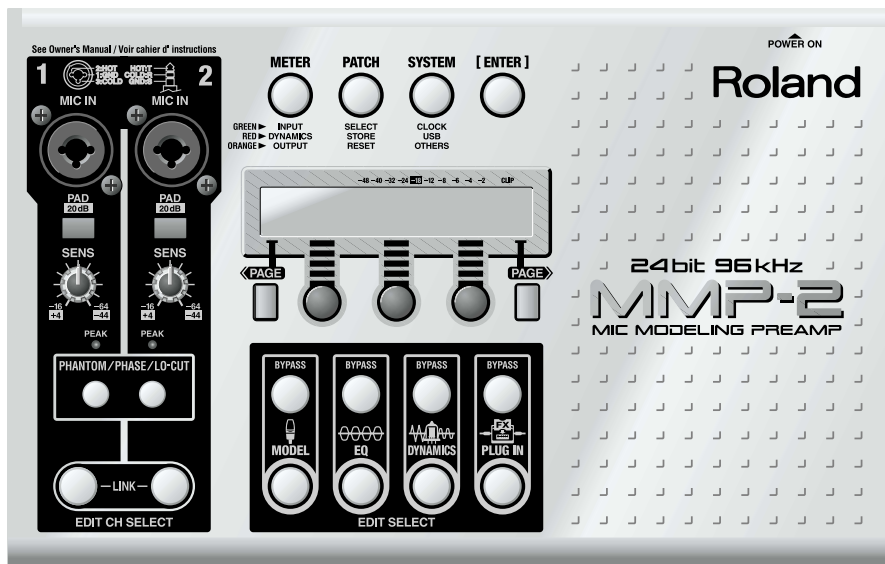


24bit 96kHz **MMP-2** MIC MODELING PREAMP

Owner's manual



Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" (p. 2), and "IMPORTANT NOTES" (p. 6). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, Owner's manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.

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USING THE UNIT SAFELY

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

About  WARNING and  CAUTION Notices







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

About the Symbols








	The  symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
	The  symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled.
	The  symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet.

ALWAYS OBSERVE THE FOLLOWING


WARNING


- Before using this unit, make sure to read the instructions below, and the Owner's Manual. 
- Do not open or perform any internal modifications on the unit. 
- 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 heat-generating equipment); or are 
 - Damp (e.g., baths, washrooms, on wet floors); or are 
 - Humid; or are
 - Exposed to rain; or are
 - Dusty; or are
 - Subject to high levels of vibration.
- Make sure you always have the unit placed so it is level and sure to remain stable. Never place it on stands that could wobble, or on inclined surfaces. 


WARNING


- The unit should be connected to a power supply only of the type described in the operating instructions, or as marked on the unit. 
- Use only the attached power-supply cord. 
- Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards! 
- This unit, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the unit, and consult an audiologist. 
- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit. 

- 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. 

⚠ WARNING


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


- Do not force the unit's power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through. 


- Before using the unit in a foreign country, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page. 


- DO NOT play a CD-ROM disc on a conventional audio CD player. The resulting sound may be of a level that could cause permanent hearing loss. Damage to speakers or other system components may result. 


⚠ CAUTION


- The unit should be located so that its location or position does not interfere with its proper ventilation. 


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


- 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 power cord or its plugs with wet hands when plugging into, or unplugging from, an outlet or this unit. 

- Before moving the unit, disconnect the power plug from the outlet, and pull out all cords from external devices. 

- Before cleaning the unit, turn off the power and unplug the power cord from the outlet (p. 18). 

- Whenever you suspect the possibility of lightning in your area, pull the plug on the power cord out of the outlet. 

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IMPORTANT NOTES

In addition to the items listed under “USING THE UNIT SAFELY” (p. 2), please read and observe the following:

Power Supply

- Do not use this unit on the same power circuit with any device that will generate line noise (such as an electric motor or variable lighting system).
- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- Noise may be produced if wireless communications devices, such as cell phones, are operated in the vicinity of this unit. Such noise could occur when receiving or initiating a call, or while conversing. Should you experience such problems, you should relocate such wireless devices so they are at a greater distance from this unit, or switch them off.
- To avoid possible breakdown, do not use the unit in a wet area, such as an area exposed to rain or other moisture.

Maintenance

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

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

Additional Precautions

- Please be aware that the contents of memory can be irretrievably lost as a result of a malfunction, or the improper operation of the unit. To protect yourself against the risk of losing important data, we recommend that you periodically save a backup copy of important data you have stored in the unit's memory on a storage device (e.g., hard disk or floppy disk).
- Unfortunately, it may be impossible to restore the contents of data that was stored on a storage device 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.
- A small amount of heat will radiate from the unit during normal operation.
- To avoid disturbing your neighbors, try to keep the unit's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially when it is late at night).
- When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.

- Use a cable from Roland to make the connection. If using some other make of connection cable, please note the following precautions.
 - Some connection cables contain resistors. Do not use cables that incorporate resistors for connecting to this unit. The use of such cables can cause the sound level to be extremely low, or impossible to hear. For information on cable specifications, contact the manufacturer of the cable.
- Before you open the included CD-ROM, you must read the “license agreement.” Opening the CD-ROM will be taken to mean your acceptance of the license agreement.

Handling CD-ROMs

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

Copyright

- When exchanging audio signals through a digital connection with an external instrument, this unit can perform recording without being subject to the restrictions of the Serial Copy Management System (SCMS). This is because the unit is intended solely for musical production, and is designed not to be subject to restrictions as long as it is used to record works (such as your own compositions) that do not infringe on the copyrights of others. (SCMS is a feature that prohibits second-generation and later copying through a digital connection. It is built into MD recorders and other consumer digital-audio equipment as a copyright-protection feature.)
- Do not use this unit for purposes that could infringe on a copyright held by a third party. We assume no responsibility whatsoever with regard to any infringements of third-party copyrights arising through your use of this unit.

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Getting Started

Checking the Included Items

This product includes the following items in addition to the MMP-2 itself. Check to make sure they are all present and accounted for. If anything is missing, contact the retailer from whom you purchased the product.

- Owner's manual (this document)
- CD-ROM (setup procedures, drivers, editors, etc.)
- Power cable
- USB cable

Main Features

The MMP-2 is a microphone pre-amp that delivers high sound quality and is equipped with a large number of functions, offering the following features:

Full Range of Input and Output Connectors and Pre-amps

The unit is equipped with two channels of XLR/1/4" phone jacks for balanced analog inputs. It supports a wide range of input sensitivities, from line level (+4 dBu) to microphone level (-64 dBu). Features such as phantom power and low-band cutoff are also provided. The unit provides not only balanced-XLR analog output, but also digital output. It is most definitely ready to play an active role in a variety of environments, including any place that uses a public-address system, or any recording studio.

Designed with Emphasis on Sound Quality

The design of the MMP-2's analog circuitry is actually a direct descendent of the design responsible for the high-quality sound of the VS-2480 Digital Studio Workstation. A separate shielded structure is employed for the vital heart of the amp circuitry, and only carefully selected parts are used. These exacting considerations result in the achievement of professional-spec sound.

Mic Modeling

Using Microphone Modeling you can process your input audio so that it models the characteristics of audio from a variety of high quality microphones. Microphone modeling of even greater fidelity is achieved through use of the best-selling C 3000 B microphone from AKG Acoustics as the source microphone for your input.

A Wide Variety of Input Processing

The MMP-2's four-band parametric equalizer has powerful specifications. The stereo 4 band parametric equalizers can also be configured from 9 different choices including band-pass filters, and shelving equalizers. The MMP-2 also features a full range of dynamics processing including, models of vacuum-tube compressors.

USB-MIDI Interface

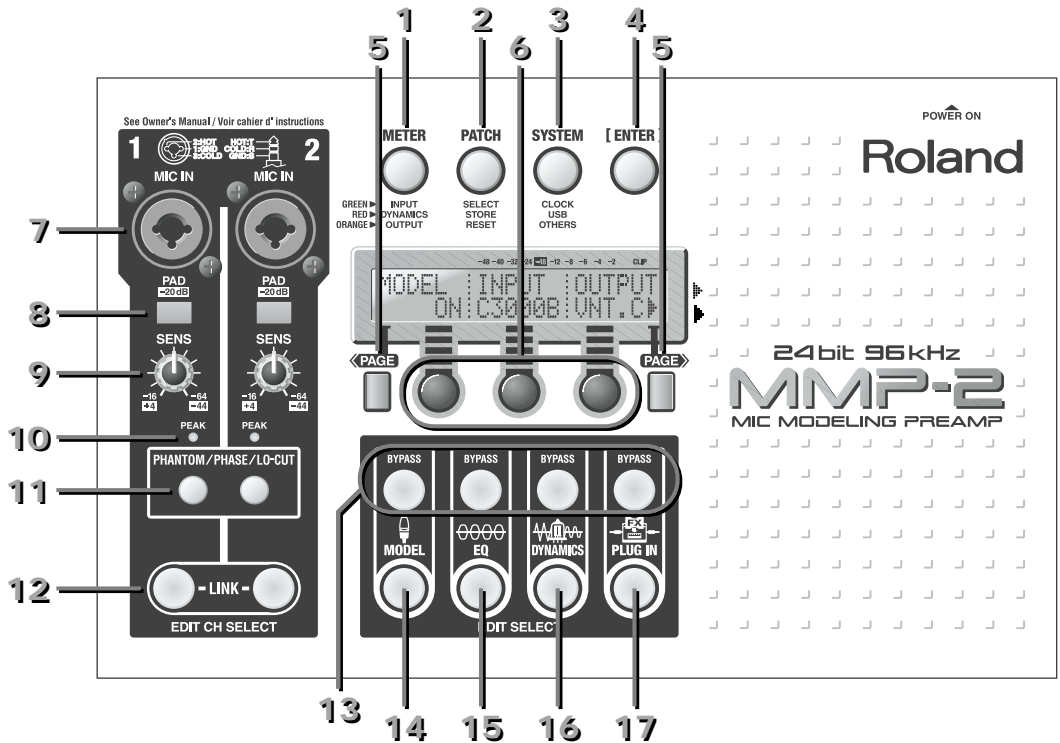
Connection to a computer can be made easily using a USB cable, and you can intuitively monitor and modify the state of the equalizer and dynamics using the included editor program for Mac and PC.

You can use the MMP-2 for a wide variety of applications such as:

- When you want to convert signals to digital at an early stage, because leaving them in analog makes them prone to noise.
- When you want to route your signals through a high-quality pre-amp before inputting them to a mixer or recorder.
- When you want to alter the response of a microphone or pre-amp.

Top and Rear Panels

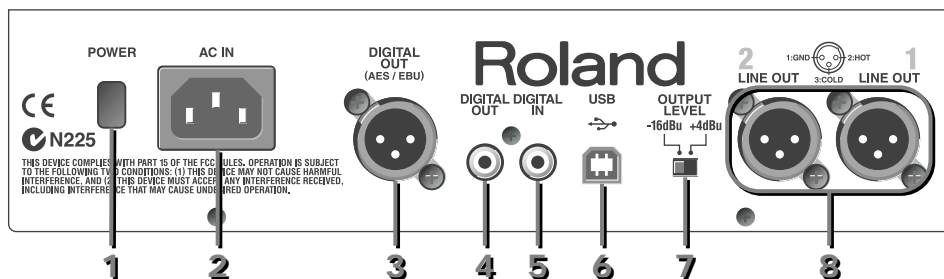
Top Panel



- 1. [METER] Button**
This changes the meter display. (p. 16)
- 2. [PATCH] Button**
This performs Select, Store, and Reset operations for patches. (p. 14)
- 3. [SYSTEM] Button**
This accesses Clock, USB, and other functions. ("Sampling Clock Source" (p. 26), "MMP-2 settings" (p. 30))
You can also adjust the contrast of the LCD screen by holding down [SYSTEM] and turning the right Value control. (p. 14)
- 4. [ENTER] Button**
This confirms operations.
You also use this when you want to save a change right away. ("Save pressing [ENTER] button" (p. 14))
- 5. [PAGE] Buttons**
These scroll the screen a page at a time.
- 6. Value Controls**
These edit parameter values. The items shown on the display correspond to the controls below the screen.
These are the left, center, and right Value controls.
- 7. [MIC IN] Jacks**
These are balanced XLR/phone input jacks. (p. 13)
- 8. [PAD] Switches**
Pressing one of these attenuates the signal input to the corresponding MIC IN jack by 20 dB. (p. 17)
- 9. [SENS] Controls**

- These adjust the [MIC IN] sensitivity. (p. 17)
10. [PEAK] Indicators
These light up when the input level exceeds the set value. (p. 17)
 11. [PHANTOM/PHASE/LO-CUT] Buttons
These call up the Phantom power switches, plus the Phase, Lo-cut, and Attenuator setting screens. (p. 17)
 12. [EDIT CH SELECT] Buttons
These specify the channels to manipulate. Pressing them simultaneously links the effect settings for both channels. ("Linking" (p. 28)).
 13. [BYPASS] Buttons
These bypass effects temporarily. (p. 19)
 14. [EDIT SELECT] Buttons ([MODEL] Button)
This calls up the editing screen for microphone modeling. (p. 19)
 15. [EDIT SELECT] Buttons ([EQ] Button)
This calls up the parameter screen for the equalizer. (p. 20)
 16. [EDIT SELECT] Buttons ([DYNAMICS] Button)
This calls up the parameter screen for dynamic effects. (p. 21)
 17. [EDIT SELECT] Buttons ([PLUG IN] Button)
This calls up the editing screen for plug-in effects. (p. 24)

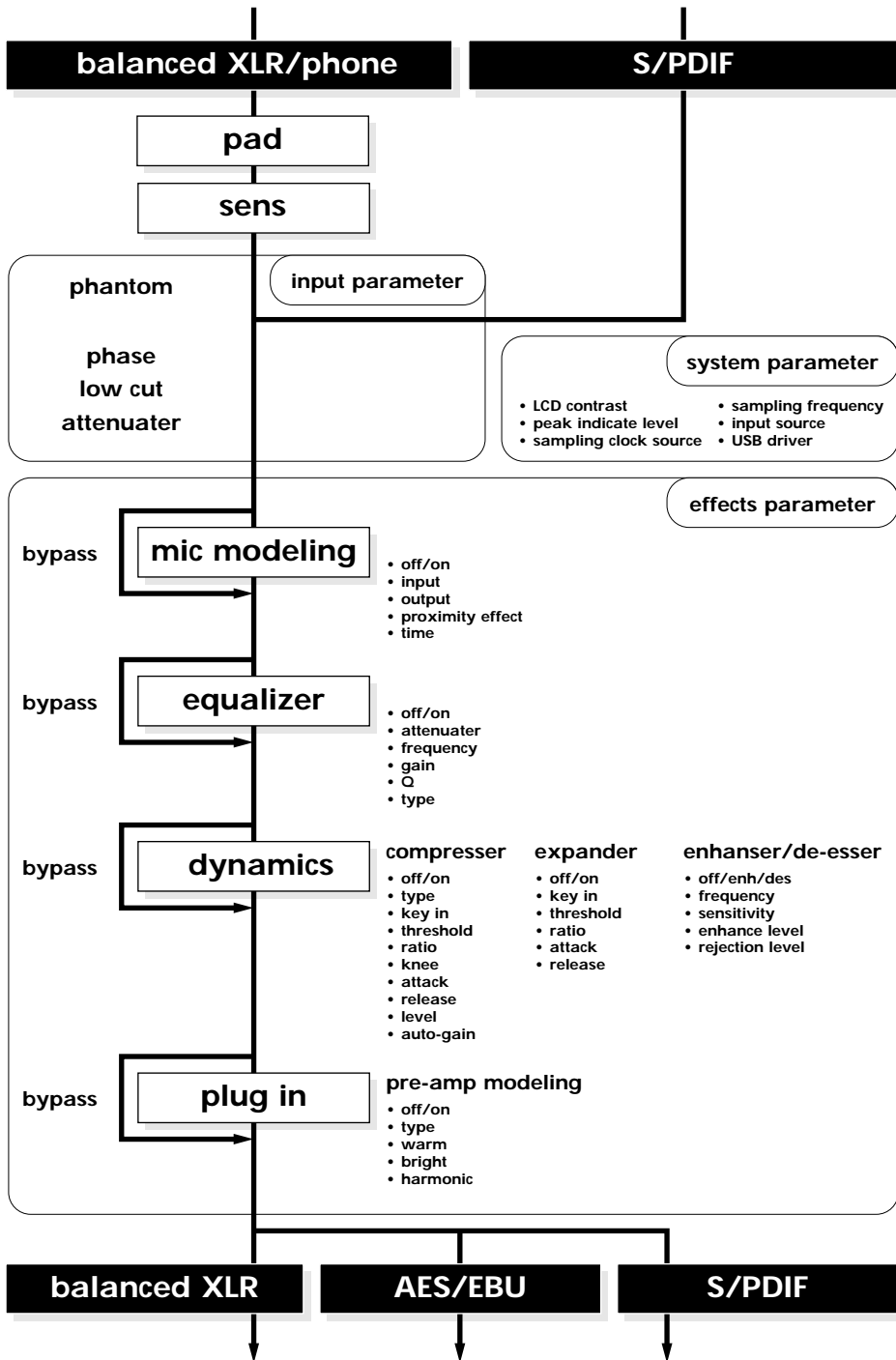
Rear Panel



1. [POWER] Switch
This switches the power on and off. (p. 13)
2. [AC IN] Connector
This is for connecting the power cable. (p. 12)
3. [DIGITAL OUT AES/EBU] Jack
This is an AES/EBU-standard digital-output jack.
4. [DIGITAL OUT] Jack
This is an S/PDIF-standard digital-output jack.
5. [DIGITAL IN] Jack
This is an S/PDIF-standard digital-input jack.
6. [USB] Jack
This is for connecting a computer and exchanging parameter settings using MIDI protocol. (p. 30)
7. [OUTPUT LEVEL] Switch
This switches the output level to either -16 dBu or +4 dBu. (p. 13)
8. [LINE OUT] Jack
This is a balanced XLR-type line-output jack. (p. 13)

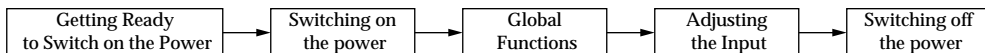
Function Organization and Signal Flow

The diagram below shows how the functions are organized, and how the signals flow.



