

Roland®

AX-Synth



Owner's Manual

For EU Countries



This product complies with the requirements of European Directive EMC 2004/108/EC.
Dieses Produkt entspricht der europäischen Richtlinie EMC 2004/108/EC.
Ce produit est conforme aux exigences de la directive européenne EMC 2004/108/EC.
Questo prodotto è conforme alle esigenze della direttiva europea EMC 2004/108/EC.
Este producto cumple con la directrice EMC 2004/108/EC de la CE.
Dit product beantwoordt aan de richtlijn EMC 2004/108/EC van de Europese Unie.

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment 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 equipment 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 equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

NOTICE

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

AVIS

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

For C.A. US (Proposition 65)

WARNING

This product contains chemicals known to cause cancer, birth defects and other reproductive harm, including lead.

For the USA

DECLARATION OF CONFORMITY Compliance Information Statement

Model Name : AX-Synth
Type of Equipment : Shoulder Synthesizer
Responsible Party : Roland Corporation U.S.
Address : 5100 S. Eastern Avenue, Los Angeles, CA 90040-2938
Telephone : (323) 890-3700

For the U.K.

IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.
Under no circumstances must either of the above wires be connected to the earth terminal of a three pin plug.

Roland

AX-Synth

SHOULDER SYNTHESIZER

Owner's Manual

Thank you and congratulations on your choice of the Roland AX-Synth Shoulder Synthesizer. Fitted with a powerful sound engine, the AX-Synth represents the next generation of Roland's legendary AX-series of shoulder keyboards, with sounds derived from Roland's latest synthesizers.

With its support for battery and wireless audio use and its stylish design, the AX-Synth allows keyboardists and other musicians to take center stage with mesmerizing keyboard solos, basslines, etc. In addition, the AX-Synth can be used to control MIDI sound modules, function as input device for your computer-based DAW, to control samplers, etc.

To avoid confusion, let's agree to...

- ...use the word "button" for all keys on the front panel, and only use "key" when referring to the AX-Synth's keyboard.
- ...use "sequencer" when referring to both hardware sequencers and computers with sequencer software.
- ...talk about "MIDI instruments" to signify both isolated ("monotimbral") instruments and parts/timbres/voices/multi channels of a multitimbral module or synth.

The explanations in this manual include illustrations that depict what should typically be shown by the display. Note, however, that your unit may incorporate a newer, enhanced version of the system (e.g., includes newer sounds), so what you actually see in the display may not always match what appears in the manual.

Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" on p. 4 and "Important notes" on 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, this owner's manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.

Copyright ©2009 ROLAND EUROPE. All rights reserved.

No part of this publication may be reproduced in any form without the written permission of Roland Europe s.p.a.

USING THE UNIT SAFELY

INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About ⚠ WARNING and ⚠ CAUTION Notices

⚠ WARNING	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
⚠ CAUTION	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.

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.

ALWAYS OBSERVE THE FOLLOWING

⚠ WARNING

- Do not open (or modify in any way) the instrument, and avoid damaging the AC adaptor.
- Do not attempt to repair the instrument, 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.
- If you do not use the AX-Synth as a shoulder keyboard, make sure you always have it placed so it is level and sure to remain stable. Never place it on stands that could wobble, or on inclined surfaces.
- Never use or store the AX-Synth 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 are
 - Subject to high levels of vibration.
- Make sure you always have the unit placed so it is level and sure to remain stable. Never place it on stands that could wobble, or on inclined surfaces.
- 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.
- Use only the attached power-supply cord. Also, the supplied power cord must not be used with any other device.
- Do not excessively twist or bend the adaptor 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!

⚠ WARNING

- This instrument, 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 AX-Synth and consult an audiologist.
- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the AX-Synth.
- Immediately turn the power off, disconnect the 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.
- 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.
- Protect the AX-Synth from strong impact. Do not drop it!
- 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.
- Before using the AX-Synth in a foreign country, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

⚠ WARNING

- Batteries must never be heated, taken apart, or thrown into fire or water.



- 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.



- Never expose Ni-MH batteries to excessive heat such as sunshine, fire or the like.

**⚠ CAUTION**

- The AX-Synth and the AC adaptor should be located so that their location or position does not interfere with its proper ventilation.



- Always grasp only the plug on the AC adaptor cord when plugging into, or unplugging from, an outlet or this unit.



- At regular intervals, you should unplug the AC adaptor and clean it by using a dry cloth to wipe all dust and other accumulations away from its prongs. Also, disconnect the power plug from the power outlet whenever the unit is to remain unused for an extended period of time. Any accumulation of dust between the power plug and the power outlet can result in poor insulation and lead to fire.



- Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children.



- Never climb on top of, nor place heavy objects on the AX-Synth.



- Never handle the AC adaptor or its plugs with wet hands when plugging into, or unplugging from, an outlet or this unit.



- Before moving the AX-Synth, disconnect the AC adaptor and all cords coming from external devices.



- Before cleaning the unit, turn off the power and unplug the AC adaptor from the outlet (see p. 13).



- Whenever you suspect the possibility of lightning in your area, disconnect the AC adaptor from the outlet.



- 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.
 - Carefully follow the installation instructions for batteries, and make sure you observe the correct polarity.
 - Avoid using new batteries together with used ones. In addition, avoid mixing different types of batteries.
 - Remove the batteries whenever the unit is to remain unused for an extended period of time.
 - 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 discharge gets onto your hands or skin. Exercise the utmost caution so that none of the discharge gets near your eyes. Immediately rinse the affected area with running water if any of the discharge has entered the eyes.
 - Never keep batteries together with metallic objects such as ball-point pens, necklaces, hairpins, etc.



- Used batteries must be disposed of in compliance with whatever regulations for their safe disposal that may be observed in the region in which you live.



Important notes

In addition to the items listed under "USING THE UNIT SAFELY" on p. 4, please read and observe the following:

Power supply

- The AX-Synth can be operated using 8 rechargeable AA-type Ni-MH batteries or the supplied adaptor. Be careful to insert the batteries the right way around. If you prefer to use the adaptor, be sure to use the enclosed Roland PSB-1U model.
- Do not connect this unit to same electrical outlet that is being used by an electrical appliance that is controlled by an inverter (such as a refrigerator, washing machine, microwave oven, or air conditioner), or that contains a motor. Depending on the way in which the electrical appliance is used, power supply noise may cause this unit to malfunction or may produce audible noise. If it is not practical to use a separate electrical outlet, connect a power supply noise filter between this unit and the electrical outlet.
- The AC adaptor will begin to generate heat after long hours of consecutive use. This is normal, and is not a cause for concern.
- The use of an AC adaptor is recommended as the unit's power consumption is relatively high. Should you prefer to use batteries, please use the rechargeable AA-type Ni-MH type.
- When installing or replacing batteries, always turn off the power on this unit and disconnect any other devices you may have connected. This way, you can prevent malfunction and/or damage to speakers or other devices.
- Before connecting the AX-Synth to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to other devices.

Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- 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.
- Do not expose the AX-Synth 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 instrument.
- When moved from one location to another where the temperature and/or humidity is very different, water droplets (condensation) may form inside the AX-Synth. Damage or malfunction may result if you attempt to use the AX-Synth in this condition. Therefore, before using the AX-Synth, you must allow it to stand for several hours, until the condensation has completely evaporated.
- 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.
- 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.

Maintenance

- For everyday cleaning wipe the AX-Synth with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a mild, non-abrasive detergent. Afterwards, be sure to wipe the instrument thoroughly with a soft, dry cloth.

- Never use benzene, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Repairs and data

- Please be aware that all data contained in the instrument's memory may be lost when it is sent for repairs. Important data should always be backed up using the Bulk Dump function (see p. 29). In certain cases (such as when circuitry related to memory itself is out of order), we regret that it may not be possible to restore the data. Roland assumes no liability concerning such loss of data.

Additional precautions

- 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 losing important data, we recommend that you periodically save a backup copy of important data you have stored in the unit's memory (see p. 29).
- Unfortunately, it may be impossible to restore the contents of data that was stored in the AX-Synth's memory once it has been lost. Roland Europe assumes no liability concerning such loss of data.
- Use a reasonable amount of care when using the AX-Synth's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.
- 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.
- To avoid disturbing your neighbors, try to keep the AX-Synth'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).
- 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.
- 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.
- Use a reasonable amount of care when using the instrument's buttons, other controls, and jacks/connectors. Rough handling can lead to malfunctions.
- Never strike or apply strong pressure to the display.

Handling CD-ROMs

- Avoid touching or scratching the shiny underside (encoded surface) of the CD-ROM. Damaged or dirty CD-ROM discs may not be read properly. Keep your discs clean using a commercially available CD cleaner.

Precautions for batteries

- Never use alkaline or zinc-carbon batteries.
- The temperature range for use of the batteries depends on the battery type being used. Please see the documentation that came with the batteries.
- Do not use or store batteries at high temperature, such as in strong direct sunlight, in cars during hot weather or directly in front of heaters. This may cause battery fluid leakage, impaired performance and shorten the batteries' service life.
- Do not splash fresh or saltwater on a battery or allow the terminals to become damp. This may cause heat generation and formation of rust on the battery and its terminals.
- If newly purchased batteries exhibit rust, generate heat or seem abnormal in any other way, do not use them. Take them back to your dealer.
- Keep the batteries out of reach of babies or small children.

- Be sure to carefully instruct any person on the proper way of handling batteries.
- Never dispose of the battery in a fire. Never heat it. Doing so may melt the insulation, damage the gas release vents or protective devices, cause combustion through chemical reaction with generated hydrogen, ejection of battery fluid, bursting or fire.
- Do not use batteries with the positive (+) and negative (-) terminals reversed, as this may drain the batteries or cause abnormal chemical reactions.
- Do not strike or drop the batteries. Strong impact can cause leakage of battery fluid, heat generation, bursting or fire.
- Never try to connect several batteries in parallel as this may cause leakage of battery fluid, heat generation, bursting or fire.
- Do not alter or remove protective mechanisms or other parts. Never disassemble the batteries.
- If any fluid from a battery comes in contact with the eyes, flush the eyes immediately, washing them thoroughly with clean water from a tap or other source and consult a doctor. Strong alkaline fluid can damage the eyes and lead to permanent loss of eyesight.
- If skin or clothing comes in contact with any fluid from a battery, wash the area immediately with clean water from a tap. Battery fluid can cause skin damage.
- When a battery is no longer usable, dispose of it in accordance with all applicable local laws and regulations.
- If a battery leaks fluid, changes color or shape or changes in any other way, do not use it, otherwise it may cause heat generation, bursting or fire.

Battery handling

- Incorrect handling of batteries, rechargeable batteries, or a battery charger can cause leakage, overheating, fire, or explosion. Before use, you must read and strictly observe all of the precautions that accompany the batteries, rechargeable batteries, or battery charger. When using rechargeable batteries and a charger, use only the combination of rechargeable batteries and charger specified by the battery manufacturer.

Strap holder precaution

- Never unscrew the strap pins to avoid damaging the AX-Synth's plastic housing, which eventually compromises overall stability and safety.
- To avoid dropping the unit and damaging it or causing injuries to yourself or other people, be sure to double-check whether the supplied strap is securely attached to the two pins before using the AX-Synth.
- Roland Europe recommends installing commercially available strap locks for guitar to guard against damage and injuries caused by the strap coming loose while you are playing.

Copyright

- Microsoft and Windows are registered trademarks of Microsoft Corporation.
- Apple and Macintosh are registered trademarks of Apple Inc.
- Mac OS is a trademark of Apple Inc.

Contents

USING THE UNIT SAFELY	4
Important notes	6
1. The AX-Synth in a nutshell	9
2. Panel descriptions	10
Front panel	10
Bottom panel	11
Connection panel (rear)	12
3. Making connections	13
Connecting the AC adaptor	13
Inserting or replacing batteries	13
Connecting the AX-Synth	14
Using headphones	16
Powering up	17
4. Playing the AX-Synth	18
Selecting 'regular' Tones	18
Selecting 'SuperNATURAL' and 'SPECIAL' Tones	19
Grouping frequently-used Tones (FAVORITE)	19
5. Using the AX-Synth's performance functions	21
Master Tune	21
Transpose	21
Shifting the keyboard pitch in octave steps	22
Using the Modulation Bar	22
Using the Touch Controller	22
Aftertouch	23
Using the D Beam controller	23
Portamento	24
Sustaining notes	25
6. Editing Tone settings	26
Editing the volume and Reverb Send levels	26
7. Using the AX-Synth as MIDI controller	27
MIDI messages that can be transmitted/received	27
Activating the AX-Synth's MIDI transmission	27
Setting the MIDI transmit channel	27
Transmitting Program Change numbers	28
Using the Bulk Dump function	29
8. Using the AX-Synth's USB port	31
General considerations	31
Making the settings for the USB driver	32
9. About V-LINK	33
How to use V-LINK	33
10. Additional functions	34
Battery-related functions	34
Loading the factory settings	34
Checking the AX-Synth's firmware version	34
11. Appendix	35
Troubleshooting	35
Control Change list	36
Tone list	37
12. Specifications	39
13. MIDI implementation chart	40
14. Index	41

1. The AX-Synth in a nutshell

High-quality Internal sound source

A "shoulder synthesizer", the AX-Synth comes with 256 high-quality sounds specially selected for solo performances, 4 SuperNATURAL™ sounds (Violin, Cello, Shakuhachi, Trombone) and 4 SPECIAL sounds (Trumpet, Sax, Strings and Jazz Scat).

Cable-free live operation possible

The AX-Synth can be powered by 8 rechargeable AA-type Ni-MH batteries with a battery life of about 6 hours. If combined with a commercially available wireless system, it allows you to play wherever you like, to follow the singer or any other musician on stage, etc., with no cables to pay attention to.

It even provides an attenuator switch to adapt its output level to the input sensitivity of the wireless system you are using.

Convenient studio operation

An AC adaptor and the USB port allow the AX-Synth to be used with a computer. Dedicated editor and librarian software is also available. The "AX-Synth Editor" software, which includes librarian software, can be downloaded free of charge from Roland's website: <http://www.Roland.com>.

All performance controls within reach

The AX-Synth provides control functions that are conveniently and ergonomically built into its neck. The AX-Synth puts you in control of your sound: key velocity sensitivity, a D Beam controller, an AFTER-TOUCH knob, a modulation bar, a TOUCH CONTROLLER ribbon, a PORTAMENTO button, a HOLD button and a BENDER MODE button are built in.

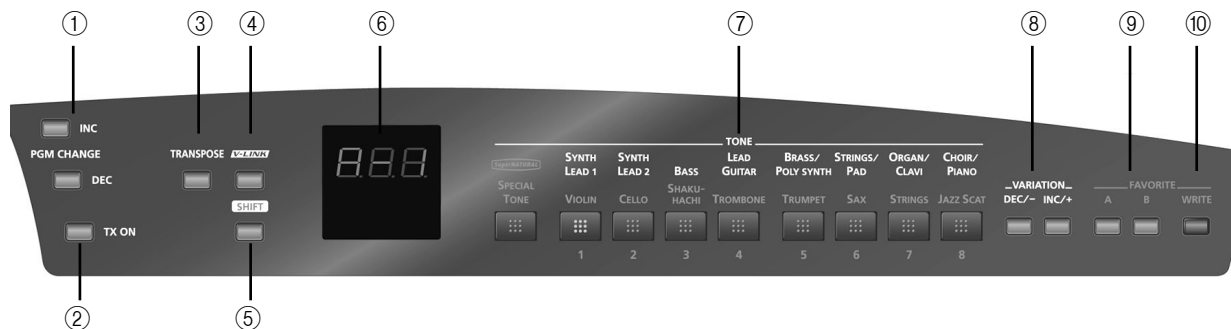
The D Beam controller can be set to transmit almost any control change message (CC) you may ever need. Finally, the AX-Synth sports a FOOT PEDAL socket to which you can connect a DP-series hold pedal.

