Roland®



Owner's Manual

Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" (p. 2) and "IMPORTANT NOTES" (p. 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, 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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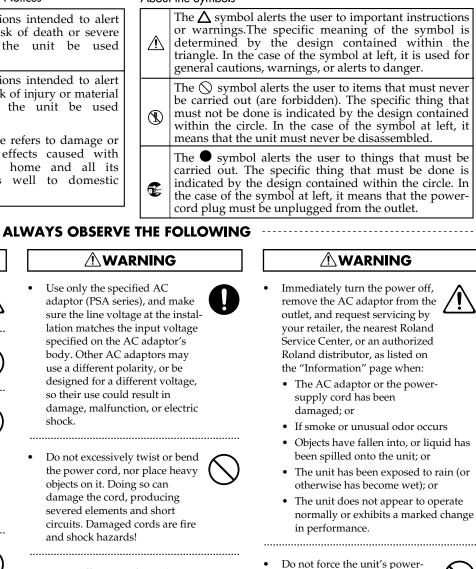
USING THE UNIT SAFELY

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

About A WARNING and A CAUTION Notices

Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.		
Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly.		
* Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.		

About the Symbols



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

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🗥 WARNING

- Before using this unit, make sure to read the instructions below, and the Owner's Manual.
- Do not open (or modify in any way) the unit or its AC adaptor.

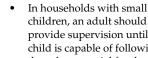
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- Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor,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



children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit.

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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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- Protect the unit from strong impact. (Do not drop it!)
- 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.

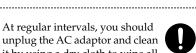
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A CAUTION

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



- 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 unit.



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

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- 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. 13).
- Whenever you suspect the possibility of lightning in your area, disconnect the AC adaptor from the outlet.
- 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.

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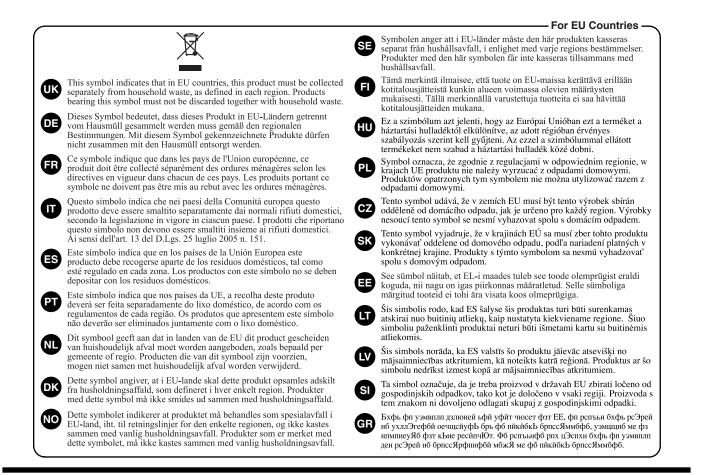
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If used improperly, batteries may explode or leak and cause damage or injury. In the interest of safety, please read and observe the following precautions (p. 11).



- 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.

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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 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.
- 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.
- Batteries are supplied with the unit. The life of these batteries may be limited, however, since their primary purpose was to enable testing.
- 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

- 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.
- When moved from one location to another where the temperature and/or humidity is very different, water droplets (condensation) may form inside the unit. Damage or malfunction may result if you attempt to use the unit in this condition. Therefore, before using the unit, you must allow it to stand for several hours, until the condensation has completely evaporated.
- Depending on the material and temperature of the surface on which you place the unit, its rubber feet may discolor or mar the surface.

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.

Repairs and Data

• Please be aware that all data contained in the unit's memory may be lost when the unit is sent for repairs. Important data should always be backed up in another MIDI device (e.g., a sequencer), or written down on paper (when possible). During repairs, due care is taken to avoid the loss of data. However, 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, and 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 loosing important data, we recommend that you periodically save a backup copy of important data you have stored in the unit's memory in another MIDI device (e.g., a sequencer).
- Unfortunately, it may be impossible to restore the contents of data that was stored in another MIDI device (e.g., a sequencer) once it has been lost. Roland Corporation assumes no liability concerning such loss of data.
- 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).
- Since sound vibrations can be transmitted through floors and walls to a greater degree than expected, take care not to allow such sound to become a nuisance to neighbors, especially at night and when using headphones.
- 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 (Roland EV-5, BOSS FV-500L or FV-500H; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

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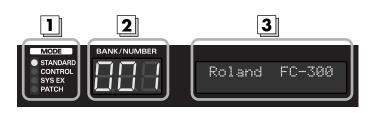
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Main Features

- Features four modes (Standard Mode, Control Change Mode, System Exclusive Mode, Patch Mode)
- Unit comes equipped with two expression pedals and two control pedals. You can also expand control even further with up to three external expression pedals or six external control pedals.
- Includes 16-character x 2-line LCD
- Equipped with RRC2 OUT connector; enables connection with RRC2 IN compatible devices with a single cable
- Includes two separate amp control channels
- Features three-way power supply (AC Adaptor, Dry battery, RRC2)

Panel Descriptions

Display





2

MODE indicator

The current mode is indicated here. (p. 15)

► BANK/NUMBER display

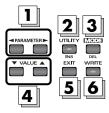
The currently selected bank and number are indicated here.



Liquid Crystal display (LCD)

A variety of information is shown in this display.

Top Panel (Buttons)



PARAMETER button [◀] [►]

Press these to select parameters.



1

UTILITY button / INS (insert) button

Press this when changing system settings. In the Edit screen, this is used to insert MIDI messages and blank spaces.

3

4

5

6

MODE button / DEL (delete) button

Press this to change the FC-300's operating mode. In the Edit screen, this is used to delete a MIDI message or a character at the cursor location.

VALUE button [🕶] [🔺]

Use this when changing the values of settings.

EXIT button

Press this to undo an operation and return to the previous screen.

WRITE button

Press this to store settings and execute procedures.

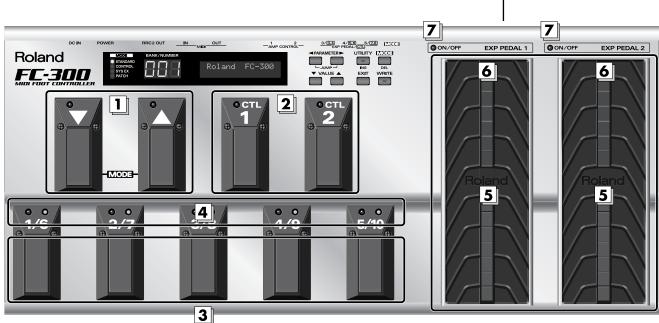
MEMO

To jump to the main parameters, hold down one of these buttons while you press the other. With items for which there aren't that many parameters, the FC-300 jumps to the last (or initial) parameter.

MEMO

- By continuing to hold down VALUE for a number of seconds, the value of the setting can be increased/ decreased continuously.
- The value will increase rapidly if you hold down VALUE [▲], then press and hold VALUE [▼].
- The value will decrease rapidly if you hold down VALUE [], then press and hold [▲].

Top Panel (Pedals)



[🕶] [🔺] (down / up) pedals

Use these pedals to switch banks and select numbers. Additionally, you can switch modes by pressing the pedals simultaneously.

CTL (Control) pedals (1, 2)

You can assign the desired functions to these pedals, then use them for control over those functions.

3

1

2

Number pedals (1/6 - 5/10)

These switch the patch numbers.

4 Number

5

6

7

Number pedal indicators (1/6 – 5/10)

The indicator for the currently selected number lights.

A red indicator lights when a number from 1 through 5 is selected; a green indicator lights when a number from 6 through 10 is selected.

EXP PEDAL (expression pedal) (1, 2)

These control the volume, wah, or other aspects of connected devices.

EXP PEDAL SW (expression pedal switch) (1, 2)

Firmly press down at the front of the pedal to switch the effect on and off.

EXP PEDAL SW indicators (expression pedal switch indicators) (1, 2)

Lights when the effect being controlled with the EXP PEDAL SW is on, and goes out when the effect is turned off.

NOTE

When you operate the expression pedal, please be careful not to get your fingers pinched between the movable part and the panel. 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.

Rear Panel



Security Slot

http://www.kensington.com/



MODE jack

Connect an optional footswitch (such as the BOSS FS-5U) here. The function is the same as that when the [\checkmark] and [\blacktriangle] pedals are held down simultaneously.

2

3

5

THIS CLASS & DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERPRETACIONAL PROFESSION PROFESSION CET APPAREIL NUMÉRIQUE DE LA CLASSE B RESPECTE TOUTES LES EXIGENCES DU REGLE SUB LE MATTERIE REGULE LEUR DU CANADA

3

4

5

EXP PEDAL/CTL jack

Connect an optional expression pedal (such as the Roland EV-5, BOSS FV-500L/FV-500H) or footswitch (such as the BOSS FS-5U/FS-6) here.

AMP CONTROL 1, 2 jack

When using the AMP CONTROL function, connect to the jack used for switching guitar amp channels.

MIDI connectors (OUT, IN)

Connect an external MIDI device to these connectors to transmit and receive MIDI messages.



RRC2 OUT connector

You can connect an external RRC2 IN device here to transmit and receive performance data between the devices.

At the same time, the FC-300 can be powered by the external RRC2 IN device.



POWER switch

Turns the power on and off.



DC IN (AC Adaptor) jack

Connect the AC adaptor (PSA series; sold separately) here.



Cord Hook

Hook the AC adaptor cord here to prevent the adaptor plug from being disconnected. Refer to **"Connecting an AC Adaptor"** (p. 12).

NOTE

Be sure to connect the RRC2 OUT connector to a device with an RRC2 IN connector. Use of the connection with other devices may cause generation of heat and damage to the equipment.

MEMO

When running on power supplied by an RRC2 IN device, the power is switched on regardless of the position of the POWER switch.

TERM

RRC2 is a Roland standard developed to enable two-way communications between RRC2 IN devices and RRC2 OUT devices, while supplying power to the RRC2 OUT device from the RRC2 IN device, all with a single cable.

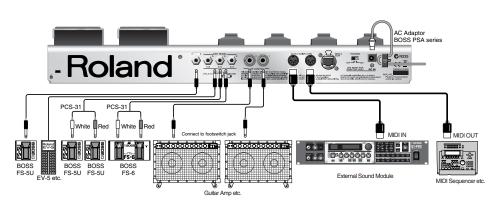
NOTE

You must use only the PSA series AC adaptor. Use of any other adaptor may cause overheating or malfunctions.

Making the Connections

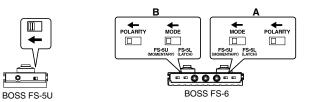
When making connections to other equipment, be sure that all equipment is switched off. If you try to make connections while the power is turned on, the settings for the FC-300 may be changed.

Connections To Make When Using the FC-300 as a MIDI Foot Controller



If you want to use a footswitch for changing the mode, be sure to connect a BOSS FS-5U/FS-6 footswitch (Optional) to the MODE jack.

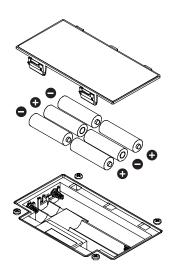
When using the FS-5U or FS-6, set the polarity switch as shown below.



Install batteries

The FC-300 is not loaded with batteries when purchased.

When running the FC-300 on battery power, install the batteries using the following figure.



NOTE

Before connecting other devices, always be sure to turn down the volume on all devices and turn off their power to prevent malfunction and damage to the speakers (or other components) of connected devices.

MEMO

This instrument is equipped with 1/4 inch TRS phone type jacks. Wiring diagrams for these jacks are shown below. Make connections after first checking the wiring diagrams of other equipment you intend to connect.



NOTE

- When turning the unit upside-down, get a bunch of newspapers or magazines, and place them under the four corners or at both ends to prevent damage to the buttons and controls. Also, you should try to orient the unit so no buttons or controls get damaged.
- When turning the unit upside-down, handle with care to avoid dropping it, or allowing it to fall or tip over.

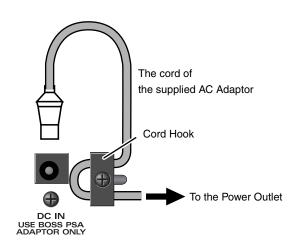
MEMO

When the battery power begins to run low, "Battery Low!" appears in the display. When this occurs, replace with new batteries as soon as possible.

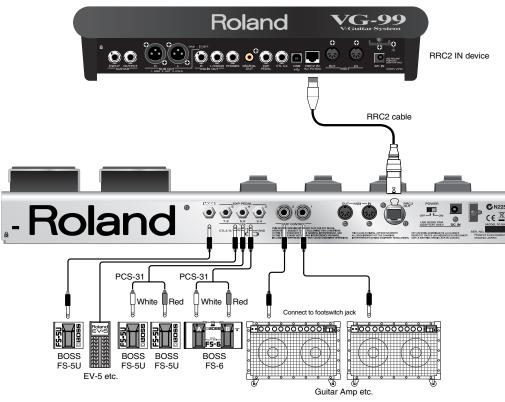
Pressing [EXIT] clears the message from the display.

Connecting an AC Adaptor

If you're using a BOSS PSA series AC adaptor, here's how to connect the cord and secure it on the cord hook.



Connections To Make When Using the FC-300 as a Dedicated Foot Controller for an RRC2 IN Device (e.g., the VG-99)



* Power is supplied from the RRC2 IN device, so no batteries or AC adaptor is necessary.

- * If using commercially available ethernet cable as the RRC2 connecting cable, be sure that the cable meets the following specifications.
- Category 5 (Cat5) or above
- Maximum length of 15 meters
- Cable designed for straight-through connections

MEMO

Use only the specified expression pedal (Roland EV-5, BOSS FV-500L/FV-500H; each sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

NOTE

Carefully connect the RRC2 cable or Ether cable all the way in—until it is firmly to the RRC2 connector.

NOTE

Ethernet cables designed for crossover connections cannot be used.

NOTE

Do not subject the RRC2 cable and the Ether cable to stress or physical shock.