Set Up and Basic Operations

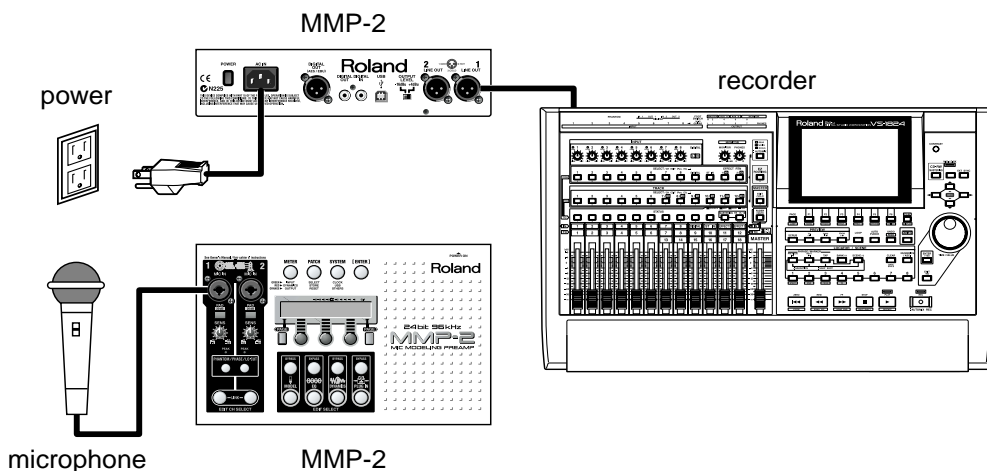
This chapter introduces the basic functions of the MMP-2 in the following order, which you should follow in getting started with your new unit.



Read through this in sequence as you try things out for yourself.

Getting Ready to Switch on the Power

■ Making the Connections



Refer to the figures and the following explanation to connect the equipment you're using.



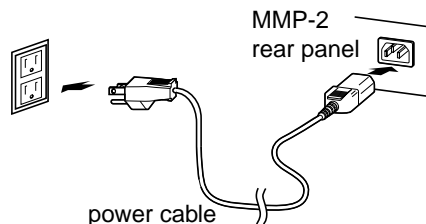
For information about digital connections, please read "Settings for Digital Connections" (p. 26).



To prevent problems, including malfunction and damage to speakers, turn the volume down completely and turn off the power for all the devices being connected before making the connections.

Connecting the Power Source

Use the included power cable to connect the unit with a power source.



Connecting the Input Device

Microphone Input (MIC IN)

Use the XLR or phone plug to connect the input device.

* Microphone input for the unit uses a balanced-type (XLR/TRS) jack which is wired as shown in the figure. Check the wiring of the device you want to connect and make the connection.



Depending on the specifications of the input device, the phase of the sound may be inverted, resulting in input that is not correct. If this happens, refer to “Phase” (p. 18).



If you're connecting a microphone that requires a phantom power source, refer to “Phantom Power (+48V)” (p. 17).
Phantom power is not supplied to phone jacks.

Connecting the Output Equipment

Line Output (LINE OUT)

Use an XLR-type plug to make the connection for output to a mixer, recorder, or the like.

Setting the Output Level

Select level switching [OUTPUT LEVEL] on rear panel. Level should be selected in accordance with output destination device. This value serves as the reference for the output level.



Generally, commercial equipment is designed for +4 dBu, while consumer equipment is designed for -16 dBu.

Turning On the Power



Once you've got everything hooked up properly, you can turn on the power—but make sure to follow the order shown below. Should you neglect to follow the correct order, you risk causing malfunction, or damage to your speakers.

* To protect its circuitry, the unit requires a few moments after power is switched on before it is ready for normal operation.

1. Make sure all devices are turned off.
2. Make sure the volume level on all equipment is turned down.
3. Press the Power switch (POWER) on the rear panel. When the unit starts normally, the display shows the model name, then changes to the Patch-selection screen. (If you perform no operation after that, the screen then changes to the input meter.)
4. Turn on the other audio equipment.
5. Turn up the volume to an appropriate level on the other audio equipment.
 - Now sound can be produced.



For information on how to turn off the power, please read “Turning Off the Power” (p. 18).



The positioning of the microphone and speakers may produce feedback whine. If this happens, try using the methods below to correct the problem.

- Change the direction of the microphone.
- Move the microphone and speakers farther apart.
- Lower the volume level.

Global Functions

In this manual, parameter settings are grouped into three categories with the following names.

System Parameters

These manipulate global settings for the entire MMP-2: CLOCK, FREQ, INPUT, DRIVER, LCDCNT, and PEAK.

Input Parameters

These manipulate basic settings for the microphone pre-amp: PHANTOM, PHASE, LO-CUT, and ATT.

Effect Parameters

These manipulate settings for microphone modeling, the equalizer, and the like: all of the settings are called up using the [EDIT SELECT] buttons MODEL, EQ, DYNAMICS, and PLUG IN.

Save pressing [ENTER] button

When you change system parameters or input parameters, the [ENTER] button lights up. This indicates that there are changes that have not been saved. Pressing the [ENTER] button saves them immediately. Settings are also saved automatically whenever you change to another screen.

** If you turn off the power without saving first, any changes you have made disappear and are no longer applied.*

■ Adjusting the Contrast of the LCD Screen (LCDCNT)

1. Press the [SYSTEM] button a number of times, until it lights in orange.
2. If the screen doesn't show the letters "LCDCNT", use the [PAGE] buttons to scroll to the correct page. The setting screen for LCD screen contrast appears.
3. Turn the left Value control to make adjustments.

```
LCDCNT: PEAK | ROUTE
8: -3dB: NORM▶
```



You can also adjust this by holding down the [SYSTEM] button and turning the right Value control.

■ Patches

You can call up and use any of a variety of grouped settings (Patches) suited to different uses and environments that are stored in memory. You can also take settings you've made yourself and save them as patches. Settings for the presence or absence of links and effect parameters can also be saved as patches. ("Linking" (p. 28)).

When you turn on the power, the patch you used before turning off is called up.

The functional algorithms are pre-set according to the types of patches. Each patch includes the setting of algorithms. Users cannot control such algorithms. The [EDIT SELECT] button of each effect lights to show that the effect is available in this patch.

Operation of patch shall be like below.

1. Select original patch ("Patch Selection (SELECT)" (p. 15))
2. Customize the patch changing Effect or Link parameters ("Using Effects" (p. 19)/ "Linking" (p. 28))
3. Save the customized status as a new patch or overwrite ("Saving a Patch (STORE PATCH)" (p. 15))

Patch Selection (SELECT)

The alphabet character shown upper left side of the patch number is showing the status of patch. (U) to be indicated if it is a user patch. (P) to be indicated if it is a preset patch.

You cannot customize the preset patch. But it is possible to customize the parameter of preset patch and save as a new user patch.

1. Press the [PATCH] button a number of times, until it lights in green. You are now in the mode where you can choose a patch.
2. Turn the left Value control to choose a patch.
3. Press the [ENTER] button to confirm your selection.

```
U001 SELECT [ENTER]
U002 Jazz Vocal
```

The patch currently selected will be shown at first in patch selection screen. If you turn around the knob, the status changes and let you select other patch. You will see the currently selected patch while turning around the knob. This to show the patch in saved status.

For example, once you select patch A and customize parameters, it is different from saved status of patch A. However, it isn't saved yet. If you turn around the knob and re-select patch A, the parameter before your customize will be shown.

Saving a Patch (STORE PATCH)

Save current status as a new user patch

- * The patch stored in the memory area disappears and to be replaced by newly created patch.
- * Only the user patch area will be shown as memory area.

1. Press the [PATCH] button a number of times, until it lights in red. You are now in the mode where you can choose the destination for saving.

```
STORE PATCH [ENTER]
+ U01 Jazz Vocal
```

2. Turn the left Value control to choose the patch to serve as the destination for saving.
3. Use the center Value control to move the cursor, and use the right Value control to choose characters. Repeat this to enter the patch name.
4. Press [ENTER]. Your confirmation will be requested.

```
STORE PATCH [ENTER]
U05 Jazz Vocal 2 OK?
```

5. Re-press [ENTER]. The patch will be saved. Once the saving procedure is completed, system go back to normal screen after indicating [Completed] on screen.

```
Completed.
```

Resetting Effect Parameters (RESET)

This resets the effect parameter to the values shown below. This is the status with almost no effect. If you want to set effect parameter completely from zero, this shall be executed. You can apply this to all effects or to just one.

1. Press the [PATCH] button several times to display "RESET PATCH." The button lights up in orange.

```
RESET PATCH [ENTER]
ALL
```

2. Use the left Value control to choose the target effect or effects for the [RESET] operation. Choosing "ALL" resets all effects.

3. Press [ENTER]. Your confirmation will be requested.

```
RESET PATCH [ENTER]
ALL OK?
```

4. Re-press [ENTER]. Reset will be executed. Once the reset is completed, system go back to normal screen after indicating "Completed." on screen.

Completed.

Effect	Parameter	Value	Effect	Parameter	Value		
mic modeling	MODEL	OFF	compressor	COMP	OFF		
	INPUT	C3000B		TYPE	SOLID		
	OUTPUT	SML.D		KEYIN	same channel		
	PROAFX	0		THRESH	-24.0		
	TIME	0		RATIO	2.00:1		
equalizer	EQ	ON		KNEE	HARD		
	ATT	0		ATTACK	10.0		
	LOW	LOTYPE		PEAK	RELEAS	500	
		LOW		80	LEVEL	0.0	
		GAIN		0.0	A.GAIN	OFF	
		Q	2.00	expander	EXP	OFF	
	LO-MID	LMTYPE	PEAK		KEYIN	same channel	
		LO-MID	400		THRESH	-40	
		GAIN	0.0		RATIO	2.00:1	
		Q	2.00		ATTACK	0.0	
	HI-MID	HMTYPE	PEAK		RELEAS	500	
		HI-MID	2.00k		enhancer/de-esser	ENH/DE	OFF
		GAIN	0.0			TYPE	ENH
		Q	2.00			ENH	SENS
	HIGH	HITYPE	PEAK				FREQ
HIGH		10.0k	ENHLEV	6.0			
GAIN		0.0	DES	SENS			25
Q		2.00		FREQ		10.0k	
		DESREJ		-6.0			

■ Meters

Press the [METER] button to select from the three types of level meters.

Input (IN)

This displays the input level. The [METER] button lights up in green.

```
IN 1:oooooooooooo o
IN 2:oooooooooooo o
```

Dynamics (CMP / EXP)

This displays the level suppressed by the dynamics processors (gain reduction).

The [METER] button lights up in red.

Pressing the [PAGE] buttons switches what is displayed between the compressor and the expander.

```
CMP 1:oooooooooooo
CMP 2:oooooooooooo ▶
```

Output (OUT)

This displays the output level. The [METER] button lights up in orange.

```
OUT 1:oooooooooooo o
OUT 2:oooooooooooo o
```

■ Edit Channel Select (EDIT CH SELECT)

These choose the channel to edit. Pressing an [EDIT CH SELECT] button makes the button light up green, showing that the corresponding channel is selected. You make the settings for effects one channel at a time. The system enters Link Mode pressing channel 2 button holding down channel 1 button. ("Linking" (p. 28))

Settings for the Analog Inputs

■ Pad

Pressing either of these switches attenuates the MIC IN input signal by 20 dB. You use these at times such as when devices other than microphones are connected. Press them again to cancel.

■ Sensitivity (SENS)

These adjust the input sensitivity. You can perform adjustments within a range of -64 dBu to -16 dBu (within a range of -44 dBu to +4 dBu when PAD is depressed).



When a microphone input has nothing connected to it, it may be a good idea to press the PAD switch and leave the SENS control set at +4 dBu. This suppresses the amount of noise sent to the unit.

■ Peak Indicator

The peak indicator lights up when the input level from microphone input jacks exceeds the value set for PEAK. At the factory default setting, it lights up at -3 dBu. To change this, follow the steps below.

1. Press the [SYSTEM] button several times to display "PEAK." The button lights up in orange.

```
LCDCNT: PEAK  : ROUTE
      8:  -3dB:  NORM▶
```

2. Turn the center Value control to change the settings.
 - "0 dB": The indicator lights up when the input sound is distorted.
 - "-3 dB": The indicator Lights up at -3 dB from the level at which sound will distort.
 - "-6 dB": Lights up at -6 dB from the sound-distortion level.

■ Phantom Power (+48V)

These switch the phantom power supply on and off. When a condenser microphone or other microphone that requires a power source is connected to the corresponding MIC IN jack, set this to "ON."



Phantom power is not supplied to 1/4 inch TRS phone jacks. If your microphone requires phantom power, please connect it to XLR jacks.



Turn this on only when a condenser microphone requiring a phantom power source is connected. Otherwise, leave it off. Supplying phantom power to a dynamic microphone or audio playback equipment may cause malfunction, so carefully check the documentation for the connected device and make the setting accordingly. (The spec for the phantom power source for this unit is DC 48 V and 7 mA when the output is shorted.)

The phantom power source of MMP-2 can drive Condenser Microphones with electrical specification 6.0mA or lower at 48V. Microphones that require more ampere is not supported. Please use phantom power supply devices separately.



To prevent hazard or damage, ensure that only microphone cables and microphones designed to IEC-268-15A are connected.

French language
for Canadian Safety Standard



Afin d'éviter tout risque ou dommage, ne brancher que des cables de microphone et des microphones conformes a la norme IEC-268-15A.

* The unit is designed not to produce noise when switching the phantom setting, but just to be on the safe side, turn down the volume level before switching the setting.

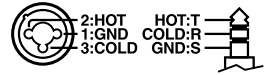
1. Press the [PHANTOM,PHASE,LO-CUT] button to display "+48V."
2. Use the left Value control to switch between "ON" and "OFF."
3. Press the [ENTER] button to confirm your selection.

```
+48V  : PHASE  : LO-CUT
      OFF:  NORM:  THRU▶
```

■ Phase



The microphone input jacks for this unit are balanced. The jack wiring is shown in the figure. However, Hot and Cold may be reversed of MMP-2 on some balanced equipment. If such equipment is connected, sound localization may be poor, or the balance of left and right will be disrupted. Furthermore, the left and right channels may cancel each other when stereo input is used. The phase shall be set same as MMP-2 in all channels before the use.



* If the phase is same through out all channels, it causes no problem even in case the wiring is different from mixers etc.

1. Press the [PHANTOM,PHASE,LO-CUT] button.
2. Turn the center Value control to switch “PHASE” between “NORM” and “INV.”

```
+48V | PHASE | LO-CUT
OFF | NORM | THRU▶
```

“NORM” (normal): Normal phase (same phase as input).

“INV” (invert): Inverted (opposite) phase.

* Usually “NORM” is selected.

■ Low-cut Filter (LO-CUT)

This cuts the audio below a specified frequency. This is effective when you want to eliminate bass noise such as microphone stand rumble or microphone handling noise. You can set a value from 20 dB to 2.00k dB.

1. Press the [PHANTOM,PHASE,LO-CUT] button.
2. Turn the right Value control to specify the threshold frequency for cutoff. When set to “THRU,” the original signal is passed without performing low-band cutoff.

```
+48V | PHASE | LO-CUT
OFF | NORM | THRU▶
```

■ Attenuator (ATT)

This adjusts the level of the input signal using digital processing. You can set a value from -42 dB to +6 dB.

1. Press the [PHANTOM,PHASE,LO-CUT] button.
2. Press the [PAGE] buttons to advance the screen until “ATT” appears.
3. Turn the left Value control to set the value.

```
ATT | | |
-4 | 0 | |
```



Leaving the attenuator set at 0 dB and adjusting for the optimal audio levels using only the Sensitivity (SENS) control may result in the best possible audio in most cases.

Turning Off the Power

* If you've changed any effect parameters, you should note that your changes will be lost if you turn off the power before they've been saved. If you want to keep your settings, save them in a patch (p. 15).