In-depth programming with the 'AX-Synth editor'

The AX-Synth comes with dedicated editor and librarian software that allows you to modify (and save) all aspects of the internal sounds. Combined with this intuitive software, the AX-Synth becomes a fully-fledged synthesizer.

2. Panel descriptions

Front panel



① PGM CHANGE INC & DEC buttons

These buttons are used to transmit program change messages on the selected MIDI channel. They work in a sequential fashion (incremental or decremental). Program change numbers can also be entered directly, however (see p. 28).

② TX ON button

This button is used to enable (button lights) or disable the transmission of MIDI messages. Pressing it while holding down the **SHIFT** button allows you to use the keys in the highest octave (NUMERIC KEYPAD) and the keys in the lowest octave (TX MIDI CHANNELS) for numeric entry of program change or MIDI channel numbers.

③ TRANSPOSE button

Press this button to display the current transposition interval. Holding it while pressing the OCTAVE/VARIATION **+**/**-** buttons allows you to set the interval in semi-tone steps.

④ V-LINK button

Press this button to activate the AX-Synth's V-LINK control function (see p. 33).

⑤ SHIFT button

Pressing this button allows you to select the secondary (hidden) function of some of the other buttons.

⑥ Display

This three-character display keeps you posted about the selected Tone, mode or the parameter value you set.

⑦ TONE buttons

These buttons are used to select the desired Tone family, SuperNATURAL, SPECIAL or FAVORITE Tone (the button you press lights blue).

⑧ VARIATION DEC/- & INC/+ buttons

These buttons allow you to select a Tone from the active Tone family (see above) in a sequential fashion. This function can also be assigned to the OCTAVE/VARIATION **+**/**-** buttons (page 18).

A third, usually faster, way to select Tones is by holding down **SHIFT** while using the keys in the highest octave (NUMERIC KEYPAD).

⑨ FAVORITE A, B buttons

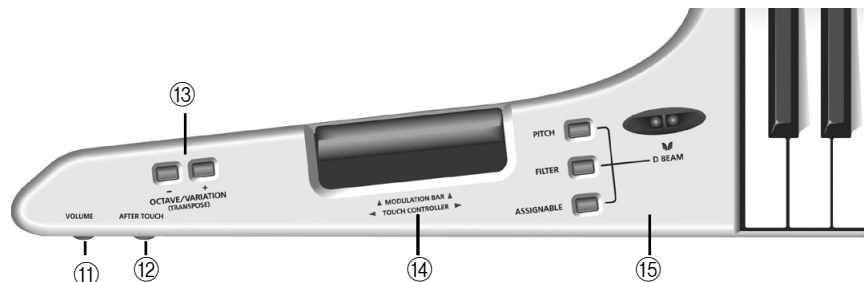
These buttons allow you to select the corresponding bank of "favorite" Tones.

⑩ WRITE button

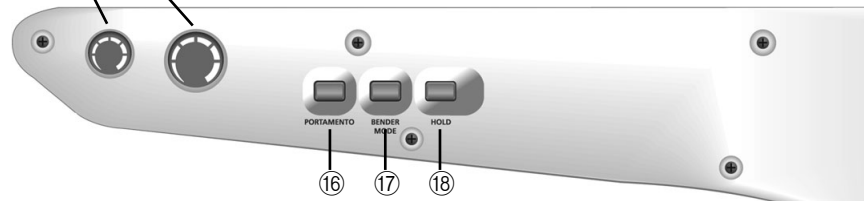
The **WRITE** button is used to assign the desired Tones to the 16 memories of FAVORITE banks "A" and "B" and to save all settings you change.

'Neck' (control) section

Front view

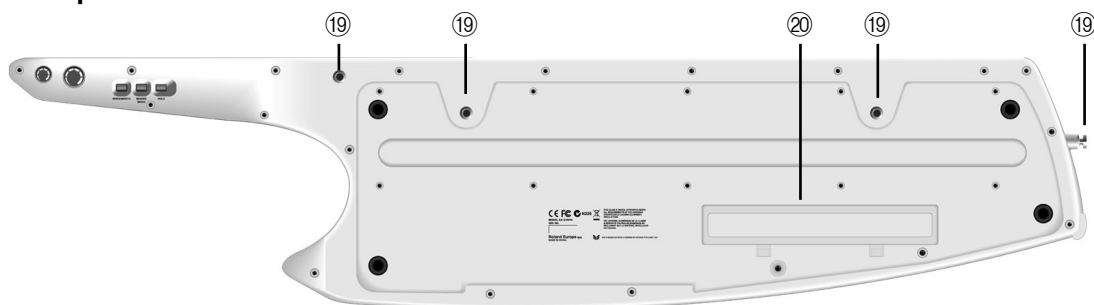


Rear view



- 11 VOLUME knob**
This knob allows you to set the AX-Synth's overall output volume.
- 12 AFTER TOUCH knob**
This knob sends channel aftertouch messages for the notes you are playing (see p. 23).
- 13 OCTAVE/VARIATION (TRANSCOPE) buttons**
These buttons are used to transpose the AX-Synth's keyboard in steps of one octave (see p. 22). You can also use these buttons to select Tone variations (see p. 18).
If you hold down **TRANSCOPE** while pressing one of these buttons, the pitch changes in semi-tone steps.
- 14 MODULATION BAR/TOUCH CONTROLLER**
Press the modulation bar to add modulation to the notes you are playing. Behind the modulation bar lies the ribbon strip. Slide your finger towards the left or right on this ribbon to change the pitch of the notes.
- 15 D Beam controller & PITCH, FILTER & ASSIGNABLE buttons**
This controller allows you to influence the pitch or timbre of the notes you play, or to create unique effects by moving one hand up/down or left/right above the two "eyes".
The buttons to its left allow you to assign the desired function to the D Beam controller (see p. 24).
- 16 PORTAMENTO button**
This button allows you to switch the Portamento function on and off.
- 17 BENDER MODE button**
This button allows you to specify how the TOUCH CONTROLLER ribbon works.
Note: This function is not available for the SuperNATURAL Tones.
- 18 HOLD button**
This button allows you to hold the notes you are playing (see p. 25).

Bottom panel



- 19 Strap pins**
This is where you can attach the ends of the supplied strap. Choose any two pins.
- 20 Battery compartment**
This is where you can insert AA-type Ni-MH batteries.

Connection panel (rear)



②① OUTPUT R & L/MONO sockets

These 1/4" sockets need to be connected to the inputs of a keyboard amplifier, mixer, etc. To take advantage of the AX-Synth mobility factor, consider using a commercially available wireless system.

Note: If you can/want to use only one channel on your external amplifier, connect the L/MONO socket to its input. For optimum sound quality, we recommend working in stereo, though.

Note: Be sure to only use wireless transmitters that comply with local radio regulations.

②② ATT ON/OFF switch

If you are using 1/4" cables to connect the AX-Synth to an amplifier, etc., slide this switch to the "OFF" position.

If you notice distortion while using a wireless system, slide this switch to the "ON" position to reduce the level of the AX-Synth's audio output signal.

Note: Be sure to only use wireless transmitters that comply with local radio regulations.

②③ PHONES socket

This is where you can connect a pair of optional headphones (Roland RH-25, RH-50, RH-200, RH-300, etc.).

②④ Cord hook (1)

This hook is intended to secure the MIDI cable connected to the MIDI OUT socket when you are using the AX-Synth as a shoulder keyboard. This is a safeguard against accidental disconnection.

②⑤ MIDI OUT, IN sockets

Connect the MIDI IN socket to the device that should transmit MIDI messages to the AX-Synth. Connect the MIDI OUT socket to the MIDI instrument you wish to control with your AX-Synth.

②⑥ USB port

Connect this port to a free USB port on your computer using an "A-B"-type USB cable.

②⑦ FOOT PEDAL socket

This is where you can connect an optional Roland DP-series pedal.

Note: Though you can also connect an expression pedal, any pedal you connect will act as Hold pedal.

②⑧ POWER switch

Set this switch to the ON position to switch the AX-Synth on. Select the OFF position to power off your AX-Synth.

If you need to turn off the power completely (when using the supplied AC adapter), first turn off the power switch, then disconnect the AC adapter's power from the wall outlet.

②⑨ DC IN socket

This is where you can connect the supplied PSB-1U adaptor.

③① Cord hook (2)

If you connect the supplied adaptor to the DC IN socket, be sure to wind its cable around this hook as a safeguard against accidental disconnection.

3. Making connections

Note: 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.

Note: When audio cables with resistors are used, the AX-Synth's volume level may be low. If this happens, use connection cables that do not contain resistors.

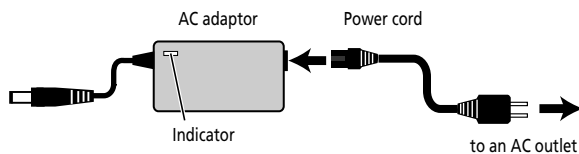
Connecting the AC adaptor

The AX-Synth can be powered either by 8 AA-type Ni-MH batteries or the supplied AC adaptor.

- (1) Make sure that the **POWER** switch is in the "OFF" position.
- (2) Turn the **VOLUME** knob to the lowest setting to minimize the volume.

Note: Be sure to use only the supplied AC adaptor. Using any other type may cause malfunction or electric shock.

Note: If the AX-Synth is to remain unused for an extended period of time, unplug the adaptor.
- (3) Connect the included power cord to the AC adaptor. The indicator will light when you plug the AC adaptor into an AC outlet.

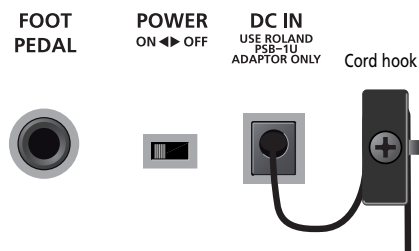


Place the AC adaptor so the side with the indicator (see illustration) faces upwards and the side with textual information faces downwards.

Note: Depending on your region, the included power cord may differ from the one shown above.

- (4) Connect the AC adaptor to the DC IN jack on the AX-Synth's rear panel, and then plug the AC adaptor into an electrical outlet. To prevent 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.

AX-Synth rear panel



Inserting or replacing batteries

Eight AA batteries are required to run the AX-Synth on battery power. We recommend the use of rechargeable AA-type Ni-MH batteries. With these batteries you can expect about 6 hours of continuous operation, although this depends on how the AX-Synth is being used.

Note: If you plan to use batteries, please disconnect the AC adaptor from the AX-Synth.

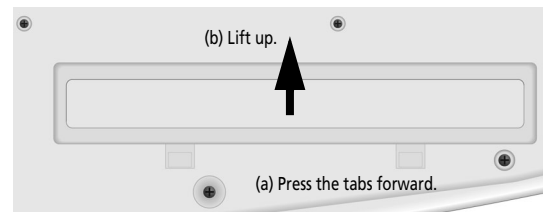
Note: If batteries are installed, disconnecting or reconnecting the AC adaptor's power cord or the adaptor plug from the AX-Synth's DC IN socket while the power is on will cause the AX-Synth to turn off. You must turn off the power before connecting or disconnecting the power cord or AC adaptor.

Note: Avoid using new batteries together with old ones. In addition, avoid mixing different types of batteries (e.g. regular carbon and alkaline batteries).

Note: When replacing batteries, be sure to insert them correctly (ensure correct polarity).

Note: Remove the batteries whenever the AX-Synth is to remain unused for an extended period of time.

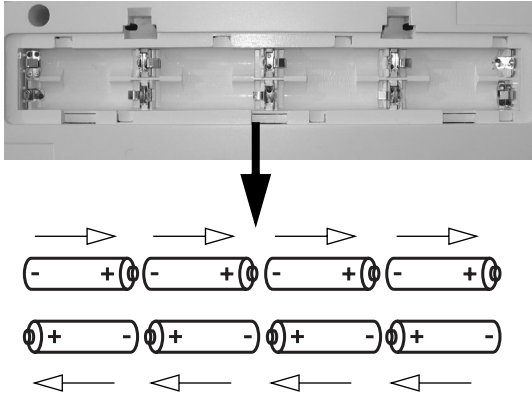
- (1) Switch off the AX-Synth.
- (2) Remove the battery cover located on the bottom of the instrument.



Note: When turning the AX-Synth 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.

Note: When turning the AX-Synth upside-down, handle with care to avoid dropping it, or allowing it to fall or tip over.

- (3) Insert 8 rechargeable AA-type Ni-MH batteries into the compartment (4 on either side), taking care to orient them in accordance with the "+" and "-" indications.



- (4) Close the AX-Synth's battery compartment.

Battery charge indication

If, while using batteries, three flashing dots appears in the display, the remaining battery power is low. Replace the batteries at your earliest convenience. Three constantly lit dots mean that you need to replace the batteries right away (or use the supplied adaptor).

Note: The AX-Synth cannot recharge your batteries.

Note: The battery charge indication is only an approximation.

Note about rechargeable batteries

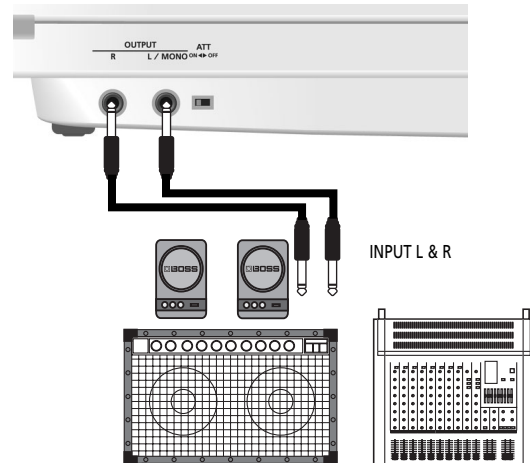
Certain batteries can be recharged several times before they need to be replaced with a new ones. Note that it is normal for the batteries to last increasingly shorter as time goes by. At the end of their life cycle, they may only last one hour, for example. But that is a gradual process.

Connecting the AX-Synth

Connecting the AX-Synth to an amplifier, mixer, etc., using cables

The AX-Synth needs to be connected to audio equipment, such as a keyboard amplifier, a mixing console, active speakers, etc.

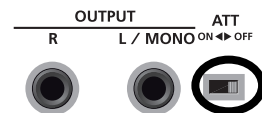
- (1) Connect the OUTPUT jacks on the AX-Synth's rear panel to the input jacks of your external device.



Please choose unbalanced (mono) cables with 1/4" jacks at one end (for the AX-Synth). The connectors at the other end need to match the input sockets of the device to which you are connecting the AX-Synth.

Note: If your amplifier is monaural, you only need to connect the L/MONO socket.

- (2) Set the ATT switch to the "OFF" position.



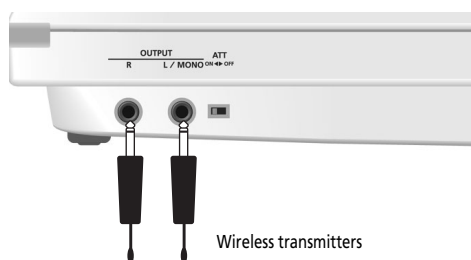
Note: You can also connect headphones to the PHONES socket, in which case you do not need to establish an audio connection.