Turning the Power On and Off

Once the connections have been completed (p. 11), turn on power to your various devices in the order specified. Turning on devices in the wrong order may cause malfunction or damage to the speakers (or other components) of connected devices.

When Using the FC-300 as a MIDI Foot Controller

Turning On the Power

First, check that you are connected properly with the external MIDI instrument. Then set the power switch on the FC-300 to "ON."



When the power is turned on, the FC-300 starts up in Standard Mode.

Turning Off the Power



Switch off the power to the device connected to the FC-300.



Set the FC-300's POWER switch to OFF.

When Using the FC-300 as a Dedicated Foot Controller for an RRC2 IN Device (e.g., the VG-99)

Turning On the Power

First, check that you are connected properly with the RRC2 IN device. Then set the power switch on the RRC2 IN device to "ON."



Turning Off the Power

Switch off the power to the RRC2 IN device connected to the FC-300.



POWFR

In addition, it starts up with the MIDI channel set to "1," but you can change the startup MIDI channel if you want. Refer to **"Setting the MIDI Transmit Channel"** (p. 52).

NOTE

Carefully connect the RRC2 cable or Ether cable all the way in—until it is firmly to the RRC2 connector.

MEMO

When the RRC2 IN device's POWER switch is set to ON, the FC-300's power switches on automatically, regardless of the position of the FC-300's POWER switch.

MEMO

Although the FC-300 starts up in Standard Mode, it may be switched to a different mode by means of settings received from an RRC2 IN device.

About the MODES

The FC-300 features the following four modes. The pedals function differently depending on the mode that's selected.

This manual describes each mode separately, while explaining the items available in a particular mode.

Standard Mode (p. 16)

This mode is for sending Program Change messages and Control Change messages. You can use the pedals to send any Program Change messages.

Control Change Mode (p. 21)

This mode is for sending Control Change messages.

You can use this mode to send the Control Change messages assigned to the pedals, and enhance the expressiveness of a performance.

You can also store up to five sets, or configurations, of settings for all of the pedals (Pedal Setting function).

System Exclusive Mode (p. 28)

This mode is for sending System Exclusive messages.

You can use this mode to operate other equipment that accepts SysEx messages sent from the FC-300.

Patch Mode (p. 29)

This mode is for transmitting multiple MIDI messages (MIDI streams) already saved to patches.

Patches are areas of memory in which MIDI streams are stored; you can save up to 100 patches.

An individual patch can hold MIDI messages containing up to a maximum of approximately 500 bytes.

Using Patch Mode, you can transmit groups of MIDI messages through one patch, which allows you to switch the settings of multiple devices all at once.

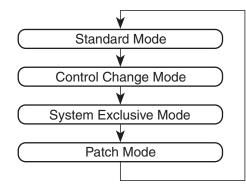


See **"Switching Modes"** (p. 15) for an explanation of how to choose a mode.

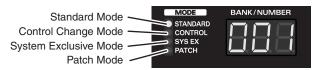
Switching Modes

You can switch modes using one of the following methods.

- Press [MODE]
- Press a footswitch (BOSS FS-5U/FS-6; sold separately) connected to the MODE jack
- Simultaneously press the [] and [▲] pedals



About the Mode Indicators



The current mode is indicated with the MODE indicators. You can switch modes only from the top screen of any mode.

(MEMO)

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, so what you actually see in the display may not always match what appears in the manual.

cf.

You can change the way the mode is switched when using $[\ \frown \]$ and $[\ \frown \]$ pedal or footswitch. See "Switching the Function of the MODE Pedal Jack" (p. 51) for the details on how to do this.

This is the mode for sending Program Change messages and Control Change messages.

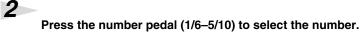
Transmitting Program Change Messages

Pressing [\checkmark] and [\checkmark] pedals and the number pedals (1/6 – 5/10) transmits the Program Change messages and Bank select messages for the corresponding number pedals.



Press the [\checkmark] pedal, and the numbers decrease by five; press the [\blacktriangle] pedal, and the numbers increase by five.

The BANK/NUMBER display and Number pedal indicators flash.



The indicator for the number pedal pressed lights, and the Program Change message is transmitted.

With the factory settings, transmission of Bank Select messages and Program Change messages is in accordance with what is indicated in the BANK/NUMBER display, as shown below.

BANK/NUMBER Display	Bank Sel	ect Message	Program Change Message
	(MSB)	(LSB)	
001–128	0	0	1–128
129–130	1	0	29–30

Setting How Tones are Switched

You can set the way the FC-300 switches tones with the pedals and displays tone numbers.

Make the settings to match the specifications of the external MIDI devices you are using (p. 47).

cf.

- With the factory settings, Program Change messages are not transmitted just by pressing the [] and [▲] pedals. To transmit Program Change messages just by pressing the [] and [▲] pedals, read "Using the [][▲] Pedals to Make the Settings" (p. 48).
- You can press the [▼] or
 [▲] pedal to change
 patch numbers ten at a
 time. For more detailed
 information, see "Setting
 the [▼] [▲] Pedal
 Step Size" (p. 49).
- You can limit the range of numbers switched. For more detailed information, see "Limiting the Range of Banks That Can Be Switched (Bank Extent)" (p. 48).
- You can indicate the pedal bank and number separately in the BANK/ NUMBER display. For details, refer to "Setting How Numbers are Indicated" (p. 49).
- You can stop output of Bank Select messages. For details, refer to **"Setting the Bank Select Output"** (p. 52).
- You can change the Bank Select messages. For details, refer to **"Setting the Bank Select Value"** (p. 53).

Transmitting Control Change Messages

You can transmit Control Change messages with expression pedals and control pedals.

Using the Expression Pedals

In keeping with the movement of the expression pedal, Control Change messages with the controller numbers set for each pedal are transmitted consecutively. Each pedal is set at the factory as shown below.

Expression Pedal	CC#	Range
EXP PEDAL 1	7	0–127
EXP PEDAL 2	1	0–127

Using the Control Pedal and Expression Pedal Switch

When you use control pedals, you can use the control pedals to send the Control Change messages for the controller numbers assigned to each of the pedals.

In addition, you can activate the expression pedal switch by strongly pressing down on the toe end of the pedal.

Control Change messages with the controller numbers set for each pedal are transmitted.

Each pedal is set at the factory as shown below.

Pedal	CC#	Range	Mode
CTL PEDAL 1	80	0–127	LATCH
CTL PEDAL 2	81	0–127	LATCH
EXP PEDAL SW 1	82	0–127	LATCH
EXP PEDAL SW 2	83	0–127	LATCH

cf.

For details about the all parameters and changes the setting, refer to **"Change the Pedal Settings"** (p. 19).



The Control pedal is a momentary type pedal that sends an ON message when depressed and an OFF message when released. You can change this to latch type operation, which sends an ON or OFF message each time you depress it – see "**Mode**" (p. 20).



You can use the control pedal and expression pedal switch to switch the AMP CONTROL jacks – see **"Change the Pedal** Settings" (p. 19).

Using the External Control Pedals and Expression Pedals

You can connect separately available footswitches and expression pedals and use the external pedals just like the FC-300's pedals to transmit Control Change messages, Realtime messages, and other such data.

When a BOSS FS-5U, FS-6 Footswitch is Connected, Assigned to CTL Pedal:

These function in the same way as the FC-300's built-in control pedals. Connect a control pedal to the EXP PEDAL/CTL jack and set the FC-300 to enable use of the pedal. (p. 50)

- * If you have two FS-5U pedals or an FS-6 pedal connected to the CTL3,4 jack with a special PCS-31 connecting cable (from Roland; available separately), the footswitch connected to the plug with the white ring controls the setting of CONTROL 3, and the footswitch connected to the plug with the red ring controls the setting of CONTROL 4.
- * When only one footswitch is connected to the CTL3,4 jack, the CONTROL 3 settings are enabled.
- * When an FS-6 is connected to the CTL3,4 jack with an optional connection cable (stereo 1/4" phone ←→ stereo 1/4" phone), pedal switch B operates according to the CONTROL 3 settings, and pedal switch A operates according to the CONTROL 4 settings.

When a Roland EV-5, BOSS FV-500L or FV-500H is Connected, Assigned to Expression Pedal:

These function in the same way as the FC-300's built-in expression pedals. Connect a expression pedal to the EXP PEDAL/CTL jack and set the FC-300 to enable use of the pedal. (p. 50)

- * These do not operate as expression pedal switches.
- * If you are connecting a BOSS FV-500L/FV-500H, connect the pedal with an optional connection cable (stereo 1/4'' phone $\leftarrow \rightarrow$ stereo 1/4'' phone).

Controller Numbers for Each Pedal

Each pedal is set at the factory as shown below.

Pedal	CC#	Range	Mode
CTL3	76	0–127	LATCH
CTL4	75	0–127	LATCH
CTL5	10	0–127	LATCH
CTL6	91	0–127	LATCH
CTL7	11	0–127	LATCH
CTL8	64	0–127	LATCH
EXP PEDAL 3	76	0–127	-
EXP PEDAL 4	10	0–127	-
EXP PEDAL 5	11	0–127	-



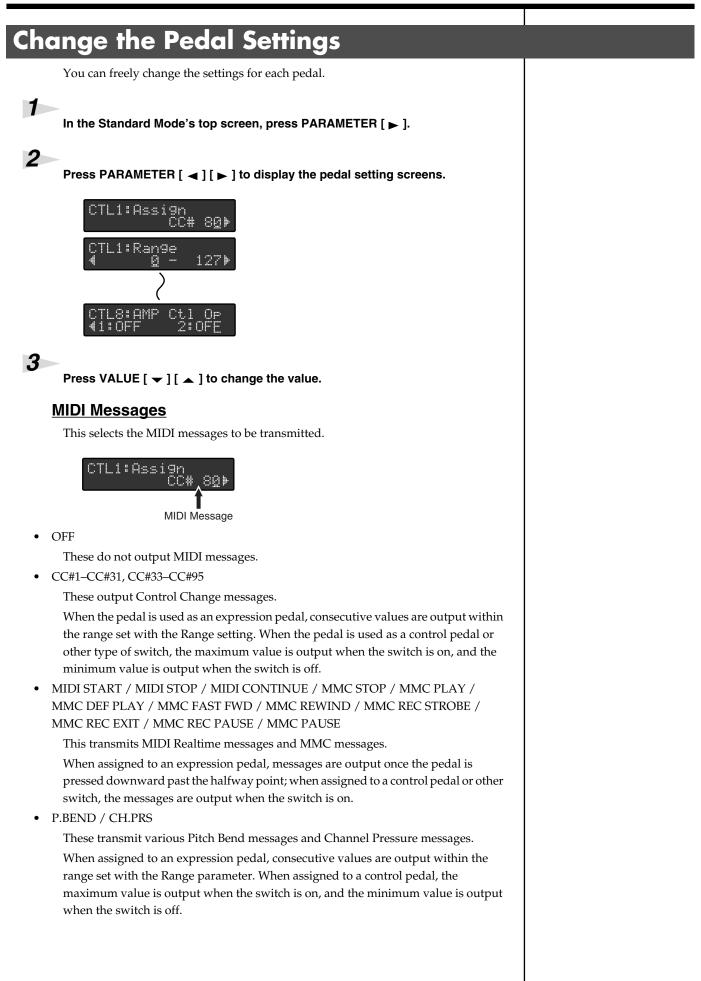
For details about the all parameters and changes the setting, refer to **"Change the Pedal Settings"** (p. 19).



See **"Making the Connections**" (p. 11) for instructions on setting the polarity switch and mode switch for the connected pedal.

cf.

For details about the all parameters and changes the setting, refer to **"Change the Pedal Settings"** (p. 19).



Standard Mode

Range

This sets the range for values that are transmitted.



<u>Mode</u>

This sets the switch mode.

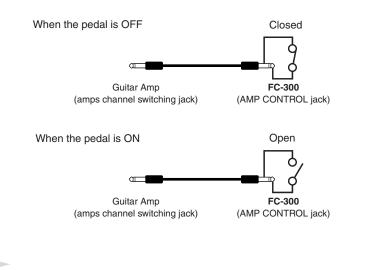
Value	Explanation
LATCH	The ON and OFF will alternate each time you press the pedal.
MOMENTARY	The value will be ON while you press the pedal, and OFF when you release the pedal.

AMP Ctl Op (Amp Control Operation)

This selects whether or not the AMP CONTROL jack is to be controlled.



When the AMP Ctl Op parameter is set to ON and the AMP Polarity parameter is set to Normal, control of AMP CONTROL with the pedal functions as shown below.



4

When you have finished making the settings, press [EXIT] to return to the initial screen.

The settings are saved, and the FC-300 returns to the initial screen.

MEMO

The Range parameter is enabled when CC#, P.BEND, or CH.PRS is selected.

MEMO

The Mode parameter and AMP Ctl Op parameter are enabled when a control pedal or other switch function is selected. This parameter is ignored when the pedal is used as a expression pedal.



You can change the polarity of the AMP CONTROL jacks. For more detailed information, see "Setting the Polarity of the AMP CONTROL Jacks" (p. 50).

About the Control Change Mode

This is the mode for sending Control Change messages.

In this mode, all the pedals can be used to send Control Change messages. You should use this mode at times when you want to send a lot of Control Change messages.



Pedal Setting Number

You can also store up to five sets, or configurations, of settings for all of the pedals within the FC-300's memory. Called pedal settings, these configurations can be switched as needed (p. 26).

Transmitting Control Change Messages

Pressing the various pedals transmits the Control Change messages set for the respective pedal over the selected MIDI channel.

Number Pedal (1/6-5/10)

Control Change messages with the controller numbers set for each pedal are transmitted.

Each pedal is set at the factory as shown below.

Pedal	CC#	Range	Mode	Pedal	CC#	Range	Mode
1	65	0–127	LATCH	6	70	0–127	LATCH
2	66	0–127	LATCH	7	71	0–127	LATCH
3	67	0–127	LATCH	8	72	0–127	LATCH
4	68	0–127	LATCH	9	73	0–127	LATCH
5	69	0–127	LATCH	10	74	0–127	LATCH

[🕶] [🔺] Pedal

These switch the number pedal functions.

