

# FOOT CONTROLLER GFC-50

## Owner's Manual

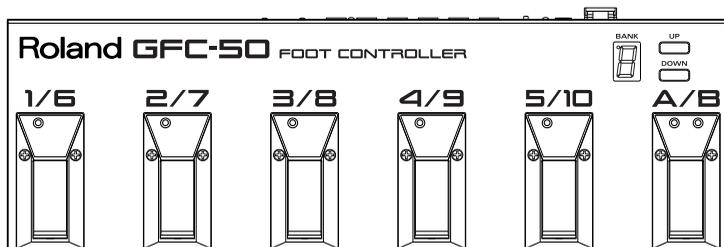
Thank you, and congratulations on your choice of the Roland GFC-50 FOOT CONTROLLER.

The GFC-50 is a foot controller that can control other MIDI instruments.

Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" and "IMPORTANT NOTES" (p. 2-3; p. 5). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, Owner's manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.

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# USING THE UNIT SAFELY

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

About  WARNING and  CAUTION Notices

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

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- Do not open (or modify in any way) the unit or its AC adaptor. 

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- Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page. 

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- Never use or store the unit in places that are:
  - 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 
  - Humid; or are
  - Exposed to rain; or are
  - Dusty; or are
  - Subject to high levels of vibration.

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- 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. 

#### WARNING

- 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.   


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- Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards! 

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- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit.   


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- Immediately turn the power off, remove the AC adaptor from the outlet, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page when:
  - The AC adaptor or the power-supply cord has been damaged; or
  - 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.

## **WARNING**

- 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 retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page. 

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



## **CAUTION**

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

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

- Whenever the unit is to remain unused for an extended period of time, disconnect the AC adaptor. 

- 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. 

## **CAUTION**

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

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

- Before moving the unit, 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 (p. 7). 

- 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 (p. 14). 

- 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 ballpoint 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. 

# FEATURES

- 6 sturdy pedals mounted on a solid baseboard.
- All Program Change information can be transmitted using only the pedals and buttons.
- The GFC-50 can accept connection of two external expression pedals and two foot switches. This allows you to control the connected MIDI instrument in real time with Control Change messages.
- The GFC-50 employs a two-way Battery/AC power supply.
- During battery operation the Economy Mode can be used to effectively extend battery life by about twice as long as usual. When the battery voltage is low, a warning indicator will appear.
- A Cord Hook is provided to prevent the unit from being disconnected accidentally during AC operation.

# IMPORTANT NOTES

In addition to the items listed under “USING THE UNIT SAFELY” on page 2, please read and observe the following:

## Power Supply: Use of Batteries

- 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).
- 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 alkaline 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 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.
- To avoid possible breakdown, do not use the unit in a wet area, such as an area exposed to rain or other moisture.

## Maintenance

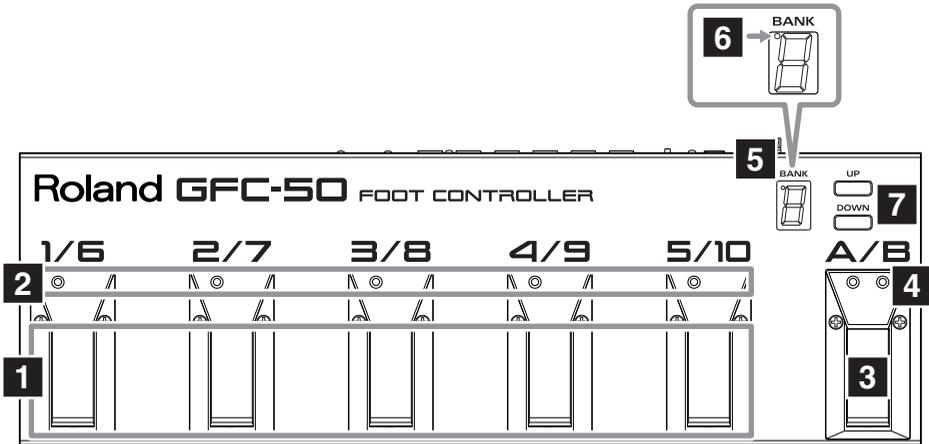
- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a cloth impregnated with a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzine, thinners, 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.
- Never strike or apply strong pressure to the display.
- 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 unit’s volume at reasonable levels (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.
- Use only the specified expression pedal (EV-5; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

