you can enjoy realistic instrumental performances that take full advantage of the PCM sound generator. * The sounds provided by the PCM sound generator are read-only sounds. Although you will be able to perform a limited amount of editing and carry out performances that use effects (reverb), you won't be able to save any of the settings you make.*

Note also that PRESET BANK H contains the sounds actually used for the supplied DVD. Selecting Sounds 1. Press the [PRESET PATCH] button or the [USER PATCH] button. These buttons switch you between the preset group and the user group.

If you want to select patches that are saved in USB memory, press the USB MEMORY [PATCH] button.

User group (USER) Sounds that you create can be saved in this group of 64 patches. For details on how to save a sound, refer to "Saving a Sound You've Created (WRITE)" (p. 39). 2. Press the [BANK] button, and then press one of the NUMBER [A][H] buttons. These buttons allow you to select among banks A-H. USB memory group (USB MEMORY) When using USB memory (sold separately), sounds that you create can be saved in this group. USB memory can hold 64 patches. For details on how to save a sound, refer to "Saving a Sound You've Created (WRITE)" (p. 39).

3. Press one of the NUMBER [1][8] buttons. Patch 18 will be selected. Example: · If the USER A-1 patch is currently selected, pressing the NUMBER [6] button will switch you to the USER A-6 patch. · If the PRESET A-4 patch is currently selected, holding down the [BANK] button and pressing the NUMBER [C] button will switch you to the PRESET C-4 patch. · If the PRESET B-5 patch is selected, pressing the [USER PATCH] button will switch you to the USER B-5 patch. Banks (BANK) There are eight banks (AH), and eight patches can be saved in each bank. The banks provide a convenient way to organize the 64 patches. For example, you could use bank A to hold the patches you'll be using in the first song of your live performance, and bank B to hold the patches for the second song. Alternatively, you could use bank A to hold synth bass patches and bank B to hold lead patches.

18 Preset group/User group/ USB memory group A-1 B-1 C-1 D-1 E-1 F-1 G-1 H-1 A-2 B-2 C-2 D-2 E-2 F-2 G-2 H-2 A-3 B-3 C-3 D-3 E-3 F-3 G-3 H-3 NUMBER 18 A-4 A-5 B-4 B-5 C-4 C-5 D-4 D-5 E-4 E-5 F-4 F-5 G-4 G-5 H-4 H-5 A-6 B-6 C-6 D-6 E-6 F-6 G-6 H-6 A-7 B-7 C-7 D-7 E-7 F-7 G-7 H-7 A-8 B-8 C-8 D-8 E-8 F-8 G-8 H-8 BANK AH 2. While holding down the OCTAVE [DOWN/-] button, press a key (C2C4). This specifies the amount of pitch change that will occur when you move the lever to the left. Adding Dynamics to the Sound The GAIA SH-01's keyboard allows you to vary the volume or brightness of the sound by changing your playing dynamics (key velocity). When the instrument was shipped from the factory, this was set to "FIX," which means that a fixed value will constantly be used for Key Velocity.

*If you want to have the strength of your playing affect the sound, you'll need to set "KEYBOARD VELOCITY" (p. 51) to "REAL." * If you want to modify the way in which this change occurs, edit the patch parameters "Level Velocity Sens" (p. 45, volume) or "Filter Envelope Velocity Sens" (p. 45, brightness). C2 Narrow Range of change Wide C4 3. While holding down the OCTAVE [UP/+] button, press a key (C2C4). This specifies the amount of pitch change that will occur when you move the lever to the right. When you've finished making settings, press the [CANCEL/ SHIFT] button. Applying Vibrato (MODULATION) While playing the keyboard, move the pitch bend/modulation lever away from yourself to apply vibrato. Vibrato is applied Changing the Pitch (BENDER) While playing the keyboard, move the pitch bend/modulation lever to the left to lower the pitch, or toward the right to raise the pitch. Moving the pitch bend/modulation lever all the way to the left will lower the pitch by two semitones. Moving the pitch bend/modulation lever all the way to the right will raise the pitch by two semitones. Pitch falls Pitch rises Modulation speed and depth You can specify the speed and depth of the effect that will be applied when you move the modulation lever away from yourself. 1.*