Pedal	Explanation
[]	This sets the number pedals to function as pedals 1–5.
[▲]	This sets the number pedals to function as pedals 6–10.

When the [\checkmark] pedal is pressed, the [\checkmark] pedal's indicator lights, and the functions for number pedals 1–5 become operable.

When the [\blacktriangle] pedal is pressed, the [\checkmark] pedal's indicator lights, and the functions for number pedals 6–10 become operable.



For details about the all parameters and changes the setting, refer to **"Change the Pedal Settings"** (p. 24).

Using the Expression Pedals

In keeping with the movement of the expression pedal, Control Change messages with the controller numbers set for each pedal are transmitted consecutively.

Each pedal is set at the factory as shown below.

Expression Pedal	CC#	Range
EXP PEDAL 1	7	0–127
EXP PEDAL 2	1	0–127

Using the Control Pedal and Expression Pedal Switch

Control Change messages with the controller numbers set for each pedal are transmitted.

Each pedal is set at the factory as shown below.

Pedal	CC#	Range	Mode
CTL PEDAL 1	80	0–127	LATCH
CTL PEDAL 2	81	0–127	LATCH
EXP PEDAL SW 1	82	0–127	LATCH
EXP PEDAL SW 2	83	0–127	LATCH



For details about the all parameters and changes the setting, refer to **"Change the Pedal Settings"** (p. 24).



The Control pedal is a momentary type pedal that sends an ON message when depressed and an OFF message when released. You can change this to latch type operation, which sends an ON or OFF message each time you depress it – see **"Mode"** (p. 25).

cf.

You can use the control pedal and expression pedal switch to switch the AMP CONTROL jacks – see **"Change the Pedal Settings"** (p. 24).

Control Change Mode

Using Additional Footswitches and Expression Pedals

You can connect separately available footswitches and expression pedals and use the external pedals just like the FC-300's pedals to transmit Control Change messages, Realtime messages, and other such data.

When a BOSS FS-5U, FS-6 Footswitch is Connected, Assigned to CTL Pedal:

These function in the same way as the FC-300's built-in control pedals. Connect a control pedal to the EXP PEDAL/CTL jack and set the FC-300 to enable use of the pedal. (p. 50)

- * If you have two FS-5U pedals or an FS-6 pedal connected to the CTL3,4 jack with a special PCS-31 connecting cable (from Roland; available separately), the footswitch connected to the plug with the white ring controls the setting of CONTROL 3, and the footswitch connected to the plug with the red ring controls the setting of CONTROL 4.
- * When only one footswitch is connected to the CTL3,4 jack, the CONTROL 3 settings are enabled.
- * When an FS-6 is connected to the CTL3,4 jack with an optional connection cable (stereo 1/4" phone ←→ stereo 1/4" phone), pedal switch B operates according to the CONTROL 3 settings, and pedal switch A operates according to the CONTROL 4 settings.

When a Roland EV-5, BOSS FV-500L or FV-500H is Connected, Assigned to Expression Pedal:

These function in the same way as the FC-300's built-in expression pedals. Connect a expression pedal to the EXP PEDAL/CTL jack and set the FC-300 to enable use of the pedal. (p. 50)

- * These do not operate as expression pedal switches.
- * If you are connecting a BOSS FV-500L or FV-500H, connect the pedal with an optional connection cable (stereo 1/4" phone ←→ stereo 1/4" phone).

Controller Numbers of the Pedals

Each pedal is set at the factory as shown below.

Pedal	CC#	Range	Mode
CTL3	76	0–127	LATCH
CTL4	75	0–127	LATCH
CTL5	10	0–127	LATCH
CTL6	91	0–127	LATCH
CTL7	11	0–127	LATCH
CTL8	64	0–127	LATCH
EXP PEDAL 3	76	0–127	-
EXP PEDAL 4	10	0–127	-
EXP PEDAL 5	11	0–127	-

cf.

For details about the all parameters and changes the setting, refer to **"Change the Pedal Settings"** (p. 24).



See **"Making the Connections**" (p. 11) for instructions on setting the polarity switch and mode switch for the connected pedal.



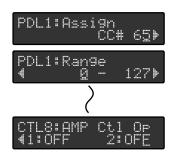
For details about the all parameters and changes the setting, refer to **"Change the Pedal Settings"** (p. 24).

Change the Pedal Settings You can freely change the settings for each pedal.

In the Control Change Mode's top screen, press PARAMETER [>].



Pressing PARAMETER [◀] [►] to show the pedal setting screens.





Press VALUE [\frown] [\frown] to change the value.

MIDI Messages

This selects the MIDI messages to be transmitted.



• OFF

These do not output MIDI messages.

• CC#1–CC#31, CC#33–CC#95

These output Control Change messages.

When assigned to an expression pedal, consecutive values are output within the range set with the Range parameter. When assigned to a control pedal, the maximum value is output when the switch is on, and the minimum value is output when the switch is off.

 MIDI START / MIDI STOP / MIDI CONTINUE / MMC STOP / MMC PLAY / MMC DEF PLAY / MMC FAST FWD / MMC REWIND / MMC REC STROBE / MMC REC EXIT / MMC REC PAUSE / MMC PAUSE

This transmits MIDI Realtime messages and MMC messages.

When assigned to an expression pedal, messages are output once the pedal is pressed downward past the halfway point; when assigned to a control pedal or other switch, the messages are output when the switch is on.

• P.BEND / CH.PRS

These transmit various Pitch Bend messages and Channel Pressure messages. When assigned to an expression pedal, consecutive values are output within the range set with the Range parameter. When assigned to a control pedal, the maximum value is output when the switch is on, and the minimum value is output when the switch is off.

NOTE

The settings made for the pedals are lost when the pedal settings are switched. To save settings made for the pedals, save them as pedal settings. For more detailed information, see **"Storing Controller Numbers Assigned to the Pedals (Pedal Settings)"** (p. 26).

Range

This sets the range for values that are transmitted.



Mode

This sets the switch mode.



Value	Explanation
LATCH	The ON and OFF will alternate each time you press the pedal.
MOMENTARY	The value will be ON while you press the pedal, and OFF when you re- lease the pedal.

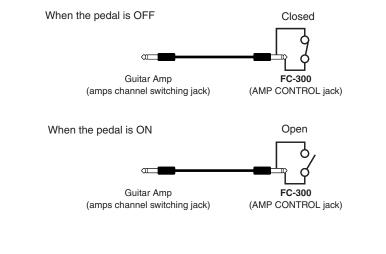
AMP Ctl Op (Amp Control Operation)

This selects whether or not the AMP CONTROL jack is to be controlled.



2 iack

When the AMP Ctl Op parameter is set to ON and the AMP Polarity parameter is set to Normal, control of AMP CONTROL with the pedal functions as shown below.



4

When you have finished with the editing, press [EXIT].

The top screen appears.

5

After making the changes, follow the instructions in "Storing Controller Numbers Assigned to the Pedals (Pedal Settings)" (p. 26) to save the settings.

(MEMO)

The Range parameter is enabled when CC#, P.BEND, or CH.PRS is selected for the expression pedal.

(MEMO)

The Mode parameter and AMP Ctl Op parameter are enabled when a control pedal or other switch function is selected.

NOTE

The settings made for the pedals are lost when the pedal settings are switched. To save settings made for the pedals, save them as pedal settings. For more detailed information, see "Storing Controller Numbers Assigned to the Pedals (Pedal Settings)" (p. 26).

∣ cf. >

You can change the polarity of the AMP CONTROL jacks. For more detailed information, see "Setting the Polarity of the AMP CONTROL Jacks" (p. 50).

Storing Controller Numbers Assigned to the Pedals (Pedal Settings)

The FC-300 can store up to five different configurations of settings made for all of the pedals ("**Change the Pedal Settings**" (p. 24)) in Control Change mode. These configurations are called pedal settings, and you can switch them as needed.

After completing the pedal settings (p. 24), press [WRITE] in the top screen of the Control Change Mode.

Select the number (1–5) for the pedal settings you want to store with VALUE [] [▲].



The store-destination of the pedal setting

3

1

Press [WRITE].

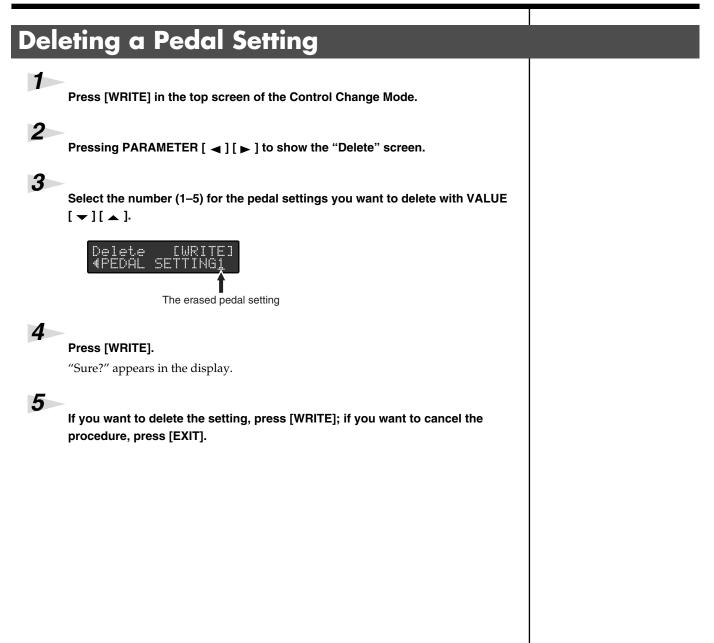
"Sure?" appears in the display.



If you want to write the setting, press [WRITE]; if you want to cancel the procedure, press [EXIT].

Switching Control Numbers Assigned to the Pedals Simultaneously

With the Control Change Mode screen displayed, press VALUE [-] [-].



System Exclusive Mode

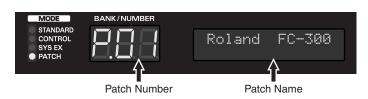
This mode is for transmitting and receiving System Exclusive messages. Pressing the FC-300's pedals and pedals connected to the EXP PEDAL/CTL jacks transmits the pedal status via System Exclusive messages. In addition, display content and pedal indicators can be switched with System Exclusive messages received by the FC-300.

* For more on the System Exclusive messages transmitted and received in System Exclusive mode, refer to the "**MIDI Implementation** (p. 59)."

About the Patch Mode

This mode is used for storing combinations of multiple MIDI messages that you can combine freely and transmitting these messages together in groups.

This mode allows you to control the settings for multiple devices, all just with the FC-300.



About the Patch

A "patch" is a group of multiple MIDI messages (MIDI stream) and other settings that are configured together as a single unit. The FC-300 can store up to 100 individual patches.(p. 44)

The patch can set the following parameters.

Patch's ON Stream

Group of MIDI messages transmitted when a patch is selected.

Patch's OFF Stream

Group of MIDI messages transmitted when a different patch is selected or when a pedal is released. These are used for canceling settings from ON streams.

- Timing for transmission of the patch's OFF stream
- CTL1,2 ON streams

These are the groups of MIDI messages transmitted when the pedals are switched on.

• CTL1,2 OFF streams

These are the groups of MIDI messages transmitted when the pedals are switched off.

AMP CONTROL

You can set the status of the AMP CONTROL jacks when a patch is selected.

- Control pedal, expression pedal, and other settings
- Patch names
- * An individual patch can hold MIDI messages containing up to a maximum of approximately 500 bytes. Although the total amount of MIDI message data that can be stored in Patch Mode is approximately 8 Kbytes, this amount of memory is shared by all patches. Therefore, please note that not all patches can contain the full approximately 500 bytes.

MEMO

When a patch name is set, the patch name is indicated in the top screen in Patch Mode.



```
A "MIDI stream" is a number
of MIDI messages grouped
together.
```

Transmitting Control Change Messages

You can transmit Control Change messages through operation of the expression pedals, control pedals, and other controllers.

Using the Expression Pedals

In keeping with the movement of the expression pedal, Control Change messages with the controller numbers set for each pedal are transmitted consecutively. Each pedal is set at the factory as shown below.

Expression Pedal	CC#	Range
EXP PEDAL 1 (Assign Number=1)	7	0–127
EXP PEDAL 2 (Assign Number=1)	1	0–127

All Assign Numbers from 2 on are set to OFF. For more information about the Assign Numbers, see "**Change the Pedal Settings**" (p. 42).

Using the Control Pedals and Expression Pedal Switches

You can connect separately available footswitches and expression pedals and use the external pedals just like the FC-300's pedals to transmit MIDI messages.

Each pedal is set at the factory as shown below.

Pedal	CC#	Range	Mode
CTL PEDAL 1	80	0–127	LATCH
CTL PEDAL 2	81	0–127	LATCH
EXP PEDAL SW 1 (Assign Number=1)	82	0–127	LATCH
EXP PEDAL SW 2 (Assign Number=1)	83	0–127	LATCH

All Assign Numbers from 2 on are set to OFF. For more information about the Assign Numbers, see "**Change the Pedal Settings**" (p. 42).



For details about the all parameters and changes the setting, refer to **"Change the Pedal Settings"** (p. 42).



The Control pedal and EXP pedal are the latch type pedal that sends an ON or OFF message each time you depress it. You can change this to momentary type operation, which sends an ON message when depressed and an OFF message when released – see "**Mode**" (p. 43).



You can use the control pedal and expression pedal switch to switch the AMP CONTROL jacks – see **"Change the Pedal Settings"** (p. 42).

Patch Mode

Using the External Control Pedals and Expression Pedals

You can connect separately available footswitches and expression pedals and use the external pedals just like the FC-300's pedals to transmit Control Change messages, Realtime messages, and other such data.