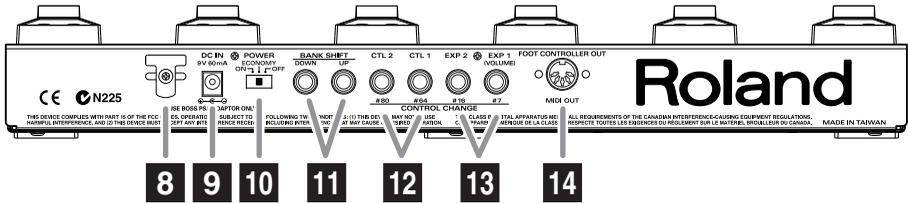
# PANEL DESCRIPTIONS

## Front Panel



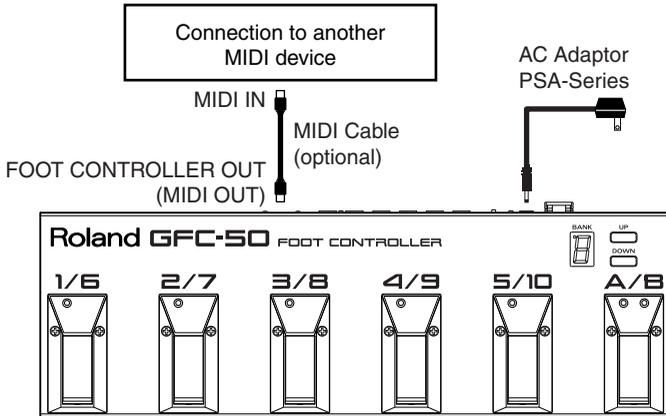
1. Number Pedals
2. Number Indicators
3. Number Shift Pedal
4. Number Shift Indicators (A/B)
5. BANK Display
6. Dot
7. Bank Shift Buttons (UP/DOWN)

# Rear Panel



- 8.** Cord Hook
- 9.** AC Adaptor Jack
- 10.** POWER Switch
- 11.** BANK SHIFT Jacks (UP/DOWN) → p. 10
- 12.** CTL (Control Pedal) Jacks (1/2) → p. 12
- 13.** EXP (Expression Pedal) Jacks (1/2) → p. 12
- 14.** FOOT CONTROLLER OUT Connector

# CONNECTIONS



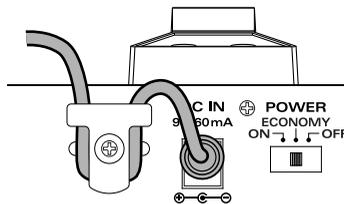
To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.



If there are batteries in the unit while an AC adaptor is being used, normal operation will continue should the line voltage be interrupted (power blackout or power cord disconnection).



To prevent the inadvertent disruption of power to your unit (should the plug be pulled out accidentally), and to avoid applying undue stress to the AC adaptor jack, anchor the power cord using the cord hook, as shown in the illustration.



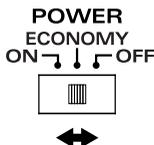
T 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLO THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUD

# POWER ON



Once the connections have been completed (p. 8), 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.

Ensure that all connections are correct and secure. Turn the GFC-50's Power switch to the ON or ECONOMY position. Turn on the other devices.



## ■ About the Economy Mode

When the GFC-50 is being operated with batteries, the Economy mode can be used to effectively extend battery life by about twice as long as usual.

The Bank Display may become somewhat dimmer and it may flicker a little, but this is not an indication of a problem.

\* *The default MIDI channel of the GFC-50 is channel 1. Refer to "CHANGING MIDI CHANNEL" (p. 13) if you want to change the default setting.*

# PROGRAM CHANGE NUMBERS

A Program Change number is selected using the “Bank” button and “Number” pedals. The Program Change message is transmitted the moment the Bank Shift button or Number pedal is pressed.

## Changing Banks

Pressing a Bank Shift button (UP or DOWN) changes Bank numbers in sequence (0 to 12). The Bank Display shows the Bank Number currently selected.

Display	0	1	2	...	10	11	12
Banks	0	1	2	...	10	11	12

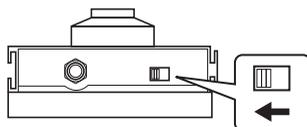
\* When Bank 10, 11 or 12 is selected, the Dot in the upper left hand corner of the display will light.