2. While holding down the [CANCEL/SHIFT] button, move the lever all the way away from yourself. Make settings using the knobs and sliders in the LFO section of the panel. For details, refer to "MODULATION LFO" (p. 37). If you move the pitch bend/modulation lever to left or right and simultaneously away from yourself, both pitch bend and modulation will be applied at the same time. Pitch bend range You can change the pitch bend range. 1. While holding down the [CANCEL/SHIFT] button, move the pitch bend/modulation lever all the way to the far left or right. The OCTAVE [DOWN/-] and [UP/+] buttons will blink.

19 Shifting the Keyboard's Pitch Range (OCTAVE UP/DOWN) You can shift the keyboard's pitch range in steps of one octave, for a maximum of three octaves upward or downward. Playing Single Notes (MONO) This function is effective when you need to simulate the performance of a solo instrument. 1. 1. To raise the range, press the OCTAVE [UP/+] button, and to lower the range press the OCTAVE [DOWN/-] button.

With each press of a button, the range is altered by one octave. If the keyboard's pitch range is raised above its normal range, the OCTAVE [UP/+] button will light. If the keyboard's pitch range is lowered, the OCTAVE [DOWN/-] button will light. If you press the OCTAVE [UP/+] and OCTAVE [DOWN/-] buttons simultaneously, the keyboard will return to its normal pitch range; both buttons will go out. Press the [MONO] button so it's lit; this puts the synth in mono mode.

Even if you hold down a chord on the keyboard, only a single note will sound. The last-played note will be heard. When you press the [MONO] button once again to turn off its illumination, the Mono function will turn off. Smoothly Connecting One Note to the Next (PORTAMENTO) This allows you to create a smooth change in pitch from one note to the next. Shifting the Keyboard's Pitch Range in Semitones (TRANSPOSE) This function lets you shift the keyboard's pitch range in steps of a semitone, in a range of -5 to +6 semitones. 1. Press the [PORTAMENTO] button so it's lit. Changing the Rate of Pitch Change (Portamento Time) 1. To turn transpose on, press the [TRANSPOSE] button so it's lit. By pressing the [TRANSPOSE] button again, so its light goes out, transpose is turned off.

To change the rate of the pitch change (the time over which the pitch change occurs), hold down the [PORTAMENTO] button and move the LFO [FADE TIME] slider. As you raise the slider, the portamento time will get longer and the pitch will change at a slower rate. 2. To raise the range, hold down the [TRANSPOSE] button while you press the OCTAVE [UP/+] button. To lower the range, hold down the [TRANSPOSE] button while you press the OCTAVE [DOWN/-] button. With each press of a button, the range is altered by one semitone. If the keyboard's pitch range has been raised above its normal range, the [TRANSPOSE] button and the OCTAVE [UP/+] button will be lit. If it has been lowered, the [TRANSPOSE] button and OCTAVE [DOWN/-] button will light. If you hold down the [TRANSPOSE] button and press the OCTAVE [UP/+] button and OCTAVE [DOWN/-] button simultaneously, the keyboard will return to its normal pitch range.

Both buttons will go out.

MEMO There's another way to adjust the portamento time; "PORTAMENTO TIME" (p. 45). 20 Changing the Pitch or Volume by Moving Your Hand (D BEAM) By moving your hand above the D BEAM controller located at the upper left of the keyboard, you can vary the pitch or volume according to the height of your hand. Changing the Pitch (PITCH) 1. 2.

Press the [PITCH] button so it's lit. While playing the keyboard, position your hand over the D beam controller, then move it up and down. The pitch will change. If you press the [PITCH] button once again, it will blink; now sound will be produced when you move your hand above the D BEAM controller. Press the [PITCH] button once again to turn off its illumination; the D BEAM will turn off.