When a BOSS FS-5U, FS-6 Footswitch is Connected, Assigned to CTL Pedal:

These function in the same way as the FC-300's built-in control pedals. Connect a control pedal to the EXP PEDAL/CTL jack and set the FC-300 to enable use of the pedal. (p. 50)

- * If you have two FS-5U pedals or an FS-6 pedal connected to the CTL3,4 jack with a special PCS-31 connecting cable (from Roland; available separately), the footswitch connected to the plug with the white ring controls the setting of CONTROL 3, and the footswitch connected to the plug with the red ring controls the setting of CONTROL 4.
- * When only one footswitch is connected to the CTL3,4 jack, the CONTROL 3 settings are enabled.
- * When an FS-6 is connected to the CTL3,4 jack with an optional connection cable (stereo 1/4" phone ←→ stereo 1/4" phone), pedal switch B operates according to the CONTROL 3 settings, and pedal switch A operates according to the CONTROL 4 settings.

When a Roland EV-5, BOSS FV-500L or FV-500H is Connected, Assigned to Expression Pedal:

These function in the same way as the FC-300's built-in expression pedals. Connect a expression pedal to the EXP PEDAL/CTL jack and set the FC-300 to enable use of the pedal. (p. 50)

- * These do not operate as expression pedal switches.
- * If you are connecting a BOSS FV-500L or FV-500H, connect the pedal with an optional connection cable (stereo 1/4'' phone $\leftarrow \rightarrow$ stereo 1/4'' phone).

The Controller Number of Each Pedal

Each pedal is set at the factory as shown below.

Pedal	CC#	Range	Mode	
CTL3	76	0–127	LATCH	
CTL4	75	0–127	LATCH	
CTL5	10	0–127	LATCH	
CTL6	91	0–127	LATCH	
CTL7	11	0–127	LATCH	
CTL8	64	0–127	LATCH	
EXP PEDAL 3	76	0–127	-	
EXP PEDAL 4	10	0–127	-	
EXP PEDAL 5	11	0–127	-	



For details about the all parameters and changes the setting, refer to **"Change the Pedal Settings"** (p. 42).



See **"Making the Connections"** (p. 11) for instructions on setting the polarity switch and mode switch for the connected pedal.

cf.

You can set the range for values that are transmitted, refer to **"Change the Pedal** Settings" (p. 42). 2

Transmitting Patch Data

When a patch is selected with the [\checkmark] and [\checkmark] pedals and number pedals, the MIDI messages saved to the patch are transmitted.

Press the [-

Press the [\checkmark] pedal, and the numbers decrease by five; press the [\blacktriangle] pedal, and the numbers increase by five.

The BANK/NUMBER display and Number pedal indicators flash.

The numbers are selected by pressing the number pedals (1/6–5/10).

The patch for the selected number is selected (the pedal's indicator lights), and the MIDI messages in the ON stream within the patch are transmitted.

Additionally, other settings included in the patch are enabled. A current patch's OFF streams are transmitted before the newly selected patch's ON streams are transmitted.

cf.

With the factory settings, Program Change messages are not transmitted just by pressing the [] and [] pedals.

To transmit Program Change messages just by pressing the [] and [▲] pedals, read "Using the [] [▲] Pedals to Make the Settings" (p. 48).

cf.

You can program the FC-300 so that pressing the [\checkmark] and [\checkmark] pedals changes patch numbers ten at a time. For details, refer to "Setting the [\checkmark][\checkmark] Pedal Step Size" (p. 49).

cf.

You can release the number pedal to transmit OFF stream at a time. For more detailed information, see **"Setting the Timing for Transmission of OFF MIDI Streams"** (p. 40).

MEMO

Patch Number 100 is indicated as P.00.

Creating Patches

In the Patch Mode's top screen, when press PARAMETER [\blacktriangleright], the various pedal setting screens appear in the display. Press PARAMETER [\triangleleft] [\blacktriangleright] to select the parameter you want to change.

The patch can set the following parameters.

- Patch's ON Stream
- Patch's OFF Stream
- The Transmit timing of the patch's Off Stream
- ON Stream of the CTL pedal 1, 2
- OFF Stream of the CTL pedal 1, 2
- Amp Control
- Control Pedal, Expression Pedal, and Other Settings
- Patch Name

Message		Display	
Channel	Program Change Message	PC	
Message	Control Change Message	CC	
	Note On/Note Off Message	N.ON/N.OFF	
	Channel Pressure Message	C.PRS	
	Polyphonic Key Pressure Message	K.PRS	
	Pitch Bend Message	P.BEND	
Realtime Message		REALTIME	MIDI START
	-		MIDI STOP
			MIDI CONTINUE
System Exclusive Message		SYSEX	

NOTE

If you switch patches before saving the MIDI messages you have input to the patch, any edited content is lost. To save the changes you have made, carry out the Write procedure, refer to **"Storing (Saving) Patches"** (p. 44).

Editing MIDI Streams

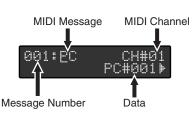
1 In the Patch Mode's top screen, press PARAMETER [▶]. 2 Use the PARAMETER [◀] and [►] buttons to select the MIDI stream you want to edit, then press [WRITE]. PATCH:On 3 "Edit MIDI" appears in the screen; press [WRITE]. The screen for selecting the MIDI stream editing function appears. <u>Ed</u>it MIDI The following display appears when the message is not assigned. Message Number 001:____ 4 Use the VALUE [\checkmark] and [\blacktriangle] to select the message number for the message to be edited. If you are adding any message, press [INS]. The message is added before the number of the currently selected message. To delete a message, select the message number with VALUE [🖵] [🔺] then press [DEL]. 5 Use the following procedures to edit the MIDI stream for different types of messages.

MEMO

You can select only one point to which no messages at all are assigned.

When Setting Channel Messages and Realtime Messages

Press PARAMETER [◀] [►] to move the cursor to the MIDI message.





Press VALUE [] [▲] to select the MIDI message to be edited.

MIDI Message	Data
PC	MIDI Channel (CH#), Program Number (PC#)
CC	MIDI Channel (CH#), Controller Number (CC#), Value (VAL)
N.ON	MIDI Channel (CH#), Note Number (NOTE#), Velocity (V)
N.OFF	MIDI Channel (CH#), Note Number (NOTE#), Velocity (V)
C.PRS	MIDI Channel (CH#), VALUE
K.PRS	MIDI Channel (CH#), Note Number (NOTE#), Velocity (V)
P.BEND	MIDI Channel (CH#), Value (MSB, LSB)
REALTIME	MIDI START/MIDI STOP/MIDI CONTINUE

3

Press PARAMETER [\triangleleft] [\blacktriangleright] to move the cursor to the parameter you want to change.

4

Press VALUE [\frown] [\frown] to change the value.

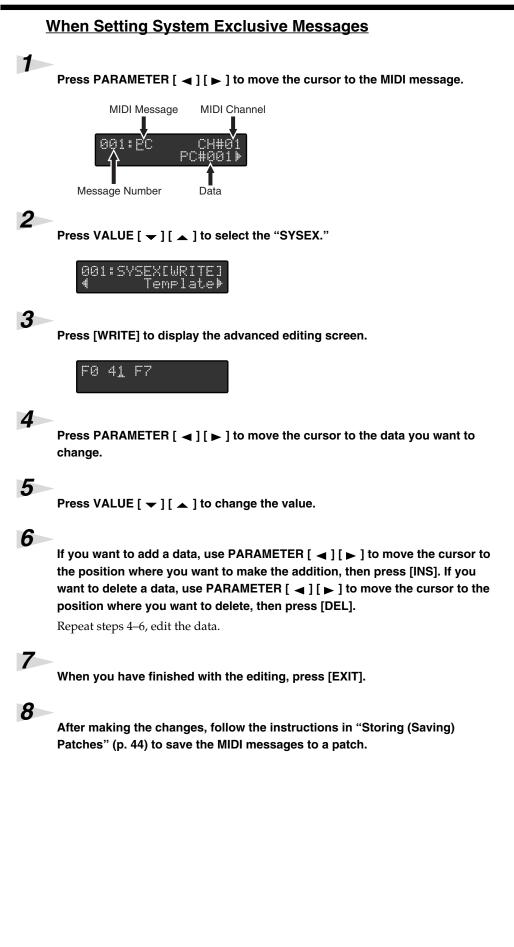
If there is any other message you want to change, select the message number as instructed in Step 4 of **"Editing MIDI Streams"** (p. 34), then repeat Steps 1-4.

5

After making the changes, follow the instructions in "Storing (Saving) Patches" (p. 44) to save the MIDI messages to a patch.

MEMO

When the MIDI channel is set to Tx, the channel set with the MIDI:Tx Channel parameter in Utilities is set (p. 52).



MEMO

The maximum amount of data that can be saved to a system exclusive message is 256 bytes.

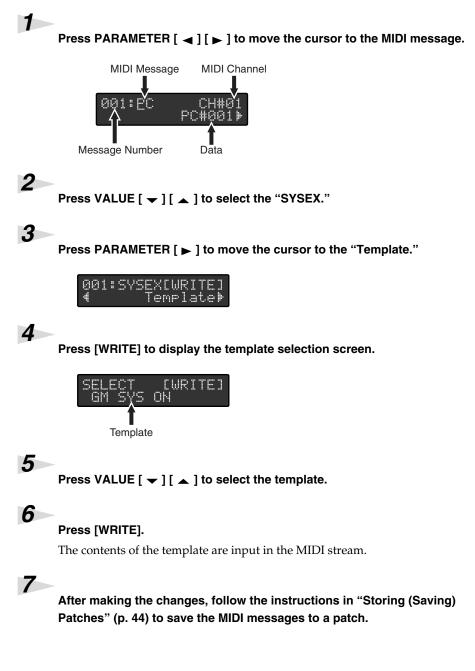
MEMO

With Roland System Exclusive messages, moving the cursor to the message in front of F7 (the end of the transmitted data) and pressing [WRITE] performs a checksum and inserts it there.

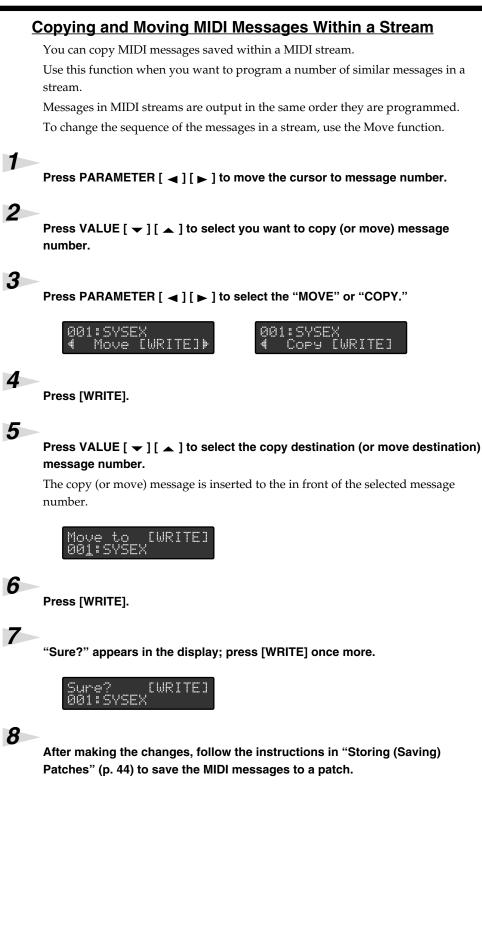
When Setting System Exclusive Messages Using the Template

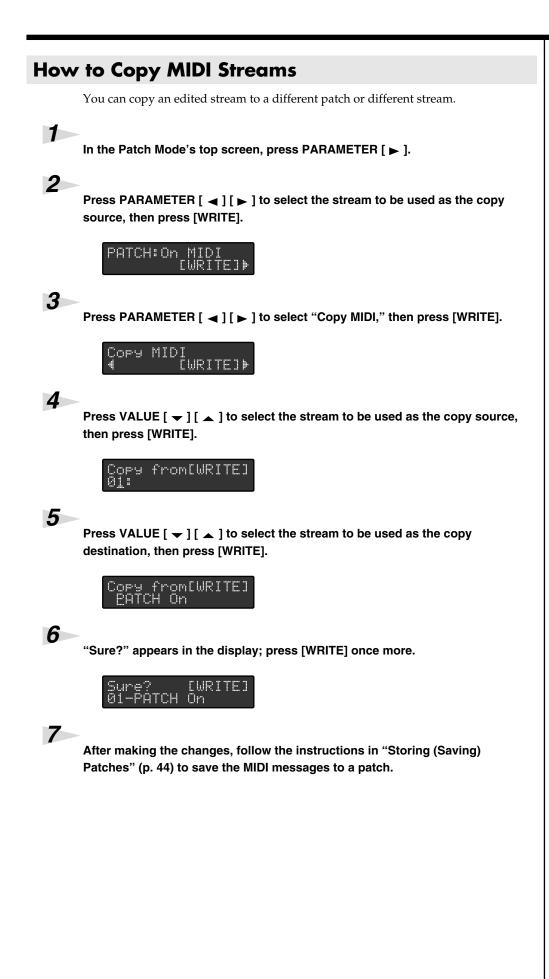
When assigning the following System Exclusive messages, use the template.