Bank numbers 0 to 12 correspond to Program Change numbers as indicated in the following:

Banks	0	1	2	...	10	11	12
Program Change Number	0	10	20	...	100	110	120

**You can change Bank numbers using a pedal by connecting a foot switch (BOSS FS-5U: optional) to the BANK SHIFT Jacks (UP/DOWN) on the rear of the GFC-50.**

\* When using the FS-5U, set the polarity switch as shown below.



Polarity switch

## Changing Numbers

Using the Number Shift (A/B) Pedal and the Number Pedals, you can select numbers 1 to 10. Numbers 1 to 10 correspond to Program Change numbers 1 to 10 respectively. By selecting A or B with the Number Shift Pedal, you can select numbers 1 to 5 or 6 to 10 as shown below.

	1/6	2/7	3/8	4/9	5/10
A	1	2	3	4	5
B	6	7	8	9	10

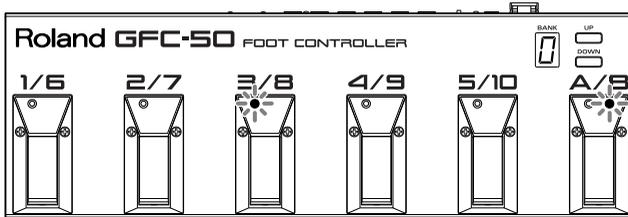
With the Number Indicators and Number Shift Indicators, you can determine what number is currently set.

# Setting a Program Change Number

## Example 1:

Setting Program Change number 8.

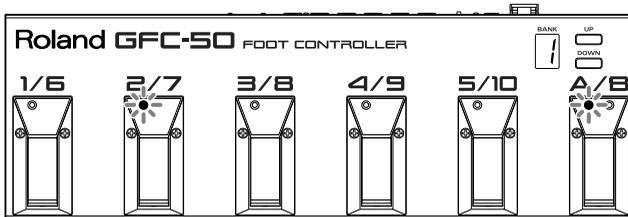
0 (Bank: 0) + 8 (Number) = 8



## Example 2:

Setting Program Change number 12.

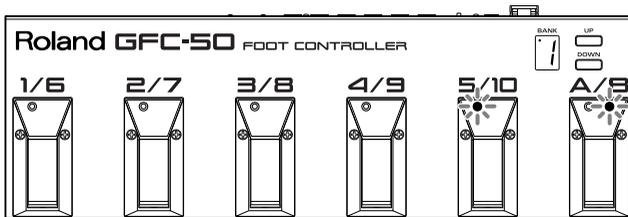
10 (Bank: 1) + 2 (Number) = 12



## Example 3:

Setting Program Change number 120.

110 (Bank: 11) + 10 (Number) = 120



\* The highest Program Change number is 128. Setting a number higher than 128 will cause the Pedal Indicators to flash, indicating that no Program Change message is being transmitted.

# CONTROL CHANGE MESSAGES

The GFC-50 can accept connection of a maximum of two external expression pedals (Roland EV-5: optional) and two foot switches (BOSS FS-5L/FS-5U: optional). This allows you to control a connected MIDI instrument in real time with Control Change messages. The Control Change jacks on the rear of the GFC-50 correspond to the following Control Change numbers:

## Expression Pedal

EXP 1: Volume (#7)

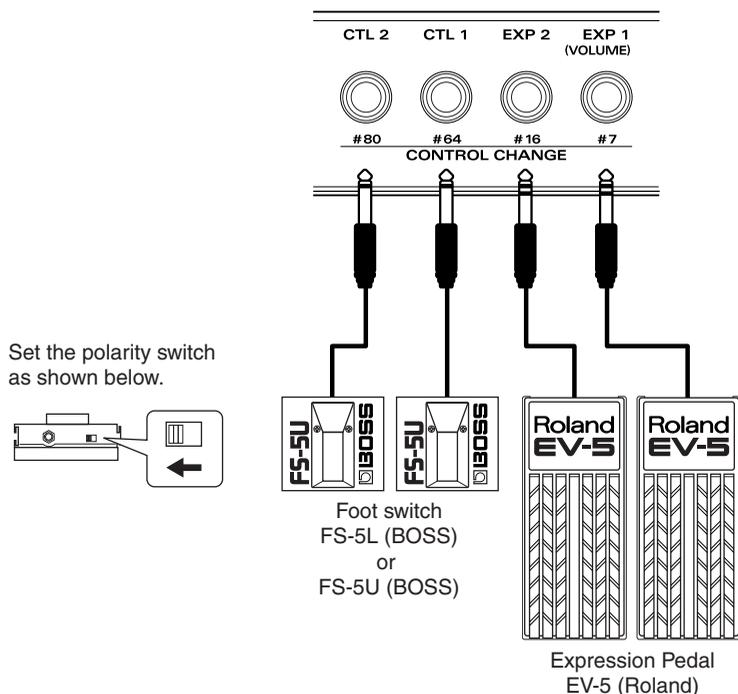
EXP 2: General Purpose Controller (#16)