* Similarly, with system parameters, any setting changes you've made, but have not saved will be discarded as soon as you turn off the power. If you want to keep your settings, press the [ENTER] button to save them (p. 14).

1. Lower the volume on the other audio equipment.
2. Turn off the other audio equipment.
3. Use the [POWER] switch on the rear panel to turn off the MMP-2.

Using Effects

The effects this unit provides are divided into four groups, which are respectively assigned to the four [EDIT SELECT] buttons [MODEL], [EQ], [DYNAMICS], and [PLUG IN].

The functional algorithms are pre-set according to the types of patches (p. 14). Each patch includes the setting of algorithms. Users cannot control such algorithms. The [EDIT SELECT] button of each effect lights to show that the effect is available in this patch.

If you press [EDIT SELECT] buttons of effects that are not functioning, "Can't edit. No effects module." will be displayed.

The steps for effect operations are as follows.

1. Press the [EDIT CH SELECT] button to select the channel you want to work on.
2. Press the [EDIT SELECT] button to select the effect you want to manipulate.
3. If the screen for the parameter you want to change for does not appear, use the [PAGE] buttons to scroll through the screens.

* While adjusting some parameters such as effect "TYPE", you may hear short click noise. This is not a malfunction.



You can call up and use any of a variety of grouped settings (Patches) suited to different uses and environments that are stored in memory. You can also save settings you have changed as patches. ("Patches" (p. 14))

BYPASS

This has the same effect as setting the Effect ON/OFF parameter to OFF. (However, the setting for the ON/OFF parameter does not change.) The Dynamics settings have a number of switches, and they are all bypassed at one time.

Pressing the [BYPASS] button makes the button light up red, and in this state effects are bypassed. Press again to cancel.

Mic Modeling

This effect models the sound characteristics of certain types of expensive microphones. It works best when the input source you use matches the settings available in the processor. For example, the effect is optimized if you use an AKG C3000B or a Roland DR-20 microphone as the source microphone and then choose the output microphone whose characteristics you would like to model. You can also edit the modeling effect by changing microphone proximity or distance effects, and other qualities.

Mic Modeling OFF/ON (MODEL)

This is the On/Off switch for the microphone modeling.

Reference Microphone (INPUT)

This table shows the optimum choices for the microphones or inputs to use when using the microphone modeling effect.

When you use modeling, specify the microphone used when making the recording or pick the choice closest to the microphone you used.

DR-20	Roland DR-20	Dynamic microphone from Roland
SML.D	Small Dynamic Microphone	Dynamic microphone used for musical instruments and vocals
HED.D	Head-worn Dynamic Microphone	Headset-type dynamic microphone
MIN.C	Miniature Condenser Microphone	Ultra-compact condenser microphone
FLAT	Flat	Line in
C3000B	AKG C 3000 B	Condenser microphone from AKG Acoustics

Modeling Microphone (OUTPUT)

This table shows the choices for different microphones or microphone types that the effect will model.

SML.D	Ordinary dynamic microphone for musical instruments and vocals. For guitar amps, snare drums, etc.
VOC.D	Preferred dynamic microphone for vocals. Features a prominent midrange. For vocals.
LRG.D	Dynamic microphone with sustained lower range. For bass drums, tams, etc.
SML.C	Small condenser microphone for musical instruments. Features a brilliant treble range. For metallic percussion instruments and acoustic guitars.
LRG.C	Condenser microphone with flat response. For vocals, narration, live instruments, etc.
VNT.C	Vintage condenser microphone. For vocals, instruments, etc.
FLAT	Microphone with flat frequency response. Used when you want to capture the idiosyncrasies of the microphone used when recording.



When you select a condenser microphone modeling for "OUTPUT," lower range response is extended, so bass noise from the microphone stand may become prominent. If this happens, use Lo-Cut (p. 18) to cut the unneeded lower range, or install an isolation mount (a vibration-absorbing microphone holder made of rubber or the like) on the microphone stand when recording.

Proximity Effect (PROX FX)

A microphone's bass response is enhanced when it is near the source of the sound. This is called the proximity effect. The Proximity Effect in the models can create this effect. You can set a value from -12 to +12. Positive values impart close-distance characteristics, and negative values impart the characteristics of farther distances.



You can also use this to adjust the desired microphone proximity even when the microphone cannot be placed at the desired location.

Distance from the Sound Source (TIME)

This models the delay that occurs when the microphone is located some distance from the sound source. You set the distance you want to reproduce to a value from 0 cm to 3,000 cm.

Equalizer

This is a 4-band parametric equalizer and adjusts the volume level for individual frequency bands. You can choose from nine types of filters for each band. These filters can be used to optimize the sound quality of the input source. You can also use it to suppress resonant frequencies and prevent feedback whine.



This is called an equalizer because it is used to restore characteristics that have been modified by the processes of recording and transmission to characteristics equal to those of the original sound, but like other effects, it is also actively used to create new sounds.

Equalizer OFF/ON (EQ)

This is the On/Off switch for the equalizer. It is the same as using bypass.

Attenuator (ATT)

This uses digital processing to amplify or attenuate the signal input to the equalizer. You can set a value from -42 dB to +6 dB.

Reference Frequency (LOW, LO-MID, HI-MID, HI)

This sets four points that serve as the frequency response curve's peak and valley centers (center frequencies) or as the filter boundaries (cutoff frequencies). You can set a value from 20 Hz to 20,0k Hz.

Because you can make the settings anywhere within this range, it's even possible, for instance, to set all four points so they're stacked at the same location, and create a sharp filter.

* A frequency 3 dB lower than the flat portion of the response curve is taken to be the cutoff frequency.

Gain (GAIN)

This sets the amount by which the volume is to be increased/decreased. You can set a value within a range of ± 15.0 dB for each reference frequency.

Q (Q)

This sets the sharpness for peaks and valleys. You can set a value within a range of 0.36 to 16 for each frequency band. When the filter type is "LPF2" or "HPF2," making the Q larger makes the cutoff frequency band more prominent.



On an historical note, with analog peaking equalizers and the like, the sharpness of the peaks that occur in the response curve changes according to the performance of the coils in the resonance circuit. For this reason, the value Q (quality factor) is used to indicate coil performance.

Filter Type (TYPE)

This chooses the type of filter for each frequency band. The available filter parameters change according to which type of filter you choose to use. Unavailable parameters are indicated by "no."

			Reference frequency	Gain	Q
PEAK	Peaking	Creates peaks and valleys around the reference frequency	yes	yes	yes
LSV	Low shelving	Adjusts the band lower than the reference frequency	yes	yes	no
HSV	High shelving	Adjusts the band higher than the reference frequency	yes	yes	no
LPF1	Low-pass filter 1st	Passes only sound lower than the reference frequency	yes	no	no
HPF1	High-pass filter 1st	Passes only sound higher than the reference frequency	yes	no	no
LPF2	Low-pass filter 2nd	Steeper response curve than "LPF1"	yes	no	yes
HPF2	High-pass filter 2nd	Steeper response curve than "HPF1"	yes	no	yes
BPF	Band-pass filter	Passes only sound near the reference frequency	yes	no	yes
BRF	Band-reject filter	Blocks only sound near the reference frequency	yes	no	yes
THRU	Thru	Passes the audio without modification	no	no	no

Dynamics

This is a group of effects that dynamically control the amount of change in the output level based on the input level.

■ Compressor

This suppresses or lowers the output level of loud sounds to reduce changes in volume. Input signals that exceed the threshold are suppressed by an amount determined by the Ratio parameter.

Compressor OFF/ON (COMP)

This is the On/Off switch for the compressor effect.

Compressor Type (TYPE)

This chooses the type of compressor.

“SOLID”: Semiconductor compressor characteristics

“TUBE1”...“TUBE4”: Vacuum-tube compressor characteristics

Key In Channel (KEY IN)

The compressor operates when the input level of the channel specified here exceeds the threshold. You can choose either channel 1 or channel 2. Normally, the same channel is specified, but a different channel may be specified for special uses. For example, when there is a microphone input and a background music input, setting the microphone channel as the key-in for the background-music channel reduces the volume of the background music when the microphone picks up someone speaking.

Threshold (THRESH)

When the input level exceeds this value, the output is lowered or suppressed according to the ratio. You can set a value from -24.0 dB to 0.0 dB.

Ratio (RATIO)

This is the ratio for suppressing sound that exceeds the threshold. You can set a value from 1.00 to infinity. When infinity is selected, the output level won't get any louder even if the input level gets louder than the threshold. This is the same effect as using a limiter.

Knee (KNEE)

This setting determines whether the change in the relationship between the input level and the output level is abrupt or gradual when the input crosses the Threshold level.

“HARD”: Immediate change before and after the threshold

“SOFT”: Sloping change centering on the threshold

Attack Time (ATTACK)

This sets the time after the input signal exceeds the threshold until the compressor effect is completely applied. You can set a value from 0.0 ms to 800.0 ms.

Release Time (RELEASE)

This sets the time after the input signal falls below the threshold until the compressor effect disappears completely. You can set a value from 0 ms to 8,000 ms.

Compression Level (LEVEL)

This sets the output level after passing through the compressor. You can set a value from -24 dB to +24 dB (from -24.0 dB to +6.0 dB in case Auto Gain is “ON”). If you are compressing the signal to even out the loud points, you may want to boost the overall output level using this control.

Auto Gain (A-GAIN)

The dynamic range is reduced when sound passes through the compressor, but setting Auto Gain to “ON” boosts the overall output level so as to match the original overall input level.

Specifically, this assures that the output level is loud but not distorted by creating a margin (output level upper limit at 0 ms of attack) of 6 dB from the clipping level (0 dB) and then boosting the output level to this point.

When the attack is set to a long time, the start of the compressor effect is delayed, and so depending on the input signal the sound may be distorted. The Auto Gain has a margin of 6 dB to prevent spiking of the output level due to this delay in the compressor effect.

■ Expander

This lowers or suppresses, at a constant ratio, low-volume sounds that do not reach the threshold. It is effective for low-volume noise.

Expander OFF/ON (EXP)

This is the On/Off switch for the expander effect.

Key In Channel (KEY IN)

The expander cuts off when the input level of the channel specified here exceeds the threshold. You can choose either channel 1 or channel 2. Normally the same channel is specified, but a different channel may be specified for special uses. For example, specifying a snare drum input as the key-in lets you produce sound on the other channel when you strike the drum.

Threshold (THRESH)

Input smaller than this is suppressed according to the ratio. You can set a value from -80 dB to 0 dB.

Compression Ratio (RATIO)

This is the ratio for lowering or suppressing sound that does not reach the threshold. You can set a value from 1.00 to infinity. When you set the Ratio to Infinity, no sound is passed when the input sound doesn't get over the Threshold level. This is the same effect as using a Gate.

Attack Time (ATTACK)

This sets the time after the input signal falls below the threshold until the expander effect is applied completely. You can set a value from 0.0ms to 800.0ms.

Release Time (RELEAS)

This sets the time after the input signal exceeds the threshold until the expander effect disappears completely. You can set a value from 0ms to 8000ms

■ Enhancer/De-esser

Enhancer/De-esser OFF/ON (ENH/DE)

This is the On/Off switch for the enhancer/de-esser effect.

Switching Between Enhancer and De-esser (TYPE)

This is the switch for choosing either the de-esser or the enhancer.

“ENH”: This augments the harmonics of human vocals, making the sound more distinct. When the high-frequency content is deficient, it is increased.

“DES”: This suppresses harsh sibilant consonants, for a softer sound. When the high-frequency content is excessive, it is reduced.

Sensitivity (SENS)

In case the high frequency sound reaches certain level, this unit increases/decreases the level. The certain level can be set in 100 steps (from 0 to 100).

Frequency (FREQ)

This is to set the border of high frequency sound. The border can be set from 500 Hz to 20.0k Hz.

Enhance Level (ENHLEV)

This is to set the level to increase. The level can be set from 0.0 dB to 12.0 dB. This is not available for de-esser.

De-esser Rejection Level (DESREJ)

This is to set the level to decrease. The level can be set from -24.0 dB to 0.0 dB. This is not available for enhancer.

Plug-in Effect

Pre-amp Modeling is assigned to [PLUG IN] by default. You can also add effect algorithms through the USB connection.

■ Pre-amp Modeling



Microphone pre-amp brand names are used solely to refer to the sounds modeled by the Roland MMP-2 product. The trademarks described in this product are trademarks of their respective owners, which are separate companies from Roland. These companies are not affiliated with Roland in any way and they have not licensed or authorized the Roland MMP-2. Their marks are used solely to identify the equipment whose sounds are simulated by the Roland MMP-2.

Pre-amp Modeling replicates the sonic response of different types of pre-amps. It models such distinctive features as the frequency response, harmonic balance and distortion.

Press the [PLUG IN] button to display the setting parameters, then use the Value controls to change the settings. If the item you want is not displayed, use the [PAGE] buttons to scroll through the pages.

Select patches with the “Pre-amp” name to use the Pre-amp modeling function using “Patch Selection (SELECT)” (p. 15)

Please note that the Pre-amp Modeling requires the use of the DSP that is normally allocated for the EQ section. For this reason, when you are using Pre-amp Modeling presets, you can not access the EQ section of the MMP-2.

** It may difficult to figure out the result of Pre-amp modeling effects because very slight character difference of various Pre-amps were modeled.*

Pre-amp OFF/ON (PREAMP)

This is the On/Off switch for the pre-amp modeling.

Pre-amp Type (TYPE)

This chooses the type of pre-amp.

The models are: Red7, N1073, ManSS, AvTube, AvSolS, HHTube, MillHV, SATube, CSSISt.

Warm

This parameter adjusts the warmth of the input sound by changing the balance of the low frequency content.

Warm Frequency (WRM F)

This sets the upper limit of this parameter. The sound components that are of a lower frequency than this parameter will be adjusted. You can set a value from 20 Hz to 1.00k Hz.

Warm Gain (WRM G)

This parameter adjusts the warmth of the signal below the value set with “Warm Frequency”. You can set a value within a range of ± 6.0 dB.

Bright

This parameter adjusts the brightness of the input sound by changing the high frequency content's balance.

Brightness Frequency (BRT F)

This sets the lower limit of this parameter. The sound components that are of a higher frequency than this parameter will be adjusted. You can set a value from 1.00k Hz to 20.0k Hz.

Brightness Gain (BRT G)

This parameter adjusts the brightness of the signal above the value set with the Brightness Frequency parameter. You can set a value within a range of ± 6.0 dB.

Harmonic

This adjusts the color and balance of the sound's harmonics

Harmonic Threshold (HRM TH)

This sets the threshold for the Harmonic Balance control. If the sound level exceeds this level, the harmonics control will function. You can set a value from -24 dB to 0.0 dB.

Harmonic Level (HRM LV)

This sets the value of the harmonic control. You can set a value in 100 steps (from 0 to 100).

Harmonic Color (HRM CL)

This sets the value of the harmonic distortion. You can set a value in 100 steps (from 0 to 100).

Settings for Digital Connections



When you change the digital-connection settings, sound may stop momentarily until the new settings are in place.

■ Sampling Clock Source

Select the source of sampling clock.

1. Press the [SYSTEM] button several times to display "CLOCK." The button lights up in green.

```
AUDIO | CLOCK | FREQ
MIC | INT | 44.1k
```

2. Turn the left Value control to make the selection.

"INT": Uses the internal clock.

"DIGI": Synchronizes with the clock signal from [DIGITAL IN].

■ Sampling Frequency

Set frequency of internal clock (INT). Four are supported: 44.1k Hz, 48.0k Hz, 88.2k Hz, and 96.0k Hz.

* In case the sampling clock source (CLOCK) is supplied from external devices (DIGI), it is impossible to set sampling frequency on MMP-2.

1. Press the [SYSTEM] button several times to display "FREQ." The button lights up in green.

```
AUDIO | CLOCK | FREQ
MIC | INT | 44.1k
```

2. Turn the center Value control to make the selection.

■ Audio Input Source

Select the jacks to input.

1. Press the [SYSTEM] button several times to display "AUDIO." The button lights up in green.

```
AUDIO | CLOCK | FREQ
MIC | INT | 44.1k
```

2. Turn the right Value control to make the selection.

"MIC": Input from [MIC IN]

"DIGI": Input from [DIGITAL IN]

* When you change the input source, sound may stop momentarily until the changeover has been completed.

* There is no need to make settings for the output. Outputs include the [LINE OUT], [AES/EBU], and [DIGITAL OUT] jacks.

* "AUDIO: DIGI" and "CLOCK: INT" cannot be selected simultaneously.

Relation of each setting is shown on the chart below.

CLOCK (sampling clock source)	INT	DIGI
FREQ (sampling frequency)	44.1k/48.0k/88.2k/96.0k	synchronizes with [DIGITAL IN]
AUDIO (audio input source)	MIC	MIC / DIGI

■ Display Messages

Digital In locked.	Changed the source of Sampling Clock to [DIGITAL IN].
Wrong sample freq.	A digital signal that is not compatible with MMP-2 is coming in from [DIGITAL IN]. The following causes can be considered. <ul style="list-style-type: none"> • Sampling frequency of inputting device is not one of followings: 44.1k Hz, 48.0k Hz, 88.2k Hz or 96.0k Hz • Vari-pitch (function to change sampling frequency continuously) is used on inputting devices.
DIGITAL IN checking...	Confirming signal from [DIGITAL IN].
DIGITAL IN unlock! Change INTERNAL?	The signal compatible with MMP-2 is not coming in. The system waits for the signal. Do you cancel the Digital Input and return to internal clock?

