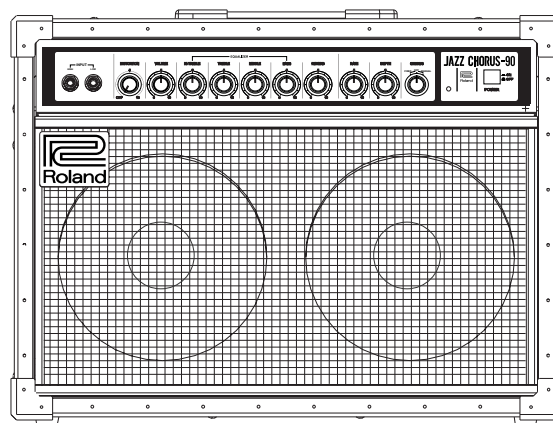


Roland®

GUITAR AMPLIFIER

JAZZ CHORUS JC-90

Owner's Manual



Thank you for purchasing the Roland JC-90 JAZZ CHORUS Guitar Amplifier.

Before using this unit, carefully read the sections entitled: "IMPORTANT SAFETY INSTRUCTIONS" (page 2), "USING THE UNIT SAFELY" (page 3), and "IMPORTANT NOTES" (page 4). 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 manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.



Features

- 80 watts (rms) of output power; 2 channels of 40 watts each; equipped with Roland's renowned chorus effect.
- Two input jacks (high-gain and low-gain) accommodate virtually any guitar.
- A three-spring reverb unit produces a warm, distinctive sound.
- The reinforced cabinet is designed to withstand the rigors of the road while providing characteristic styling.
- Chorus, Reverb and Distortion can all be controlled by foot switches leaving your hands free for playing.
- A Phones jack is provided for practice with "cabinet voiced" sound.

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

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
ATTENTION: RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR		
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS.

IMPORTANT SAFETY INSTRUCTIONS SAVE THESE INSTRUCTIONS

WARNING - When using electric products, basic precautions should always be followed, including the following:

1. Read all the instructions before using the product.
2. Do not use this product near water — for example, near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool, or the like.
3. This product should be used only with a cart or stand that is recommended by the manufacturer.
4. This product, 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 consult an audiologist.
5. The product should be located so that its location or position does not interfere with its proper ventilation.
6. The product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
7. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.
8. The power-supply cord of the product should be unplugged from the outlet when left unused for a long period of time.
9. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
10. The product should be serviced by qualified service personnel when:
 - A. The power-supply cord or the plug has been damaged; or
 - B. Objects have fallen, or liquid has been spilled into the product; or
 - C. The product has been exposed to rain; or
 - D. The product does not appear to operate normally or exhibits a marked change in performance; or
 - E. The product has been dropped, or the enclosure damaged.
11. Do not attempt to service the product beyond that described in the user-maintenance instructions. All other servicing should be referred to qualified service personnel.

For the USA

GROUNDING INSTRUCTIONS

This product must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock.

This product is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DANGER: Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded.


Do not modify the plug provided with the product — if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

For the U.K.

WARNING: THIS APPARATUS MUST BE EARTHED

IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.
GREEN-AND-YELLOW: EARTH, 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 GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol  or coloured GREEN or GREEN-AND-YELLOW.

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.

The product which is equipped with a THREE WIRE GROUNDING TYPE LINE PLUG must be grounded.

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

- Before using this unit, make sure to read the instructions below, and the Owner's Manual.
- Do not open or perform any internal modifications on the unit.
- 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.
- Avoid damaging the power cord. Do not bend it excessively, step on it, place heavy objects on it, etc. A damaged cord can easily become a shock or fire hazard. Never use a power cord after it has been damaged.
- 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 unit 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 unit in a foreign country, consult with your dealer, or qualified Roland service personnel.

⚠ CAUTION

- Always grasp only the plug on the power-supply cord when plugging into, or unplugging from an outlet.
- 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.
- If the unit could become a hazard if it moves, all caster wheels should be removed once the unit has been placed at the place of installation, or has been loaded onto a vehicle.
- Never climb on top of, nor place heavy objects on the unit.
- Never handle the power cord or its plug with wet hands when plugging into, or unplugging from, an outlet.
- Before moving the unit, disconnect the power plug from the outlet, and pull out all cords from external devices.
- Before cleaning the unit, turn off the power and unplug the power cord from the outlet (page 6).
- Whenever you suspect the possibility of lightning in your area, pull the plug on the power cord out of the outlet.