Using a wireless system to connect the AX-Synth to your amplifier, etc.

Using a commercially available wireless system and batteries has the advantage that you are free in your movements on stage—with no cables to worry about.

Note: Be sure to only use wireless transmitters that comply with local radio regulations.

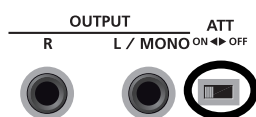
- (1) Connect the wireless transmitters to the OUTPUT jacks on the AX-Synth's rear panel.



Note: The shape of the wireless connectors depends on the model you are using.

Note: If your amplifier is monaural, you need only one transmitter. Connect it to the L/MONO socket.

- (2) If the wireless receiver is intended for low-level signals (high input sensitivity), set the **ATT** switch to the "ON" position to reduce the AX-Synth's audio output level.

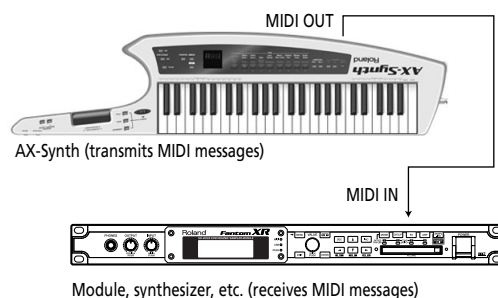


"ATT" is short for "attenuator".

- (3) Connect the wireless receiver's audio output(s) to the mixing console, amplifier, etc.

Controlling a MIDI-compatible sound source

- (1) Connect the AX-Synth's MIDI OUT socket to the MIDI IN socket of the module or synthesizer you want to control.



Note: Do not forget to connect the module, synthesizer, etc., to an amplifier. See its manual for details.

- (2) Switch on the **TX ON** button.

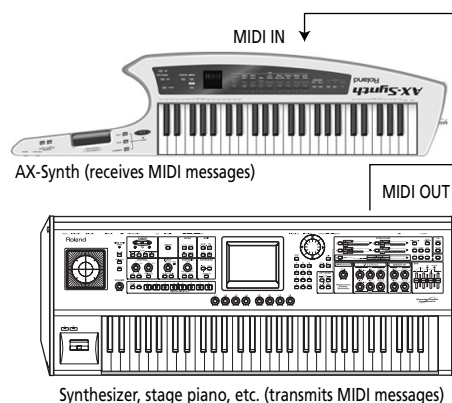


Note: See page 27 for details about the AX-Synth's MIDI functions.

Controlling the AX-Synth from an external MIDI device

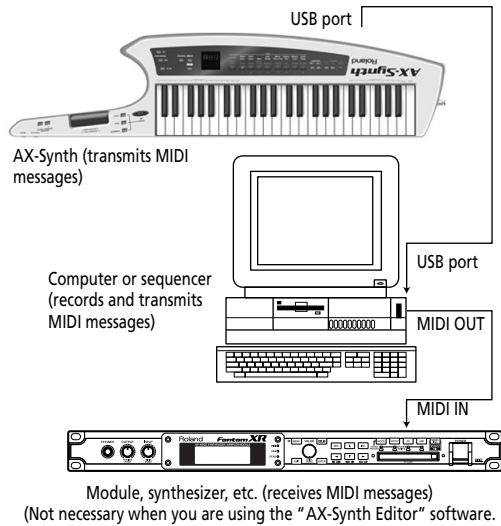
The AX-Synth's tone generator can also receive MIDI data and play the notes using the currently selected sound. The AX-Synth always receives on the MIDI channel that has the same number as the transmit channel you select (see p. 27).

- (1) Connect the AX-Synth's MIDI IN socket to the MIDI OUT socket of the instrument that should control the AX-Synth.



Working with a computer or sequencer

If you want to use the AX-Synth as Master keyboard for recording applications that involve a computer with sequencing software, or take advantage of the "AX-Synth Editor" software, here is the most useful connection system:

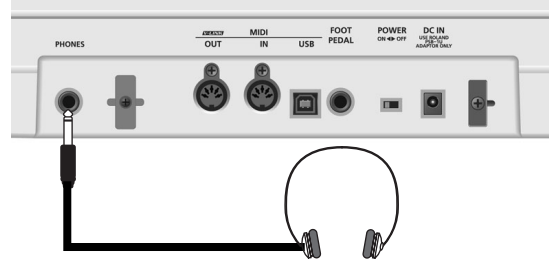


Note: The AX-Synth is not multitimbral.

Using headphones

The AX-Synth has one jack for plugging in headphones. This allows you to play without having to worry about bothering others around you, even at night.

- (1) Plug the headphones into the **PHONES** jack located on the AX-Synth's rear panel.



Note: Use stereo headphones. Please use only Roland headphones. Headphones from other manufacturers may be unable to provide sufficient volume.

- (2) The headphone volume can be adjusted with the **VOLUME** knob.

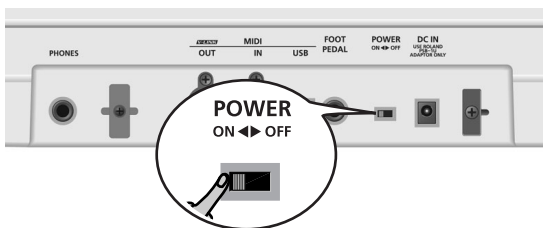
Some notes on using headphones

- To prevent damage to the cord, handle the headphones only by the headset or the plug.
- Connecting headphones when the volume of connected equipment is turned up may result in damage to the headphones. Lower the volume on the AX-Synth before plugging in the headphones.
- Listening at excessively high volume levels will not only damage the headphones, but may also cause hearing loss. Use the headphones at a moderate volume level.

Powering up

Once the connections have been completed (page 14), turn on the 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.

- (1) Before you turn on the power, turn the **VOLUME** knob to the lowest setting to minimize the volume.
- (2) Slide the rear-panel **POWER** switch to the "ON" position to turn on the power.



This unit is equipped with a protection circuit. A brief interval (a few seconds) after power up is required before it will operate normally.

Note: If the AX-Synth is connected to a keyboard amp or audio amp, turn on the power of the AX-Synth first, and then switch on your amp.

- (3) Turn the **VOLUME** knob to adjust the volume of the AX-Synth.
The AX-Synth has a "sleep" function for reduced power consumption when you are using batteries. After several minutes of inactivity, all LEDs go dark, and only a dot will scroll through the display. To "wake" the AX-Synth, simply press a key or button. (This function is not available while you are using the supplied AC adaptor.)
Note: See page 34 for how change the sleep interval.

Turning the power off

- (1) Before you turn off the power, turn the **VOLUME** knob to the lowest setting.
- (2) Slide the **POWER** switch to the "OFF" position to turn off the power.
If the AX-Synth is connected to a keyboard amp or audio amp, switch off the amp first, then turn off the AX-Synth.

4. Playing the AX-Synth

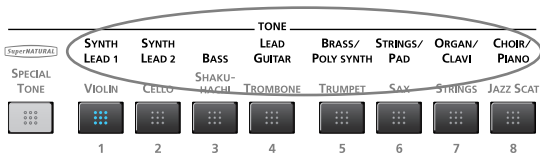
Selecting 'regular' Tones

The AX-Synth contains 256 Tones derived from Roland's cutting-edge synthesizers, 4 "SuperNATURAL™" Tones, and 4 "SPECIAL" Tones. These sounds can be played via the 49 velocity-sensitive keys (or via MIDI).

Selecting 'regular' Tones sequentially

The AX-Synth's "regular" Tones are grouped into 8 families with 32 "variations" (sounds) each.

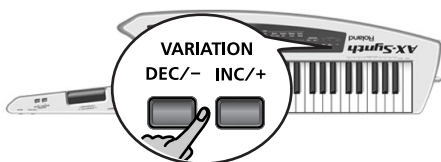
- (1) Connect the AX-Synth to your amplifier (page 14) and switch it on (page 17).
- (2) If the **SuperNATURAL/SPECIAL TONE**, the FAVORITE **A** or **B** button lights, switch it off.
- (3) Press one of the following buttons to select a Tone family:



The family names of regular Tones are printed in white on the AX-Synth's front panel. The family button you press lights blue.

When you press a family button, the AX-Synth automatically selects the last Tone you chose in this family since switching it on.

- (4) Use the VARIATION **DEC/-**/**INC/+** buttons (whose legends are also white) to select a Tone from the selected family.



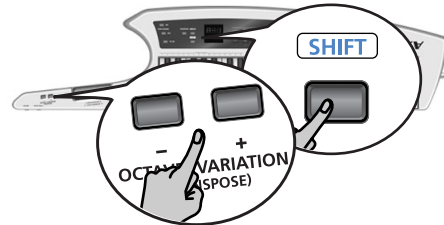
Press **INC/+** to select the next Tone, or **DEC/-** to select the previous one. You may have to press the selected button several times to call up the sound you need.

The display shows the number of the Tone you selected (1~32).

To scroll through the available Tones of the active family, you can hold down either VARIATION **INC/+** or **DEC/-**. To scroll even faster, press and hold the "other" VARIATION button.

You can also use the OCTAVE/VARIATION **+**/**-** buttons on the neck to select Tones. To do so, you first need to assign them the "UR" function.

- (a) Hold down the **SHIFT** button and press OCTAVE/VARIATION **+** or **-** to select "UR" (see the display).



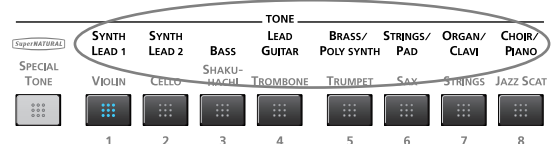
The **WRITE** button flashes.

- (b) Keep holding the **SHIFT** button and press the **WRITE** button to confirm your selection. You only need to make this selection once: the AX-Synth will remember it until you change it again.
- (c) Release the **SHIFT** button.
- (d) Use OCTAVE/VARIATION **+**/**-** to select Tones in the same way as VARIATION **DEC/-**/**INC/+**.

Numeric selection of a 'regular' Tone

To save time, you can also specify the number of the desired Tone directly:

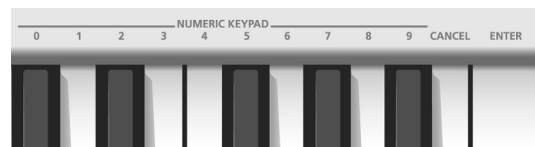
- (1) Connect the AX-Synth to your amplifier (page 14) and switch it on (page 17).
- (2) Press one of the following buttons to select a Tone family:



- (3) Press and hold the **SHIFT** button.



- (4) Keep holding the **SHIFT** button and enter the desired variation number with the keys in the highest octave (NUMERIC KEYPAD). Confirm by pressing the highest key (**ENTER**).



You can repeat this step to select other sounds at a later stage.

If you entered the wrong number, you can erase it by pressing the CANCEL key, then start again.

- (5) Release the **[SHIFT]** button.

Selecting 'SuperNATURAL' and 'SPECIAL' Tones

There are four "SuperNATURAL" and four "SPECIAL" Tones for breathtakingly realistic solo performances.

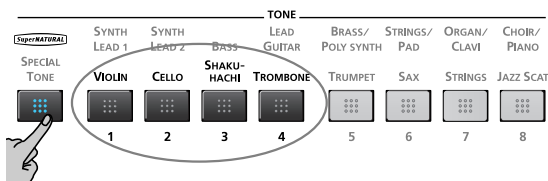
Selecting 'SuperNATURAL' Tones

SuperNATURAL is Roland's breakthrough sound-generating technology that enables a new level of realism and expression. SuperNATURAL reproduces the delicate, organic tonal changes and playing nuances of acoustic and electric musical instruments.



The AX-Synth contains four SuperNATURAL sounds: VIOLIN, CELLO, SHAKUHACHI and TROMBONE.

- (1) Connect the AX-Synth to your amplifier (page 14) and switch it on (page 17).
- (2) Press the **[SuperNATURAL/SPECIAL TONE]** button.

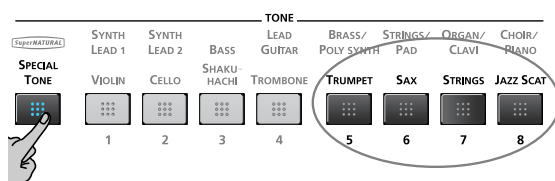


- (3) Press one of the first four TONE buttons to select the corresponding SuperNATURAL Tone. See the blue legends above the buttons.
Note: Switch off the **[SuperNATURAL/SPECIAL TONE]** button if you want to select a "regular" Tone again.

Selecting 'SPECIAL' Tones

There are four "special" Tones: TRUMPET, SAX, STRINGS and JAZZ SCAT. These sounds are based on a different technology than SuperNATURAL Tones.

- (1) Connect the AX-Synth to your amplifier (page 14) and switch it on (page 17).
- (2) Press the **[SuperNATURAL/SPECIAL TONE]** button.



- (3) Press one of the last four TONE buttons to select the corresponding SPECIAL Tone.
Note: Switch off the **[SuperNATURAL/SPECIAL TONE]** button if you want to select a "regular" Tone again.

Grouping frequently-used Tones (FAVORITE)

The AX-Synth provides 16 "FAVORITE" memories where you can "compile" the Tones you want to select at the press of two buttons during a live performance.

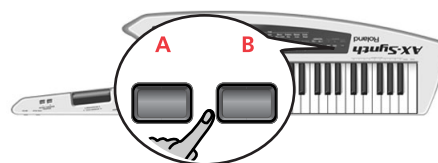
If you like, you can change the volume and Reverb Send levels of the Tones before assigning them to the FAVORITE memories (see p. 26).

Assigning a Tone to a FAVORITE memory

- (1) Select the Tone you want to assign to a FAVORITE memory. See "Editing the volume and Reverb Send levels" on p. 26 if you want to change the Tone's volume and/or Reverb Send level before saving it.
- (2) Press the **[WRITE]** button (it flashes).



- (3) Press the FAVORITE **[A]** or **[B]** button to select the bank.



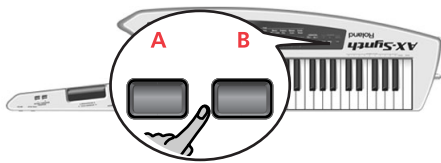
The FAVORITE button you press lights and the display shows "A -" (bank "A") or "B -" (bank "B").

- (4) Press one of the eight TONE buttons to specify the target memory (see the red numbers below the buttons). The button you press lights and the **[WRITE]** button goes dark.
Note: To select a "regular" Tone again, press the **[A]** or **[B]** button that lights to switch it off.

Recalling FAVORITE memories

To select the Tones assigned to the FAVORITE memories, proceed as follows.

- (1) Press the FAVORITE **[A]** or **[B]** button to select the bank.



The FAVORITE button you press lights and the display shows "A -" (bank "A") or "B -" (bank "B").

- (2) Press one of the eight TONE buttons to select the desired FAVORITE memory in the currently selected bank.

You can also use the VARIATION **[DEC/-]**/**[INC/+]** buttons to select the FAVORITE memories sequentially, which may be handy for live performances.

This procedure does not allow you to change banks (from "A" to "B" and vice versa), however.

Note: When the "UR" function is selected (see p. 18), you can also use the OCTAVE/VARIATION **[+]**/**[-]** buttons to select FAVORITE memories.

Note: To select a "regular" Tone again, press the **[A]** or **[B]** button that lights to switch it off.