Examples of Use

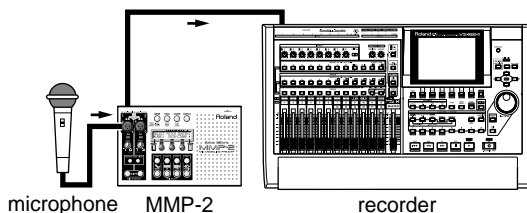
This section shows some examples of how you can use the MMP-2.

* Before hooking up or turning on any equipment, make sure the volume on all devices is turned down.

Analog Input to Analog Output

The microphone input is output from the MMP-2 as an analog signal and sent to a recording device or a mixer.

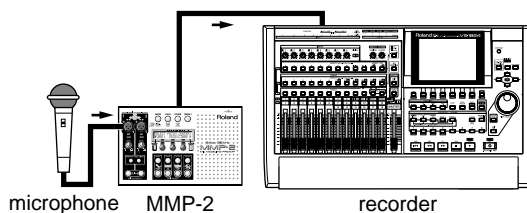
1. Connect the microphone to [MIC IN].
2. Connect the destination device to [LINE OUT].
3. Use the [PHANTOM/PHASE/LO-CUT] buttons and other controls to set the phantom power setting so it matches the type of microphone (p. 17).
4. Use the [METER] button to display the input meter.
5. Refer to the meters and the [PEAK] indicator and adjust the [PAD] and [SENS] settings.



Analog Input to Digital Output

The microphone input is output from the MMP-2 as an S/PDIF-standard digital signal and sent to a recording device or the like. (The AES/EBU-standard jacks can also be used in the same way.)

1. Connect the microphone to [MIC IN].
2. Connect the destination device to [DIGITAL OUT].
3. Use the [PHANTOM/PHASE/LO-CUT] buttons and other controls to set the phantom power setting so it matches the type of microphone (p. 17).
4. Use the [METER] button to display the input meter.
5. Refer to the meters and the [PEAK] indicator and adjust the [PAD] and [SENS] settings.
6. Use the [SYSTEM] button and other controls to set "CLOCK" to "INT," to set "FREQ" to an appropriate value for the destination device, and to set "AUDIO" to "MIC" (p. 26).
7. Make the clock setting on the destination device.



Other Features

■ Channel Linking

This interlinks the effect parameters for the two channels. You can use it with stereo recording or other applications. Input parameters are not linked.

Linking

Hold down the [EDIT CH SELECT] button for channel 1 and press the [EDIT CH SELECT] button for channel 2. Both [EDIT CH SELECT] buttons light up, showing that linking is in effect.

Canceling Linking

Press either one of the [EDIT CH SELECT] buttons to cancel the link. This makes only one button light up, and lets you edit individual channels in the usual way.



When linked, the effects for channel 2 use the parameter values for channel 1 (the reverse is not possible). Effect operations you perform while in this state are handled as settings for channel 1, and so the setting values for channel 2 remain unchanged in memory. When you cancel the link, the effects for channel 2 revert to the setting values they had before linking.

■ Copying Settings Between Channels

This copies the effect parameters to the other channel. You can use this at times such as when you want to edit sets of parameters separately after making the same settings. Input parameters are not copied.



Copied settings are overwritten. The original settings cannot be restored after copying.

What follows is the procedure for copying from channel 1 to channel 2. To copy in the opposite direction, follow the same procedure with the channel numbers reversed.

1. Press and hold the [EDIT CH SELECT] button for channel 2 for several seconds. The message "COPY PARAM CH1 → CH2 OK?" is displayed.

```
COPY PARAM [ENTER]
CH1 → CH2 OK?
```

2. Press [ENTER] to carry out the procedure. The setting values for channel 1 are copied to channel 2.
** If you don't want to copy, press any button other than [ENTER].*

■ Backup Patch

You can save user patch to computers or sequencers and load it from those. You can transfer your user patch to another MMP-2 using this function. Operation from MMP-2 editor is shown on adopted CD-ROM "ReadMe".

Save patch to Computer (BACKUP)

1. Press [SYSTEM] button of MMP-2 several times and make it lights up in orange. The screen turn to the status as right.
2. Press [PAGE] button several times to display "BACKUP" on screen.
3. Operate external device like computer to start sending/receiving signal. If commencement of operation is necessary on MMP-2, press [ENTER].

```
LCD CNT: PEAK : ROUTE
8: -3dB: NORM▶
```

```
BACKUP [ENTER]
◀ USER PATCHES ▶
```

Load patch from computer (RECOVER)

1. Press [SYSTEM] button of MMP-2 several times and make it light orange. The screen turn to the status as right.

```
LCD CNT: PEAK : ROUTE
8: -3dB: NORM▶
```

- Press [PAGE] button several times to display "RECOVER" on screen.
- Operate external devices like computer to start sending/receiving signal.

```
RECOVER
USER PATCHES
```

Route

Select one of the following routings from input to output. Take "NORM" as a normal rule.

- Press the [SYSTEM] button several times to display "ROUTE." The button lights up in orange.

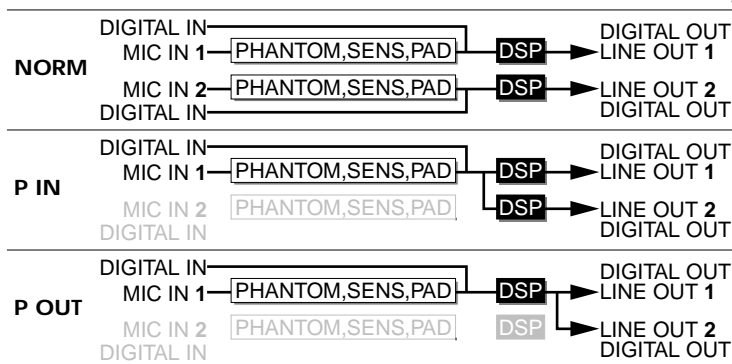
- Turn the right Value control to make the selection.

"NORM": The normal routing.

"P IN": This divide signal flow into two routes. DSP* can be inserted into each route individually. This would be suitable for creating "Channel divider" which divides audio signal into various outputs according to its frequency range.

"P OUT": This divides signal flow into two routes after DSP* insertion. Two divided signals must always be same.

* DSP: digital signal processor.



Initializing

This returns the contents of memory to their factory defaults.



Initializing erases any parameters or patches you have set yourself. Once they are lost, they cannot be recovered. Save your settings to a computer if you want to save them before initializing. ("Backup Patch" (p. 28), "Use of computer and setup" (p. 30))

- Press the [SYSTEM] button a number of times, until it lights in orange.
- Press the [PAGE] buttons several times until the message "INITIALIZE" appears.
- Use the left Value control to choose the target for the initializing.
 - "SYSTEM": system parameters
 - "USER PATCHES": user's effect patches
 - "ALL": both

```
LDCNT: PEAK | ROUTE
8 | -3dB | NORM
```

- Press [ENTER]. Your confirmation will be requested.
- Re-press [ENTER]. The system will be initialized. Once it's initialized, system go back to normal screen after indicating [Completed] on screen.

```
INITIALIZE [ENTER]
SYSTEM
```

```
INITIALIZE [ENTER]
SYSTEM OK?
```

```
Completed.
```

* If you don't want to initialize, press any button **other than [ENTER]**.

Use of computer and setup

You can add effect algorithms via a USB connection. You can also use a computer editor to easily and intuitively change the equalizer and dynamics parameters. What's more, you can also exchange MIDI signals with the computer. For more details and descriptions of this operation, please read "ReadMe" on the included CD-ROM.

Both Mac OS and Windows are supported. The system requirements are as follows.



USB (Universal Serial Bus) is an interface for connecting peripheral equipment to computers. It is a standard that lets you connect a variety of peripherals using a single USB cable. It also allows peripheral devices to be connected or disconnected while the power is left on.

Set up (PC setting and Install)

■ MMP-2 settings

Stop sending meter signal and select USB-MIDI driver to be used on MMP-2

1. Make sure MMP-2 is NOT connected to the computer.

** The USB driver cannot be switched while the unit is connected to computer by USB.*

2. Press [SYSTEM] button several times to display "METER" on screen. The button lights up in red.

3. Turn around the value dial and switch "METER" to "OFF".

"ON": Send meter signal

"OFF": Stop sending meter signal

DRIVER:	DEV. ID:	METER
VENDOR:	17:	OFF

** If you use software that handles meter signal of MMP-2 (like MMP-2 Editor), switch value of "METER" to "ON" again after installation of the driver.*

4. Turn around the value knob to select driver. Use of "VENDOR" is recommended.

** to reflect the change of driver, you will need to re-boot the system.*

"VENDOR": MMP-2 driver provided by Roland Corporation

"GENERIC" (generic): Default MIDI driver

5. Once you change setting of "METER" or "DRIVER", the [ENTER] button lights up. Press [ENTER] to save settings.

6. Turn off the power of MMP-2.

■ Computer settings

In order to use the MMP-2, you must first install the MMP-2 driver. The MMP-2 Driver is included in the "MMP-2 Driver & Software CD-ROM."

** If you wish to use the MMP-2 at the same time as another USB device connected to your computer, disconnect the other USB device from the USB connector before installing the MMP-2 driver. If another USB device is connected to your computer when you install the MMP-2 driver, the MMP-2 driver may not be installed correctly.*

The explanation about installing and setup the driver is organized according to the computer and MIDI driver that you are using. Please proceed to the following pages.

** The MMP-2 cannot be used with Windows95 or Windows NT.*

Windows 98 / Me Users	p. 31
Windows 2000 Users	p. 32
Using OMS on the Macintosh	p. 35
Using FreeMIDI on the Macintosh	p. 38



OMS or FreeMIDI is a driver to let MacOS to communicate with external devices on MIDI protocol. USB-MIDI driver is the driver that makes the communication on OMS or FreeMIDI through USB possible.

You can download OMS from the Web site of Opcode Systems, Inc.

You can download FreeMIDI from the Web site of Mark of the Unicorn, Inc.

Windows Me / 98

Use the following procedure to install the MMP-2 driver.

- * Disconnect the MMP-2 from your computer before starting up Windows.
- * If the MMP-2 is already connected to your computer and a message of "Add New Hardware Wizard" is displayed, go to the MMP-2 Driver & Software CD-ROM, open the file Driver\WinMe_98\Readme_e.htm, and read the "Troubleshooting" section entitled "You attempted to install using the above procedure, but were not able to."

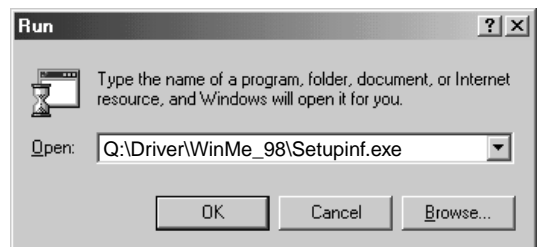
1. With all USB cables disconnected, start up Windows. (except the keyboard and mouse)
2. Exit all applications before you begin installing the driver.
3. Insert the MMP-2 Driver & Software CD-ROM into the CD-ROM drive.
4. From the Windows Start menu, select "Run."



5. In the "Open" field of the dialog box that appears, enter "Q:\Driver\WinMe_98\Setupinf.exe" and click "OK."

* Enter the drive name Q: appropriate for the drive name of your CD-ROM drive.

* To check the drive name of your CD-ROM drive, double-click the My Computer icon.

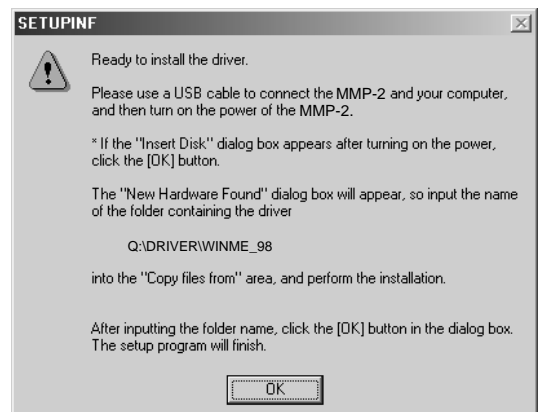


6. The SETUPINF dialog box will appear, and the display will indicate "Ready to install the driver.-"

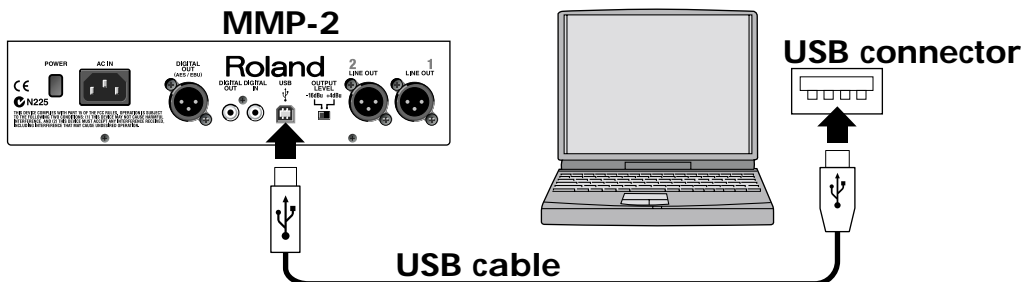
* If the "Ready to install the driver.-" dialog box does not appear, go to the MMP-2 Driver & Software CD-ROM, open the file Driver\WinMe_98\Readme_e.htm, and read the section entitled "Installation."

* If the display indicates "The driver is already installed.-", you can connect the MMP-2's USB cable to the computer and use it.

* If the display indicates "The driver was not deleted completely.-", refer to "Deleting the MMP-2 Driver"(p. 32) to re-install it.

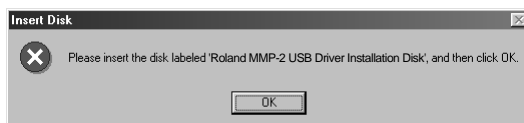


7. Use the USB cable to connect the MMP-2 to your computer.
As appropriate, switch the USB select switch to either the front or the rear position.



8. Turn on the power of the MMP-2.
 - * After you have made connections correctly, you must turn on the power in this step. If you fail to observe the correct sequence, the system may malfunction.
 - * To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.

9. In some cases, the “Insert Disk” dialog box may appear. Click “OK.”



10. The “New Hardware Found” dialog box will appear. In the “Copy files from” area, input “Q:\Driver\WinMe_98” and click the “OK” button. Installation will be completed.

* Change the drive name Q: to match the drive name of your CD-ROM drive. For example if your CD-ROM drive is named D:, you would input “D:\Driver\WinMe_98”.

11. Click “OK” button in the “SETUPINF” dialog box.



This completes the installation of the MMP-2 driver and the settings.
Read “ReadMe” of adopted CD-ROM in case you use MMP-2 Editor.

Deleting the MMP-2 Driver

If you were not able to install the MMP-2 driver according to the procedure, or if you are unable to use the MMP-2 even after installing the driver, you must delete the driver.

After deleting the driver, use the procedure described in “Windows Me / 98” (p. 31) to re-install the driver.

For details on how to delete the driver, refer to the explanation provided in the on-line manual(Readme_e.htm) within the MMP-2 Driver & Software CD-ROM.

Windows 2000

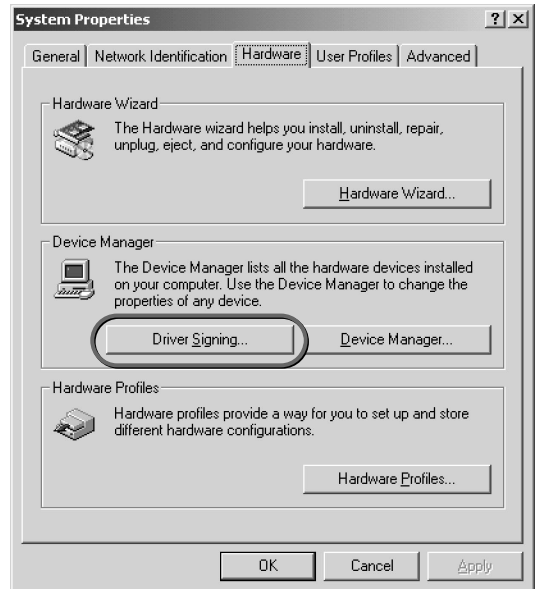
Use the following procedure to install the MMP-2 driver.

- * Disconnect the MMP-2 from your computer before starting up Windows.
- * To install the driver, you must log on to Windows as the Administrator or other user with the privileges of the Administrators group. For more information regarding this, consult your computer system administrator.
- * The MMP-2 cannot be used with Windows95 or Windows NT.