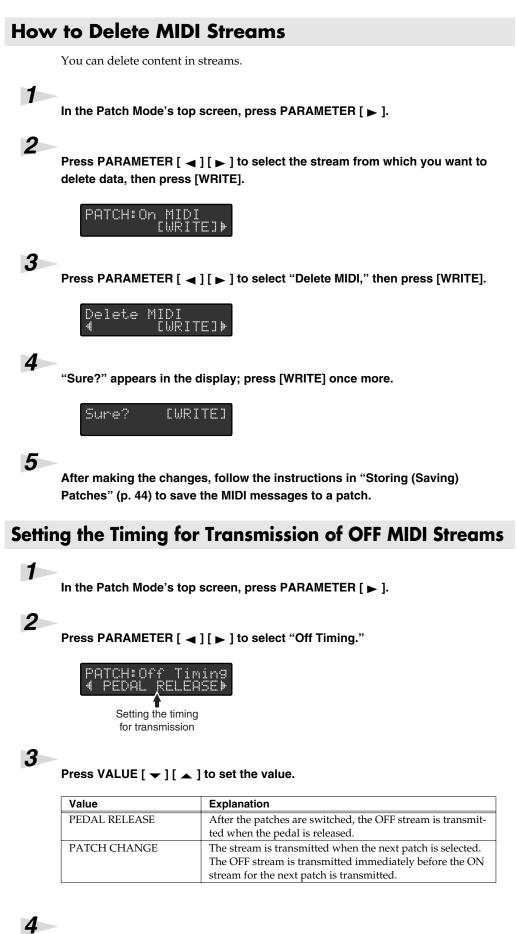
Template		
GM SYS ON	MMC PLAY	MMC REC EXIT
GM SYS OFF	MMC DEF PLAY	MMC REC PAUSE
V-LINK ON	MMC FAST FWD	MMC PAUSE
V-LINK OFF	MMC REWIND	MMC RESET
MMC STOP	MMC REC STROBE	MMC LOCATE



Patch Mode







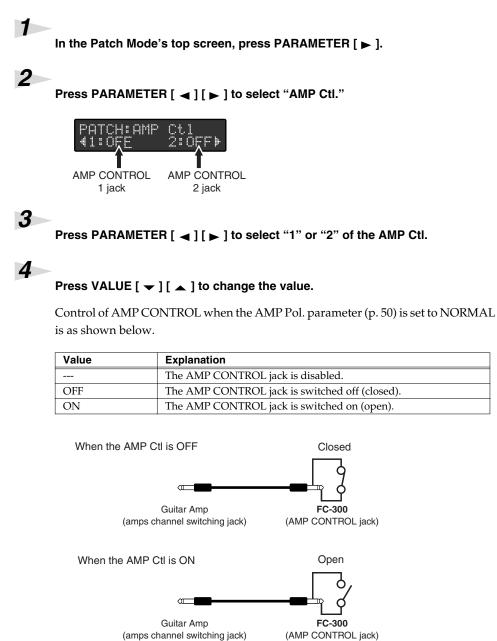
After making the changes, follow the instructions in "Storing (Saving) Patches" (p. 44) to save the MIDI messages to a patch.

MEMO

The Off Timing parameter is set to PATCH CHANGE when shipped from the factory.

Setting the Amp Control

You can set the status of the AMP CONTROL jacks when patches are selected.



cf.

You can change the polarity of the AMP CONTROL jacks. For more detailed information, see "Setting the Polarity of the AMP CONTROL Jacks" (p. 50).

5

After making the changes, follow the instructions in "Storing (Saving) Patches" (p. 44) to save the setting to a patch.

Change the Pedal Settings

You can freely change the settings for each pedal.

1

In the Patch Mode's top screen, press PARAMETER [▶].

2

3

Press PARAMETER [◀] [►] to select the each pedal settings screen.

The pedals being set appear at the left and upper of the screen.

You can set the following parameters:

- ON Stream
- OFF Stream
- Control Change Message (The pedal can be assigned to up to six messages.)
- Amp Control

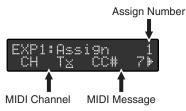
Press VALUE [] [] to change the value.

Setting the ON Stream and OFF Stream

You can assign these in the same manner as streams set as patch parameters. (p. 34) However, the timing for transmission of OFF streams follows the settings made in Pedal mode. You can set ON streams and OFF streams only with the FC-300's CTL pedals.

Assign Number

The EXP PEDAL and EXP PEDAL SW can be assigned to up to six messages to be transmitted. You can also assign one message to be transmitted to each of the pedals connected to the rear panel's EXP PEDAL/CTL jacks and FC-300's CTL pedals.



MIDI Channel

This sets the MIDI channel for the messages being transmitted.

MIDI Messages

This sets the range for values that are transmitted.

• Off

These do not output MIDI messages.

• CC#1 – CC#31, CC#33 – CC#95

These output Control Change messages.

When used to an expression pedal, consecutive values are output within the range set with the Range parameter. When used to a control pedal, the maximum value is output when the switch is on, and the minimum value is output when the switch is off.

 MIDI START / MIDI STOP / MIDI CONTINUE / MMC STOP / MMC PLAY / MMC DEF PLAY / MMC FAST FWD / MMC REWIND / MMC REC STROBE /

MEMO

When the MIDI channel is set to Tx, the channel set with the MIDI:Tx Channel parameter in Utilities is set (p. 52).

MMC REC EXIT / MMC REC PAUSE / MMC PAUSE

This transmits MIDI Realtime messages and MMC messages.

When assigned to an expression pedal, messages are output once the pedal is pressed downward past the halfway point; when assigned to a control pedal or other switch, the messages are output when the switch is on.

• P.BEND/CH.PRS

These transmit various Pitch Bend messages and Channel Pressure messages. When assigned to an expression pedal, consecutive values are output within the range set with the Range parameter. When assigned to a control pedal, the maximum value is output when the switch is on, and the minimum value is output when the switch is off.

Range

This sets the range for values that are transmitted.



Mode

This sets the switch mode.



Value	Explanation
LATCH	The ON and OFF will alternate each time you press the pedal.
MOMENTARY	The value will be ON while you press the pedal, and OFF when you release the pedal.

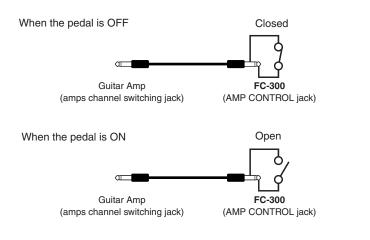
AMP Ctl Op (Amp Control Operation)

This selects whether or not the AMP CONTROL jack is to be controlled.



AMP CONTROL AMP CONTROL 1 jack 2 jack

Control of AMP CONTROL using a pedal when the AMP Ctl Op parameter is set to ON and the AMP Pol. parameter (p. 50) is set to NORMAL is as shown below.



MEMO

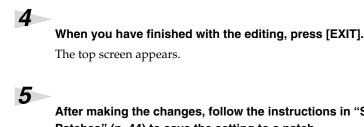
The Range parameter is enabled only when CC#, P.BEND, or CH.PRS is selected.

MEMO

The Mode parameter and AMP Ctl Op parameter are enabled with control pedals and other such switches. These parameters are disregarded when the pedal is used as an expression pedal.



You can change the polarity of the AMP CONTROL jacks. For more detailed information, see "Setting the Polarity of the AMP CONTROL Jacks" (p. 50).



After making the changes, follow the instructions in "Storing (Saving) Patches" (p. 44) to save the setting to a patch.

Set the Patch Name

In the Patch mode's top screen, press PARAMETER [].

Press PARAMETER [◀] [►] to select "Patch Name."

Patch Name

3

1

2

Press PARAMETER [▶] to move the cursor, and press VALUE [▼][▲] to enter the characters.

Storing (Saving) Patches

To store patches you have created in memory, carry out the Write procedure.

1

In the Patch mode's top screen, press [WRITE].

Write to 01:	EWRITE]
-----------------	---------

2

Press VALUE [-] [-] to select the save-destination patch number, then press [WRITE].

3

"Sure?" appears in the display; press [WRITE] once more.



The set value is saved, and the FC-300 returns to the top screen.

NOTE

The settings made for the pedals are lost when the patch is switched. To save settings made for the pedals, save them as a patch. For more detailed information, see "Storing (Saving) Patches" (p. 44).

(MEMO)

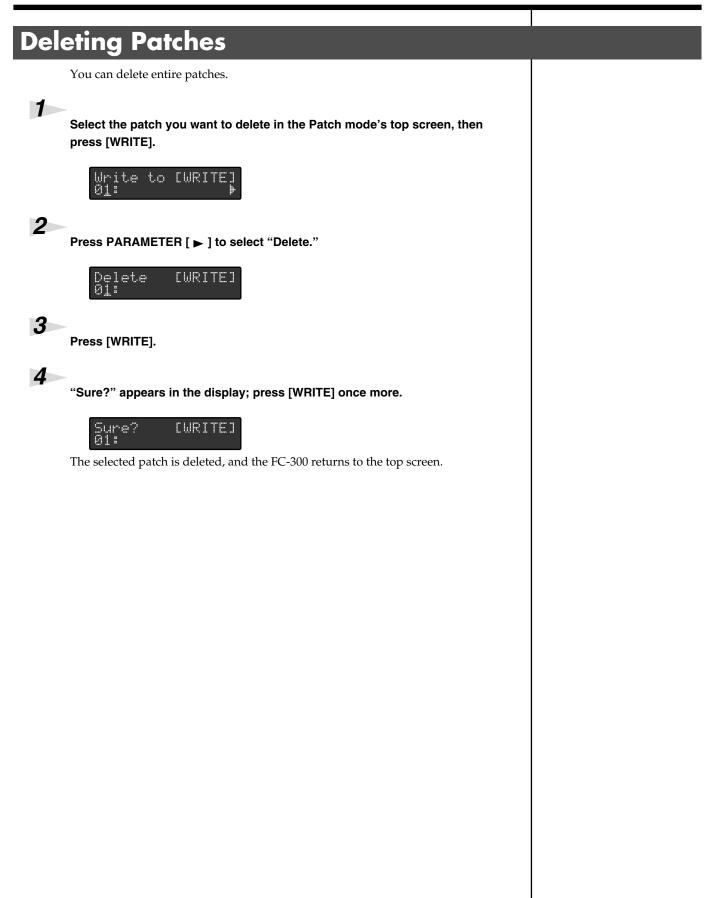
Patch names can be up to 12 characters in length.

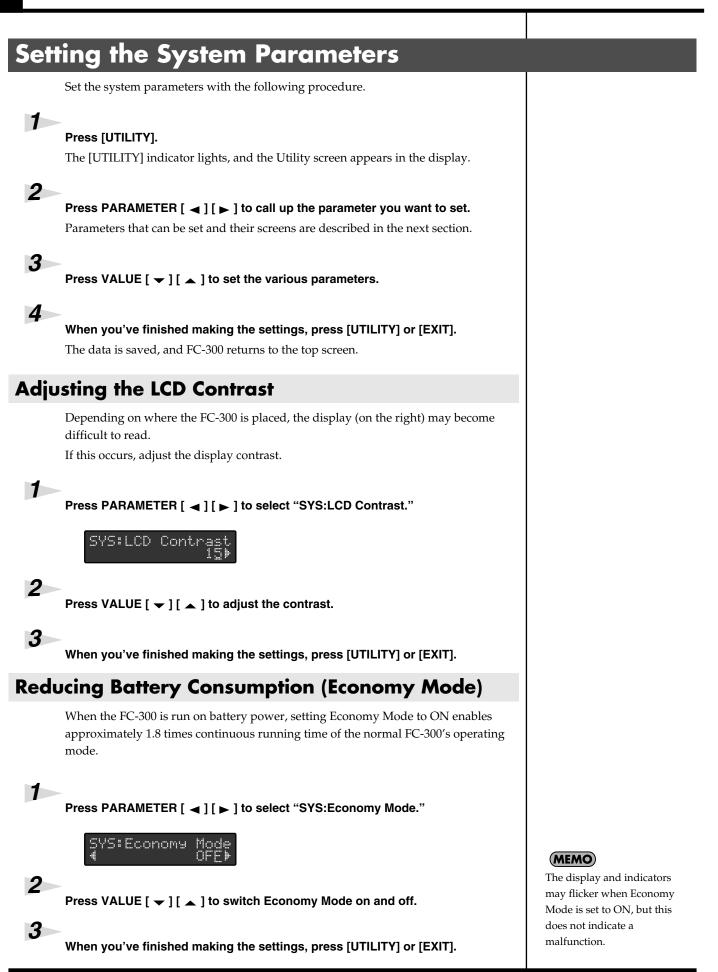
(MEMO)

When you press [INS], inserts a blank space at the cursor location. When you press [DEL], deletes a character at the cursor location.

(MEMO)

Patch names are indicated in the top screen in Patch Mode.





Setting the Method Used for Transmitting Program Change messages in Standard Mode (PC Mode)

You can change the method used for transmitting program changes to match the device connected to the FC-300.

Press PARAMETER [◀] [►] to select "SYS:PC Mode."

SYS:PC Mode EFFFTSI

1

2

3

Press VALUE [-] [-] to make the setting.

Value	Explanation
EFFECTS	Optimal mode for switching effects processor patches
SOUND MODULE	Optimal mode for switching sound module patches

When PC Mode parameter sets to "EFFECTS" and SYS:Bank Display parameter sets to "LINEAR," the FC-300's BANK/NUMBER display and the transmitted bank select messages and program change messages correspond as shown below.

BANK/NUMBER Display	Bank Select message		Program Change
	(MSB)	(LSB)	message
001–128	0	0	1–128
129–200	1	0	29-100
201–300	2	0	1–100
301–400	3	0	1–100
401–500	4	0	1–100
501-600	5	0	1–100
601–700	6	0	1–100
701–800	7	0	1–100
801–900	8	0	1–100
901–990	9	0	1–90

When set to "SOUND MODULE," the FC-300's LCD appears bank select MSB and LSB, and the transmitted bank select message with program change message.



When you've finished making the settings, press [UTILITY] or [EXIT].

MEMO

When PC Mode is set to EFFECTS, the Bank Select messages actually output include the Bank Select in the table at the left together with the Bank Select set with the UTILITY MIDI:Bank Select parameter (p. 47).

MEMO

You can switch how information is indicated in the BANK/NUMBER display (p. 49).



The MIDI Bank Select setting increases and decreases the MSB. You can also have this change the LSB. For more detailed information, see **"Setting the Bank Select Output"** (p. 52).

MEMO

When PC Mode is set to SOUND MODULE, the MSB and LSB values upon powerup will be the values set in MIDI:Bank Select.

Using the [-] [-] Pedals to Make the Settings

Press PARAMETER [◀] [►] to select "SYS:Bnk Chg Mode."

SYS:Bnk Chg Mode 4WAIT FOR A NUMÞ



1

Press the VALUE [-] [-] to program the settings.

Here are some examples of operation in Standard Mode.