## Control Pedal

CTL 1: Hold (#64)

CTL 2: General Purpose Controller (#80)

\* “#” represents a Control Change number.



\* Either a latch-type (FS-5L), or momentary-type (FS-5U) footswitch can be connected to each CTL Jack.

**Latch Type:** Pressing the pedal turns a connected unit (or function) ON or OFF.

**Momentary Type:** Only while the pedal is being pressed, the ON/OFF status can be changed.



Use only the specified expression pedal (EV-5; sold separately).

By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

# CHANGING MIDI CHANNEL

The GFC-50's default MIDI channel is channel 1. If you wish to change the default channel, follow this procedure:

\* *The MIDI channel you set will not be stored in memory. It will be necessary to set the MIDI channel each time the unit is turned on.*

1. Switch on the unit while holding the Number Shift Pedal (A/B) down.
2. Select the desired MIDI channel using the Bank Shift Buttons (UP/DOWN).  
(The Bank Display shows the MIDI channel currently selected.)

Display	1	2	3	-----	0	1	2	-----	6
MIDI CHANNEL	1	2	3	-----	10	11	12	-----	16

\* *When any of MIDI channels 10 to 16 is selected, the Dot in the upper left hand corner of the display will light.*

3. Press the Number Shift Pedal (A/B). (The MIDI channel has now been set.)

# BATTERY REPLACEMENT

## When to replace the batteries

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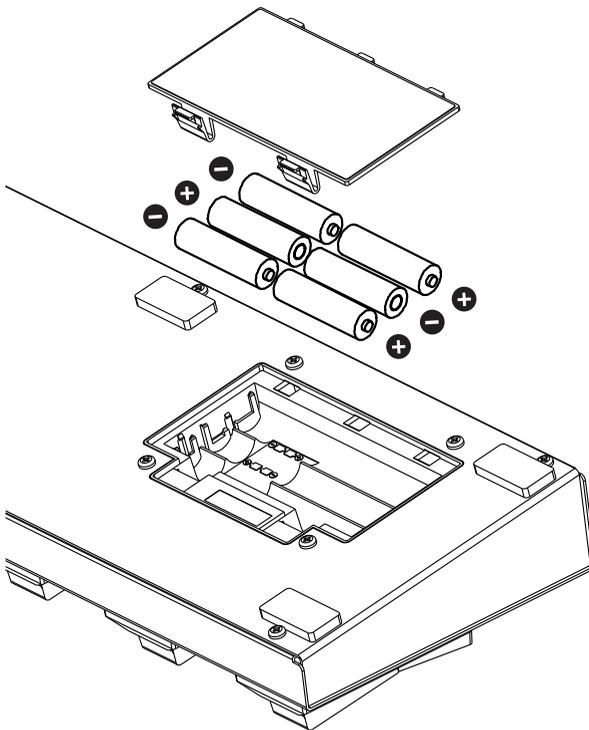


When operating on battery power only, the unit's indicator will become flash when battery power gets too low. Replace the battery as soon as possible.

- \* *Even if the unit is set to ON, it will automatically switch to the ECONOMY mode when the indicators begin to flash. The indicators will continue to flash until the batteries are replaced.*

## How to replace batteries

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- \* *Do not mix new batteries with used ones. Do not mix batteries of different types (e.g., carbon and alkaline).*
- \* *Be sure to insert the batteries correctly (ensure correct polarity).*

# MIDI IMPLEMENTATION

FOOT CONTROLLER

Model: GFC-50

Date: Oct. 1, 2000

Version: 1.00

## 1. TRANSMITTED DATA

### ●Control change

<u>Status</u>	<u>Second</u>	<u>Third</u>
BnH	ccH	vvH

n = MIDI channel number	0H - FH (ch.1 - ch.16)
cc = Control number	07H, 10H, 40H, 50H (7, 16, 64, 80)
vv = Control Value	00H - 7FH (Prog.1 - Prog.128)

This message can be transmitted when the external pedal is connected.