Changing the Assigned Parameter (EFFECTS/ASSIGN) The D BEAM controller's effective range 1. 2. Press the [EFFECTS/ASSIGN] button so it's lit. While playing the keyboard, position your hand over the D beam controller, then move it up and down. Parameters assigned on an individual patch basis will change. Press the [EFFECTS/ASSIGN] button to turn off its illumination; the D BEAM will turn off. Since you can assign a variety of functions to the [EFFECTS/ASSIGN] button, use it to apply various effects to the sound in real time (p. 48). The D BEAM controller's effective range is shown in the diagram at left. No effect will be obtained if you move your hand outside this range.

Determining the polarity of the D BEAM (D BEAM POLARITY) The changes in the value of the parameter assigned to the D beam can be made to occur in either the positive or negative directions. The polarity is determined by the direction that you move the knob at the time that the parameter is assigned. When you move your hand near the D Beam controller, the value will change in the same direction as it did when you turned the knob. For example, if you hold down the D BEAM [EFFECTS/ ASSIGN] button while you turn the OSC [PITCH] knob to the right, the pitch will rise when you place your hand near the D beam controller. Conversely, if you turn the OSC [PITCH] knob to the left while you hold down the D BEAM [EFFECTS/ASSIGN] button, the pitch will descend when you place your hand near the D beam controller. Adjusting the D BEAM controller's sensitivity The D BEAM controller's sensitivity will decrease if it's used in strong sunlight or strong illumination. The GAIA SH-01 lets you adjust the sensitivity of the D BEAM controller. 1. Hold down the [EFFECTS/ASSIGN] button and press one of the NUMBER [1][8] buttons. The higher the NUMBER button you press, the higher the sensitivity will be. The current sensitivity is indicated by how many NUMBER buttons light red when you press the [EFFECTS/ASSIGN] button. The more NUMBER buttons that are lit red, the higher the sensitivity. 21 Changing the Volume to Add Expression (VOLUME) 1. 2. Press the [VOLUME] button so it's lit.

While playing the keyboard, position your hand over the D beam controller, then move it up and down. The volume will change, allowing you to add expression to your performance. If you press the [VOLUME] button once again, it will blink; now sound will be produced when you move your hand above the D BEAM controller. Press the [VOLUME] button to turn off its illumination; the D BEAM will turn off. Automatically Playing Arpeggios (ARPEGGIO) Press the [ARPEGGIO] button so it's lit; the arpeggiator will be on.

Holding Notes After Removing Your Hand from the Keyboard (KEY HOLD) You can make notes continue sounding even after you take your hand off the keyboard. Playing an Arpeggio 1. Press the [ARPEGGIO] button so it's lit; the arpeggiator will be on. Press a chord on the keyboard; an arpeggio will sound according to the settings stored for each patch. If you press the [KEY HOLD] button so it's lit, the arpeggio will continue sounding. 1. Press the [KEY HOLD] button so it's lit; key hold will be turned on. When you play a new key, the previously sounding note will stop sounding, and only the newly played note will be heard. If the arpeggiator is on, turning key hold on will cause the arpeggio to continue sounding. When you play a chord on the keyboard, an arpeggio will be produced according to the settings stored for each patch, and the arpeggio will continue sounding even after you take your hand off the keyboard.

When you play a different chord, the notes of the arpeggio will also change. To stop the arpeggio, turn off the arpeggiator. To turn off the arpeggiator, press the [ARPEGGIO] button so it goes out. 22 Selecting How the Arpeggio will Sound The GAIA SH-01 lets you choose from 64 variations of arpeggio. 4. Press the [CANCEL/SHIFT] button. MEMO There are also other ways to change the way in which the arpeggio is sounded"ARPEGGIO VARIATION" (p. 45). 1. Hold down the [CANCEL/SHIFT] button and press the [ARPEGGIO] button.