5. Using the AX-Synth's performance functions

The AX-Synth provides several functions that allow you to add expression to your music, change the pitch/key, etc.

Master Tune

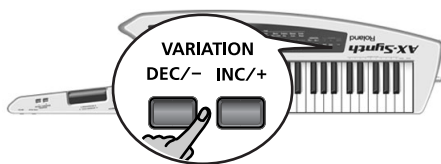
This parameter allows you to change the AX-Synth's overall tuning. The factory default, 440Hz, represents the reference pitch used by most electronic musical instruments.

- (1) Hold down the **[SHIFT]** button and press the **[TRANPOSE]** button.



The current tuning value flashes in the display and the **[WRITE]** button flashes.

- (2) Keep holding the **[SHIFT]** button and set the desired tuning value with the VARIATION **[DEC/-]**/**[INC/+]** buttons.



Press **[INC/+]** to increase the value, or **[DEC/-]** to select a lower one. You may have to press the selected button several times to select the desired value.

The setting range is 415.3~466.2Hz. The display only shows the last three digits (the initial "4" is therefore omitted).

To scroll through the available values, you can hold down either VARIATION **[INC/+]** or **[DEC/-]**. To scroll even faster, press and hold the "other" VARIATION button.

You can play on the keyboard to check whether you have selected the correct interval. Feel free to change it again before confirming your setting (see below).

- (3) Press the **[WRITE]** button to confirm your setting.



- (4) Release the **[SHIFT]** button.

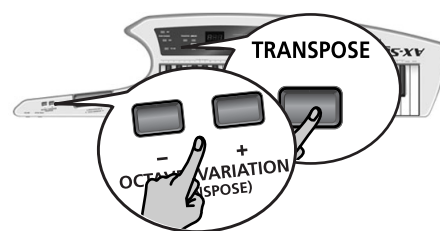
Transpose

Your AX-Synth comes with a **TRANPOSE** function you may want to use for playing songs in other keys than the ones you are used to.

- (1) Hold down the **[TRANPOSE]** button and wait until the current transposition interval flashes in the display.



- (2) Keep holding the **[TRANPOSE]** button and press **OCTAVE/VARIATION [+]** or **[-]** to set the desired value.



The setting range is "-5" (five semi-tones down) to "6" (six semi-tones up).

- (3) Release the **[TRANPOSE]** button and start playing. If you selected a transposition interval other than "0", the **[TRANPOSE]** button lights.
- (4) To reset the transposition interval to "0", hold down **[TRANPOSE]** and press **OCTAVE/VARIATION [+]** and **[-]** simultaneously. The **[TRANPOSE]** button goes dark.

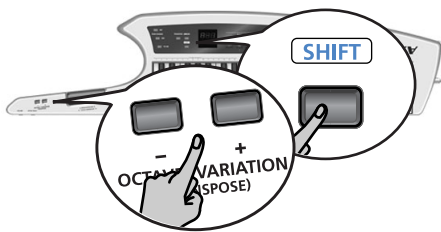
Shifting the keyboard pitch in octave steps

You can shift the pitch of the currently selected Tone upward or downward in steps of an octave, over a maximum of three octaves up or down.

Octave Switch mode

This mode means that the octave transposition you set is used until you change this setting again. (Choose this setting to play a bass part, for instance.)

- (1) Check whether the OCTAVE/VARIATION \oplus/\ominus buttons are assigned to the "OCS" function.
- (a) Hold down the SHIFT button and press OCTAVE/VARIATION \oplus or \ominus .



If the display reads "OCS", there is nothing you need to do, so continue with step (2) below. If the display reads "OCH" or "OAR", however...

- (b) Keep holding SHIFT and press OCTAVE/VARIATION \oplus or \ominus to select "OCS".
You only need to do this once: the AX-Synth will remember this setting until you change it again.
The WRITE button now flashes.
- (c) Press the WRITE button (it goes dark).
- (d) Release the SHIFT button.

- (2) Press the OCTAVE/VARIATION \oplus button to select a higher octave ("1"~"3"), or use \ominus to select a lower octave ("-1"~"-3").
The button you pressed lights if the octave interval is different from "0". The selected value briefly flashes in the display and the OCTAVE/VARIATION button you pressed lights.
- (3) To return to standard pitch ("0"), press OCTAVE/VARIATION \oplus and \ominus simultaneously.
The OCTAVE/VARIATION \oplus and \ominus go dark to indicate that the keyboard's octave has returned to normal pitch.

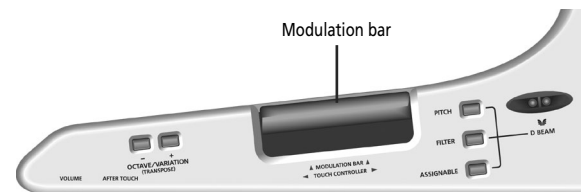
Octave Hold mode

This mode means that the keyboard's pitch is only shifted one octave up or down while you press the OCTAVE/VARIATION \oplus or \ominus button. When you release the button, the keyboard's pitch returns to normal. This can be used to quickly play a few notes in a higher or lower octave before returning to the keyboard's normal pitch.

- (1) Check whether the OCTAVE/VARIATION \oplus/\ominus buttons are assigned to the "OCH" function.
- (a) Hold down the SHIFT button and press OCTAVE/VARIATION \oplus or \ominus .
If the display reads "OCH", there is nothing you need to do, so continue with step (2) below. If the display reads "OCS" or "OAR", however...
- (b) Keep holding SHIFT and press OCTAVE/VARIATION \oplus or \ominus to select "OCH".
You only need to do this once: the AX-Synth will remember this setting until you change it again.
The WRITE button now flashes.
- (c) Press the WRITE button (it goes dark).
- (d) Release the SHIFT button.
- (2) Press the OCTAVE/VARIATION \oplus button to temporarily transpose the keyboard's pitch one octave up ("1"). Press \ominus to temporarily transpose the keyboard's pitch one octave down ("-1").
- (3) To return to standard pitch ("0"), release the OCTAVE/VARIATION \oplus or \ominus button.

Using the Modulation Bar

Press the Modulation Bar to generate MIDI Modulation messages (CC01).

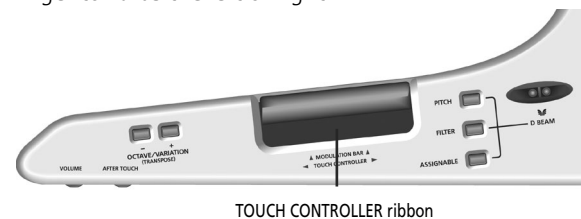


What happens now depends on the Modulation assignment of the Tone you are using. (This needs to be specified using the "AX-Synth Editor" software.)

In most cases, pressing this bar generates a vibrato effect. If you select a SuperNATURAL Tone (VIOLIN~TROMBONE), however, it acts as "Dynamics" function.

Using the Touch Controller

The AX-Synth also provides a TOUCH CONTROLLER ribbon that allows you to change the sound by sliding a finger towards the left or right.



What happens now depends on the assignment for the Tone you are using. (This needs to be specified using the "AX-Synth Editor" software.)

In most cases, the ribbon allows you to change the pitch of the notes you are playing (Pitch Bend).

Selecting the Bender Mode

The **BENDER MODE** button at the back of the neck can be used to select one of two modes for the TOUCH CONTROLLER ribbon:



BENDER MODE The ribbon works like any Pitch Bend device, i.e. it immediately affects the pitch of the notes you are playing.

BENDER MODE If you place a finger somewhere off center on the Touch Controller (not in the middle) and then play a note, that note uses its normal pitch. To bend it at a later stage, keep holding the note and slide your finger past the Touch Controller's center.

If you first play a note and then slide a finger over the Touch Controller, the note's pitch changes immediately. Subsequent notes you play while still touching the ribbon will use their normal pitch, however. Combining these two techniques allows you to simulate "double bendings" of electric guitarists.

Aftertouch

The **AFTER TOUCH** knob can be used to generate channel aftertouch messages for the notes you are playing. The AX-Synth's keyboard does not transmit these messages (it is velocity sensitive, however).



What happens now depends on the aftertouch assignment of the Tone you are using: the knob may change the Tone's level or pitch, generate filter sweeps etc. (This needs to be specified using the "AX-Synth Editor" software.)

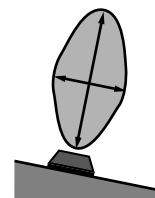
Note: The knob does not return to its minimum setting automatically. Do not forget to turn it back to zero if you no longer need the aftertouch functionality.

Using the D Beam controller

The D Beam controller can be used simply by waving your hand over it. Depending on the function you select, the D Beam controller can be used to apply various effects and to modify the sounds.

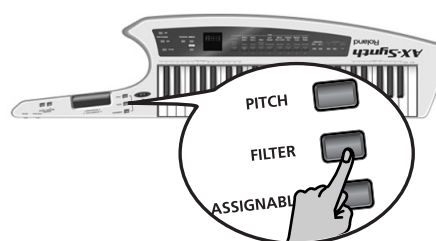
The usable range of the D Beam controller

The diagram shows the usable range of the D Beam controller. Waving your hand outside this range will produce no effect.



Note: The usable range of the D Beam controller will become extremely small when used under strong light.

- (1) Select the function you want the D Beam controller to perform by pressing one of the following buttons:



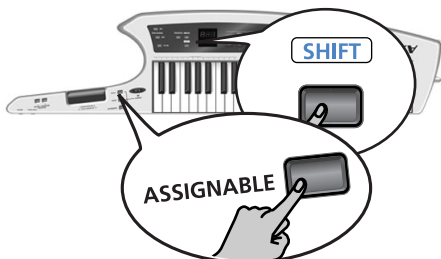
PITCH	Moving your hand over the D Beam controller changes the pitch of the notes you are playing.
FILTER	Moving your hand over the D Beam controller changes the cutoff frequency (brightness).
ASSIGNABLE	The D Beam transmits the selected Control Change message (see below).

- (2) While you play the keyboard to produce sound, place your hand above the D Beam controller and move it slowly up and down. The button you pressed in step (1) above flashes.
- (3) To turn off the D Beam controller, once again press the button you pressed in step (1) so the indicator goes dark.

Assigning a different function to the D Beam controller

While the functions of the D BEAM [PITCH] and [FILTER] buttons are fixed, you can assign a MIDI control change number (CC) to the [ASSIGNABLE] button to control the desired parameter in real-time.

- Hold down the [SHIFT] button while pressing the [ASSIGNABLE] button.



The current assignment now flashes in the display.



(This is only an example.) The [WRITE] button flashes.

- Keep holding the [SHIFT] button and select a different assignment with the VARIATION [DEC-/INC+] buttons.

The setting range is "C01"~"C95" ("C32" is not available). See the "MIDI implementation chart" on p. 40 to find out which control change numbers the AX-Synth understands. To control a specific parameter of an external instrument, see the manual for that instrument.

Note: You can hold down [DEC-/] or [INC/+] or hold one while pressing the other to speed up this operation.

- Press the [WRITE] button to confirm your choice.



Note: This selection is remembered even after switching the AX-Synth off.

- Release the [SHIFT] button.

Portamento

"Portamento" means that the pitch of the notes you play doesn't change in clearly defined steps: it glides from one note to the next.



The speed of those pitch changes can be set for each Tone individually using the "AX-Synth Editor" software. For "regular" Tones, Portamento can be switched on or off by pressing the [PORTAMENTO] button repeatedly: press it once to switch it on (the button lights), press it again to switch it off.

For the SuperNATURAL Tones (VIOLIN~TROMBONE), however, you can select one of two modes.

Selecting the Portamento mode

As stated above, this mode selection is only available for SuperNATURAL Tones. The other Tones do not support "HLD" mode. However, if you are sure that you always want to use "HLD" mode for SuperNATURAL Tones, switch it on now—it will be ignored by the remaining Tones but used whenever you select a SuperNATURAL Tone.

Here is how to select a different mode:

- Select a SuperNATURAL Tone (any of the four).
- Press and hold the [SHIFT] button.



- Keep holding [SHIFT] and press [PORTAMENTO] once or twice to select the desired mode:



Please use your thumb to avoid having to flip the AX-Synth over: you need to be able to see the display.

The [WRITE] button flashes.

The display shows your selection:

HLD	The Portamento effect will be applied while you hold down the [PORTAMENTO] button. Releasing the button switches off the Portamento effect.
SLT	Pressing the [PORTAMENTO] button once (it lights) switches the effect on. Pressing it again switches it off.

- (4) Confirm your selection by pressing the **[WRITE]** button.
Note: This selection is remembered even after switching the AX-Synth off.
- (5) Release the **[SHIFT]** button

Sustaining notes

The AX-Synth provides two controls for holding the notes you are currently playing.

HOLD button

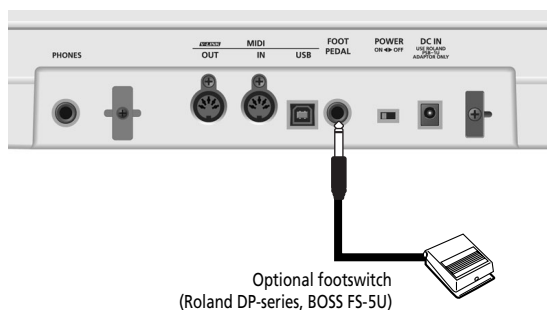
This button allows you to hold the notes you play on the keyboard in much the same way as on an acoustic piano.



Play a note or chord and press **[HOLD]** to sustain the note(s).

FOOT PEDAL socket

Also called "sustain" or "damper", an optional footswitch you connect to the FOOT PEDAL socket allows you to hold the notes you play on the keyboard in much the same way as on an acoustic piano.



For obvious reasons, connecting a footswitch to the AX-Synth while using it to move around on stage seems impractical. In such cases, we recommend using the **[HOLD]** button.

Note: Please use a Roland DP-series or a BOSS FS-5U footswitch to ensure that it uses the correct polarity (on when pressed, off when released).

Note: The AX-Synth does not support expression pedals.

6. Editing Tone settings

Editing the volume and Reverb Send levels

Though most sound parameter can only be edited using the dedicated "AX-Synth Editor" software and a computer, you can change the volume and Reverb Send levels of the Tones on the AX-Synth itself and save those changes to a FAVORITE memory.

Note: The two parameters discussed here are not available for SuperNATURAL or SPECIAL Tones.

Note: All parameters of the AX-Synth can be edited using the dedicated "AX-Synth Editor" software. This software can be downloaded free of charge from Roland's website (<http://www.Roland.com>).

- (1) Select the "regular" Tone whose volume and or Reverb Send level you want to set (see p. 18).
Note: The "VOL" and "rEV" parameters are not available for SuperNATURAL or SPECIAL Tones.
- (2) Press and keep holding the **[SHIFT]** button.



The display now shows "---".

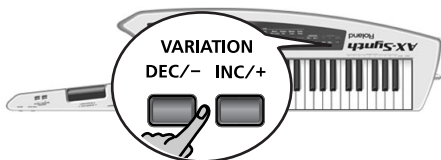
- (3) Keep holding the **[SHIFT]** button and press the TONE button of the sound you selected in step (1) above (i.e. the button that lights).
The "VOL" message briefly flashes in the display.



This message refers to the Tone's volume parameter.

Note: Skip to step (6) if you only need to change the Reverb Send level.

- (4) Wait until the volume value is displayed.
- (5) Keep holding the **[SHIFT]** button and use VARIATION **[DEC/-]**/**[INC/+]** to select the desired setting (0~127).



Note: You can hold down VARIATION **[DEC/-]** or **[INC/+]**, or hold one while pressing the other to speed up this operation.