- * If you wish to use the MMP-2 at the same time as another USB device connected to your computer, disconnect the other USB device from the USB connector before installing the MMP-2 driver. If another USB device is connected to your computer when you install the MMP-2 driver, the MMP-2 driver may not be installed correctly.
- * If the MMP-2 is already connected to your computer and a message of "Add New Hardware Wizard" is displayed, go to the MMP-2 Driver & Software CD-ROM, open the file Driver\Win2000\Readme_e.htm, and read the "Troubleshooting" section entitled "You attempted to install using the above procedure, but were not able to."

1. With all USB cables disconnected, start up Windows. (except the keyboard and mouse)
2. Log onto Windows as an Administrator, or other user that is a member of the Administrators group.
3. Exit all applications before performing the installation.
4. Make "Driver Signing" settings.

Open the "Control Panel," and double-click "System." Click the "Hardware" tab, and then click the "Driver Signing" button. The "Driver Signing Options" dialog box will appear.



5. Make sure that "File signature verification" is set to "Ignore."
If it is set to "Ignore," click "OK." If not, make a note of the current setting; then change it to "Ignore" and click the "OK" button.
6. Click the "OK" button to close "System Properties."
7. Insert the MMP-2 Driver & Software CD-ROM into the CD-ROM drive.



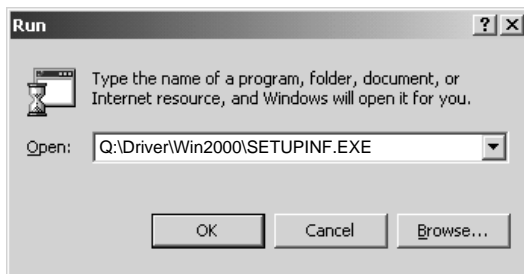
8. From the Windows Start menu, select “Run.”



9. In the “Open” field of the dialog box that appears, enter “Q:\Driver\Win2000\Setupinf.exe” and click [OK].

* Enter the drive name Q: appropriate for the drive name of your CD-ROM drive.

* To check the drive name of your CD-ROM drive, double-click the My Computer icon.

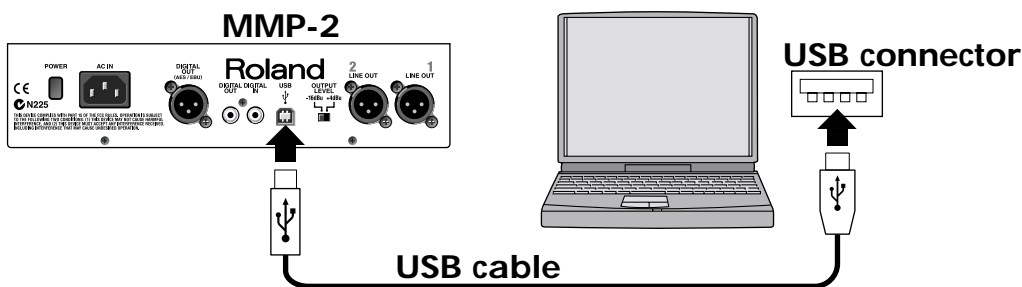


10. The SETUPINF dialog box will appear, and the display will indicate “Ready to install the driver.-”

* If the “Ready to install the driver.-” dialog box does not appear, go to the MMP-2 Driver & Software CD-ROM, open the file Driver\WinMe_98\Readme_e.htm, and read the section entitled “Installation.”

* If the display indicates “The driver is already installed.-”, you can connect the MMP-2’s USB cable to the computer and use it.

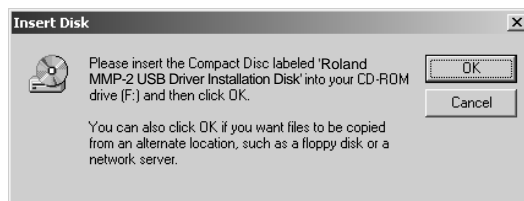
11. Use the USB cable to connect the MMP-2 and your computer.



12. After completing the connections between the MMP-2 and your computer, turn on your computer and start up Windows, and then turn on the MMP-2.

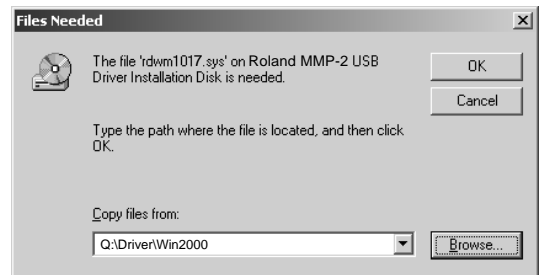
* To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.

13. The “Insert Disk” dialog box will appear. Click the “OK” button.

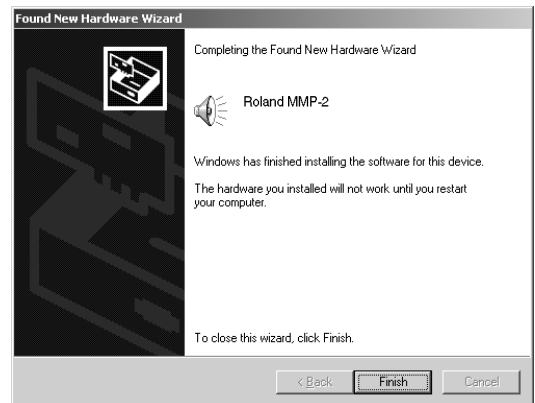


14. The “Files Needed” dialog box will appear.
In the “Copy files from” area, input
“Q:\Driver\Win2000” and click the “OK” button.
Installation will be completed.

* Change the drive name Q: to match the drive name of your CD-ROM drive. For example if your CD-ROM drive is named D:, you would input “D:\Driver\Win2000”.

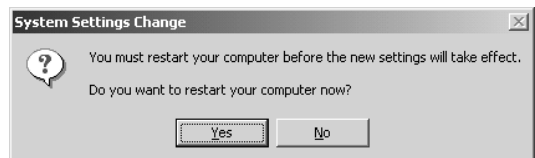


15. The “Found New Hardware Wizard” will appear.
Make sure that “Roland MMP-2 USB Driver” is
displayed, and click the “Finish” button.



16. The “System Settings Change” dialog box will appear.
Click the “Yes” button and restart Windows.
17. If you changed the setting for “File signature
verification” in step 5, set it back to the previous
setting.

(To restore the setting, the Administrator or user belonging to the Administrators group must log on to Windows.)



This completes the installation of the MMP-2 driver and the settings.
Read “ReadMe” of adopted CD-ROM in case you use MMP-2 Editor.

Deleting the MMP-2 Driver

If you were not able to install the MMP-2 driver according to the procedure, or if you are unable to use the MMP-2 even after installing the driver, you must delete the driver.

After deleting the driver, use the procedure described in “Windows 2000” (p. 32) to re-install the driver.

For details on how to delete the driver, refer to the explanation provided in the on-line manual(Readme_e.htm) within the MMP-2 Driver & Software CD-ROM.

Macintosh / OMS

Installing the MMP-2 Driver

Use the following procedure to install the MMP-2 driver.

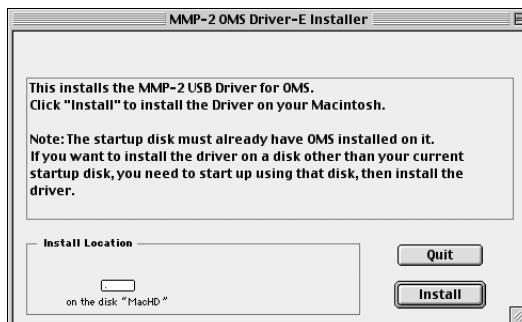
- * Disconnect the MMP-2 from your computer before starting up Macintosh.
- * Exit all applications before you begin installing the driver.
- * The MMP-2 OMS Driver included on the disc is provided as an additional module that allows the MMP-2 to be used with OMS. In order to use it, OMS must already be installed on the start-up hard disk.

1. In the “MMP-2 Driver E” folder of the CD-ROM, double-click the “MMP-2 OMS Driver-E Installer” icon.

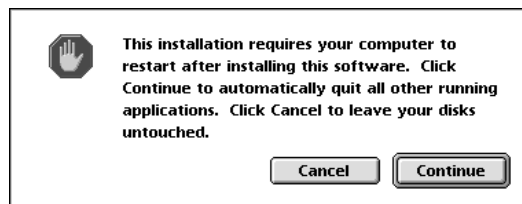


MMP-2 OMS Driver-E Installer

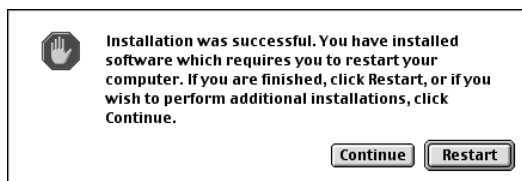
2. Make sure that OMS is already installed in the location where the driver will be installed, and click [Install].



3. If the following message appears, click [Continue] and all other currently-running applications will be exited, and installation will continue.

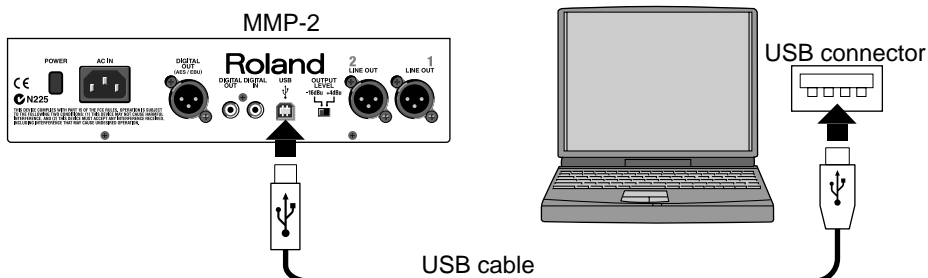


4. When installation is completed, the following dialog box will appear. Click [Restart] to restart your Macintosh.



OMS settings

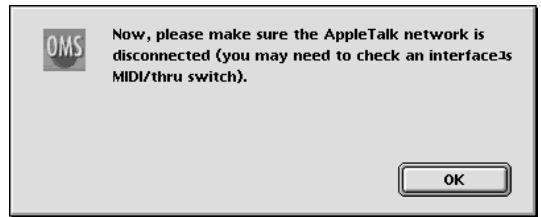
1. Use the USB cable to connect the MMP-2 and your computer.



2. After completing the connections between the MMP-2 and your computer, turn on your computer and start up Mac OS, and then turn on the MMP-2.

** Once the connections have been completed, turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and the other devices.*
3. In the “Opcode” folder in the location where OMS is installed, open the “OMS Applications” folder, and double-click the “OMS Setup” icon.

4. If the “Apple Talk” dialog box appears, click [Turn It Off].
Then, in the dialog box that appears next, click [OK].

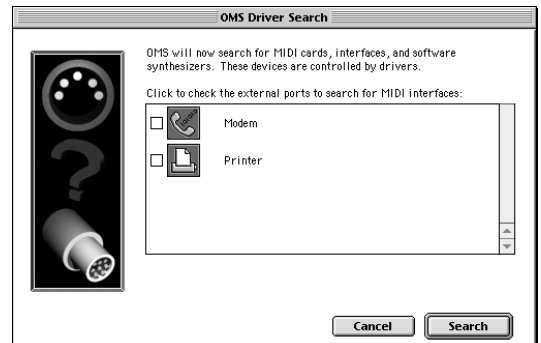


5. The “Create a New Studio setup” dialog box will appear.
Click [OK].

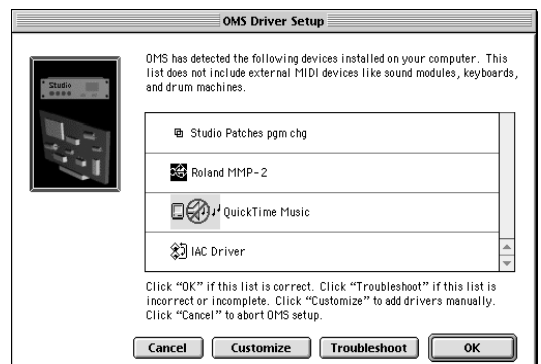
- * If the “Create a New Studio setup” dialog box does not appear, click [New Studio setup] in the [File] menu.
- * If an error dialog box is displayed during the setup, make the OMS settings once again.



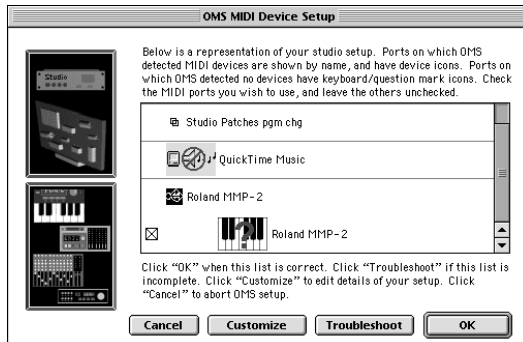
6. The “OMS Driver Search” dialog box will appear.
Click [Search].



7. When the search ends, verify that Roland MMP-2 is listed in the OMS driver setting dialog box, and click [OK].



8. Verify that the MMP-2 is listed in the OMS MIDI device setting dialog box, then click [OK].
9. A dialog box will appear, allowing you to save the settings file.
Input the desired filename, and click [Save].

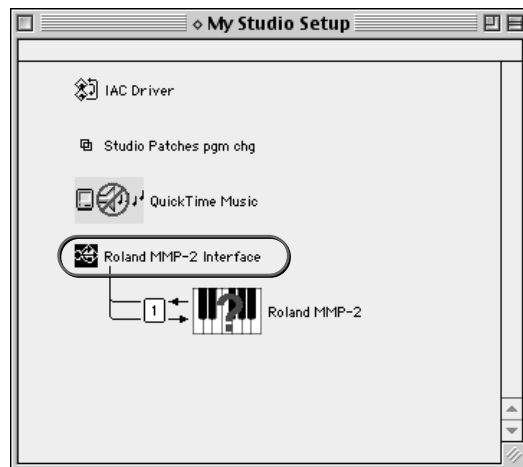


10. A settings window like the one shown at right will appear.

Click on the name, and change the name to “Roland MMP-2 Interface”

- * If the name is same, it may be possible for some MIDI application to confuse the name of interface or connected equipment.
- * In case of using “MMP-2 Editor”, please remark that the name of the device (“Roland MMP-2” comes with keyboard icon in the setting window shown at right) should always be start from “Roland MMP-2”, otherwise MMP-2 Editor can not detect MMP-2 automatically.
- * This is only one possible example of the settings window. The settings window that you actually see will differ depending on your system.

11. Select the [Quit] command from the File menu to exit OMS Setup. If the Save dialog box appears, input a filename, and click [Save].



This completes driver settings.

Read “ReadMe” of adopted CD-ROM in case you use MMP-2 Editor.

Macintosh / FreeMIDI

Installing the MMP-2 Driver

Use the following procedure to install the MMP-2 driver.

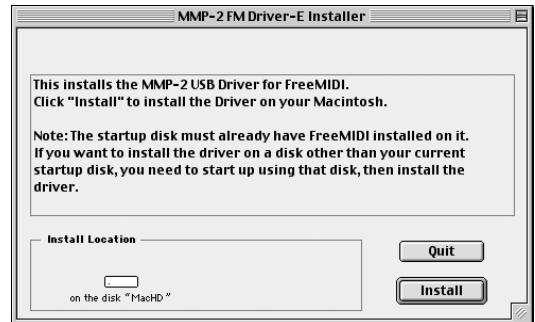
- * Disconnect the MMP-2 from your computer before starting up Macintosh.
- * Exit all applications before you begin installing the driver.
- * The MMP-2 FreeMIDI Driver included on the disc is provided as an additional module that allows the MMP-2 to be used with FreeMIDI. In order to use it, FreeMIDI must already be installed on the start-up hard disk.

1. In the “MMP-2 Driver E” folder of the CD-ROM, double-click the “MMP-2 FreeMIDI Driver-E Installer” icon to start up the installer.

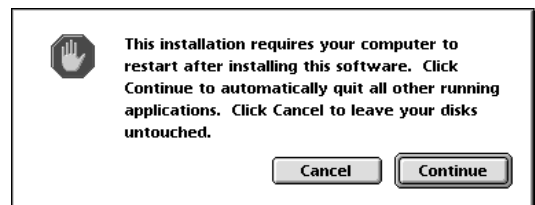


MMP-2 FM Driver - E Installer

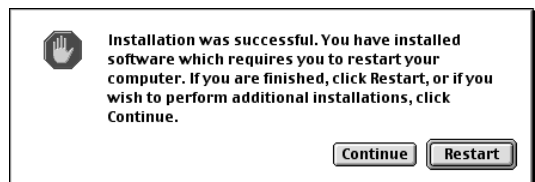
- Click [Install].
If the dialog box that all other currently-running applications will be exited appears, click [Continue].



- If the following message appears, click [Continue] and all other currently-running applications will be exited, and installation will continue.