Changing the Tempo (TAP TEMPO) Now you can use the [BANK] button and NUMBER [1][8] buttons to select the arpeggio variation. The NUMBER button corresponding to the currently selected variation will blink; the other buttons will be lit. The arpeggio variations are organized into eight banks with eight variations in each bank. 1. Press the [TAP TEMPO] button four or more times at quarter-note intervals of the desired tempo.

*You can also change the tempo by holding down the [TAP TEMPO] button and pressing the OCTAVE [UP/+] or OCTAVE [DOWN/-] button. The [TAP TEMPO] button will be constantly blinking green at quarter-note intervals of the phrase recorder and arpeggio (p. 22) tempo. When the phrase recorder is recording or playing back, the [TAP TEMPO] button will light red only for the first beat of the measure. * If the SYSTEM parameter CLOCK SOURCE (p. 52) is set to PATCH, these operations will change the PATCH TEMPO. * If the SYSTEM parameter CLOCK SOURCE (p. 52) is set to SYSTEM, these operations will change the SYSTEM TEMPO. * If the SYSTEM parameter CLOCK SOURCE (p. 52) is set to MIDI or USB, the TAP TEMPO operations are not available. 2. Press the [BANK] button and then a NUMBER [A] [H] button to select the desired bank of arpeggio variations. The bank corresponding to the button you pressed will be selected. While you're selecting a bank, the button of the currently selected bank will be blinking, while the other buttons will remain unlighted. 3.*

Press a NUMBER [1][8] button to select the desired arpeggio variation. The corresponding arpeggio will be selected. While you're selecting an arpeggio, the button of the currently selected NUMBER will blink, and the other buttons will be lit. 23 Recording Operations (PHRASE RECORDER) You can record your keyboard performance and knob operations, and play them back repeatedly. The recorded performance is called a "phrase." You can record up to eight phrases, and each phrase can be up to eight measures long.

*The GAIA SH-01's phrase recorder does not record the sound that's actually being produced; rather, it records performance data (MIDI messages) such as "which key was pressed when and how strongly." * The phrase does not record the patch you're using, nor does it record patch changes or tempo changes you made during the phrase. 3. Press the [PLAY/STOP] button.*

You'll hear a one-measure (four-beat) count, and then recording will begin. The [REC] button, which was blinking, will now light steadily. 4. To stop recording, press the [PLAY/STOP] button once again. Recording 1.

Press the [REC] button to make it blink; the phrase recorder will enter Rec Standby mode. Rehearsing While recording a phrase, you can temporarily suspend recording while you rehearse an idea. 1. During recording, press the [REC] button. The metronome will start sounding.

*2. Press one of the NUMBER [1][8] buttons to specify the length (number of measures in the phrase you're going to record. The number of lit buttons corresponds to the number of measures in the phrase. The [REC] button will blink. Your performance will not be recorded while the button is blinking. 2. Press the [REC] button once again. The [REC] button will light, and normal recording will resume. * When you specify the length of the phrase, any data previously recorded in that phrase will be erased. 24 Erasing Recorded Operations While recording a phrase, you can erase unwanted notes from the recording.*

Saving the Recorded Phrase The phrase you record will be lost when you switch off the GAIA SH-01's power, or when you select a different phrase. When you've finished recording a phrase, it's a good idea to save it. 1. During recording, press the [BANK] button. 1. Hold down the [REC] button and press the [WRITE] button. 2. Press the NUMBER [8] button at the location where you want to erase notes All recorded notes will be erased for the duration that you hold down the NUMBER [8] button. The NUMBER button corresponding to the currently selected phrase number will blink, and the other seven NUMBER buttons will light. The [WRITE] button will also blink.

If you want to save the phrase to USB memory (sold separately), press the USB MEMORY [PATCH] button so it's lit. To store it internally, press the USB MEMORY [PATCH] button so its illumination is turned off. 3. At the end of the region that you want to erase, release the NUMBER [8] button. Normal recording will resume.