Note: If you don't need to change the Reverb Send level, skip to step (9).

- (6) Press the TONE button used in step (3) again.
The "rEV" message briefly flashes in the display:



This message refers to the Tone's Reverb Send parameter.

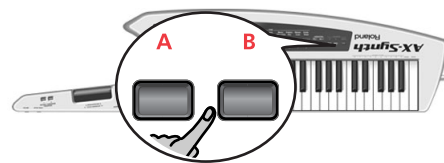
- (7) Wait until the Reverb Send value is displayed.
- (8) Keep holding the **[SHIFT]** button and use VARIATION **[DEC/-]**/**[INC/+]** to select the desired setting (0~127).
Note: You can hold down VARIATION **[DEC/-]** or **[INC/+]**, or hold one while pressing the other to speed up this operation.
- (9) Release the **[SHIFT]** button.
- (10) Start playing to check whether your settings correspond to what you had in mind.
Note: Do not select other sounds at this stage, or switch off the AX-Synth, because that would cancel the settings you have made so far.
If you like your settings, continue with step (11). If you don't, return to step (2).

- (11) Press the **[WRITE]** button.



The **[WRITE]** button now flashes.

- (12) Press the FAVORITE **[A]** or **[B]** button to select the bank and then choose



- (13) Press one of the eight TONE buttons to select the target memory.

7. Using the AX-Synth as MIDI controller

The AX-Synth can transmit and receive performance data when connected to an external MIDI device, which enables the two devices to control each other's performance. For example, one device can play or switch sounds on the other device. MIDI stands for "Musical Instrument Digital Interface." It is a universal standard for exchanging musical performance data among electronic musical instruments and computers.

Please see page 15 for how to connect the AX-Synth to your MIDI rig.

MIDI messages that can be transmitted/received

The most important MIDI messages the AX-Synth can transmit and receive are:

Message	Remarks
Note On/Off ^a	
Velocity	Transmission: striking force of the AX-Synth's keys
Aftertouch	Transmission: channel aftertouch via AFTER TOUCH knob (not from the keyboard). Reception: polyphonic & channel aftertouch.
Program Change	Transmission also without changing sounds on the AX-Synth
Bank Select	Transmission: cannot be specified on the AX-Synth ^b .
Pitch Bend	Transmission: TOUCH CONTROLLER and/or D Beam
Modulation	CC01, transmission: MODULATION BAR
Hold/Sustain	CC64, HOLD button & optional footswitch connected to FOOT PEDAL
CC01~31, CC33~95	Transmission: the control change number assigned to the D BEAM ASSIGNABLE button.

- The AX-Synth has no Local switch. To control a MIDI device without hearing its internal sound source, set the **VOLUME** control to the minimum value, disconnect the AX-Synth's OUTPUT sockets or turn down the volume on your amplifier, mixing console, etc.
- The AX-Synth does not allow you to enter Bank Select messages (CC00 and CC32) for the Program Change numbers you transmit using the PGM CHANGE functionality. However, when you select an internal sound, its Bank Select address (CC00 and CC32, see also page 37) will be transmitted along with its program Change number.

Please see the "MIDI implementation chart" on p. 40 for a complete overview of the supported MIDI messages.

About the AX-Synth's receive channel

The AX-Synth always receives MIDI messages via its MIDI IN socket and USB port.

The receive channel (RX) always corresponds to the transmit channel you select (see the right column). As long as you don't need to transmit MIDI messages, you can therefore "set" the receive channel by selecting the corresponding transmit channel.

Activating the AX-Synth's MIDI transmission

If you want the AX-Synth to transmit MIDI messages, proceed as follows:

- Connect the AX-Synth's MIDI OUT socket to the MIDI IN socket of the device you wish to control.
- Switch on the **TX ON** button (it must light).



Note: Activating this button does not bypass the AX-Synth's internal sound source.

Setting the MIDI transmit channel

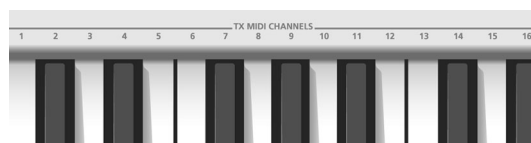
The transmit ("TX") channel can be set to match the reception channel of the instrument you want to control.

MIDI provides sixteen channels, numbered 1~16. Even if two MIDI devices are connected, you won't be able to select or play sounds on the other device unless both devices are set to the same MIDI channel.

- Press and hold the **SHIFT** button.



- Keep holding the **SHIFT** button and press the **TX ON** button. The **TX ON** button flashes.
- Keep holding the **SHIFT** button and press a key in the TX MIDI CHANNELS section (left side of the keyboard) to select the desired transmit channel.



The display now shows the number of the selected MIDI transmit channel and the **WRITE** button flashes.

- (4) Press the **WRITE** button to confirm your setting.
- (5) Release the **SHIFT** button.

Transmitting Program Change numbers

The AX-Synth automatically transmits the Program Change numbers of the sounds you select in the TONE section. The messages sent in this way also include the Bank Select address (CC00 and CC32). See the "Tone list" on p. 37.

If you want to select another sound on the receiving MIDI instrument without changing sounds on the AX-Synth, proceed as follows.

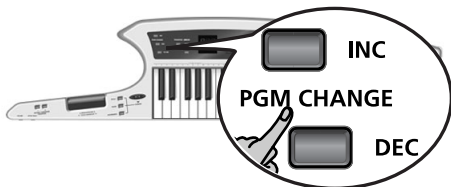
Note: The methods described here only allow you to transmit Program Change messages. Bank Select messages (CC00 and CC32) cannot be entered by hand. What you can do, however, is first select one of the AX-Synth's internal Tones that uses the correct bank, and then proceed with the following.

Transmitting Program Change numbers sequentially

- (1) Switch on the **TX ON** button (it must light).



- (2) Use the PGM CHANGE **INC** and **DEC** buttons to select the number you want to transmit (1~128).



The display briefly shows the number you selected and then reverts to the last internal Tone number you selected.

Press **INC** to select the next number, or **DEC** to select the previous one. You may have to press the selected button several times to call up the sound you need.

To scroll through the available Program Change numbers, you can hold down either PGM CHANGE **INC** or **DEC**. To scroll even faster, press and hold the "other" PGM CHANGE button.

Note: Be aware that the receiving MIDI instrument will select sounds/memories as you increase or decrease Program Change numbers.

Entering Program Change numbers directly

To save time, you can also enter the desired Program Change number numerically:

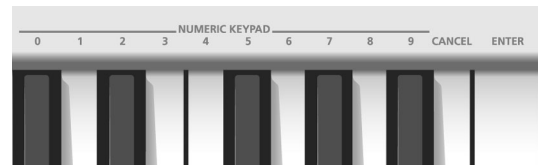
- (1) Switch on the **TX ON** button (it must light).



- (2) Press and hold the **SHIFT** button.



- (3) Keep holding the **SHIFT** button and press the **TX ON** button.
The **TX ON** button flashes.
- (4) Keep holding the **SHIFT** button and enter the desired Program Change number with the keys in the highest octave (NUMERIC KEYPAD). Confirm by pressing the highest key (**ENTER**).



If you entered the wrong number, you can erase it by pressing the CANCEL key, then start again.

- (5) Release the **SHIFT** button.

Using the Bulk Dump function

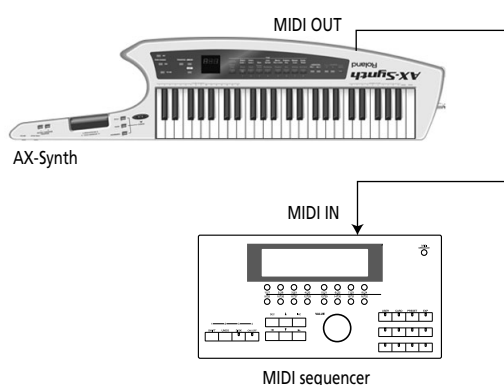
The AX-Synth provides a Bulk Dump function that allows you to archive its settings by transmitting them to a MIDI sequencer, and to send them back to the AX-Synth at a later stage.

Archiving the AX-Synth's settings using a MIDI sequencer

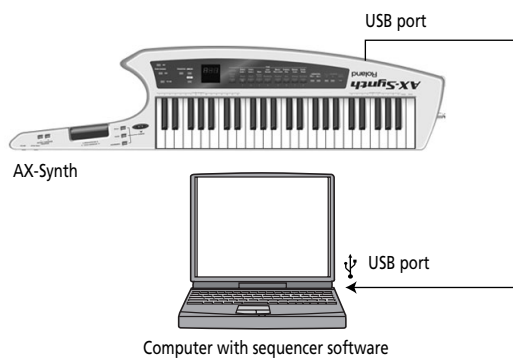
This procedure transmits all of the AX-Synth's settings—including the ones that can only be edited with the "AX-Synth Editor" software.

Note: The Bulk Dump procedure takes about 16 minutes. We therefore recommend connecting the AC adaptor to the AX-Synth.

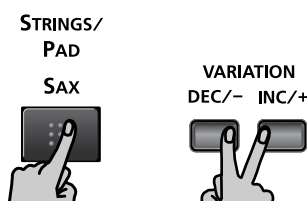
- (1) Connect the AX-Synth's MIDI OUT socket to the sequencer's MIDI IN socket.



You can also connect the AX-Synth's USB port to a USB port on your computer and use a sequencer program:



- (2) Hold down the VARIATION **DEC/-** + **INC/+** + TONE **6** (STRINGS/PAD) buttons and switch on the AX-Synth.



The display now shows the "dnp" message and the FAVORITE **A** and **B** buttons flash.

- (3) Start recording on your sequencer.

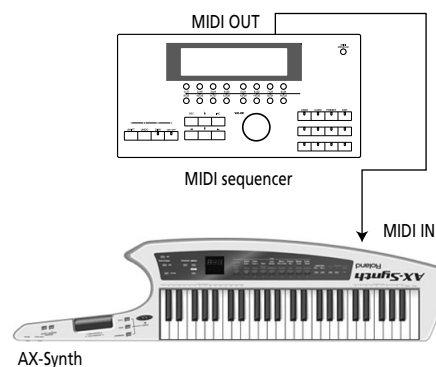
You may also have to activate its reception of SysEx data. See the sequencer's manual for details.

- (4) Press the FAVORITE **B** button on the AX-Synth to start transmitting its settings. The display now shows the "snd" (sending) message and the FAVORITE **WRITE** button flashes.
- (5) Wait until "dne" appears in the AX-Synth's display and the FAVORITE **WRITE** button goes dark, then stop the sequencer.
- (6) Save your "song" (or data file) on the sequencer/computer.
- (7) Switch the AX-Synth off, wait a moment, then switch it back on again.

Sending your settings back to the AX-Synth

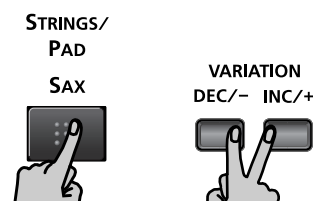
Note: The Bulk Dump procedure takes about 16 minutes. We therefore recommend connecting the AC adaptor to the AX-Synth.

- (1) Connect the sequencer's MIDI OUT socket to the AX-Synth's MIDI IN socket.



You can also connect the AX-Synth's USB port to a USB port on your computer and use a sequencer program.

- (2) Hold down the VARIATION **DEC/-** + **INC/+** + TONE **6** (STRINGS/PAD) buttons and switch on the AX-Synth.



The display now shows the "dnp" message and the FAVORITE **A** and **B** buttons flash.

- (3) Press the FAVORITE **A** button on the AX-Synth to enable its reception of SysEx data. The display now shows the "rcl" (ready to receive) message and the FAVORITE **WRITE** button lights.
- (4) On your sequencer, load the file containing your settings and start playback. You may also have to activate its transmission of SysEx messages. See the sequencer's manual for details.

The AX-Synth's FAVORITE **WRITE** button flashes to indicate that SysEx data are being received. When all data blocks have been received, the display changes to "WrE" (writing data) and the FAVORITE **WRITE** button lights.

- (5) Wait until "dNE" appears in the AX-Synth's display and until the FAVORITE **WRITE** button starts flashing.

Note: If the "Err" message appears during the reception of bulk data, the AX-Synth was unable to process the data correctly, then stop the sequencer. The FAVORITE **WRITE** button will go dark at that time. In such a case, please repeat the entire procedure.

- (6) Switch the AX-Synth off, wait a moment, then switch it back on again.

Note: We recommend using the librarian software included in the "AX-Synth Editor" to transmit and receive the AX-Synth's settings to your computer. This software is available for the Mac and PC platforms and can be downloaded from Roland's website: www.Roland.com.

8. Using the AX-Synth's USB port

The AX-Synth is equipped with a USB port for MIDI communication with a computer.

General considerations

Possible applications

If you connect the USB port located on the AX-Synth's rear panel to a USB port of your computer, you'll be able to do the following things.

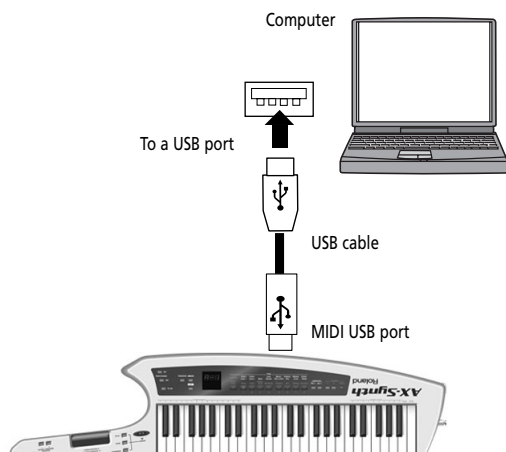
- Take advantage of the "AX-Synth Editor" and librarian software to edit the internal sounds to your liking. This software is available for the Mac and PC platforms and can be downloaded from Roland's website: <http://www.Roland.com>. Settings you change in this way can be stored inside the AX-Synth and used even when it is not connected to a computer.
- By transferring MIDI data between the AX-Synth and your sequencer software, you'll be able to enjoy a wide range of possibilities for music production and editing.

Connection

Caution

- To avoid the risk of malfunction and/or speaker damage, always make sure to turn the volume all the way down and turn off the power on all equipment before you make any connections.
- Only MIDI data can be transmitted and received via USB.
- A USB cable is not included. If you need to obtain one, ask the dealer where you purchased the AX-Synth.
- Switch on the AX-Synth before you start up the MIDI application on your computer. Don't turn the AX-Synth's power on/off while your MIDI application is running.

Connect the AX-Synth to your computer as shown below.



Refer to the Roland website for system requirements: <http://www.Roland.com/>

Note: Do not connect two or more AX-Synth units to one computer via USB. The system will not operate correctly with such connections.

If connection to your computer is unsuccessful...

Normally, you don't need to install a driver in order to connect the AX-Synth to your computer. However, if a problem occurs, or if the performance is poor, using the Roland original driver may solve the problem.

For details on downloading and installing the Roland original driver, refer to the Roland website: <http://www.roland.com/>

If you are using Windows XP/Windows Vista, you must log onto Windows as one of the following users in order to complete the USB connection correctly.

- A user name belonging to the Administrators group, such as Administrator
- A user name whose account type is a computer administrator

Making the settings for the USB driver

For successful USB communication, you need to specify the USB driver you want to use, and then activate that driver.

- (1) Hold down the **[SHIFT]** button and press PGM CHANGE **[INC]**.