Value	Explanation
IMMEDIATE	Program changes are transmitted immediately when [▼] or [▲] is pressed. Example) When starting from "003," pressing [▲] simultaneously transmits PC#8.
WAIT FOR A NUM	Program changes are transmitted when a number pedal is pressed after [] or [▲] is pressed. Example) Starting from "003," after [▲] is pressed and all of the green number pedal indicators are flashing, pressing number pedal 8 outputs PC#8.
RESET NUMBER	Although program changes are transmitted immediately when [] or [▲] is pressed, just as with Immediate, in this case, the number furthest to the left is output. Example) If starting from "003," pressing [▲] simultaneously transmits PC#6.

3

When you've finished making the settings, press [UTILITY] or [EXIT].

Limiting the Range of Banks That Can Be Switched (Bank Extent)

You can set an upper limit on the banks that can be switched, thus limiting the range of banks that are switched and allowing you to select only the patches required.



SYS:Bank Extent.



3

Press VALUE [\checkmark] [\blacktriangle] to set the upper limit on the banks.

When you've finished making the settings, press [UTILITY] or [EXIT].



This is enabled only when PC Mode is set to EFFECTS.

Setting the [🕶] [🔺] Pedal Step Size

You can set the size of the step made when the [\checkmark] [\checkmark] pedals are pressed.



Press VALUE [] [▲] to make the setting.

Value	Explanation
5STEP	The number decreases or increases by five each time [\checkmark] or [\checkmark] is pressed.
10STEP	The number decreases or increases by ten each time [] or [▲] is pressed. Additionally, each time a number pedal is pressed, that pedal's number is switched. Example) When "012" is indicated in BANK/NUMBER display, pressing number pedal 2/7 switches it to "017."

3

1

2

2

When you've finished making the settings, press [UTILITY] or [EXIT].

Setting How Numbers are Indicated

You can select the way numbers are indicated in Standard Mode to match that of the connected device.

Press PARAMETER [◀] [►] to select "SYS:Bank Display."

Press VALUE [-] [-] to make the setting.

Value	Explanation
LINEAR	The bank and number are indicated as a single decimal number.
BANK&NUM	The bank and number are indicated as separate numbers. A dot is displayed between the bank and number. Example) The number indicated in LINEAR as "001" appears as "01.1" with BANK&NUM.
FC-200	The numerals are indicated in the same way as with BANK & NUM, but with the banks beginning with "00" in the display.

3

When you've finished making the settings, press [UTILITY] or [EXIT].

Setting the Polarity of the AMP CONTROL Jacks Change this parameter if the indicator on an amp connected to an AMP CONTROL jack (1 or 2) does not correspond to the ON indicator (indicator lit) on the FC-300. 1 Press PARAMETER [◀] [►] to select "SYS:AMP 1 Pol." or "SYS:AMP 2 Pol." SYS: AMP1 Pol 2 Press VALUE [🖵] [👗] to make the setting. Value Explanation NORMAL The parameter is set to the factory setting. INVERT Actual operation is the reverse of that indicated by the FC-300's ON/OFF indicator. 3 When you've finished making the settings, press [UTILITY] or [EXIT].

Determining the Role of an EXP PEDAL/CTL Jack

Follow the steps below to specify whether a pedal being connected to an EXP PEDAL/CTL jack (on the rear panel) is a control pedal or an expression pedal. This setting needs to be made individually for each jack.

Press PARAMETER [◀] [►] to select "SYS:E3/C3 Type", "SYS:E4/C5 Type" or "SYS:E5/C7 Type."

SYS:E3/C3 Type ∢ EXP PEDAL⊮

Press VALUE [-] [-] to make the setting.

Value	Explanation
EXP PEDAL	The jack will be used for connecting expression pedals. Connect a Roland EV-5 or BOSS FV-500L or FV-500H.
CTL	The jack will be used for connecting control pedals. Connect a BOSS FS-5U or FS-6.

3

1

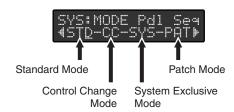
2

When you've finished making the settings, press [UTILITY] or [EXIT].

Switching the Function of the MODE Pedal Jack

This sets the modes that can be selected when the mode is switched with a pedal. This setting allows you to toggle only between the modes you need when using the pedal.

Press PARAMETER [◀] [►] to select "SYS:MODE PdI Seq."



2

Press PARAMETER [\triangleleft] [\blacktriangleright] to select the mode you want to set, then press VALUE [\neg] [\blacktriangle] to make the setting.

Value	Explanation
Uppercase letters	These can be selected by pressing the pedal.
Lowercase letters	These cannot be selected by pressing the pedal.



When you've finished making the settings, press [UTILITY] or [EXIT].

Switching How the Pedal Indicators Light

You can have all unlit pedal indicators flash faintly instead.

This makes it easier to locate pedal positions on stage and in other darkened environments.



Press PARAMETER [◀] [►] to select "SYS:PdI Indicate."



2

Press VALUE [\frown] [\frown] to make the setting.

Value	Explanation
OFF	All pedal indicators other than the lit pedal indicator remain off.
ON	All pedal indicators other than the unlit pedal indicator flash.

3

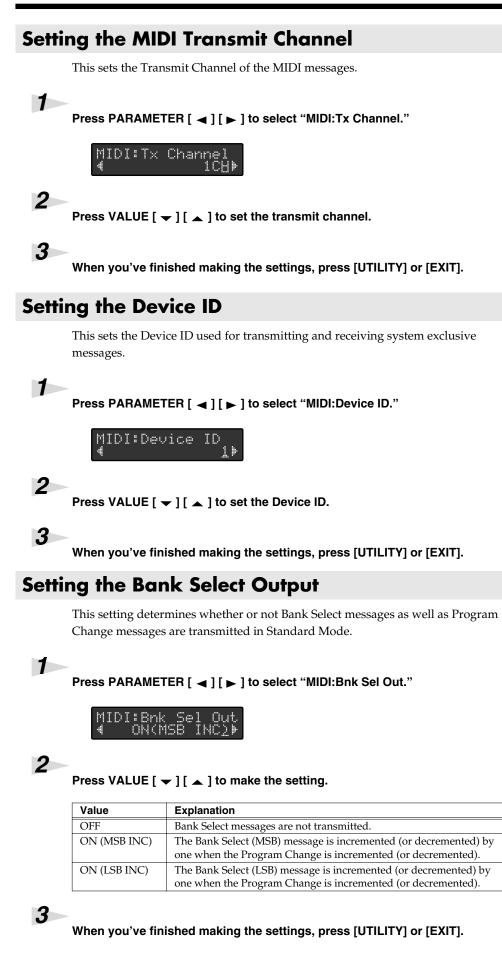
When you've finished making the settings, press [UTILITY] or [EXIT].

MEMO

The actions performed by simultaneously pressing the [] and [▲] pedals also conform to this setting.

MEMO

You cannot set the lower case letters in all modes.



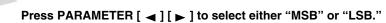
Other Features

Setting the Bank Select Value

You can change the values of the Bank Select messages output in Standard Mode to match the connected device. Values from the $[\ \bullet \] [\ \bullet \]$ pedals are added to the base values set here and then output. For details, refer to "Setting the Method Used for Transmitting Program Change messages in Standard Mode (PC Mode)" (p. 47).

Press PARAMETER [◀] [►] to select "MIDI:Bank Select."





3

Δ

1

Press VALUE [\frown] [\frown] to make the setting.

When you've finished making the settings, press [UTILITY] or [EXIT].

Transmitting Data to an External MIDI Device (Bulk Dump)

On the FC-300, you can use System Exclusive messages to provide another FC-300 with identical settings, and save settings on a MIDI sequencer or other device.

Making the Connections

- When saving to a MIDI sequencer Connect the FC-300's MIDI OUT to the MIDI sequencer's MIDI IN connector with a MIDI cable.
- When transmitting data to another FC-300 Connect the sending FC-300's MIDI OUT to the receiving FC-300's MIDI IN connector with a MIDI cable.
- 1. Set the Device ID for the transmitting and receiving FC-300s to the same ID (p. 52).
- 2. Switch to the Bulk Load screen on the receiving FC-300 (p. 54).

Transmitting

Press PARAMETER [◀] [►] to select "Bulk Dump."



MEMO

For instructions on operating the MIDI sequencer, see the owner's manual that came with your MIDI sequencer.

Press VALUE	$[\bullet] [\bullet]$ to make the setting.
Value	Explanation
ALL	All settings (UTILITY, STANDARD, CONTROL, PATCH) are transmitted.
UTILITY	System parameter settings are transmitted.
STANDARD	Standard Mode settings are transmitted.
CONTROL	Control Change Mode settings are transmitted.
PATCH	Patch Mode settings are transmitted.

3

2

Press [WRITE].

The "Now Sending..." message appears in the display when the FC-300 sends the data. The top screen appears in the display when the FC-300 finishes sending the data.

If either ALL, CONTROL, or PATCH is selected in Step 2, the message "Erase Tmp Data Sure?" is displayed.

Press [WRITE] again; the data currently being edited (unsaved) in Control Change mode and Patch mode is erased, and then the bulk dump begins.

Receiving Data from an External MIDI Device (Bulk Load)

FC-300 can receive the setting saved in the sequencer or the other FC-300 with identical settings.

Making the Connections

· When receiving data saved to a MIDI sequencer Connect the MIDI sequencer's MIDI OUT to the FC-300's MIDI IN connector with a MIDI cable.

Transmitting



Press PARAMETER [◀] [►] to select "Bulk Load."

Bulk Load Now Waiting..

2

Transmit the data.

The "Now Receiving..." message appears in the display when the FC-300 receiving the data.

The bulk load processing ended when the message "Now Waiting..." appears in the display.

3

When you've finished receiving the data, press [UTILITY] or [EXIT].

The data is saved, and the FC-300 returns to the top screen.

(MEMO)

For instructions on operating the MIDI sequencer, see the owner's manual that came with your MIDI sequencer.

(MEMO)

Just as when transmitting data to a MIDI sequencer, match the FC-300's and MIDI sequencer's Device ID settings (p. 52).

Restoring the Factory Settings (Factory Reset)

You can restore all of the FC-300's settings to their original factory settings.

This is referred to as "Factory Reset."

Use the following procedure when carrying out Factory Reset.



Switch off the power.

2

Hold down VALUE [\blacktriangleright] [\blacktriangle] and switch on the power.

The message "Factory Reset Are you sure?" appears in the display.

Factory Reset Are you sure?



4

Press [WRITE].

Factory Reset is executed.

When the Factory Reset is finished, the message "Completed!" appears in the display.

Switch off the power.

NOTE

Do not turn off the power to the FC-300 while Factory Reset is in progress.

MEMO

If you want to cancel the factory reset operation, turn off the power.

Adjusting the Expression Pedal

Although the FC-300's EXP pedals are adjusted for optimal performance when shipped from the factory, extended use over time and under certain usage conditions may result in the pedals going out of adjustment. If you find the pedals exhibiting problems, such as "a failure to completely shut off the volume when used as volume pedals," or "MIDI messages not being output in the range corresponding to the set values," you can readjust the pedals using the following procedure.



2

Hold down [UTILITY] and switch on the power.

When "EXP1:Set to MIN" is displayed, rock EXP PEDAL 1 all the way back (so that the toe end of the pedal is raised). Release your foot from EXP PEDAL 1, and then press [WRITE].



3

When "EXP1:Set to MAX" is displayed, rock EXP PEDAL 1 fully forward (so that the heel end of the pedal is raised). Release your foot from EXP PEDAL 1, and then press [WRITE].

EXP1:Set	, to MAX [WRITE]
----------	---------------------

4

When "EXP1:Threshold" appears in the display, set the sensitivity of the EXP PEDAL SW 1 with VALUE [\checkmark][\checkmark], and then press [WRITE].



5

When "EXP2:Set to MIN" is displayed, rock EXP PEDAL 2 all the way back (so that the toe end of the pedal is raised). Release your foot from EXP PEDAL 2, and then press [WRITE].



6

When "EXP2:Set to MAX" is displayed, rock EXP PEDAL 2 fully forward (so that the heel end of the pedal is raised). Release your foot from EXP PEDAL 2, and then press [WRITE].

EXP2:	Set	to	MAX
		CWR	ITEI

7

8

When "EXP2:Threshold" appears in the display, set the sensitivity of the EXP PEDAL SW 2 with VALUE [\bullet] [\bullet], and then press [WRITE].



When the message "Complete!" appears in the display, switch off the power.

NOTE

When you operate the expression pedal, please be careful not to get your fingers pinched between the movable part and the panel. 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.

MEMO

EXP1:Threshold and EXP2:Threshold can be set to any value from 1 through 16. The expression pedal switch can be switched on and off with less pressure as the value is lowered.

Error Messages

Battery Low!

[Cause]	The batteries are depleted ($6 \times AA$ size).
[Solution]	Replace the batteries as soon as possible. (p. 11)

Memory Full!

[Cause 1]	The internal memory became full at the time the patch was saved.
[Solution 1]	Delete any unnecessary patches. (p. 45)
[Cause 2]	The area of memory for the FC-300's internal operations became full
	while the patch was being edited (COPY, INS, etc).
[Solution 2]	Delete MIDI messages within the patch. (p. 40)

MIDI Buffer Full!

[Cause]	Too many MIDI messages were received in a short time from an
	external MIDI device than could be processed correctly.
[Solution]	Reduce the amount of MIDI message data transmitted by the external
	MIDI device.

MIDI Offline!

[Cause]	There is a problem with the MIDI cable connection.
[Solution]	Check to make sure the cable has not been pulled out or is not
	defective.

RRC2 Buffer Full!

[Cause]	Too many RRC2 control messages were received in a short time from
	an external RRC2 IN device than could be processed correctly.
[Solution]	Reduce the amount of control message data transmitted by the external RRC2 IN device.

RRC2 Offline!

[Cause]	There is a problem with the RRC2 cable connection.
[Solution]	Check to make sure the cable has not been pulled out or is not
	defective.

Troubleshooting

If other operational problems occur, first check by using the following solutions: If this does not resolve the problem, then contact your dealer or a nearby Roland service station.