Choosing the Type of Data to be Recorded or Erased While in Rec Standby mode, or while recording a phrase, you can choose the type of data that will be recorded or erased. 2. Press the NUMBER [1][8] button for the phrase number in which you want to save the phrase you recorded. 1. 2.

*While in standby mode or during recording, press the [BANK] button Select the type of data by pressing one of the NUMBER [1]-[4] buttons. · NUMBER [1] (All): All recorded data (this is the default) · NUMBER [2] (Bender): Only operations of the pitch bend/ modulation lever · NUMBER [3] (Controller): Knob operations · NUMBER [4] (Notes): Only keyboard performance data The NUMBER button you pressed will blink, and the NUMBER buttons that were blinking will change to steadily lit. 3. Press the [WRITE] button. The phrase will be saved. The NUMBER [1][8] buttons will return to their function of selecting patches. * If you decide not to save the phrase, press the [CANCEL/ SHIFT] button before pressing the [WRITE] button in step 3. 25 Choosing the phrase to play back Here's how to select a phrase that's saved in internal memory or USB memory. Using a Pedal If you connect a pedal switch (DP series, FS-5U; sold separately) or expression pedal (EV-5; sold separately) to the rear panel PEDAL jack, you can use it to control a variety of functions that you've assigned. 1.*

Hold down the [REC] button. While you hold down the [REC] button, the NUMBER [1][8] buttons will select phrases. To select a phrase that's saved in USB memory, hold down the [REC] button and press the USB MEMORY [PATCH] button so it's lit. If this button is unlit, you'll be selecting phrases that are saved in internal memory. The NUMBER button for the currently selected phrase number will blink, and the other seven NUMBER buttons will light. Sustaining the Notes (HOLD) If you connect a pedal switch (DP series, FS-5U; sold separately), the notes will be sustained as long as you continue holding down the pedal even after you take your hands off the keyboard. 2. Continue holding down the [REC] button, and press the NUMBER [1][8] button of the phrase that you want to play back. The NUMBER button you pressed will blink, and the other NUMBER buttons will light. Setting things so a pedal switch can be used to sustain the sound 1.

2. 3. Hold down the [CANCEL/SHIFT] button and press the [V-LINK] button. Hold down the [PORTAMENTO] button and press one of the NUMBER [1] buttons. Press the [CANCEL/SHIFT] button.

· MODULATION · VOLUME · BEND MODE · D BEAM SYNC · TAP TEMPO 3. Take your finger off the [REC] button. The phrase has now been selected. If playback is still taking place when you select a phrase, the selection will be switched after the previous phrase has finished playing. Playing or stopping the phrase 1.

*Press the [PLAY/STOP] button. The currently selected phrase will start playing. The phrase will continue playing repeatedly until you press PLAY/STOP once again. 2. Press the [PLAY/STOP] button once again to stop phrase playback. * No data for the phrase that is played will be output from MIDI OUT. 26 Adding Expression to Your Performance (EXPRESSION) If you connect an expression pedal (EV-5; sold separately), you'll be able to use the expression pedal to control the volume and add expression to your performance. Using V-LINK What is V-LINK? V-LINK ( ) is functionality that allows you to perform music and video simultaneously. If the GAIA SH-01 is connected via MIDI to a V-LINK compatible device, you'll be able to enjoy a variety of video effects that are synchronized to the expressive elements of your performance. The GAIA SH-01 can control images on a V-LINK compatible video device that's connected via MIDI.*

*Press the [V-LINK] button to turn V-LINK on. Setting things so an expression pedal can be used to add modulation to a performance 1. 2. 3. 925 Hold down the [CANCEL/SHIFT] button and press the [V-LINK] button. Hold down the [PORTAMENTO] button and press one of the NUMBER [4] buttons. Press the [CANCEL/SHIFT] button. * Use only the specified expression pedal (EV-5; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit. You can control the presentation of images so they're matched with the music you play on the GAIA SH-01, simply by pressing buttons or operating sliders on the GAIA SH-01.*