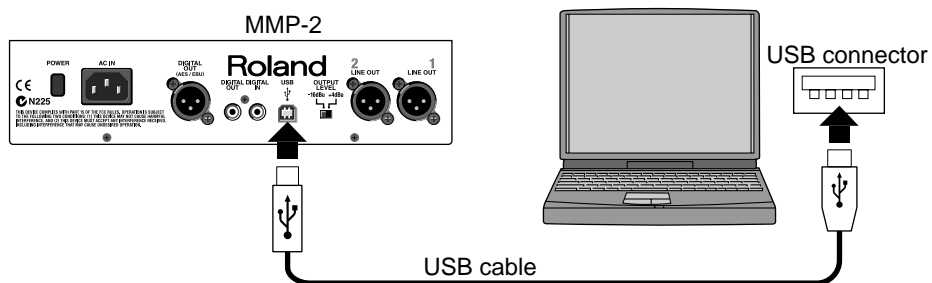


- When installation is completed, the following dialog box will appear. Click [Restart] to restart your Macintosh.



FreeMIDI settings

- Use the USB cable to connect the MMP-2 and your computer.



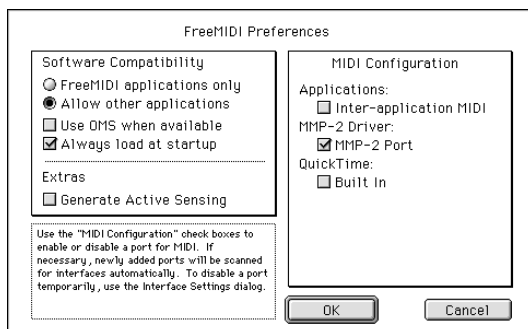
- Turn on the power of the MMP-2.
* Once the connections have been completed, turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and the other devices.
- Open the "FreeMIDI Applications" folder, and double-click the "FreeMIDI Setup" icon.

- The first time FreeMIDI is started up, a “Welcome to FreeMIDI!” dialog box will appear. Click [Continue].
If this is the second or later time, select “FreeMIDI Preferences” from the File menu.



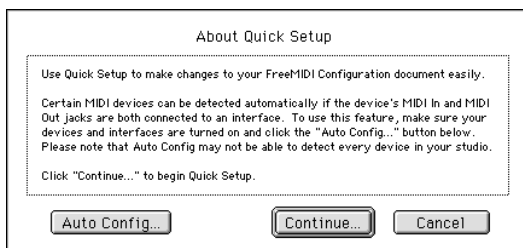
- In the “FreeMIDI Preferences” dialog box, check “MMP-2 Port” which is located below MMP-2 Driver in MIDI Configuration, and click [OK].

** If the dialog box does not show “MMP-2 Driver,” check whether the MMP-2 is connected correctly, and start up FreeMIDI Setup once again.*



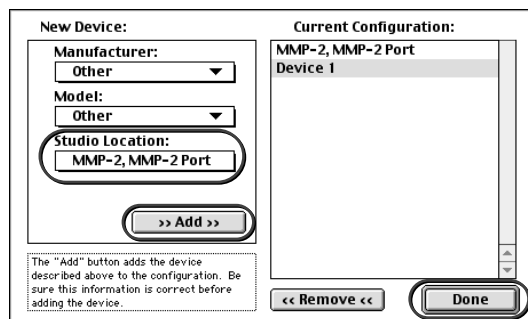
- The About Quick Setup dialog box will appear. Click [Continue].

** If the About Quick Setup dialog box is not displayed, select Quick Setup... from the Configuration menu.*



- Confirm the studio location is set “MMP-2” and click [>>Add>>]. “Device1” will be added in right column.

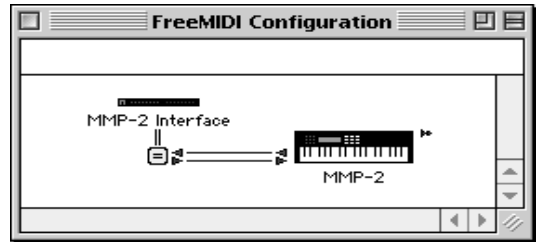
- Click [Done].



9. A setting window like the following will appear. Change “MMP-2, MMP-2 Port” to different name like “MMP-2 interface”. Change “Device1” to different name like “MMP-2”.

** If the name is same, it may be possible for some MIDI application to confuse the name of interface or connected equipment.*

** This is one example of a setting window. The window that appears will depend on your setup.*



10. From the File menu, select [Save], and save your settings.
11. Select [Quit] from the File menu to exit FreeMIDI.

This completes driver settings.

Functions work in conjunction with computers

■ Backup Patches

You can save user patch to computers or sequencers (BACKUP) and load it from those (RECOVER). You can transfer your user patch to another MMP-2 using this function. Operation from MMP-2 editor is shown on adopted CD-ROM “ReadMe”.

■ Intuitive operation of MMP-2 using MMP-2 editor

Using MMP-2 on computer, you can execute intuitive customize of graph curve of equalizer/dynamics. Operation from MMP-2 editor is shown on adopted CD-ROM “ReadMe”.

Trouble Shooting

If the unit doesn't work the way you think it should, check the items shown in the following table before you assume that there is a malfunction. If the cause of the problem is still unclear, contact your retailer or Roland Corporation's Customer Service Center.

For other computer-related problems, please read "ReadMe" on the included CD-ROM.

Symptom	Cause	Remedy
Nothing appears on the LCD screen.	The display contrast is too dark or too light.	Adjust the contrast of the LCD screen (p. 14).
No sound.	The volume is turned down.	Check the [SENS] controls and the volume levels for connected amplifiers, mixers, and other equipment (" Sensitivity (SENS) " p. 17).
	The microphone is not receiving the required power.	Check the documentation for the microphone and make the phantom setting if necessary (p. 17).
	The audio input-source settings are different from the actual configuration.	Make settings that match the input jack and standard (" Audio Input Source " p. 26).
	External malfunction	Check the cables, amp, mixer, and other equipment.
The volume of the MIC IN sound is too low.	You could be using a connection cable that contains a resistor.	Use a connection cable that does not contain a resistor (such as one from the Roland PCS series).
The output sound is too low or too loud.	The switch setting for the output level is not appropriate.	Set the [OUTPUT LEVEL] switch on the rear panel to match the destination device (p. 13).
Effects are not applied.	The unit is set to OFF or BYPASS.	Check the settings (" Using Effects " p. 19).
	RESET was applied.	The RESET function changes the effect parameter settings so the most minimal effect is produced. Change the parameters or choose another patch (" Resetting Effect Parameters (RESET) " p. 15).
Changes in system parameters are not saved.	The power was turned off immediately after making the changes.	When the [ENTER] button is illuminated, it means there are changes that have not been saved. Before turning off the power, press the [ENTER] button to save such changes (p. 14).
I can't change the "DRIVER" setting parameter of MMP-2 unit.	The unit is already connected to the computer via USB.	The "DRIVER" setting parameter of MMP-2 unit cannot be switched during the USB connection of MMP-2 unit and computer exists. Disconnect once and then change setting (" MMP-2 settings " p. 30).
I changed the USB driver, but the change does not take effect.	The power was not cycled.	A change in the driver takes effect after you switch off the MMP-2's power, then turn it on again (" MMP-2 settings " p. 30).
LCD screen displays unstable image when buttons are pressed in rough.	Buttons were pressed in rough.	The temporary distortion of image on LCD after rough pressing is not because of malfunction. Please be careful to press buttons in moderate pressure.

Trouble Shooting about Computer

** Please read the "ReadMe" file in the MMP-2 Driver & Software CD-ROM. You can get any additional information not written in the owner's manual from the "ReadMe" file.*

Windows Users..... p.43

Macintosh Users p.44

Windows users

USB connections cannot be made correctly.

◆Has the MMP-2 been recognized?

Disconnect the USB cables, and then re-connect them.

It is possible that the computer has failed to recognize or initialize the MMP-2. Leave the USB cable connected to the MMP-2, and restart Windows. If connection still does not occur, exit Windows, and turn off the power of your computer. Then turn on the power of your computer and start Windows.

Cannot shift to Suspend*

◆Is an application which uses the MMP-2 running?

Exit the application which is using the MMP-2.

The computer cannot shift to Suspend mode if an application such as a sequencer is using the MMP-2.

What is Suspend?

This is a function which minimizes power consumption by shutting down the internal circuitry of the computer and the peripheral devices while the power remains supplied to the computer.

MMP-2 does not resume correctly from the suspended state

◆When suspended, was the MMP-2 still connected via the USB cable?

Disconnect the USB cable, and then re-connect it.

On some computers when Windows resumes from the suspended state, the MMP-2 may fail to resume. If this occurs, the USB cable connected to the MMP-2 should be disconnected and then reconnected.

Windows hangs up (freezes) when returning from the suspended state

Disconnect the USB cable before suspending.

On some computers when Windows resumes from the suspended state, it may hang up (freeze). If this occurs, the USB cable connected to the MMP-2 should be disconnected before suspending.

When you once again wish to use the MMP-2, make sure that the computer has resumed correctly from the suspend state, and then connect the USB cable to the MMP-2.

** If the computer itself has a suspend switch, the USB cable connected to the MMP-2 should be disconnected before you press that switch.*

** For a notebook computer, some settings of the computer may cause it to automatically enter suspend mode when the lid (LCD display) is closed, so the USB cable connected to the MMP-2 should be disconnected before the lid is closed.*

Does not work with Windows 95

It will not operate on Windows 95.

My computer hangs up when I open a MIDI file

This problem can occur if the USB waveform of your computer does not sufficiently meet the standards. In this case, the problem may be solved if you connect the MMP-2 via a USB hub (USB hub containing a power supply).

Windows 98 / Me users

The latest information is provided in the “Troubleshooting” section of the file **Readme_e.htm**, located in the Driver\WinMe_98 folder of the CD-ROM. Please refer to the appropriate section.

- Cannot install/uninstall/use the driver
- Cannot select the MMP-2 device
- Cannot transfer data
- Data transfer is interrupted

Windows 2000 users

The latest information is provided in the “Troubleshooting” section of the file **Readme_e.htm**, located in the Driver\Win2000 folder of the CD-ROM. Please refer to the appropriate section.

- Cannot install/uninstall/use the driver
- Cannot select the MMP-2 device
- Cannot transfer data
- Data transfer is interrupted
- The “Digital Signature Not Found” dialog box appears
- You are asked for the driver file even though it has already been installed
- Cannot use two or more units simultaneously
- Other

Macintosh users

An error dialog box is displayed

◆Is the MMP-2 driver installed?

An error dialog box will be displayed if the MMP-2 is connected to your computer before the MMP-2 driver is installed.

If the display indicates “**The software needed to use the USB device “Unknown Device” cannot be found. Please refer to the device documentation to install the necessary software**”, click “**OK.**”

If the display indicates “**Software needed for the USB device “Unnamed Device” is not available. Would you like to look for the software on the Internet?**”, click “**Cancel.**”

After closing the dialog box, follow the procedure for “Macintosh / OMS” (p. 35) or “Macintosh / FreeMIDI” (p. 38) to install the MMP-2 driver.

Cannot install the USB MIDI driver

◆Did you exit all other programs?

Exit all currently-running programs.

Cannot make USB connections correctly

◆Was the MMP-2 recognized?

Disconnect the USB cable, and then re-connect it.

If another USB device is connected, try connecting only the MMP-2.

It is possible that the computer did not correctly recognize or initialize the MMP-2. Leave the USB cable connected to the MMP-2, and restart your Macintosh. If the connection is still not achieved, exit your Macintosh and turn off the power of the computer. Then turn on the power of the computer once again, and start up your Macintosh.

The computer cannot recognize the MMP-2 when the USB connector of Macintosh's keyboard is used. Re-connect the USB cable to the USB connector of the main body.

The MMP-2 does not recover correctly from sleep mode

After your Macintosh has been in sleep mode, exit the software and re-start it.

** We recommend that you make **Energy saving** settings in the **Control panel** so that your computer does not enter sleep mode.*

Macintosh hangs up

◆Did you try to plug and unplug USB cable during the booting of MMP-2 editor?

It is possible for your Macintosh to hang in case plugging and unplugging of USB cable is done during the MMP-2 editor is booting. Please do plugging and unplugging with confirmation that MMP-2 editor is not booted.

◆Did you try to communicate with MMP-2 without establishing connection via USB?

It is possible to hang or freeze if you try to send data from the MMP-2 Editor to MMP-2 unit without turning the power of MMP-2 unit on or connecting your Macintosh with MMP-2 unit using USB cable.

Please confirm MMP-2 unit and your Macintosh is correctly connected via USB and the power of MMP-2 unit is turned on before the communication of MMP-2 Editor and MMP-2 unit.

◆Did you booted MMP-2 editor before turning the power of MMP-2 unit on?

MMP-2 editor is set to obtain setup status of MMP-2 unit immediately after booting. In order to avoid hanging or freezing, please boot up MMP-2 editor after connection of MMP-2 unit with your Macintosh and turning the power on.

MIDI Implementation

Model: MMP-2
Version: 1.00

TRANSMITTED DATA AND REGONIZED RECEIVE DATA

■Channel Voice message

●Polyphonic Key Pressure

Transmits the level meter value of MMP-2(MIDI ch. is fixed to 16.)

Status	Second	Third
AFH	mmH	llH

mm = Note No.: 00H - 07H (0 - 7)
ll = Level Meter Value: 00H - 7FH (0 - 127)

Level Meter Target	
Note	
Level Meter	
Number	Channel
0	Input 1
1	Input 2
2	Output 1
3	Output 2
4	GR (COMP) 1
5	GR (COMP) 2
6	GR (EXP) 1
7	GR (EXP) 2

Level Meter Value	Level
0	0dB
1	-1dB
2	-2dB
:	:
127	-Infinite

●Control Change

Switches the group of effect patch (MIDI ch. is fixed to 16.)

Status	Second	Third
BFH	00H	mmH
BFH	20H	llH

mm = upper byte of bank number: 00H - 07H (0 - 7)
ll = lower byte of bank number: 00H - 7FH (0 - 127)

Bank Select	Program Change	Patch Number
MSB	LSB	
00H	00H	00H - 28H (0 - 40) Preset #01 - #41
00H	40H	00H - 3FH (0 - 63) User #01 - #64

●Program Change

Switches the effect patch (MIDI ch. is fixed to 16.)

Status	Second
CFH	ppH

pp = Program No.: 00H - 3FH (0 - 63)

■System Exclusive Message

Status	Data Byte	Status
F0H	iiH, ddH, ..., eeH	F7H

Byte	Description
F0H	Status of System Exclusive Message
iiH	Manufacturer ID
41H	Roland's Manufacturer ID
7EH	Universal Non Real-time Message
7FH	Universal Real-time Message
ddH	Data: 00H - 7FH (0 - 127)
:	:
eeH	Data
F7H	EOX (End of System Exclusive message)

The MMP-2 can transfer and receive the internal parameters information using system exclusive messages, and also can be controlled by the external devices using system exclusive message.

The MMP-2 can transmit and receive Universal System Exclusive messages, Data Request (RQ1) and Data set (DT1) as the System Exclusive Message.

○About Model ID

The Model ID of the MMP-2 is 00H,4EH as for Data Request (RQ1) and Data set (DT1).

○About Device ID

System Exclusive messages are not assigned to any particular MIDI channel. Instead, they have their own special control parameter called device ID.

The Roland system exclusive messages use device IDs to specify multiple MMP-2 units.

The MMP-2 sends system exclusive messages with the device ID set with "MIDI Device ID(*1)", and receives the system exclusive messages whose device ID is same as its device ID and 7FH.

(*1) See "Data Transfer Address Map" (p. 47) section.

●Universal System Exclusive Message

○INQUIRY MESSAGE

○Identity Request

Status	Data Byte	Status
F0H	7EH, Dev, 06H, 01H	F7H

Byte	Description
F0H	Status of System Exclusive Message
7EH	Universal System Exclusive Message Non Real-time Header
Dev	Device ID (or 7FH)
06H	General Information (sub ID #1)
01H	Identify Request (sub ID #2)
F7H	EOX (End of System Exclusive Message)

The message is used to request the particular information of the MMP-2.

The MMP-2 does not transmit the message.

If the MMP-2 received the message and the device ID of the message is same as its device ID or 7FH, the MMP-2 transmits the following Identity Reply message.

○Identity Reply

Status	Data Bytes	Status
F0H	7EH, Dev, 06H, 02H, 41H, 4EH, 01H, 00H, 00H, ssH, ssH, ssH, ssH	F7H

Byte	Description
F0H	Status of System Exclusive Message
7EH	Universal System Exclusive Message Non Real-time Header
Dev	Device ID (sub ID #1)
06H	General Information (sub ID #2)
02H	Identify Request
41H	Manufacturer ID (Roland)
4EH 01H	Device Family Code (MMP-2)
00H 00H	Device Family No.
ssH ssH	Software Revision Level
F7H	EOX (End of System Exclusive Message)

●Data Transfer

(RQ1, DT1)

○Data Request (RQ1)

Status	Data Bytes	Status
F0H	41H, Dev, 00H, 4EH, 11H, aaH, bbH, ccH, ssH, ssH, ssH, Sum	F7H

Byte	Description
F0H	Status of System Exclusive Message
41H	Manufacturer ID (Roland)
Dev	Device ID (MMP-2)
00H 4EH	Model ID (RQ1)
11H	Command ID
aaH	Address MSB
bbH	Address MID
ccH	Address LSB
ssH	Size MSB
ssH	Size MID
ssH	Size LSB
Sum	Check Sum
F7H	EOX (End of System Exclusive Message)

The message is used to request data to the MMP-2.