### ●Program change

<u>Status</u>	<u>Second</u>
CnH	ppH

n = MIDI channel number	0H - FH (ch.1 - ch.16)
pp = Program number	00H - 7FH (Prog.1 - Prog.128)

This message is transmitted when the patch of GFC-50 is changed.

FOOT CONTROLLER  
Model GFC-50

Date : Oct. 1, 2000  
Version : 1.00

## MIDI Implementation Chart

Function...	Transmitted	Recognized	Remarks
Basic Channel	1 1-16	X X	
Mode	X X *****	X X	
Note Number :	X *****	X	
Velocity	X X	X X	
After Touch	X X	X X	
Pitch Bend	X	X	
	7 16 64 80	X X X X	Volume *1 General purpose controller *1 Hold *1 General purpose controller *1
Control Change			



# SPECIFICATIONS

## GFC-50: Foot Controller

### Controls

Pedal x 6  
Bank Shift Buttons (UP/DOWN)  
Power Switch

### Display

Bank Display (7 segment)

### Indicators

Number Indicators x 5  
Number Shift Indicators (A/B)

### Connectors

FOOT CONTROLLER OUT Connector  
BANK SHIFT Jacks (UP/DOWN)  
CTL (Control Pedal) Jacks (1/2)  
EXP (Expression Pedal) Jacks (1/2)  
AC Adaptor Jack

### Power

DC 9V: AC Adaptor (PSA series)/  
1.5V R6/LR6 (AA) type x 6 (optional)

### Power Consumption (under normal conditions)

40 mA (in the "ON" mode)  
28 mA (in the "ECONOMY" mode)

\* **Expected battery life under continuous use:**

Carbon:

15 hours or greater (in the "ON" mode)  
30 hours or greater  
(in the "ECONOMY" mode)

Alkaline:

40 hours or greater (in the "ON" mode)  
80 hours or greater  
(in the "ECONOMY" mode)

*These figures will vary depending on the actual conditions of use.*

### Dimensions

423 (W) x 135 (D) x 40 (H) mm  
16-11/16 (W) x 5-3/8 (D) x 1-5/8 (H) inches

### Weight

1.6 kg/3 lbs 9 oz (excluding AC adaptor)

### Accessories

Owner's Manual  
AC Adaptor (PSA series)

### Options

Foot Switch:  
FS-5U (BOSS)  
FS-5L (BOSS)  
Expression Pedal:  
EV-5 (Roland)

### NOTE

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

**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 ciascuno 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 opsamlles 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 szimbólummal ellátott termékeket nem szabad a háztartási hulladék közé dobni.

**PL** Symbol oznacza, że zgodnie z regulacjami w odpowiednim regionie, w krajach UE produkty 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 sbíráán 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 byť tohto produktu vykonávaná 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 igas piirkonnas määratletud. Selle sümboliga märgitud tooteid ei tohi ära visata koos olemprügiga.

**LT** Šis simbolis rodo, kad ES šalyse šis produktas turi būti surenkamas atskirai nuo buitinių atliekų, kaip nustatyta kiekviename regione. Šiuo simboliu paženklinoti produktai neturi būti išmetami kartu su buitinių atliekais.

**LV** Šis simbols norāda, ka ES valstīs šo produktu jāievēc atsevišķi no mājsaimniecības atkritumiem, kā noteikts katrā reģionā. Produkta 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 ar šo simbolom ni dovoljeno odlagati skupaj z gospodinskimi 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 EU Countries**

This product complies with the requirements of EMC Directive 2004/108/EC.