IMPORTANT NOTES

In addition to the items listed under “IMPORTANT SAFETY INSTRUCTIONS” and “USING THE UNIT SAFELY” on pages 2 and 3, please read and observe the following:

Power Supply

- Do not use this unit on the same power circuit with any device that will generate line noise (such as an electric motor or variable lighting system).
- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or 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.
- Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the unit.

Maintenance

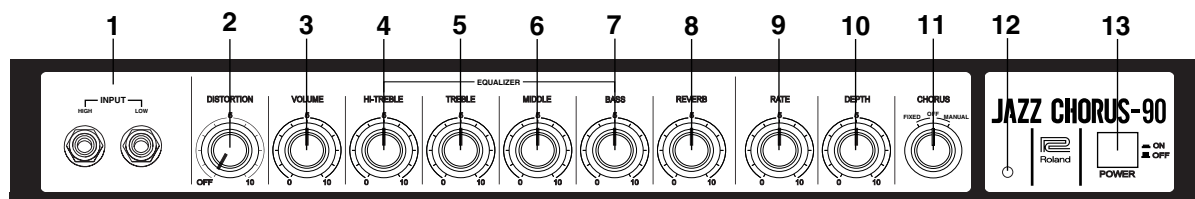
- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a cloth impregnated with a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzene, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Additional Precautions

- Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.
- 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.
- A small amount of heat will radiate from the unit during normal operation.
- To avoid disturbing your neighbors, try to keep the unit's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially when it is late at night).
- 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.

Panel Descriptions

< Front Panel >



1. INPUT Jacks

Two input jacks are provided. For a guitar with a standard output, use the “HIGH” input. For very high output instruments, use the “LOW” input.

2. DISTORTION Knob

Clockwise rotation will intensify the distortion effect. “OFF” turns the effect off.

3. VOLUME Knob

Clockwise rotation will increase the amplifier's overall volume.

4. HI-TREBLE Control Knob

Clockwise rotation will boost the high frequencies.

5. TREBLE Control Knob

Clockwise rotation will boost the higher frequencies.

6. MIDDLE Control Knob

Clockwise rotation will boost the all-important middle frequencies.

7. BASS Control Knob

Clockwise rotation will boost the lower frequencies.

8. REVERB Knob

Clockwise rotation will intensify the reverb effect.

9. RATE Knob

This knob adjusts the rate (frequency of the sound vibrations) of the chorus effect. Clockwise rotation increases the chorus speed.

10. DEPTH Knob

This knob adjusts the depth of the chorus effect. Clockwise rotation deepens the chorus effect.

11. CHORUS Switch

This knob selects the Chorus effect mode (FIXED/OFF/MANUAL). When it is set to the "OFF" position neither effect will be obtained.

** Neither the speed nor depth of the FIXED mode can be changed.*

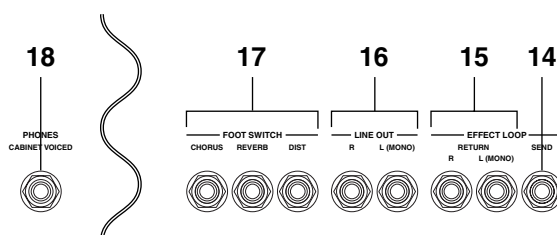
12. Pilot Lamp

This will light when the amplifier is switched on.

13. POWER Switch

This switch turns the amplifier on and off.

< Rear Panel >



14. EFFECT LOOP SEND Jack

This is the jack from which the dry (unprocessed) signal is sent to the effects device.

15. EFFECT LOOP RETURN Jacks

These are input jacks for the return signal from your effects device. Stereo connections (L/R) are possible. To use the unit in mono, use the L (MONO) jack only.

** Before you make connections to the RETURN jack(s), be sure to switch the units off.*

16. LINE OUT Jacks

Use these jacks to connect the JC-90 to another guitar amplifier or mixer, or to a tape deck for recording. A stereo pair (L/R) is provided, but mono connections are also possible (use the L (MONO) jack).

17. FOOT SWITCH Jacks

With the proper foot switch connected to the appropriate jack, you can obtain on/off control of Chorus, Reverb and/or Distortion.