The MMP-2 does not transmit this message.

The MMP-2 transmits the requested data using Data Set(DT1) under following condition when it received the message.

1. The requested address correspond to the specified parameter base address of the MMP-2.
2. The requested size is over 1 byte.

○Data Set (DT1)

Status	Data Bytes	Status
F0H	41H,Dev,00H,4EH,12H,aaH,bbH,ccH,ddH, ..., eeH,Sum	F7H
Byte	Description	
F0H	Status of System Exclusive Message	
41H	Manufacturer ID (Roland)	
Dev	Device ID	
00H 4EH	Model ID (MMP-2)	
12H	Command ID (DT1)	
aaH	Address MSB	
bbH	Address MID	
ccH	Address LSB	
ddH	Data	
:	:	
eeH	Data	
Sum	Check Sum	
F7H	EOX (End of System Exclusive Message)	

○The message is received under the following condition.

If the device ID on the message is same as that of the receive device, and the address on the message correspond to the specified parameter base address, the received data are stored from the specified parameter base address.

If the interval of received messages is shorter than 25m sec., the MMP-2 can not work the receive message procedure correctly.

○The message is transmitted under the following condition.

When the MMP-2 transmit the data on the requested parameter after receiving the Data Request message(RQ1).

See "Data Transfer Address Map" (p. 47) for more details of the transfer parameters.

Data Transfer Address Map

The each address value is expressed as a 7bit hex number.

Address	MSB	LSB
Binary	0aaa aaaa	0bbb bbbb
7-bit Hex	AA	BB
	0ccc cccc	CC

■Parameter Address Block

<Model ID = 00H 4EH>

Start Address	Data	Contents and Remarks
00 00 00	00 - 01	System Parameter
00 01 00	00 - 01	Input Parameter
00 02 00	00 - 01	Effect Parameter (Temp)
00 04 00	00 - 01	Status
00 05 00	00 - 01	Remote Operation
01 00 00	00 - 01	Bulk Data

●System Parameter

Start Address	Data	Contents and Remarks
00 00	00 - 01	Master Clock(*1) INTERNAL, DIGITAL
00 01	00 - 03	Sampling Frequency(*1) 44.1K,48K,88.2K,96KHz
00 02	00 - 01	Audio Source(*1) MIC, DIGITAL
00 03	00	(Reserved)
00 0F	00	(Reserved)
00 10	00 - 01	USB Driver(*1) VENDER, GENELIC
00 11	00 - 1F	MIDI Device ID(*1) 1,,,32
00 12	00 - 01	MIDI Level Meter Tx. Switch OFF,ON
00 13	00	(Reserved)
00 1F	00	(Reserved)
00 20	00 - 0F	LCD Contrast 1,,,16
00 21	00 - 02	Peak Level Select -6,-3,0dB
00 22	00 - 02	Effects Routing NORM,P IN,P OUT
00 23	00	(Reserved)
00 7F	00	(Reserved)

(*1)Read Only Parameters.

●Input Parameters

Start Address	Data	Contents and Remarks
01 00	00 - 01	Phantom Power 1 OFF, ON
01 01	16 - 46	ATT 1 (0dB:40H) -42 - +6dB
01 02	00 - 01	Phase 1 NORMAL, INVERT
01 03	00	(Reserved)
01 04	00 - 51	LO-Cut 1 TURU,20 - 2.00kHz
01 05	00	(Reserved)
01 0F	00	(Reserved)
01 10	00 - 01	Phantom Power 2 OFF, ON
01 11	16 - 46	ATT 2 (0dB:40H) -42 - +6dB
01 12	00 - 01	Phase 2 NORMAL, INVERT
01 13	00	(Reserved)
01 14	00 - 51	LO-Cut 2 TURU,20 - 2.00kHz
01 15	00	(Reserved)
01 7F	00	(Reserved)

●Effect Parameters

○Basic Address

Start Address	Data	Contents and Remarks
02 00	20 - 7F	Effects Patch Name - 1 (ASCII)
02 0B	20 - 7F	Effects Patch Name -12
02 0C	10 - 11	Effects Algorithm Number 10H: MIC MODEL + 4 BAND EQ + DYNAMICS 11H: MIC MODEL + DYNAMICS + PLUG IN(Preamp)
02 0D	00	(Reserved)
02 0F	00	(Reserved)
02 10	00 - 7F	Effects Parameters
03 7F	00 - 7F	

○Algorithm 0 (MIC MODELING + 4 BAND EQ + DYNAMICS)

Start Address	Data	Contents and Remarks
02 10	00 - 01	LINK OFF, ON
02 11	00	(Reserved)
02 12	00 - 01	Bypass MODEL 1 OFF, ON
02 13	00 - 01	Bypass MODEL 2 OFF, ON
02 14	00 - 01	Bypass EQ 1 OFF, ON
02 15	00 - 01	Bypass EQ 2 OFF, ON
02 16	00 - 01	Bypass DYN 1 OFF, ON
02 17	00 - 01	Bypass DYN 2 OFF, ON
02 18	00	(Reserved)
02 1F	00	(Reserved)
02 20	00 - 01	MODEL 1: SW OFF, ON
02 21	00 - 05	MODEL 1: Input 0,,,5 = DR-20,SmlDy,HedDy,MinCn,Flat,AKGC3K
02 22	00 - 06	MODEL 1: Output 0,,,6 = SML.DY,VOC.DY,LRG.DY,SML.CN,LRG.CN,VNT.CN,FLAT
02 23	34 - 4C	MODEL 1: Proximity Effect (0:40H) -12,,,+12
02 24	00 - 6B	MODEL 1: Timelag 0,,,107 = 0,,,3000cm
02 25	00 - 01	MODEL 2: SW OFF, ON
02 26	00 - 05	MODEL 2: Input 0,,,5 = DR-20,SmlDy,HedDy,MinCn,Flat,AKGC3K
02 27	00 - 06	MODEL 2: Output 0,,,6 = SML.DY,VOC.DY,LRG.DY,SML.CN,LRG.CN,VNT.CN,FLAT
02 28	34 - 4C	MODEL 2: Proximity Effect (0:40H) -12,,,+12
02 29	00 - 6B	MODEL 2: Timelag 0,,,107 = 0,,,3000cm
02 2A	00	(Reserved)
02 2F	00	(Reserved)
02 30	00 - 01	EQ 1: SW OFF, ON
02 31	16 - 46	EQ 1: ATT (0dB:40H) -42 - +6dB

MIDI Implementation

02 32	01 - 79	EQ 1: Low EQ Frequency	20 - 20.0kHz
02 33	22 - 5E	EQ 1: Low EQ Gain (0dB:40H)	-15,,,+15dB
02 34	1E - 60	EQ 1: Low EQ Q	0.36,,,16.0
02 35	01 - 79	EQ 1: Lo-Mid EQ Frequency	20 - 20.0kHz
02 36	22 - 5E	EQ 1: Lo-Mid EQ Gain (0dB:40H)	-15,,,+15dB
02 37	1E - 60	EQ 1: Lo-Mid EQ Q	0.36,,,16.0
02 38	01 - 79	EQ 1: Hi-Mid EQ Frequency	20 - 20.0kHz
02 39	22 - 5E	EQ 1: Hi-Mid EQ Gain (0dB:40H)	-15,,,+15dB
02 3A	1E - 60	EQ 1: Hi-Mid EQ Q	0.36,,,16.0
02 3B	01 - 79	EQ 1: Hi EQ Frequency	20 - 20.0kHz
02 3C	22 - 5E	EQ 1: Hi EQ Gain (0dB:40H)	-15,,,+15dB
02 3D	1E - 60	EQ 1: Hi EQ Q	0.36,,,16.0
02 3E	00 - 02	EQ 1: Low-Type	0,,,9 = PEAK,,,THRU
02 3F	00 - 02	EQ 1: Lo-Mid Type	0,,,9 = PEAK,,,THRU
02 40	00 - 02	EQ 1: Hi-Mid Type	0,,,9 = PEAK,,,THRU
02 41	00 - 02	EQ 1: Hi Type	0,,,9 = PEAK,,,THRU
02 42	00 - 01	EQ 2: SW	OFF, ON
02 43	16 - 46	EQ 2: ATT (0dB:40H)	-42 - +6dB
02 44	01 - 79	EQ 2: Low EQ Frequency	20 - 20.0kHz
02 45	22 - 5E	EQ 2: Low EQ Gain (0dB:40H)	-15,,,+15dB
02 46	1E - 60	EQ 2: Low EQ Q	0.36,,,16.0
02 47	01 - 79	EQ 2: Lo-Mid EQ Frequency	20 - 20.0kHz
02 48	22 - 5E	EQ 2: Lo-Mid EQ Gain (0dB:40H)	-15,,,+15dB
02 49	1E - 60	EQ 2: Lo-Mid EQ Q	0.36,,,16.0
02 4A	01 - 79	EQ 2: Hi-Mid EQ Frequency	20 - 20.0kHz
02 4B	22 - 5E	EQ 2: Hi-Mid EQ Gain (0dB:40H)	-15,,,+15dB
02 4C	1E - 60	EQ 2: Hi-Mid EQ Q	0.36,,,16.0
02 4D	01 - 79	EQ 2: Hi EQ Frequency	20 - 20.0kHz
02 4E	22 - 5E	EQ 2: Hi EQ Gain (0dB:40H)	-15,,,+15dB
02 4F	1E - 60	EQ 2: Hi EQ Q	0.36,,,16.0
02 50	00 - 02	EQ 2: Low-Type	0,,,9 = PEAK,,,THRU
02 51	00 - 02	EQ 2: Lo-Mid Type	0,,,9 = PEAK,,,THRU
02 52	00 - 02	EQ 2: Hi-Mid Type	0,,,9 = PEAK,,,THRU
02 53	00 - 02	EQ 2: Hi Type	0,,,9 = PEAK,,,THRU
02 54	00	(Reserved)	:
02 5F	00	(Reserved)	:
02 60	00 - 01	DYN 1: COMP SW	OFF, ON
02 61	00 - 04	DYN 1: COMP Type 0,,,4 = SOLID,TUBE1,TUBE2,TUBE3,TUBE4	
02 62	00 - 01	DYN 1: COMP KEYIN	IN1,IN2
02 63	10 - 40	DYN 1: COMP Threshold (0dB:40H)	-24 - 0dB
02 64	00 - 0D	DYN 1: COMP Ratio	0,13 = 1.00:0,,,INF:0
02 65	00 - 01	DYN 1: COMP Knee	HARD,SOFT
02 66	00 - 7C	DYN 1: COMP Attack	0,,,800.0ms
02 67	00 - 7C	DYN 1: COMP Release	0,,,8000ms
02 68	10 - 70	DYN 1: COMP Level (0dB:40H)	-24 - +24dB
02 69	00 - 01	DYN 1: COMP Autogain	OFF, ON
02 6A	00 - 01	DYN 1: EXP SW	OFF, ON
02 6B	00 - 01	DYN 1: EXP KEYIN	IN1,IN2
02 6C	10 - 60	DYN 1: EXP Threshold (0dB:60H)	-80 - 0dB
02 6D	00 - 0D	DYN 1: EXP Ratio	0,13 = 1.00:0,,,INF:0
02 6E	00	(Reserved)	:
02 6F	00 - 7C	DYN 1: EXP Attack	0,,,800.0ms
02 70	00 - 7C	DYN 1: EXP Release	0,,,8000ms
02 71	00 - 01	DYN 1: ENH/DES SW	OFF, ON
02 72	00 - 01	DYN 1: ENH/DES Type	ENH,DES
02 73	00 - 64	DYN 1: ENH Sens	0,,,100
02 74	39 - 79	DYN 1: ENH Freq	500,,,20000Hz
02 75	40 - 58	DYN 1: ENH Mix Level (0dB:40H)	0 - +12dB
02 76	00 - 64	DYN 1: DES Sens	0,,,100
02 77	39 - 79	DYN 1: DES Freq	500,,,20000Hz
02 78	10 - 40	DYN 1: DES Rejection Level (0dB:40H)	-24 - 0dB
02 79	00 - 01	DYN 2: COMP SW	OFF, ON
02 7A	00 - 04	DYN 2: COMP Type 0,,,4 = SOLID,TUBE1,TUBE2,TUBE3,TUBE4	

02 7B	00 - 01	DYN 2: COMP KEYIN	IN1,IN2
02 7C	10 - 40	DYN 2: COMP Threshold (0dB:40H)	-24 - 0dB
02 7D	00 - 0D	DYN 2: COMP Ratio	0,13 = 1.00:0,,,INF:0
02 7E	00 - 01	DYN 2: COMP Knee	HARD,SOFT
02 7F	00 - 7C	DYN 2: COMP Attack	0,,,800.0ms
03 00	00 - 7C	DYN 2: COMP Release	0,,,8000ms
03 01	10 - 70	DYN 2: COMP Level (0dB:40H)	-24 - +24dB
03 02	00 - 01	DYN 2: COMP Autogain	OFF, ON
03 03	00 - 01	DYN 2: EXP SW	OFF, ON
03 04	00 - 01	DYN 2: EXP KEYIN	IN1,IN2
03 05	10 - 60	DYN 2: EXP Threshold (0dB:60H)	-80 - 0dB
03 06	00 - 0D	DYN 2: EXP Ratio	0,13 = 1.00:0,,,INF:0
03 07	00	(Reserved)	:
03 08	00 - 7C	DYN 2: EXP Attack	0,,,800.0ms
03 09	00 - 7C	DYN 2: EXP Release	0,,,8000ms
03 0A	00 - 01	DYN 2: ENH/DES SW	OFF, ON
03 0B	00 - 01	DYN 2: ENH/DES Type	ENH,DES
03 0C	00 - 64	DYN 2: ENH Sens	0,,,100
03 0D	39 - 79	DYN 2: ENH Freq	500,,,20000Hz
03 0E	40 - 58	DYN 2: ENH Mix Level (0dB:40H)	0 - +12dB
03 0F	00 - 64	DYN 2: DES Sens	0,,,100
03 10	39 - 79	DYN 2: DES Freq	500,,,20000Hz
03 11	28 - 40	DYN 2: DES Rejection Level (0dB:40H)	-12 - 0dB
03 12	00	(Reserved)	:
03 7F	00	(Reserved)	:

Algorithm 1 (MIC MODELING + DYNAMICS + PLUG IN(Preamp))

Start Address	Data	Contents and Remarks
02 10	00 - 01	LINK OFF, ON
02 11	00	(Reserved)
02 12	00 - 01	Bypass MODEL 1 OFF, ON
02 13	00 - 01	Bypass MODEL 2 OFF, ON
02 14	00	(Reserved)
02 15	00	(Reserved)
02 16	00 - 01	Bypass DYN 1 OFF, ON
02 17	00 - 01	Bypass DYN 2 OFF, ON
02 18	00 - 01	Bypass PLUGIN 1(Preamp) OFF, ON
02 19	00 - 01	Bypass PLUGIN 2(Preamp) OFF, ON
02 1A	00	(Reserved)
02 1F	00	(Reserved)
02 20	00 - 01	MODEL 1: SW OFF, ON
02 21	00 - 05	MODEL 1: Input 0,,,5 = DR-20,SmlDy,HedDy,MinCn,Flat,AKGC3K
02 22	00 - 06	MODEL 1: Output 0,,,6 = SML.DY,VOC.DY,LRG.DY,SML.CN,LRG.CN,VNT.CN,FLAT
02 23	34 - 4C	MODEL 1: Proximity Effect (0:40H) -12,,,+12
02 24	00 - 6B	MODEL 1: Timelag 0,,,107 = 0,,,3000cm
02 25	00 - 01	MODEL 2: SW OFF, ON
02 26	00 - 05	MODEL 2: Input 0,,,5 = DR-20,SmlDy,HedDy,MinCn,Flat,AKGC3K
02 27	00 - 06	MODEL 2: Output 0,,,6 = SML.DY,VOC.DY,LRG.DY,SML.CN,LRG.CN,VNT.CN,FLAT
02 28	34 - 4C	MODEL 2: Proximity Effect (0:40H) -12,,,+12
02 29	00 - 6B	MODEL 2: Timelag 0,,,107 = 0,,,3000cm
02 2A	00	(Reserved)
02 5F	00	(Reserved)
02 60	00 - 01	DYN 1: COMP SW OFF, ON
02 61	00 - 04	DYN 1: COMP Type 0,,,4 = SOLID,TUBE1,TUBE2,TUBE3,TUBE4
02 62	00 - 01	DYN 1: COMP KEYIN IN1,IN2
02 63	10 - 40	DYN 1: COMP Threshold (0dB:40H) -24 - 0dB
02 64	00 - 0D	DYN 1: COMP Ratio 0,13 = 1.00:0,,,INF:0
02 65	00 - 01	DYN 1: COMP Knee HARD,SOFT
02 66	00 - 7C	DYN 1: COMP Attack 0,,,800.0ms
02 67	00 - 7C	DYN 1: COMP Release 0,,,8000ms