**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.

# 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, EBIN Hagar Al Askalany  
Street,  
ARD El Golf, Heliopolis,  
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TEL: (022)-418-5531

### REUNION

Maison FO - YAM Marcel  
25 Rue Jules Hermann,  
Chaudron - BP797 97 491  
Ste Clotilde Cedex,  
REUNION ISLAND  
TEL: (0262) 218-429

### SOUTH AFRICA

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

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

## ASIA

### CHINA

Shanghai Electronics  
Co.,Ltd.  
3F, No.1500 Pingliang Road  
Shanghai 200990, CHINA  
TEL: (021) 5580-0800

Roland Shanghai Electronics  
Co.,Ltd.  
(BEIJING OFFICE)  
10F, No.18 3 Section Anhuaxi  
Chaoyang District Beijing  
100011 CHINA  
TEL: (010) 6426-2050

### 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  
Ch. 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

Comos 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 Potaling  
Jaya, Selangor, MALAYSIA  
TEL: (03) 7805-3263

### VIET NAM

Suoi Nhat Company, Ltd  
370 Cach Mang Thang Tam St.  
Dist.3, Ho Chi Minh City,  
VIET NAM  
TEL: 93161640

## PHILIPPINES

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339 Gil J. Puyat Avenue  
Makati, Metro Manila 1200,  
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TEL: (02) 899 9801

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150 Sims Drive,  
SINGAPORE 387381  
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Shan N. Road Sec.2, Taipei,  
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100-108 Soi Verg  
Nakornkasem, New  
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## AUSTRALIA/ NEW ZEALAND

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

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Instrumentos Musicales S.A.  
Av.Santa Fe 2055  
(1125) Buenos Aires  
ARGENTINA  
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## BARBADOS

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12 Webster Industrial Park  
Wildes, St.Michael, Barbados  
TEL: (246)430-1100

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Rua San Jose, 780 Sala B  
Parque Industrial San Jose  
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Nataliel Cox #739, 4th Floor  
Santiago - Centros, CHILE  
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Cra 43 B No 25 A 41 Bododega 9  
Medellin, Colombia  
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## COSTA RICA

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10237,  
San Jose, COSTA RICA  
TEL: 258-0211

## CURACAO

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Orionweg 30  
Curacao, Netherland Antilles  
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## DOMINICAN REPUBLIC

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Ens.La Esperilla  
Santo Domingo,  
Dominican Republic  
TEL:(809) 683 0305

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Ruminchaca 822 y Zaruma  
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## EL SALVADOR

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Alameda Juan Pablo II,  
Edificio No.4010 San Salvador,  
CALLE VIALOR  
TEL: 262-0788

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

## HONDURAS

Almacon Pajano Azul S.A. de C.V.  
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3 Ave.11 Calle S.O  
San Pedro Sula, Honduras  
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97232 Le Lamantin  
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TEL: 996 596 426860

## Gigamusic SARL

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97200 Fort De France  
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TEL: 996 596 71222

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Av. Toluca No. 323, Col. Mexico  
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D.F. MEXICO  
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## NICARAGUA

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Musicales Nicaragua  
Altamira D'Este Calle Principal  
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1 Cuadra al Lago #503  
Managua, Nicaragua  
TEL: (505)277-2557

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Panama City, REP. DE  
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1771  
C.P. 11.800  
Montevideo, URUGUAY  
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Instrumentos Musicales  
Allegro,C.A.  
Av.las industrias edf.Guitar  
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#7 zona Industrial de Turumo  
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TEL: (212) 244-1122

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

### BELGIUM/FRANCE/ HOLLAND/ LUXEMBOURG

Roland Central Europe N.V.  
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### CZECH REPUBLIC

DISTRIBUTOR S.r.o  
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TEL: 3916 6200

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Ennontie 5  
FIN-01510 Vantaa, FINLAND  
TEL: (09 68 24 020)

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Lilleaker N-0216 Oslo  
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PL-03 664 Warszawa  
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4050-465, Porto, PORTUGAL  
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65500 Ploiesti Greshenji,  
ROMANIA  
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CH-4452 Itingen,  
SWITZERLAND  
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UKRAINE  
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## UNITED KINGDOM

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Enterprise Park, SWANSEA  
SA7 9FF,  
UNITED KINGDOM  
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KUWAIT  
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Beirut, LEBANON  
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SULTANATE OF OMAN  
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TEL: 4423-854

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aDawlah Universal  
Electronics AFL  
Behind Pizza Inn  
Prince Fuzayl Street  
aDawlah Building,  
PO BOX 2154,  
Alkhobar 31952  
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TEL: (03) 8643601

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Damascus, SYRIA  
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Galip Dede Cad. No.37  
Beyoglu - Istanbul / TURKEY  
TEL: (0212) 249 85 10

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

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5480 Parkwood Way  
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TEL: (604) 270 6626

## Roland Canada Ltd.

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

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Los Angeles, CA 90040-2938,  
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