The display now shows the name of the driver that is currently active ("UEn" or "GEN") and the **[WRITE]** button flashes.

- (2) Keep holding the **[SHIFT]** button and press the PGM CHANGE **[INC]** button to switch between "UEn" or "GEN".

UEn	Select this if you use the supplied driver.
GEN	Select this if you use a generic USB driver included with the OS.

- (3) Press the **[WRITE]** button to confirm your selection.
- (4) Release the **[SHIFT]** button.
- (5) Switch the AX-Synth off, wait a few seconds, then switch it on again.

9. About V-LINK

V-LINK (**V-LINK**) is a function that allows music and images to be performed together. By using MIDI to connect two or more V-LINK compatible devices, you can easily enjoy performing a wide range of visual effects that are linked to the expressive elements of a music performance.

How to use V-LINK

Activating V-LINK

- (1) Connect the AX-Synth's MIDI OUT socket to the MIDI IN socket of your optional Edirol video device.
Note: V-LINK communication is not possible via the USB port.
- (2) Press the **V-LINK** button (it lights).



Operations on the AX-Synth

V-LINK messages are transmitted on MIDI channel "10". The following functions can be controlled from the AX-Synth:

- Video clip selection: the keys in the lowest octave allow you to switch clips on an optional Edirol device. (Those keys are temporarily unavailable for triggering notes.)
- Video playback speed control: Sliding your finger over the TOUCH CONTROLLER ribbon will speed up or slow down the video playback speed. (The ribbon still generates Pitch Bend messages, however.)

10. Additional functions

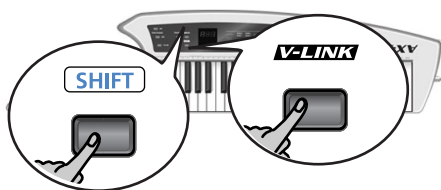
Battery-related functions

Here are two functions that may come in handy when you are using the AX-Synth with batteries.

Checking the remaining battery charge

If you are not sure whether your AX-Synth contains fresh (or fully recharged) batteries, you may want to check how much power is left before going on stage.

- (1) Hold down the **SHIFT** button and press the **V-LINK** button.



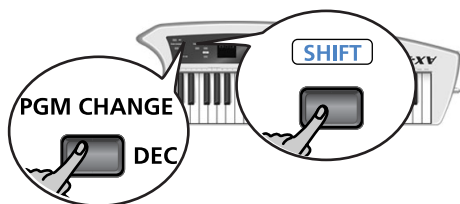
The display now shows the remaining battery charge as a percentage value (between "0" and "100").

- (2) Release the **SHIFT** to leave this function.
Note: The battery charge indication is only an approximation.
Note: Do not use this function while the AC adaptor is connected, because the displayed value will always be "100".

Sleep mode setting

When the AX-Synth runs on batteries, it is programmed to go into sleep mode after a while. By default, this interval is set to "15" (minutes). But you can change it as follows:

- (1) Hold down the **SHIFT** button and press the PGM CHANGE **DEC** button.



The display shows the current setting and the **WRITE** button flashes.

- (2) Keep holding the **SHIFT** button and press the PGM CHANGE **DEC** button to select the desired sleep mode interval.
 The possibilities are: "OFF" (the sleep function is off), "15", "30" and "60" (minutes).
- (3) Press the **WRITE** button to confirm your selection.
- (4) Release the **SHIFT** button.

Loading the factory settings

The AX-Synth allows you to change and store certain settings, thereby overwriting its original settings.

Furthermore, in-depth editing using the "AX-Synth Editor" software may cause one AX-Synth to sound and behave radically different from another. This may become a problem when you are using someone else's AX-Synth.

This function returns all of the AX-Synth's parameters to their factory settings.

Note: Consider archiving your settings using the Bulk Dump function (see p. 29) before loading the factory defaults.

Here is how to load the factory settings.

- (1) Hold down the VARIATION **INC/+** + **DEC/-** + TONE **7** (ORGAN/CLAVI) buttons and switch on the AX-Synth.
 The display shows the "Fct" message and the **WRITE** button flashes.
- (2) Press the **WRITE** button to load the factory settings.
 All indicators flash.
- (3) Wait until the "done" message appears in the display, then switch the AX-Synth off, wait a few seconds, and switch it back on.
Note: Never switch off the AX-Synth while the **WRITE** button is still lit, because doing so may damage it.

Checking the AX-Synth's firmware version

In some cases, your Roland dealer or local Roland distributor may ask you which firmware version you are using when you report a problem. In other cases, you may need want to check whether the AX-Synth you are using contains the latest firmware version. In such cases, proceed as follows:

- (1) Hold down the VARIATION **INC/+** + **DEC/-** + TONE **8** (CHOIR/PIANO) buttons and switch on the AX-Synth.
 The display shows the version number of the firmware your AX-Synth is using.
- (2) Switch the AX-Synth off, wait a few seconds, then switch it back on again.

11. Appendix

Troubleshooting

This section provides points to check and actions to take when the AX-Synth does not function as you expect. Refer to the appropriate section for the problem you are experiencing.

Power does not turn on

Is the included AC adaptor/power cord correctly connected to an AC outlet and to the AX-Synth?

→ Do not use any AC adaptor or power cord other than the ones included. Doing so will cause malfunctions. See page 13.

Are you sure that the AX-Synth contains batteries that are not depleted?

→ Check the batteries. See page 13.

Were the batteries inserted correctly?

→ Open the battery compartment and check the batteries' orientation. See page 13.

The AX-Synth suddenly turns off

If you are able to "wake it up" simply by pressing a button or key, this means that sleep mode had been activated. All settings are preserved in this state, so there is no need to worry.

There are three flashing dots in the display

This means that the remaining battery power is low. Replace the batteries at your earliest convenience.

The display only shows three dots

This means that the batteries are empty.

→ Please install new batteries. See page 13.

No sound from the AX-Synth

Could the **[VOLUME]** knob be turned down?

Did you select a FAVORITE memory for which the volume level was set to "0"?

→ Select a higher volume setting. See page 26.

The OCTAVE/VARIATION buttons do not allow me to select a different octave

Did you change the mode setting for these buttons?

→ Select "OCS" or "OCH" mode. See page 22.

The OCTAVE/VARIATION buttons no longer allow me to select Tones

Did you change the mode setting for these buttons?

→ Select "UFR" mode. See page 18.

No sound from a connected MIDI device

Are MIDI messages being transmitted?

→ The AX-Synth only transmits MIDI messages when the **[TX ON]** button lights. Please switch it on.

Does the MIDI transmit channel of the AX-Synth match the MIDI receive channel of the connected MIDI device?

→ Set the MIDI channel of the connected external device to match the AX-Synth, or change the AX-Synth's transmit channel. See page 27.

The AX-Synth no longer sounds and behaves like before

Did you, or someone else, load its factory settings?

→ If in doubt, please use the Bulk Dump function (see p. 29) to transmit your own settings to the AX-Synth.

Pitch Bend not obtained when the TOUCH CONTROLLER ribbon is used

Could the Pitch Bend Range be set to 0?

→ Set the Pitch Bend Range to a value other than "0". This needs to be done in the "AX-Synth Editor" software after connecting the AX-Synth to your computer.

The Portamento function goes off when I release the button

You have selected a SuperNATURAL Tone after activating the **[PORTAMENTO]** button's "HLD" mode.

→ Select "SUE" mode. See page 24.

Pitch is wrong

For some Tones, the pitch in certain ranges may sound different than other Tones.

Could the pitch have been changed by movements on the TOUCH CONTROLLER ribbon or by Pitch Bend messages received from an external MIDI device?

Notes are cut off

If you attempt to play more than 128 voices simultaneously, currently sounding notes may be cut off.

Standard MIDI Files played back with a sequencer sound strange

The AX-Synth is not GS/GM2 compatible and "monotimbral".

Sound is distorted when using a wireless system

The AX-Synth's output level is too high for your wireless system.

→ Set the **[ATT]** switch to the "ON" position. See page 15.

Note: Be sure to only use wireless transmitters that comply with local radio regulations.

Could you be applying an effect such as overdrive or distortion which intentionally distorts the sound?

→ Please check this in the "AX-Synth Editor" software.

Control Change list

Here are the official or frequently-used functions of Control Change numbers CC00~127. Not all MIDI instruments support all Control Changes, while some instruments may use certain numbers for different purposes. Be sure to check the MIDI implementation chart of the external instrument.

CC00	Bank Select MSB	CC66	Sostenuto on/off
CC01	Modulation wheel	CC67	Soft pedal on/off
CC02	Breath control	CC68	Legato Footswitch
CC03	Undefined	CC69	Hold 2
CC04	Foot controller	CC70	Sound Controller 1
CC05	Portamento time	CC71	Harmonic Content (Resonance)*
CC06	Data Entry MSB	CC72	Release Time*
CC07	Channel Volume	CC73	Attack Time*
CC08	Balance	CC74	Brightness (Cutoff)*
CC09	Undefined	CC75	Decay Time*
CC10	Pan	CC76	Vibrato Rate*
CC11	Expression	CC77	Vibrato Depth*
CC12	Effect control 1	CC78	Vibrato Delay*
CC13	Effect control 2	CC79	Sound Controller 10
CC14	Undefined	CC80	General Purpose Controller #5
CC15	Undefined	CC81	General Purpose Controller #6
CC16	General Purpose Controller #1	CC82	General Purpose Controller #7
CC17	General Purpose Controller #2	CC83	General Purpose Controller #8
CC18	General Purpose Controller #3	CC84	Portamento Control (Source Note)
CC19	General Purpose Controller #4	CC85~90	Undefined
CC20~CC31	Undefined	CC91	Effects 1 Depth
CC32	Bank Select LSB	CC92	Effects 2 Depth
CC33	Modulation wheel LSB	CC93	Effects 3 Depth
CC34	Breath control LSB	CC94	Effects 4 Depth
CC35	Undefined	CC95	Effects 5 Depth
CC36	Foot controller LSB	CC96	Data entry +1
CC37	Portamento time LSB	CC97	Data entry -1
CC38	Data entry LSB	CC98	NRPN LSB
CC39	Channel Volume LSB	CC99	NRPN MSB
CC40	Balance LSB	CC100	RPN LSB
CC41	Undefined	CC101	RPN MSB
CC42	Pan LSB	CC102~CC120	Undefined
CC43	Expression Controller LSB	CC120	All Sound Off
CC44	Effect control 1 LSB	CC121	Reset All Controllers
CC45	Effect control 2 LSB	CC122	Local control on/off
CC46	Undefined	CC123	All notes off
CC47	Undefined	CC124	Omni mode off (+ all notes off)
CC48	General Purpose Controller #1 LSB	CC125	Omni mode on (+ all notes off)
CC49	General Purpose Controller #2 LSB	CC126	Poly mode on/off (+ all notes off)
CC50	General Purpose Controller #3 LSB	CC127	Poly mode on (incl mono=off +all notes off)
CC51	General Purpose Controller #4 LSB		
CC52~63	Undefined		
CC64	Damper/Hold (Sustain)		
CC65	Portamento on/off		

(*) Definition according to General MIDI System Level 2 (GM2)

Tone list

SuperNATURAL Tones

Position	Tone	CC00	CC32	PC
1	Violin	66	0	1
2	Cello	66	0	2
3	Shakuhachi	66	0	3
4	Trombone	66	0	4

SPECIAL Tones

Position	Tone	CC00	CC32	PC
5	Trumpet	87	64	1
6	Sax	87	64	2
7	Strings	87	64	3
8	Jazz Scat	87	64	4

Regular Tones

Synth Lead 1		CC00	CC32	PC
1	AX Saw Lead	87	0	1
2	AX Sync Lead	87	0	2
3	GR300 Lead 1	87	0	3
4	JupiterLead1	87	0	4
5	JupiterLead2	87	0	5
6	Saw Lead 1	87	0	6
7	Saw Lead 2	87	0	7
8	Saw Lead 3	87	0	8
9	Saw Lead 4	87	0	9
10	Saw Lead 5	87	0	10
11	Classic Ld	87	0	11
12	Delayed Lead	87	0	12
13	GR300 Lead 2	87	0	13
14	Alpha Spit	87	0	14
15	Pro Fat Ld	87	0	15
16	Fat GR Lead	87	0	16
17	Bright Pls	87	0	17
18	Octa Juice	87	0	18
19	Octa Saw	87	0	19
20	Octa Sync	87	0	20
21	Phase Lead	87	0	21
22	Waspy Lead	87	0	22
23	Follow Me	87	0	23
24	Digi Lead 1	87	0	24
25	Digi Lead 2	87	0	25
26	Hot Coffee	87	0	26
27	Hot Sync	87	0	27
28	Sync Tank	87	0	28
29	2krazy Brite	87	0	29
30	Juicy Lead	87	0	30
31	Vintager	87	0	31
32	BagShakuLead	87	0	32

Synth Lead 2		CC00	CC32	PC
1	ResoSawLead	87	0	33
2	Theramax 1	87	0	34
3	AX Sqr Lead	87	0	35
4	Pulse Lead 1	87	0	36
5	Pulse Lead 2	87	0	37
6	Mid Saw Ld	87	0	38
7	On Air	87	0	39
8	2krazy Soft	87	0	40
9	Soft Lead	87	0	41
10	Tri Lead 1	87	0	42
11	Tri Lead 2	87	0	43
12	Sine Lead 1	87	0	44
13	Sine Lead 2	87	0	45
14	Simple Sine	87	0	46
15	Simple Tri	87	0	47
16	Simple Sqr	87	0	48
17	Spooky Lead	87	0	49
18	Ramp Lead	87	0	50
19	Air Lead	87	0	51
20	Growl Lead	87	0	52
21	Pulstar Ld	87	0	53
22	Mini Growl	87	0	54
23	Round SQR	87	0	55

24	Brite Square	87	0	56
25	Octa Square	87	0	57
26	Square SAW	87	0	58
27	Soft Squ Ld	87	0	59
28	Wormy Lead	87	0	60
29	Theramax 2	87	0	61
30	SoloNzPeaker	87	0	62
31	Mlt Pipes	87	0	63
32	5th SawLead	87	0	64

Bass		CC00	CC32	PC
1	Reso Bs 1	87	0	65
2	Round Bs	87	0	66
3	Moogue Bs1	87	0	67
4	Monster Bass	87	0	68
5	Moogue Bs2	87	0	69
6	Triangle Bs	87	0	70
7	Punch MG	87	0	71
8	Acddg Bass	87	0	72
9	Alpha Bs	87	0	73
10	Reso Bs 2	87	0	74
11	Reso Bs 3	87	0	75
12	MKS-50 SBs	87	0	76
13	TB Dist Bs	87	0	77
14	TB Bs	87	0	78
15	Fat Analog	87	0	79
16	Compu SBs	87	0	80
17	Modular Bs1	87	0	81
18	Modular Bs2	87	0	82
19	Garage Bass	87	0	83
20	Spike Bs	87	0	84
21	FatMG Bs	87	0	85
22	JunoSqu Bs	87	0	86
23	Acoustic Bs1	87	0	87
24	Acoustic Bs2	87	0	88
25	Finger EBs 1	87	0	89
26	Finger EBs 2	87	0	90
27	Finger EBs 3	87	0	91
28	Finger EBs 4	87	0	92
29	Pick Bs 1	87	0	93
30	Pick Bs 2	87	0	94
31	Fretnot Bs	87	0	95
32	Slap Bass	87	0	96