The power doesn't come on

• Is the specified AC adaptor (PSA series; sold separately) properly connected?

Check connections again. Never use any AC adaptor other than one specified for use with the FC-300 (p. 12).

• Are the batteries dead? Replace the new batteries (p. 11).

Power not turning off

• Is there an RRC2 IN device connected? Switch the RRC2 IN device's POWER switch to OFF (p. 13).

MIDI messages are not transmitted/received

- Are the MIDI cables broken? Try another set of MIDI cables.
- Is the FC-300 correctly connected to the other MIDI device? Check connections with the other MIDI device.
- Do the MIDI channel settings of both devices match? Make sure that the MIDI channels of both devices match (p. 52).
- Is the number pedal indicator flashing?
 Program Change messages are not transmitted while the number pedal's indicator is flashing.

Pressing a number pedal and selecting the number transmits the message.

• When you send messages from the FC-300, make sure the FC-300 is set to the settings appropriate for sending data.

 $Check \ the \ "Setting \ the \ Method \ Used \ for \ Transmitting \ Program \ Change \ messages \ in \ Standard \ Mode \ (PC \ Mode)" \ (p. 47) \ or \ "Transmitting \ Control \ Change \ Messages" \ (p. 17) \ (p. 21) \ (p. 30).$

Expression pedal switch not switching on and off / Fails to completely shut off the volume when used as a volume pedal

• Has the pedal gone out of adjustment? Adjust the expression pedal (p. 56).

Display is faint or flickering

Check the following settings.

- "Adjusting the LCD Contrast" (p. 46)
- "Reducing Battery Consumption (Economy Mode)" (p. 46)
- "Switching How the Pedal Indicators Light" $\left(p,\,51\right)$

MEMO

The batteries that are supplied with the unit is for temporary use, intended primarily for testing this unit.

MEMO

When running on power supplied by an RRC2 IN device, the power is switched on regardless of the position of the POWER switch.

MEMO

Although the FC-300's EXP pedals are adjusted for optimal performance when shipped from the factory, extended use over time and under certain usage conditions may result in the pedals going out of adjustment.

MIDI Implementation

Roland System Exclusive Messages

1. Data Format for Exclusive Messages

Roland's MIDI implementation uses the following data format for all Exclusive messages (type IV):

Byte	Description	
F0H	System Exclusive Status	
41H	Manufacturer ID (Roland)	
DEV	Device ID	
MDL	Model ID	
CMD	Command ID	
[BODY]	Main data	
F7H	EOX (End of System Exclusive)	

MIDI status: F0H, F7H

An Exclusive message must be flanked by a pair of status codes, starting with a Manufacturer ID immediately after F0H (MIDI version 1.0).

Manufacturer ID: 41H

The Manufacturer ID identifies the manufacturer of a MIDI instrument that sends an System Exclusive message. Value 41H represents Roland's Manufacturer ID.

Device ID: DEV

The Device ID contains a unique value that identifies individual devices in the implementation of several MIDI instruments.

It is usually set to 00H–0FH, a value smaller by one than that of a basic channel, but value 00H–1FH may be used for a device with several basic channels.

Model ID: MDL

The Model ID contains a value that identifies one model from another. Different models, however, may share an identical Model ID if they handle similar data.

The Model ID format may contain 00H in one or more places to provide an extended data field.

The following are examples of valid Model IDs, each representing a unique model:

01H
02H
03H
00H, 01H
00H, 02H
00H, 00H, 01H

Command ID: CMD

The Command ID indicates the function of an Exclusive message. The Command ID format may contain 00H in one or more places to provide an extended data field.

The following are examples of valid Command IDs, each representing a unique function:

01H 02H 03H 00H, 01H 00H, 02H 00H, 00H, 01H

Main data: BODY

This field contains a message to be exchanged across an interface. The exact data size and content will vary with the Model ID and Command ID.

2. Address-mapped Data Transfer

Address mapping is a technique for transferring messages conforming to the data format given in Section 1.

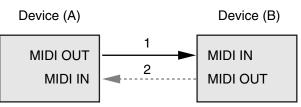
It assigns a series of memory-resident records–waveform and tone data, switch status, and parameters, for example, to specific locations in a machine-dependent address space, thereby allowing access to data residing at the address a message specifies.

Address-mapped data transfer is therefore independent of models and data categories.

This technique allows use of two different transfer procedures: oneway transfer and handshake transfer.

One-way transfer procedure (See Section 3 for details.)

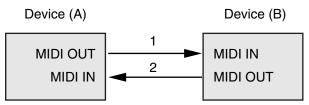
This procedure is suited to the transfer of a small amount of data. It sends out an Exclusive message completely independent of the receiving device's status.



Connection at point 2 is essential for "Request data" procedures. (See Section 3.)

Handshake-transfer procedure (This device does not use this procedure)

This procedure initiates a predetermined transfer sequence (handshaking) across the interface before data transfer takes place. Handshaking ensures that reliability and transfer speed are high enough to handle a large amount of data.



Connection at points 1 and 2 is essential.

MEMO

Notes on the above procedures

- There are separate Command IDs for different transfer procedures.
- Devices A and B cannot exchange data unless they use the same transfer procedure, share identical Device ID and Model ID, and are ready for communication.

3. One-way Transfer Procedure

This procedure sends out data until it has all been sent and is used when the messages are so short that answerbacks need not be checked.

For longer messages, however, the receiving device must acquire each message in time with the transfer sequence, which inserts 20 milliseconds intervals. In this method, as for the receiving device, it is necessary to receive data correctly in time.

Types of Messages

Message	Command ID
Request data 1	RQ1 (11H)
Data set 1	DT1 (12H)

Request data 1: RQ1 (11H)

This message is sent out when there is a need to acquire data from a device at the other end of the interface.

It contains data for the address and size that specify designation and length, respectively, of data required.

On receiving an RQ1 message, the remote device checks its memory for the data address and size that satisfy the request.

If it finds them and is ready for communication, the device will transmit a "Data set 1 (DT1)" message, which contains the requested data.

Otherwise, the device won't send out anything.

Byte	Description
F0H	System Exclusive Status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
11H	Command ID
aaH	Address MSB
:	:
:	:
	Address LSB
ssH	Size MSB
:	:
:	:
	Size LSB
sum	Check sum
F7H	EOX (End of System Exclusive)

MEMO

- The size of the requested data does not indicate the number of bytes that will make up a DT1 message, but represents the address fields where the requested data resides.
- Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.
- The same number of bytes comprises address and size data, which, however, vary with the Model ID.
- The error-checking process uses a checksum that provides a bit pattern where the last 7 bits are zero when values for an

address, size, and that checksum are summed.

Data set 1: DT1 (12H)

This message corresponds to the actual data transfer process.

Because every byte in the data is assigned a unique address, a DT1 message can convey the starting address of one or more bits of data as well as a series of data formatted in an address-dependent order.

The MIDI standards inhibit non real-time messages from interrupting an Exclusive one. This fact is inconvenient for devices that support a "soft-thru" function.

To maintain compatibility with such devices, Roland has limited the DT1 to 256 bytes so that an excessively long message is sent out in separate 'segments.'

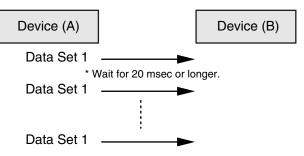
Byte	Description
F0H	System Exclusive Status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
12H	Command ID
aaH	Address MSB
:	:
:	:
	Address LSB
ddH	Data MSB
:	:
:	:
	Data LSB
sum	Check sum
F7H	EOX (End of System Exclusive)

MEMO

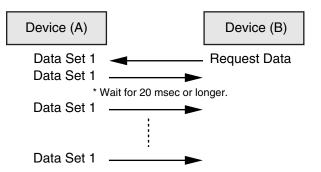
- A DT1 message is capable of providing only the valid data among those specified by an RQ1 message.
- Some models are subject to limitations in data format used for a single transaction. Requested data, or example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.
- The number of bytes comprising address data varies from one Model ID to another.
- The error-checking process uses a checksum that provides a bit pattern where the last 7 bits are zero when values for an address, data, and that checksum are summed.

Example of Message Transactions

• Device A sending data to Device B Transfer of a DT1 message is all that takes place.



 Device B requesting data from Device A Device B sends an RQ1 message to Device A.
 Checking the message, Device A sends a DT1 message back to Device



1. Recognized Receive Data

System Realtime Message

Active Sensing

Status	
FEH	

When FC-300 receives Active Sensing, it measures time intervals between incoming messages. If the subsequent message will not come within 400 msec after the previous one, FC-300 turns off Active Sensing for a period and stops measuring message intervals.

System Exclusive Message

Status	Data	Status
F0H	iiH, ddH,, eeH	F7H

F0H	System Exclusive Status
ii	ID Number: The ID Number (manufacturer's ID) is
	used to distinguish one manufacturer's System Exclu-
	sive messages from another. Roland's manufacturer ID
	is 41H. ID Numbers 7EH and 7FH are used as Universal
	Non-realtime messages (7EH), and Universal Realtime
	message (7FH) for extending the MIDI standard.
dd,, ee	00H-7FH (0-127)
F7H	EOX (End of System Exclusive)

System Exclusive messages that the FC-300 can receive are Data Request (RQ1) and Data Set (DT1).

For a detailed explanation about Data Request (RQ1) and Data Set (DT1), refer to **"Roland System Exclusive Messages"** (p. 59) and **"3. Exclusive Communications"** (p. 64).

2. Transmitted Data

Transmitted Messages

Channel Voice Message

Note Off

Status	Second	Third
8nH	kkH	vvH

n = MIDI Channel Number	0H-FH (ch.1-ch.16)
kk = Note Number	00H-7FH (0-127)
vv = Velocity	00H-7FH (0-127)

* Specifically when Patch Mode is selected.

Note On

Status	Second	Third
9nH	kkH	vvH

n = MIDI Channel Number	0H - FH (ch.1-ch.16)
kk = Note Number	00H-7FH (0-127)
vv = Velocity	01H-7FH (1-127)

* Specifically when Patch Mode is selected.

Polyphonic Key Pressure

Status	Second	Third
AnH	kkH	vvH

n = MIDI Channel Number	0H - FH (ch.1-ch.16)
kk = Note Number	00H-7FH (0-127)
vv = Polyphonic Key	00H-7FH (0-127)
Pressure	

* Specifically when Patch Mode is selected.

Control Change

Status	Second	Third
BnH	ccH	vvH

n = MIDI Channel Number	0H-FH (ch.1-ch.16)
cc = Control Number	01H-1FH (1-31), 21H-5FH (33-95)
vv = Control Value	00H-7FH (0-127)

* Does not transmit while in System Exclusive Mode.

Bank Select

Status	Second	Third
BnH	00H	mmH
BnH	20H	llH

n = MIDI Channel Number	0H-FH (ch.1-ch.16)
mm = Upper bytes of Bank Select Number	00H-7FH (0-127)
II = Lower bytes of Bank Select Number	00H-7FH (0-127)

Specifically when Standard Mode and Patch Mode are selected.

Program Change

Status	Second
CnH	ррН

n = MIDI Channel Number	0H-FH (ch.1-ch.16)
pp = Program Number	00H-7FH (prog.1-prog.128)

* Specifically when Standard Mode and Patch Mode are selected.

Channel Pressure

Status	Second
DnH	vvH

n = MIDI Channel Number	0H - FH (ch.1-ch.16)
vv = Channel Pressure	00H-7FH (0-127)

* Does not transmit while in System Exclusive Mode.

Pitch Bend Change

Status	Second	Third
EnH	llH	mmH

n = MIDI Channel Number	0H - FH (ch.1-ch.16)
	00 00H - 40 00H - 7F 7FH
	(-8192 - 0 - +8192)

* Does not transmit while in System Exclusive Mode.

System Realtime Message

Start

Status	
FAH	

* Does not transmit while in System Exclusive Mode.

Continue

Status	
FBH	

* Does not transmit while in System Exclusive Mode.

Stop

Status	
FCH	

* Does not transmit while in System Exclusive Mode.

Active Sensing

Status	
FEH	

- * During the normal operation, transmits at approx. 200 msec intervals.
- * When message intervals are being monitored at the input section, the output of Active Sensing messages will cease for a certain period of time if the input interval exceeds 400 msec.

System Exclusive Message

Status	Data	Status
F0H	iiH, ddH,, eeH	F7H

FOH System Exclusive Status		
ii = ID Number	nber 41H (65)	
dd,, ee = data	00H-7FH (0-127)	
F7H	EOX (End of System Exclusive)	

For a detailed explanation, see **"Roland System Exclusive Messages**" (p. 59) and **"3. Exclusive Communications**" (p. 64).

MIDI Machine Control (MMC)

Status	Data	Status
F0H	7FH, 7FH, 06H, com	F7H

Byte	Description
F0H	System Exclusive Status
7FH	ID Number (Universal Realtime Message)
7FH	Device ID (Broadcast)
06H	Sub-ID#1 (Machine Control Command)
com	Sub-ID#2 (MMC Command)
F7H	EOX (End of System Exclusive)

* FC-300 can set the following MMC commands.

com	
01H	STOP
02H	PLAY
03H	DEFERRED PLAY
04H	FAST FORWARD
05H	REWIND
06H	RECORD STROBE
07H	RECORD EXIT
08H	RECORD PAUSE
09H	PAUSE

Does not transmit while in System Exclusive Mode.

3. Exclusive Communications

Using Roland's one-way System Exclusive message you can transfer data between FC-300 and another device.

You can use the following Model ID for the FC-300.

• 00H 00H 1EH (FC-300)

You can use System Exclusive messages to transmit and receive the FC-300's internal parameters in the form of bulk data.

• 00H 00H 20H (Foot Controller)

You can use System Exclusive messages to transmit and receive the FC-300's operational messages and display messages. The Device ID can be set within the 00H to 1FH range.

For more on setting the Device ID, see "**Setting the Device ID**" (p. 52).