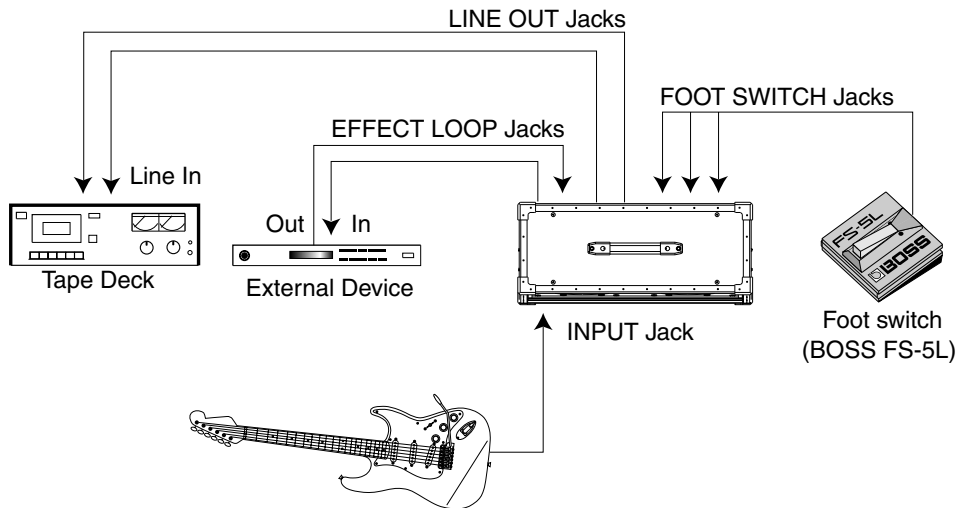
** Even when a foot switch is turned on, no effect will be obtained if knobs 2 and 11 are "OFF" positions.*

18. PHONES Jack

Connect headphones to this jack. When headphones are connected, no sound will be output through the internal speakers.

Connections

* 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.



Switching On Power

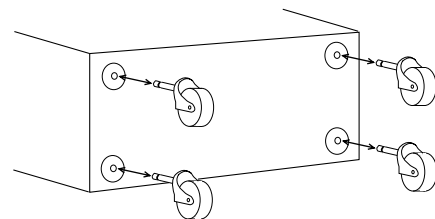
* Once the connections have been completed, turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.

* Always make sure to have the volume level turned down before switching on power. Even with the volume all the way down, you may still hear some sound when the power is switched on, but this is normal, and does not indicate a malfunction.

1. Switch on the power on all devices EXCEPT the device(s) connected to the LINE OUT jacks (16).
2. Turn on the JC-90's power.
3. Finally, switch on the power on any devices connected to the LINE OUT jacks.

Attaching / Removing Caster Wheels

The caster wheels were not attached at the factory. To attach or remove them, do as shown in the illustration.



Specifications

JC-90: JAZZ CHORUS

Rated Power output

80 W (40 W / 8 Ω + 40 W / 8 Ω)

Nominal Input Level

INPUT HIGH -31 dBm
INPUT LOW -19 dBm
EFFECT RETURN -10 dBm

Nominal Output Level

EFFECT SEND -10 dBm
LINE OUT 0 dBm

* 0 dBm = 0.775 Vrms

Speakers

25 cm (10 inches) x 2

Controls

DISTORTION Knob
VOLUME Knob
HI-TREBLE Control Knob
TREBLE Control Knob
MIDDLE Control Knob
BASS Control Knob
REVERB Knob
RATE Knob
DEPTH Knob
CHORUS Switch (FIXED/OFF/MANUAL)
POWER Switch

Connectors

INPUT Jacks (HIGH, LOW)
FOOT SWITCH Jacks (CHORUS, REVERB, DISTORTION)
EFFECT SEND Jack
EFFECT RETURN Jacks (L (MONO), R)
LINE OUT Jacks (L (MONO), R)
PHONES Jack

Power Supply

AC 117 V, 230 V, 240 V

Power Consumption

80 W (AC 117 V, 230 V, 240 V)

Dimensions

595 (W) x 274 (D) x 508 (H) mm
23-7/16 (W) x 10-13/16 (D) x 20 (H) inches
(includes caster wheels)

Weight

22 kg / 48 lbs 9 oz

Accessories

Owner's Manual
Caster Wheel x 4

Option

Foot switch: FS-5L (BOSS)

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



This product complies with the requirements of European Directives EMC 89/336/EEC and LVD 73/23/EEC.

For EU Countries

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.

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 the USA

CLASS B

NOTICE

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

CLASSE B

AVIS

Cet appareil numérique ne dépasse pas les limites de la classe B au niveau des émissions de bruits radioélectriques fixés dans le Règlement des signaux parasites par le ministère canadien des Communications.

For Canada