Lead Guitar		CC00	CC32	PC
1	SearingGtr 1	87	0	97
2	SearingGtr 2	87	0	98
3	SearingGtr 3	87	0	99
4	SearingGtr 4	87	0	100
5	OctSearingGt	87	0	101
6	Dist.Fingerz	87	0	102
7	AX DistGt	87	0	103
8	Digi DistGt	87	0	104
9	Fuzz	87	0	105
10	Nice Dist Gt	87	0	106
11	Guitar Rip	87	0	107
12	Twin	87	0	108
13	MS1959 I	87	0	109
14	MS1959 II	87	0	110
15	Metal Lead	87	0	111
16	OD-2 Turbo	87	0	112
17	Jazz EGtr	87	0	113
18	Clean EGtr	87	0	114
19	Pick EGtr	87	0	115
20	Funk EGtr	87	0	116
21	Strat EGtr	87	0	117
22	Nylon Gtr 1	87	0	118
23	Nylon Gtr 2	87	0	119
24	Nylon Gtr 3	87	0	120
25	Folk Gtr 1	87	0	121
26	Folk Gtr 2	87	0	122
27	Folk Gtr 3	87	0	123
28	Harp	87	0	124
29	Aerial Harp	87	0	125

30	LostParadise	87	0	126
31	Sitar	87	0	127
32	Santur Stack	87	0	128

Brass/Poly Synth		CC00	CC32	PC
1	80s Brass 1	87	1	1
2	80s Brass 2	87	1	2
3	Soft SynBrs	87	1	3
4	Brite SynBrs	87	1	4
5	Wide SynBrs	87	1	5
6	Analog Brass	87	1	6
7	Juno Brass	87	1	7
8	Poly Brass	87	1	8
9	106 Brass	87	1	9
10	Octa Brass	87	1	10
11	AX BrassSect	87	1	11
12	Trumpeter	87	1	12
13	Soft Brass	87	1	13
14	Sax Sect 1	87	1	14
15	Sax Sect 2	87	1	15
16	Breathy Sax	87	1	16
17	Soprano Sax	87	1	17
18	Alto Sax	87	1	18
19	Tenor Sax	87	1	19
20	Baritone Sax	87	1	20
21	Pan Pipes	87	1	21
22	Harmonica	87	1	22
23	Ox Synth	87	1	23
24	Poly Synth 1	87	1	24
25	Poly Synth 2	87	1	25
26	Poly Synth 3	87	1	26
27	Poly Synth 4	87	1	27
28	Juno SAW	87	1	28
29	Super Saw	87	1	29
30	Touchy	87	1	30
31	Euro Express	87	1	31
32	Analog Dream	87	1	32

Strings/Pad		CC00	CC32	PC
1	AX Strings 1	87	1	33
2	AX Strings 2	87	1	34
3	Tape Strings	87	1	35
4	PhaserPad	87	1	36
5	Cosmic Rays	87	1	37
6	Soft Pad 1	87	1	38
7	Soft Pad 2	87	1	39
8	Synth Str 1	87	1	40
9	Synth Str 2	87	1	41
10	JX Strings	87	1	42
11	JP Strings	87	1	43
12	106 Strings	87	1	44
13	Sawtooth Str	87	1	45
14	Chorus Pad	87	1	46
15	5th DLA Pad	87	1	47
16	Hollow Pad	87	1	48
17	Nu Epic Pad	87	1	49
18	Angelis Pad	87	1	50
19	TrnsSweepPad	87	1	51
20	Heaven Pad	87	1	52
21	Voyager	87	1	53
22	OB Strings	87	1	54
23	Shimmer Pad	87	1	55
24	Xadecimal	87	1	56
25	World X	87	1	57
26	Sliced Pad	87	1	58
27	Trance Synth	87	1	59
28	Major 7	87	1	60
29	Freeze Synth	87	1	61
30	Bustranza	87	1	62
31	SuperSaw Pad	87	1	63
32	Digitaless	87	1	64

Appendix

Organ/Clavi		CC00	CC32	PC
1	Lord Organ 1	87	1	65
2	Lord Organ 2	87	1	66
3	Rotary Org 1	87	1	67
4	Rotary Org 2	87	1	68
5	Vintage Org 1	87	1	69
6	Vintage Org 2	87	1	70
7	VK Organ 1	87	1	71
8	VK Organ 2	87	1	72
9	D-Bars 1	87	1	73
10	D-Bars 2	87	1	74
11	D-Bars 3	87	1	75
12	D-Bars 4	87	1	76
13	D-Bars 5	87	1	77
14	AX Dist Org1	87	1	78
15	AX Dist Org2	87	1	79
16	Technorgan	87	1	80
17	Old Fashion	87	1	81
18	Posit/Mod	87	1	82
19	Grand Pipes	87	1	83
20	Musette	87	1	84
21	Amped D6	87	1	85
22	AX Clav 1	87	1	86
23	AX Clav 2	87	1	87
24	Pulse Clav 1	87	1	88
25	Pulse Clav 2	87	1	89
26	Phase Clavi	87	1	90
27	Sweepin Clav	87	1	91
28	AX Vibe	87	1	92
29	Marimba	87	1	93
30	Xylophone	87	1	94
31	Steel Drums	87	1	95
32	Ethno Keys	87	1	96

Choir/Piano		CC00	CC32	PC
1	Angels Choir	87	1	97
2	Aerial Choir	87	1	98
3	Humming	87	1	99
4	Gospel Hum	87	1	100
5	Vox Pad 1	87	1	101
6	Vox Pad 2	87	1	102
7	80s Vox	87	1	103
8	SynVox 1	87	1	104
9	SynVox 2	87	1	105
10	Sample Opera	87	1	106
11	Jazz Dooos	87	1	107
12	AX Grand	87	1	108
13	AX Mono Pno	87	1	109
14	E-Grand	87	1	110
15	JD-800 Piano	87	1	111
16	Honky Tonk	87	1	112
17	Blend Piano	87	1	113
18	Harpsichord	87	1	114
19	Phase Stage	87	1	115
20	PhaseEP	87	1	116
21	Stage EP	87	1	117
22	Dyno EP	87	1	118
23	SA EP	87	1	119
24	Wurly EP	87	1	120
25	Dist Wurly	87	1	121
26	FM EP 1	87	1	122
27	FM EP 2	87	1	123
28	Psycho EP	87	1	124
29	D-50 Fantsia	87	1	125
30	FM Sparkles	87	1	126
31	Dreaming Box	87	1	127
32	Sweet Keys	87	1	128

12. Specifications

Roland AX-Synth Shoulder Synthesizer

Keyboard	49 keys, velocity sensitive
Sound Generator	
Maximum polyphony	128 voices
Sounds	4 SuperNATURAL Tones 4 SPECIAL Tones 256 Tones (8 families x 32 sounds)
Memories	8 x 2 FAVORITE memories (Tone assignments + Volume and Reverb Send levels)
Real-time controllers	
	D Beam controller, MODULATION BAR, TOUCH CONTROLLER ribbon, VOLUME knob, AFTER TOUCH knob, PORTAMENTO button (2 modes for SuperNATURAL Tones), BENDER MODE button (2 modes), HOLD button, OCTAVE/VARIATION buttons
Connectors	
	OUTPUT L/MONO, R: 1/4" phone jacks x2 PHONES: 1/4" TRS phone jack x1 FOOT PEDAL: for Roland DP-series or BOSS FS-5U footswitch USB port: COMPUTER (supports USB-MIDI) <i>* See http://www.Roland.com for the supported operating systems</i> MIDI: IN, OUT DC IN: For supplied PSB-1U adaptor
Others	
Display	7 segments x 3 (LED)
Power supply	Batteries (AA-type, rechargeable Ni-MH x8) Supplied PSB-1U adaptor
Current draw	320mA
Dimensions:	1142 (W) x 266 (D) x 87 (H) mm
Weight:	3.9kg
Supplied accessories:	Owner's Manual, Shoulder strap
Options:	Roland DP-series footswitch

Note: In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.

14. Index

- A**
 Aftertouch 23
 Archiving settings 29
 ATT 15
 Attenuation 15
- B**
 Bank Select 28
 Batteries 6, 13
 Indication 34
 Bender 22
 Mode 23
 Bulk Dump 29
- C**
 CANCEL 19
 CC01 22
 Connections 14
- D**
 D Beam 23
 Damper 25
 DC IN 13
 Different key 21
 Dmp 29
 dne 34
 Driver 32
 Dynamics 22
- E**
 ENTER 18
 Err 30
- F**
 Factory settings 34
 Favorite 26
 Assigning Tones 19
 Recalling 20
 Fct 34
 Filter 23
 Firmware 34
 Foot Pedal 25
- G**
 Gen 32
- H**
 Headphones 16
 Hld 24
 Hold 25
- I**
 Initialize 34
- M**
 MIDI 27
 Channels 27
 Program Change 28
- Receive channel 27
 TX Channels 27
 Modulation Bar 22
- N**
 Numeric Keypad 18, 28
- O**
 OCH 22
 OCS 22
 Octave 22
 OCTAVE/VARIATION 18
- P**
 Pedal 25
 PGM CHANGE 28
 PHONES 16
 Pitch 21
 Bend 22
 D Beam 23
 Portamento 24
 Mode 24
 POWER 17
 Program Change 28
- R**
 rCV 29
 Receive channel 27
 Rev 26
 Reverb Send 26
 Ribbon 22
 RX channel 27
- S**
 Sleep function 17
 Sleep mode 34
 Snd 29
 Sounds 18
 Special 19
 SuperNATURAL 19
 Sustain 25
 Sut 24
 Switching on/off 17
 SysEx 29
- T**
 Tone
 Numeric selection 18
 Regular 18
 Selection 18
 Special 19
 SuperNATURAL 19
 Touch Controller 22
 Transmit Channel 27
 Transpose 21
 Troubleshooting 35
- TX**
 MIDI Channels 27
- ON** 27
- U**
 USB 31
 Driver 32
- V**
 Var 18
 VARIATION 18, 21
 Ven 32
 Version 34
 Vibrato 22
 V-LINK 33
 Vol 26
 Volume 17, 26
- W**
 Windows 31
 WRITE 18, 19, 21, 22
 Wrt 30

Information

When you need repair service, call your nearest Roland Service Center or authorized Roland distributor in your country as shown below.

AFRICA

EGYPT

Al Fanny Trading Office
9, EBN Hagar Al Askalany Street,
ARD El Golf, Heliopolis,
Cairo 11341, EGYPT
TEL: (022)-417-1828

REUNION

Maison FO - YAM Marcel
25 Rue Jules Hermann,
Chaudron - BP79 97 491
Ste Clotilde Cedex,
REUNION ISLAND
TEL: (0262) 218-429

SOUTH AFRICA

T.O.M.S. Sound & Music (Pty)Ltd.
2 ASTRON ROAD DENVER
JOHANNESBURG ZA 2195,
SOUTH AFRICA
TEL: (011)417 3400

Paul Bothner(PTY) Ltd.
Royal Cape Park, Unit 24
Londonderry Road, Ottery 7800
Cape Town, SOUTH AFRICA
TEL: (021) 799 4900

ASIA

CHINA

Roland Shanghai Electronics Co., Ltd.
5F, No.1500 Pingliang Road
Shanghai 200090, CHINA
TEL: (021) 5580-0800

Roland Shanghai Electronics Co., Ltd.
(BEIJING OFFICE)
10F, No.18 3 Section Anhuaxili
Chaoyang District Beijing
100011 CHINA
TEL: (010) 6426-5050

HONG KONG

Tom Lee Music Co., Ltd.
Service Division
22-32 Pun Shan Street, Tsuen
Wan, New Territories,
HONG KONG
TEL: 2415 0911

Parsons Music Ltd.
8th Floor, Railway Plaza, 39
Chatham Road South, T.S.T,
Kowloon, HONG KONG
TEL: 2333 1863

INDIA

Rivera Digitec (India) Pvt. Ltd.
411, Nirman Kendra
Mahalaxmi Flats Compound
Off. Dr. Edwin Moses Road,
Mumbai-400011, INDIA
TEL: (022) 2493 9051

INDONESIA

PT Citra IntiRama
Jl. Cideng Timur No. 15J-150
Jakarta Pusat
INDONESIA
TEL: (021) 6324170

KOREA

Cosmos Corporation
1461-9, Seocho-Dong,
Seocho Ku, Seoul, KOREA
TEL: (02) 3486-8855

MALAYSIA

Roland Asia Pacific Sdn. Bhd.
45-1, Block C2, Jalan PJU 1/39,
Dataran Prima, 47301 Petaling
Jaya, Selangor, MALAYSIA
TEL: (03) 7805-3263

VIET NAM

VIET THUONG CORPORATION
386 CACH MANG THANG
TAM ST. DIST.3,
HO CHI MINH CITY
VIET NAM
TEL: 9316540

PHILIPPINES

G.A. Yupangco & Co. Inc.
339 Gil J. Payat Avenue
Makati, Metro Manila 1200,
PHILIPPINES
TEL: (02) 899 9801

SINGAPORE

SWEET LEE MUSIC COMPANY PTE. LTD.
150 Sims Drive,
SINGAPORE 387381
TEL: 6846-3676

TAIWAN

ROLAND TAIWAN ENTERPRISE CO., LTD.
Room 5, 9fl. No. 112 Chung
Shan N.Road Sec.2, Taipei,
TAIWAN, R.O.C.
TEL: (02) 2561 3339

THAILAND

Theera Music Co., Ltd.
100-108 Soi Verg
Nakornkasem, New
Road,Sumpantawongse,
Bangkok 10100 THAILAND
TEL: (02) 224-8821

OCEANIA

AUSTRALIA/ NEW ZEALAND Roland Corporation Australia Pty., Ltd.
38 Campbell Avenue
Dee Why West, NSW 2099
AUSTRALIA

For Australia
Tel: (02) 9982 8266
For New Zealand
Tel: (09) 3098 715

CENTRAL/LATIN AMERICA

ARGENTINA

Instrumentos Musicales S.A.
Av.Santa Fe 2055
(1123) Buenos Aires
ARGENTINA
TEL: (011) 4508-2700

BARBADOS

A&B Music Supplies LTD
12 Webster Industrial Park
Wilsey, St.Michael, Barbados
TEL: (246)430-1100

BRAZIL

Roland Brasil Ltda.
Rua San Jose, 211
Parque Industrial San Jose
Cotia - Sao Paulo - SP, BRAZIL
TEL: (011) 4615 5666

CHILE

Comercial Fancy II S.A.
Rut.: 96.919.420-1
Nataníel Cox #739, 4th Floor
Santiago - Centro, CHILE
TEL: (02) 688-9540

COLOMBIA

Centro Musical Ltda.
Cra 43 B No 25 A 41 Bododega 9
Medellin, Colombia
TEL: (574)3812529

COSTA RICA

JUAN Bansbach Instrumentos Musicales
Ave.1. Calle 11, Apartado
10237,
San Jose, COSTA RICA
TEL: 258-0211

CURACAO

Zeelandia Music Center Inc.
Orionweg 30
Curacao, Netherland Antilles
TEL:(305)5926866

DOMINICAN REPUBLIC

Instrumentos Fernando Giraldez
Calle Proyecto Central No.3
Ens.La Esperilla
Santo Domingo,
Dominican Republic
TEL:(809) 683 0305

ECUADOR

Mas Musica
Rumichaca 822 y Zaruma
Guayaquil - Ecuador
TEL:(593-4)2302364

EL SALVADOR

OMNI MUSIC
75 Avenida Norte y Final
Alameda Juan Pablo II,
Edificio No.4010 San Salvador,
EL SALVADOR
TEL: 262-0788