Request Data 1 RQ1 (11H)

Byte	Description		
F0H	System Exclusive Status		
41H	Manufacturer ID (Roland)		
dev	Device ID (dev: 00H-0FH)		
mdl	Model ID (mdl: 00H 00H 1EH) FC-300 (mdl: 00H 00H 20H) Foot Controller		
11H	Command ID (RQ1)		
aaH	Address MSB		
bbH	Address LSB		
ssH	Size MSB		
ttH	Size LSB		
sum	Checksum		
F7H	EOX (End of System Exclusive)		

DATA SET 1 DT1 (12H)

Byte	Description
Бую	
F0H	System Exclusive Status
41H	Manufacturer ID (Roland)
dev	Device ID (dev: 00H-0FH)
mdl	Model ID
	(mdl: 00H 00H 1EH) FC-300
	(mdl: 00H 00H 20H) Foot Controller
12H	Command ID (DT1)
aaH	Address MSB
bbH	Address LSB
ddH	Data
:	:
eeH	Data
sum	Checksum
F7H	EOX (End of System Exclusive)

4. Parameter Address Map (Model ID = 00H 00H 20H)

There are two type of the FC-300 System Exclusive message. FC-300 can send and receive the operation of this unit and display information by using the system exclusive message.

Address Block Map

Address (H)	Block	Description
10 00	Mode Status	Read/Write
20 00	Pedal Status	Read
30 00	Pedal LED Status	Write
40 00	BANK/NUMBER Display Status	Write
50 00	Controller Status	Read/Write
60 00	Message Display Status	Write
68 00	Message Display User Font	Write
70 00	Tuner Display Status	Write
71 00	Tuner Pitch Status	Write

Mode Status (Individual area)

Address (H)	Size (H)	Data (H)	Parameter	Description
10 00	00 01	00-01	SYSEX Mode	0: Off, 1:On
			Status *1	
10 01	00 01	00-01	SYSEX Mode	0: Off, 1:On
			Status *2	
10 02	00 01	00-01	Function	0: Play, 1:TUNER
			Mode Status *3	-

*1 Outputs on power-up or when Mode change is made. Also outputs upon receiving Data Request (RQ1). Data Set (DT1) is ignored.

- *2 Mode Status is changed when Data Set (DT1) is received. Changes the System Exclusive Mode when On is received. MODE pedal is pressed same operation when Off is received in System Exclusive Mode.
- *3 Changes the display of LCD in System Exclusive Mode when Data Set (DT1) is received.

Appears the received data in Message Display Status Address when PLAY is received.

Appears the TUNER screen and received data in Tuner Pitch Status Address when TUNER is received. (FC-300 has not TUNER function.)

Outputs when Data Request (RQ1) is received.

Pedal Status (Individual area)

Address (H)	Size (H)	Data (H)	Parameter	Description
20 00	00 01	00/7F	Pedal 1/6 Status	OFF/ON
20 01	00 01	00/7F	Pedal 2/7 Status	OFF/ON
20 02	00 01	00/7F	Pedal 3/8 Status	OFF/ON
20 03	00 01	00/7F	Pedal 4/9 Status	OFF/ON
20 04	00 01	00/7F	Pedal 5/10 Status	OFF/ON
21 00	00 01	00/7F	CTL Pedal 1 Status	OFF/ON
21 01	00 01	00/7F	CTL Pedal 2 Status	OFF/ON
21 02	00 01	00/7F	CTL Pedal 4 Status	OFF/ON
21 03	00 01	00/7F	CTL Pedal 6 Status	OFF/ON
21 04	00 01	00/7F	CTL Pedal 8 Status	OFF/ON
22 00	00 01	00/7F	EXP Pedal SW 1	OFF/ON
			Status	
22 01	00 01	00/7F	EXP Pedal SW 2	OFF/ON
			Status	
	-	1	1	
24 00	00 01	00-7F	EXP Pedal 1 Status	0-127
24 01	00 01	00-7F	EXP Pedal 2 Status	0-127
24 02	00 01	00-7F	CTL3/EXP3 Pedal	0-127
			Status	
24 03	00 01	00-7F	CTL5/EXP4 Pedal	0-127
			Status	
24 04	00 01	00-7F	CTL7/EXP5 Pedal	0-127
			Status	
25.00	00.01	00 (77	UDD 110.	
25 00	00 01	00/7F	UP Pedal Status	OFF/ON
25 01	00 01	00/7F	DOWN Pedal Status	OFF/ON

- Outputs when pedal is operated while in the System Exclusive Mode.
- Also outputs Data Set (DT1) when Data Request (RQ1) is received.
- Data Set (DT1) is ignored.

LED Status (Individual area)

Address (H)	Size (H)	Data (H)	Parameter	Description
30 00	00 01	00/7F	Pedal 1/6 red LED	OFF/ON
			Status	
30 01	00 01	00/7F	Pedal 2/7 red LED	OFF/ON
			Status	
30 02	00 01	00/7F	Pedal 3/8 red LED	OFF/ON
			Status	
30 03	00 01	00/7F	Pedal 4/9 red LED	OFF/ON
			Status	
30 04	00 01	00/7F	Pedal 5/10 red LED	OFF/ON
			Status	
30 05	00 01	00/7F	Pedal 1/6 green LED	OFF/ON
			Status	
30 06	00 01	00/7F	Pedal 2/7 green LED	OFF/ON
			Status	
30 07	00 01	00/7F	Pedal 3/8 green LED	OFF/ON
			Status	
30 08	00 01	00/7F	Pedal 4/9 green LED	OFF/ON
			Status	
30 09	00 01	00/7F	Pedal 5/10 green	OFF/ON
			LED Status	
31 00	00 01	00/7F	CTL Pedal 1 LED	OFF/ON
			Status	
31 01	00 01	00/7F	CTL Pedal 2 LED	OFF/ON
			Status	
32 00	00 01	00/7F	EXP Pedal SW 1 LED	OFF/ON
			Status	
32 01	00 01	00/7F	EXP Pedal SW 2 LED	OFF/ON
			Status	
35 00	00 01	00/7F	UP Pedal LED Status	OFF/ON
35 01	00 01	00/7F	DOWN Pedal LED	OFF/ON
			Status	

- Receives Data Set (DT1) in all mode, changes the LED status of each pedal only in the System Exclusive Mode.
- Data Request (RQ1) is ignored.

BANK/NUMBER Display Status (Individual area)

Address (H)	Size (H)	Data (H)	Parameter	Description
40 00	00 02	0abcdefg, 0000000h	Right	
40 02	00 02	0abcdefg <i>,</i> 0000000h	Center	a <mark>e_</mark> c
40 04	00 02	0abcdefg, 0000000h	Left	fljb g^h

[•] Receives Data Set (DT1) in all mode, changes the BANK/ NUMBER display status only in the System Exclusive Mode.

- Each bit represents ON/OFF of corresponding display segment. Bit "0" = OFF; "1" = ON
- Data Request (RQ1) is ignored.

Controller Status (Individual area)

Address (H)	Size (H)	Data (H)	Parameter	Description
50 00	00 01	00/7F	AMP CON-	OFF/ON
			TROL 1 Status	
50 01	00 01	00/7F	AMP CON-	OFF/ON
			TROL 2 Status	

- Receives Data Set (DT1) in all mode.
- Changes status of AMP CONTROL jack when Data Set (DT1) is received.
- Outputs when Data Request (RQ1) is received.

Message Display Status (Individual area)

Address (H)	Size (H)	Data (H)	Parameter	Description
60 00	00 10	00-07,	Line 0	00-07: User Font
		20-7D	Column 0 data	20-7D: ASCII
:		:	:	characters
60 0F		00-07,	Line 0	
		20-7D	Column 15	
			data	
64 00	00 10	00-07,	Line 1	
		20-7D	Column 0 data	
:		:	:	
64 0F		00-07,	Line 1	
		20-7D	Column 15	
			data	

- Receives Data Set (DT1) in all mode.
- Outputs when Data Request (RQ1) is received.

Message Display User Font (Individual area)

Address (H)	Size (H)	Data (H)	Parameter	Description
68 00	00 08	00-1F	User Font 1	*1
			Line 0 data	
:		:	:	
68 07	1	00-1F	User Font 1	
			Line 7 data	
68 08	00 08	00-1F	User Font 2	
			Line 0 data	
:	:	:	:	
68 38	00 08	00-1F	User Font 8	1
			Line 7 data	

- Receives Data Set (DT1) in all mode, changes the user font of the LCD only in the System Exclusive Mode.
- Data Request (RQ1) is ignored.
- *1 The bitmap data of the user font following displayed in LCD.

Parameter	Data	
User Font line0 data	000xxxxx	
User Font line1 data	000xxxxx	
User Font line2 data	000xxxxx	
User Font line3 data	000xxxxx	
User Font line4 data	000xxxxx	
User Font line5 data	000xxxxx	
User Font line6 data	000xxxxx	
User Font line7 data	000xxxxx	

Tuner Display Status (Individual area)

Address (H)	Size (H)	Data (H)	Parameter	Description
70 01	00 01	00/7F	C#/D [↓] Display Status	C#/D [↓]
70 02	00 01	00/7F	D#/E ^b Display Status	D#/E
70 03	00 01	00/7F	F#/G [♭] Display Status	F#/G ^b
70 04	00 01	00/7F	G#∕A [↓] Display Status	G#/A [↓]
70 05	00 01	00/7F	A#/B [♭] Display Status	A#/B [♭]

- Receives Data Set (DT1) in all mode, changes the display of the LCD when only Function Mode Status is TUNER.
- Data Request (RQ1) is ignored.

Tuner Pitch Status (Individual area)

Address (H)	Size (H)	Data (H)	Parameter	Description
71 00	00 01	00, 01-06	String	00: OFF
			Number	01: 1-6
71 01	00 01	00, 01-0D	Tuner Note	00: No Signal
			Status	01: C, 02: C#
				03: D, 04: D#
				05: E, 06: F
				07: F#, 08: G
				09: G#, 0A: A
				0B: A#, 0C: B
71 02	00 01	00,	Tuner Cent	00: No Signal
		01–40–7F	Status	01: -50
				40:0
				7F: 50

- Receives Data Set (DT1) when only Function Mode Status is TUNER.
- Changes the display of the LCD when Data Set (DT1) is received.
- Data Request (RQ1) is ignored.

MIDI Implementation

MIDI FOOT CONTROLLER

Date : Apr. 1, 2007

Model FC-300	ONTROLLER	MIDI Impl	ement	tation Chart	Date : Apr. 1, 200 Version : 1.0
	Function	Transmitted		Recognized	Remarks
Basic Channel	Default Changed	1–16 1–16	*1 *1	x x	Memorized
Mode	Default Messages Altered	X X ******		x x	
Note Number	True Voice	0–127 ******	*3	x x	
Velocity	Note ON Note OFF	o 9n v=1–127 o 8n v=0–127	*3 *3	x x	
After Touch	Key's Ch's	o 0–127 o 1–16	*3 *1	x x	
Pitch Bend		0	*1	x	
Control Change	0, 32 1 - 31 33 - 95	0 0 0	*2 *1 *1	x x x	Bank Select
Program Change	True #	0 *****	*2	x x	Program Number 1 – 128
System Excl	usive	0		0	
Common	Song Position Song Select Tune Request	x x x		x x x	
System Realtime	Clock Commands	x o	*1	x x	
AUX Messages Re	Local ON/OFF All Notes OFF All Sound OFF eset All Controller Active Sense System Reset	X X X X O X		x x x x o x	
Notes		*1 Does not transmit wh *2 Transmits while in St *3 Transmits while in Pa	andard Mod		

Mode 1: OMNI ON, POLY Mode 3: OMNI OFF, POLY Mode 2: OMNI ON, MONO Mode 4: OMNI OFF, MONO o: Yes x: No

FC-300 : MIDI FOOT CONTROLLER

Connectors	MIDI connectors (IN, OUT)				
Connectors	MODE jack				
	EXP PEDAL/CTL jack (3/3,4 4/5,6 5/7,8)				
	AMP CONTROL jack (1, 2)				
	RRC2 OUT connector				
	DC IN jack				
Controls	Number pedals 1/6–5/10				
	[▼][▲]pedals				
	CTL pedals (1, 2)				
	EXP PEDAL (1, 2)				
	PARAMETER [\triangleleft] [\blacktriangleright] button				
	VALUE [🕶] [🔺] button				
	UTILITY button				
	MODE button				
	EXIT button				
	WRITE button				
	POWER switch				
Display	BANK/NUMBER display (7 segments w/ dots, 3 characters LED)				
	LCD (16 characters x 2 lines with backlit)				
Indicators	MODE indicators (STANDARD, CONTROL, SYS EX, PATCH)				
	UTILITY button indicator				
	WRITE button indicator				
	Number pedal indicators $1/6-5/10$ (When the number pedal 1-5 is selected, the indicator lights in red.				
	When the number pedal 6-10 is selected, the indicator lights in green.)				
	[▼][▲] pedal indicators				
	CTL pedal indicators (1, 2)				
	EXP PEDAL indicators (1, 2)				
Number of Patches	100				
(Patch Mode)					
Power Supply	9 V DC: Dry battery (AA) type x 6				
	AC Adaptor (BOSS PSA series; sold separately)				
	RRC2 (Supplied from RRC2 IN device)				
Current Draw	94 mA (When Economy Mode is OFF.)				
	61 mA (When Economy Mode is ON.)				
Expected battery	6.5 hours or longer (When Economy Mode is OFF)				
life under continu-	12 hours or longer (When Economy Mode is ON)				
ous use (Carbon):	* These figures will vary depending on the actual conditions of use.				
Dimensions	550 (W) x 250 (D) x 76 (H) mm				
	21-11/16 (W) x 9-7/8 (D) x 3 (H) inches				
Weight	5.3 kg / 11 lbs 11 oz (including batteries)				
Accessories	Owner's Manual				
	Dry battery R6 (AA) type (carbon) x 6				
	Dry battery R6 (AA) type (carbon) x 6 Roland Service				
Options					
Options	Roland Service				

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

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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.

-For EU Countries -

This product complies with the requirements of European Directive 89/336/EEC.

-For the USA -

For the U.K.

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 underived approximately accepted and the second s

(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.

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