GUATEMALA

Casa Instrumental
Calzada Roosevelt 34-01,zona 11
Ciudad de Guatemala
Guatemala
TEL:(502) 599-2888

HONDURAS

Almacen Pajaro Azul S.A. de C.V.
BO.Paz Barahona
3 Ave.11 Calle S.O
San Pedro Sula, Honduras
TEL: (504) 553-2029

MARTINIQUE

Musique & Son
Z.I.Les Mangle
97232 Le Lamantin
Martinique F.W.I.
TEL: 596 596 426860

Gigamus SARL
10 Rte De La Folie
97200 Fort De France
Martinique F.W.I.
TEL: 596 596 715222

MEXICO

Casa Veerkamp, s.a. de cv.
Av. Toluca No. 323, Col. Olivar
de los Padres 01780 Mexico
D.F. MEXICO
TEL: (55) 5668-6699

NICARAGUA

Bansbach Instrumentos Musicales Nicaragua
Altamira D'Este Calle Principal
de la Farmacia Sta.Avenida
1 Cuadra al Lago.#503
Managua, Nicaragua
TEL: (505)277-2557

PANAMA

SUPRO MUNDIAL, S.A.
Boulevard Andrews, Albrook,
Panama City, REP. DE
PANAMA
TEL: 315-0101

PARAGUAY

Distribuidora De Instrumentos Musicales
J.E. Olear y ESQ. Manduvira
Asuncion PARAGUAY
TEL: (595) 21 492147

PERU

Audionet
Distribuciones Musicales SAC
Juan Fanning 530
Miraflores
Lima - Peru
TEL: (511) 4461388

TRINIDAD

AMR Ltd
Ground Floor
Maritime Plaza
Barataria Trinidad W.I.
TEL: (868) 638 6385

URUGUAY

Todo Musica S.A.
Francisco Acuna de Figueroa
1771
C.P.: 11.800
Montevideo, URUGUAY
TEL: (02) 924-2335

VENEZUELA

Instrumentos Musicales Allegro,C.A.
Av.las industrias edf.Guitar
import
#7 zona Industrial de Turumo
Caracas, Venezuela
TEL: (212) 244-1122

EUROPE

AUSTRIA

Roland Elektronische Musikinstrumente HmbH.
Austrian Office
Eduard-Bodem-Gasse 8,
A-6020 Innsbruck, AUSTRIA
TEL: (0512) 26 44 260

BELGIUM/FRANCE/ HOLLAND/ LUXEMBOURG

Roland Central Europe N.V.
Houtstraat 3, B-2260, Oevel
(Westerlo) BELGIUM
TEL: (014) 575811

CROATIA

ART-CENTAR
Degenova 3,
HR - 10000 Zagreb
TEL: (1) 466 8493

CZECH REP.

CZECH REPUBLIC DISTRIBUTOR S.r.o
Vochtárova 247/16
CZ - 180 00 PRAHA 8,
CZECH REP.
TEL: (2) 830 20270

DENMARK

Roland Scandinavia A/S
Nordhavnsvej 7, Postbox 880,
DK-2100 Copenhagen
DENMARK
TEL: 3916 6200

FINLAND

Roland Scandinavia As, Filial Finland
Elannontie 5
FIN-01510 Vantaa, FINLAND
TEL: (09) 68 24 020

GERMANY

Roland Elektronische Musikinstrumente HmbH.
Oststrasse 96, 22844
Norderstedt, GERMANY
TEL: (040) 52 60090

GREECE/CYPRUS

STOLLAS S.A.
Music Sound Light
155, New National Road
Patras 26442, GREECE
TEL: 2610 435400

HUNGARY

Roland East Europe Ltd.
Warehouse Area 'DEPO' Pf.83
H-2046 Torokbalint,
HUNGARY
TEL: (23) 511011

IRELAND

Roland Ireland
G2 Calmount Park, Calmount
Avenue, Dublin 12
Republic of IRELAND
TEL: (01) 4294444

ITALY

Roland Italy S. p. A.
Viale delle Industrie 8,
20020 Arese, Milano, ITALY
TEL: (02) 937-78300

NORWAY

Roland Scandinavia Avd.
Kontor Norge
Lilleakerveien 2 Postboks 95
Lilleaker N-0216 Oslo
NORWAY
TEL: 2273 0074

POLAND

ROLAND POLSKA SP. Z O.O.
ul. Kty Grodziskie 16B
03-289 Warszawa, POLAND
TEL: (022) 678 9512

PORTUGAL

Roland Iberia, S.L.
Portugal Office
Cais das Pedras, 8/9-1 Dto
4050-465, Porto, PORTUGAL
TEL: 22 608 00 60

ROMANIA

FBS LINES
Piata Libertatii 1,
535500 Gheorgheni,
ROMANIA
TEL: (266) 364 609

RUSSIA

MuTek
Dorozhnaya ul.3,korp.6
117 545 Moscow, RUSSIA
TEL: (095) 981-4967

SLOVAKIA

DAN Acoustic s.r.o.
Povazská 18,
SK - 940 01 Nové Zámky
TEL: (035) 6424 330

SPAIN

Roland Iberia, S.L.
Paseo Garcia Faria, 33-35
08005 Barcelona SPAIN
TEL: 93 493 91 00

SWEDEN

Roland Scandinavia A/S
SWEDISH SALES OFFICE
Danvik Center 28, 2 tr.
S-131 30 Nacka SWEDEN
TEL: (08) 702 00 20

SWITZERLAND

Roland (Switzerland) AG
Landstrasse 5, Postfach,
CH-4452 Ittingen,
SWITZERLAND
TEL:(061)975-9987

UKRAINE

EURHYTHMICS Ltd.
P.O.Box: 37-a,
Nedecey Str. 30
UA - 89600 Mukachevo,
UKRAINE
TEL: (03131) 414-40

UNITED KINGDOM

Roland (U.K.) Ltd.
Atlantic Close, Swansea
Enterprise Park, SWANSEA
SA7 9FJ,
UNITED KINGDOM
TEL: (01792) 702701

MIDDLE EAST

BAHRAIN

Moon Stores
No.1231&1249 Rumaytha
Building Road 3931, Manama
339 BAHRAIN
TEL: 17 813 942

IRAN

MOCO INC.
No.41 Nike St., Dr.Shariyati Ave.,
Roberoy Cerah Mirdamad
Tehran, IRAN
TEL: (021)-2285-4169

ISRAEL

Halilit P. Greenspoon & Sons Ltd.
8 Retzif Ha'alia Hashnia St.
Tel-Aviv-Yafo ISRAEL
TEL: (03) 6823666

JORDAN

MUSIC HOUSE CO. LTD.
FREDDY FOR MUSIC
P. O. Box 922846
Amman 11192 JORDAN
TEL: (06) 5692696

KUWAIT

EASA HUSAIN AL-YOUSIFI & SONS CO.
Al-Yousifi Service Center
P.O.Box 126 (Safat) 13002
KUWAIT
TEL: 00 965 802929

LEBANON

Chahine S.A.L.
Malatan House No.1
Al Nour Street, Ruwi
SULTANATE OF OMAN
TEL: 2478 3443

OMAN

TALENTZ CENTRE L.L.C.
Malatan House No.1
Al Nour Street, Ruwi
SULTANATE OF OMAN
TEL: 2478 3443

QATAR

Al Emadi Co. (Badie Studio & Stores)
P.O. Box 62, Doha, QATAR
TEL: 4423-554

SAUDI ARABIA

aDawliah Universal Electronics APL
Behind Pizza Inn
Prince Turkey Street
aDawliah Building,
PO BOX 2154,
Alkhobar 31952
SAUDI ARABIA
TEL: (03) 8643601

SYRIA

Technical Light & Sound Center
PO BOX 13520 BLDG No.17
ABDUL WAHAB
KANAWATIST RAWDA
DAMASCUS, SYRIA
TEL: (011) 223-5384

TURKEY

ZUHAL DIS TICARET A.S.
Galip Dede Cad. No.37
Beyoglu - Istanbul / TURKEY
TEL: (0212) 249 85 10

U.A.E.

Zak Electronics & Musical Instruments Co. L.L.C.
Zabeel Road, Al Sherooq Bldg.,
No. 14, Ground Floor, Dubai,
U.A.E.
TEL: (04) 3360715

NORTH AMERICA

CANADA

Roland Canada Ltd.
(Head Office)
5480 Parkwood Way
Richmond B. C., V6V 2M4
CANADA
TEL: (604) 270 6626

Roland Canada Ltd.

(Toronto Office)
170 Admiral Boulevard
Mississauga On L5T 2N6
CANADA
TEL: (905) 362 9707

U. S. A.

Roland Corporation U.S.
5100 S. Eastern Avenue
Los Angeles, CA 90040-2938,
U. S. A.
TEL: (323) 890 3700

As of Jan. 1, 2009 (ROLAND)

For EU Countries



- UK** This symbol indicates that in EU countries, this product must be collected separately from household waste, as defined in each region. Products bearing this symbol must not be discarded together with household waste.
- DE** Dieses Symbol bedeutet, dass dieses Produkt in EU-Ländern getrennt vom Hausmüll gesammelt werden muss gemäß den regionalen Bestimmungen. Mit diesem Symbol gekennzeichnete Produkte dürfen nicht zusammen mit dem Hausmüll entsorgt werden.
- FR** Ce symbole indique que dans les pays de l'Union européenne, ce produit doit être collecté séparément des ordures ménagères selon les directives en vigueur dans chacun de ces pays. Les produits portant ce symbole ne doivent pas être mis au rebut avec les ordures ménagères.
- IT** Questo simbolo indica che nei paesi della Comunità europea questo prodotto deve essere smaltito separatamente dai normali rifiuti domestici, secondo la legislazione in vigore in ciascun paese. I prodotti che riportano questo simbolo non devono essere smaltiti insieme ai rifiuti domestici. Ai sensi dell'art. 13 del D.Lgs. 25 luglio 2005 n. 151.
- ES** Este símbolo indica que en los países de la Unión Europea este producto debe recogerse aparte de los residuos domésticos, tal como está regulado en cada zona. Los productos con este símbolo no se deben depositar con los residuos domésticos.
- PT** Este símbolo indica que nos países da UE, a recolha deste produto deverá ser feita separadamente do lixo doméstico, de acordo com os regulamentos de cada região. Os produtos que apresentem este símbolo não deverão ser eliminados juntamente com o lixo doméstico.
- NL** Dit symbool geeft aan dat in landen van de EU dit product gescheiden van huishoudelijk afval moet worden aangeboden, zoals bepaald per gemeente of regio. Producten die van dit symbool zijn voorzien, mogen niet samen met huishoudelijk afval worden verwijderd.
- DK** Dette symbol angiver, at i EU-lande skal dette produkt opsamles adskilt fra husholdningsaffald, som defineret i hver enkelt region. Produkter med dette symbol må ikke smides ud sammen med husholdningsaffald.
- NO** Dette symbolet indikerer at produktet må behandles som spesialavfall i EU-land, iht. til retningslinjer for den enkelte regionen, og ikke kastes sammen med vanlig husholdningsavfall. Produkter som er merket med dette symbolet, må ikke kastes sammen med vanlig husholdningsavfall.

- SE** Symbolen anger att i EU-länder måste den här produkten kasseras separat från hushållsavfall, i enlighet med varje regions bestämmelser. Produkter med den här symbolen får inte kasseras tillsammans med hushållsavfall.
- FI** Tämä merkintä ilmaisee, että tuote on EU-maissa kerättävä erillään kotitalousjätteistä kunkin alueen voimassa olevien määräysten mukaisesti. Tällä merkinnällä varustettuja tuotteita ei saa hävittää kotitalousjätteiden mukana.
- HU** Ez a szimbólum azt jelenti, hogy az Európai Unióban ezt a terméket a háztartási hulladéktól elkülönítve, az adott régióban érvényes szabályozás szerint kell gyűjteni. Az ezzel a szimbóllal ellátott termékeket nem szabad a háztartási hulladék közé dobni.
- PL** Symbol oznacza, że zgodnie z regulacjami w odpowiednim regionie, w krajach UE produktu nie należy wyrzucać z odpadami domowymi. Produktów opatrzonych tym symbolem nie można utylizować razem z odpadami domowymi.
- CZ** Tento symbol udává, že v zemích EU musí být tento výrobek sbírán odděleně od domácího odpadu, jak je určeno pro každý region. Výrobky nesoucí tento symbol se nesmí vyhazovat spolu s domácím odpadem.
- SK** Tento symbol vyjadruje, že v krajinách EÚ sa musí zber tohto produktu vykonávať oddelene od domového odpadu, podľa nariadení platných v konkrétnej krajine. Produkty s týmto symbolom sa nesmú vyhazovať spolu s domovým odpadom.
- EE** See sümbol näitab, et EL-i maades tuleb see toode olemprügist eraldi koguda, nii nagu on iga piirkonnas määratletud. Selle sümboliga märgitud tooteid ei tohi ära visata koos olmeprügiga.
- LT** Šis simbolis rodo, kad ES šalyse šis produktas turi būti surenkamas atskirai nuo buitinių atliekų, kaip nustatyta kiekviename regione. Šiuo simboliu paženklinėti produktai neturi būti išmetami kartu su buitiniemis atliekomis.
- LV** Šis simbols norāda, ka ES valstīs šo produktu jāievāc atsevišķi no mājsaimniecības atkritumiem, kā noteikts katrā reģionā. Produkts ar šo simbolu nedrīkst izmest kopā ar mājsaimniecības atkritumiem.
- SI** Ta simbol označuje, da je treba proizvod v državah EU zbirati ločeno od gospodinskih odpadkov, tako kot je določeno v vsaki regiji. Proizvoda s tem znakom ni dovoljeno odlagati skupaj z gospodinjiskimi odpadki.
- GR** Το σύμβολο αυτό υποδηλώνει ότι στις χώρες της Ε.Ε. το συγκεκριμένο προϊόν πρέπει να συλλέγεται χωριστά από τα υπόλοιπα οικιακά απορρίμματα, σύμφωνα με όσα προβλέπονται σε κάθε περιοχή. Τα προϊόντα που φέρουν το συγκεκριμένο σύμβολο δεν πρέπει να απορρίπτονται μαζί με τα οικιακά απορρίμματα.

For China

有关产品中所含有害物质的说明

本资料就本公司产品中所含的特定有害物质及其安全性予以说明。
本资料适用于 2007 年 3 月 1 日以后本公司所制造的产品。

环保使用期限



此标志适用于在中国国内销售的电子信息产品，表示环保使用期限的年数。所谓环保使用期限是指在自制造日起的规定期限内，产品中所含的有害物质不致引起环境污染，不会对人身、财产造成严重的不良影响。环保使用期限仅在遵照产品使用说明书，正确使用产品的条件下才有效。不当的使用，将会导致有害物质泄漏的危险。

产品中有毒有害物质或元素的名称及含量

部件名称	有毒有害物质或元素					
	铅(Pb)	汞(Hg)	镉(Cd)	六价铬(Cr(VI))	多溴联苯(PBB)	多溴二苯醚(PBDE)
外壳(壳体)	×	○	○	○	○	○
电子部件(印刷电路板等)	×	○	×	○	○	○
附件(电源线、交流适配器等)	×	○	○	○	○	○

○：表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。
×：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006 标准规定的限量要求。
因根据现有的技术水平，还没有什么物质能够代替它。

Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.com>

<http://www.4manuals.cc>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

TV manuals search

<http://tv.somanuals.com>