02 68	10 - 70	DYN 1: COMP Level	(0dB:40H) -24 - +24dB
02 69	00 - 01	DYN 1: COMP Autogain	OFF,ON
02 6A	00 - 01	DYN 1: EXP SW	OFF,ON
02 6B	00 - 01	DYN 1: EXP KEYIN	IN1,IN2
02 6C	10 - 60	DYN 1: EXP Threshold	(0dB:60H) -80 - 0dB
02 6D	00 - 0D	DYN 1: EXP Ratio	0,13 = 1.00:0,,,INF:0
02 6E	00	(Reserved)	
02 6F	00 - 7C	DYN 1: EXP Attack	0,,,800.0ms
02 70	00 - 7C	DYN 1: EXP Release	0,,,8000ms
02 71	00 - 01	DYN 1: ENH/DES SW	OFF,ON
02 72	00 - 01	DYN 1: ENH/DES Type	ENH,DES
02 73	00 - 64	DYN 1: ENH Sens	0,,,100
02 74	39 - 79	DYN 1: ENH Freq	500,,,20000Hz
02 75	40 - 58	DYN 1: ENH Mix Level	(0dB:40H) 0 - +12dB
02 76	00 - 64	DYN 1: DES Sens	0,,,100
02 77	39 - 79	DYN 1: DES Freq	500,,,20000Hz
02 78	10 - 40	DYN 1: DES Rejection Level	(0dB:40H) -24 - 0dB
02 79	00 - 01	DYN 2: COMP SW	OFF,ON
02 7A	00 - 04	DYN 2: COMP Type 0,,,4 =	SOLID,TUBE1,TUBE2,TUBE3,TUBE4
02 7B	00 - 01	DYN 2: COMP KEYIN	IN1,IN2
02 7C	10 - 40	DYN 2: COMP Threshold	(0dB:40H) -24 - 0dB
02 7D	00 - 0D	DYN 2: COMP Ratio	0,13 = 1.00:0,,,INF:0
02 7E	00 - 01	DYN 2: COMP Knee	HARD,SOFT
02 7F	00 - 7C	DYN 2: COMP Attack	0,,,800.0ms
03 00	00 - 7C	DYN 2: COMP Release	0,,,8000ms
03 01	10 - 70	DYN 2: COMP Level	(0dB:40H) -24 - +24dB
03 02	00 - 01	DYN 2: COMP Autogain	OFF,ON
03 03	00 - 01	DYN 2: EXP SW	OFF,ON
03 04	00 - 01	DYN 2: EXP KEYIN	IN1,IN2
03 05	10 - 60	DYN 2: EXP Threshold	(0dB:60H) -80 - 0dB
03 06	00 - 0D	DYN 2: EXP Ratio	0,13 = 1.00:0,,,INF:0
03 07	00	(Reserved)	
03 08	00 - 7C	DYN 2: EXP Attack	0,,,800.0ms
03 09	00 - 7C	DYN 2: EXP Release	0,,,8000ms
03 0A	00 - 01	DYN 2: ENH/DES SW	OFF,ON
03 0B	00 - 01	DYN 2: ENH/DES Type	ENH,DES
03 0C	00 - 64	DYN 2: ENH Sens	0,,,100
03 0D	39 - 79	DYN 2: ENH Freq	500,,,20000Hz
03 0E	40 - 58	DYN 2: ENH Mix Level	(0dB:40H) 0 - +12dB
03 0F	00 - 64	DYN 2: DES Sens	0,,,100
03 10	39 - 79	DYN 2: DES Freq	500,,,20000Hz
03 11	28 - 40	DYN 2: DES Rejection Level	(0dB:40H) -12 - 0dB
03 12	00	(Reserved)	
:	:		
03 1F	00	(Reserved)	
03 20	00 - 01	PLUGIN 1: Preamp SW	OFF,ON
03 21	00 - 08	PLUGIN 1: Preamp Type	0,,,8 = RED7,,,CSSLST
03 22	01 - 45	PLUGIN 1: Preamp Warm Freq	20,,,10000Hz
03 23	04 - 7C	PLUGIN 1: Preamp Warm Gain	-6,,,+6dB
03 24	45 - 79	PLUGIN 1: Preamp Brightness Freq	1000,,,20000Hz
03 25	04 - 7C	PLUGIN 1: Preamp Brightness Gain	-6,,,+6dB
03 26	28 - 40	PLUGIN 1: Preamp Harmonic Distortion Threshold	(0dB:40H) -12 - 0dB
03 27	00 - 64	PLUGIN 1: Preamp Harmonic Distortion Level	0,,,100
03 28	00 - 64	PLUGIN 1: Preamp Harmonic Distortion Color	0,,,100
03 29	00 - 01	PLUGIN 2: Preamp SW	OFF,ON
03 2A	00 - 08	PLUGIN 2: Preamp Type	0,,,8 = RED7,,,CSSLST
03 2B	01 - 45	PLUGIN 2: Preamp Warm Freq	20,,,10000Hz
03 2C	04 - 7C	PLUGIN 2: Preamp Warm Gain	-6,,,+6dB
03 2D	45 - 79	PLUGIN 2: Preamp Brightness Freq	1000,,,20000Hz
03 2E	04 - 7C	PLUGIN 2: Preamp Brightness Gain	-6,,,+6dB
03 2F	28 - 40	PLUGIN 2: Preamp Harmonic Distortion Threshold	(0dB:40H) -12 - 0dB
03 30	00 - 64	PLUGIN 2: Preamp Harmonic Distortion Level	0,,,100

03 31	00 - 64	PLUGIN 2: Preamp Harmonic Distortion Color	0,,,100
03 32	00	(Reserved)	
:	:		
03 7F	00	(Reserved)	

●Status

Start Address	Data	Contents and Remarks
04 00	00 - 01	Lock Flag UNLOCK, LOCK
04 01	00 - 02	Operation Mode NORMAL, BULK DUMP, BULK RCV
04 02	00	(Reserved)
:	:	
04 7F	00	(Reserved)

(*) Read Only Parameters.

●Remote Operation

Start Address	Data	Contents and Remarks
00 05 00	00 -	Remote Command / Response
05 01#	00 -	Parameter
00 7F#	00 -	Parameter

* The addresses with # marks are invalid. Set data in regulated size (DT1) to the addresses without # marks.

* It is necessary to set parameter in regulated size simultaneously with the Command.

○Remote Operation Command List

Command	Remarks
00	NOP (No Operation)
01	Reset Temporary Patch
02	Set Application Control Mode

○Remote Operation Response List

Command	Remarks
40	Complete (No Error)
41	Error

○Command 00 NOP (No Operation)

Start Address	Data	Contents and Remarks
00 05 00	00	NOP (No Operation)

○Command 01 Reset Temporary Patch

Start Address	Data	Contents and Remarks
00 05 00	01	Reset Temporary Patch

○Command 02 Set Application Control Mode

Start Address	Data	Contents and Remarks
00 05 00	02	Set Application Control Mode
00 05 01	00 - 01	PC-Base Application (MMP-2 Editor) Control Mode 00 = Off Line 01 = On Line

MIDI Implementation

Response 40 Complete (No Error)

Start Address	Data	Contents and Remarks
00 05 00	40	Complete (No Error)

Response 41 Error

Start Address	Data	Contents and Remarks
00 05 00	41	Error
00 05 01	00 - 7F	Error Code 00 = No Error (Complete, End of data) 01 = Illegal Patch Data 02 = Busy

Bulk Data

Start Address	Data	Contents and Remarks
01 00 00	00 -	User Effect Patch Data
7F 7F	00 -	User Effect Patch Data

See Table as follows for settings.

MIDI Data - EQ Frequency Table

Data	HZ	Data	HZ	Data	HZ	Data	HZ
00H	TURU	10H	47	20H	120	30H	300
01H	20	11H	50	21H	125	31H	315
02H	21	12H	53	22H	133	32H	335
03H	22	13H	56	23H	140	33H	355
04H	24	14H	60	24H	150	34H	376
05H	25	15H	63	25H	160	35H	400
06H	27	16H	67	26H	170	36H	422
07H	28	17H	71	27H	180	37H	450
08H	30	18H	75	28H	190	38H	473
09H	32	19H	80	29H	200	39H	500
0AH	33	1AH	84	2AH	210	3AH	530
0BH	36	1BH	90	2BH	224	3BH	560
0CH	38	1CH	94	2CH	237	3CH	600
0DH	40	1DH	100	2DH	250	3DH	630
0EH	42	1EH	106	2EH	266	3EH	670
0FH	45	1FH	112	2FH	280	3FH	710

Data	HZ	Data	HZ	Data	HZ	Data	HZ
40H	750	50H	1.90k	60H	4.73k	70H	12.0k
41H	800	51H	2.00k	61H	5.00k	71H	12.5k
42H	840	52H	2.10k	62H	5.30k	72H	13.3k
43H	900	53H	2.24k	63H	5.60k	73H	14.0k
44H	944	54H	2.37k	64H	6.00k	74H	15.0k
45H	1.00k	55H	2.50k	65H	6.30k	75H	16.0k
46H	1.06k	56H	2.66k	66H	6.70k	76H	17.0k
47H	1.12k	57H	2.80k	67H	7.10k	77H	18.0k
48H	1.20k	58H	3.00k	68H	7.50k	78H	19.0k
49H	1.25k	59H	3.15k	69H	8.00k	79H	20.0k
4AH	1.33k	5AH	3.35k	6AH	8.40k	7AH	—
4BH	1.40k	5BH	3.55k	6BH	9.00k	7BH	—
4CH	1.50k	5CH	3.76k	6CH	9.44k	7CH	—
4DH	1.60k	5DH	4.00k	6DH	10.0k	7DH	—
4EH	1.70k	5EH	4.22k	6EH	10.6k	7EH	—
4FH	1.80k	5FH	4.50k	6FH	11.2k	7FH	—

MIDI Data - EQ Gain Table

Data	Gain (dB)	Data	Gain (dB)	Data	Gain (dB)	Data	Gain (dB)
20H	-16.0	40H	0.0	60H	16.0	80H	32.0
21H	-15.5	41H	0.5	61H	16.5	81H	32.5
22H	-15.0	42H	1.0	62H	17.0	82H	33.0
23H	-14.5	43H	1.5	63H	17.5	83H	33.5
24H	-14.0	44H	2.0	64H	18.0	84H	34.0
25H	-13.5	45H	2.5	65H	18.5	85H	34.5
26H	-13.0	46H	3.0	66H	19.0	86H	35.0
27H	-12.5	47H	3.5	67H	19.5	87H	35.5
28H	-12.0	48H	4.0	68H	20.0	88H	36.0
29H	-11.5	49H	4.5	69H	20.5	89H	36.5
2AH	-11.0	4AH	5.0	6AH	21.0	90H	37.0
2BH	-10.5	4BH	5.5	6BH	21.5	91H	37.5
2CH	-10.0	4CH	6.0	6CH	22.0	92H	38.0
2DH	-9.5	4DH	6.5	6DH	22.5	93H	38.5
2EH	-9.0	4EH	7.0	6EH	23.0	94H	39.0
2FH	-8.5	4FH	7.5	6FH	23.5	95H	39.5
30H	-8.0	50H	8.0	70H	24.0	96H	40.0
31H	-7.5	51H	8.5	71H	24.5	97H	40.5
32H	-7.0	52H	9.0	72H	25.0	98H	41.0
33H	-6.5	53H	9.5	73H	25.5	99H	41.5
34H	-6.0	54H	10.0	74H	26.0	00H	42.0
35H	-5.5	55H	10.5	75H	26.5	01H	42.5
36H	-5.0	56H	11.0	76H	27.0	02H	43.0
37H	-4.5	57H	11.5	77H	27.5	03H	43.5
38H	-4.0	58H	12.0	78H	28.0	04H	44.0

19H	-19.5	39H	- 3.5	59H	12.5
1AH	-19.0	3AH	- 3.0	5AH	13.0
1BH	-18.5	3BH	- 2.5	5BH	13.5
1CH	-18.0	3CH	- 2.0	5CH	14.0
1DH	-17.5	3DH	- 1.5	5DH	14.5
1EH	-17.0	3EH	- 1.0	5EH	15.0
1FH	-16.5	3FH	- 0.5	5FH	15.5

MIDI Data - EQ Quality Table

Data	Data	Data	Data				
00H	—	10H	—	20H	0.40	30H	1.00
01H	—	11H	—	21H	0.42	31H	1.06
02H	—	12H	—	22H	0.45	32H	1.12
03H	—	13H	—	23H	0.47	33H	1.20
04H	—	14H	—	24H	0.50	34H	1.25
05H	—	15H	—	25H	0.53	35H	1.33
06H	—	16H	—	26H	0.56	36H	1.40
07H	—	17H	—	27H	0.60	37H	1.50
08H	—	18H	—	28H	0.63	38H	1.60
09H	—	19H	—	29H	0.67	39H	1.70
0AH	—	1AH	—	2AH	0.71	3AH	1.80
0BH	—	1BH	—	2BH	0.75	3BH	1.90
0CH	—	1CH	—	2CH	0.80	3CH	2.00
0DH	—	1DH	—	2DH	0.84	3DH	2.10
0EH	—	1EH	0.36	2EH	0.90	3EH	2.24
0FH	—	1FH	0.38	2FH	0.94	3FH	2.37

Data	Data	Data	Data				
40H	2.50	50H	6.30	60H	16.0	70H	—
41H	2.66	51H	6.70	61H	—	71H	—
42H	2.80	52H	7.10	62H	—	72H	—
43H	3.00	53H	7.50	63H	—	73H	—
44H	3.15	54H	8.00	64H	—	74H	—
45H	3.35	55H	8.40	65H	—	75H	—
46H	3.55	56H	9.00	66H	—	76H	—
47H	3.76	57H	9.44	67H	—	77H	—
48H	4.00	58H	10.0	68H	—	78H	—
49H	4.22	59H	10.6	69H	—	79H	—
4AH	4.50	5AH	11.2	6AH	—	7AH	—
4BH	4.73	5BH	12.0	6BH	—	7BH	—
4CH	5.00	5CH	12.5	6CH	—	7CH	—
4DH	5.30	5DH	13.3	6DH	—	7DH	—
4EH	5.60	5EH	14.0	6EH	—	7EH	—
4FH	6.00	5FH	15.0	6FH	—	7FH	—

MIDI Data - EQ Type Table

Data	TYPE
00H	PEAK
01H	LSV
02H	HSV
03H	LPF1
04H	HPF1
05H	LPF2
06H	HPF2
07H	BRF2
08H	BRF2
09H	THRU

MIDI Data - EXP / CMP Ratio Table

Data	RATIO
00H	1.00:1
01H	1.12:1
02H	1.25:1
03H	1.40:1
04H	1.60:1
05H	1.80:1
06H	2.00:1
07H	2.50:1
08H	3.20:1
09H	4.00:1
0AH	5.60:1
0BH	SCB
0CH	16.0:1
0DH	INF:1

MIDI Data - Time Table (Time Lag Table)

Data	ms (cm)	Data	ms (cm)	Data	ms (cm)	Data	ms (cm)
00H	0	10H	16	20H	40	30H	100
01H	1	11H	17	21H	42	31H	106
02H	2	12H	18	22H	45	32H	112
03H	3	13H	19	23H	47	33H	120
04H	4	14H	20	24H	50	34H	125
05H	5	15H	21	25H	53	35H	133
06H	6	16H	22	26H	56	36H	140
07H	7	17H	24	27H	60	37H	150
08H	8	18H	25	28H	63	38H	160
09H	9	19H	27	29H	67	39H	170
0AH	10	1AH	28	2AH	71	3AH	180
0BH	11	1BH	30	2BH	75	3BH	190
0CH	12	1CH	32	2CH	80	3CH	200
0DH	13	1DH	33	2DH	84	3DH	210
0EH	14	1EH	36	2EH	90	3EH	224
0FH	15	1FH	38	2FH	94	3FH	237

Data	ms (cm)	Data	ms (cm)	Data	ms (cm)	Data	ms (cm)
40H	250	50H	630	60H	1600	70H	4000
41H	266	51H	670	61H	1700	71H	4220
42H	280	52H	710	62H	1800	72H	4500
43H	300	53H	750	63H	1900	73H	4730
44H	315	54H	800	64H	2000	74H	5000
45H	335	55H	840	65H	2100	75H	5300
46H	355	56H	900	66H	2240	76H	5600
47H	376	57H	944	67H	2370	77H	6000

48H -	400	58H -	1000	68H -	2500	78H -	6300
49H -	422	59H -	1060	69H -	2660	79H -	6700
4AH -	450	5AH -	1120	6AH -	2800	7AH -	7100
4BH -	473	5BH -	1200	6BH -	3000	7BH -	7500
4CH -	500	5CH -	1250	6CH -	3150	7CH -	8000
4DH -	530	5DH -	1330	6DH -	3350	7DH -	—
4EH -	560	5EH -	1400	6EH -	3550	7EH -	—
4FH -	600	5FH -	1500	6FH -	3760	7FH -	—

MIDI Data - PREAMP Type Table

Data	TYPE
00H -	RED7
01H -	N1073
02H -	MANSS
03H -	AVTUBE
04H -	AVSOLS
05H -	HHTUBE
06H -	MILLHV
07H -	SATUBE
08H -	CSSLST

MIDI Data - PREAMP Gain Table

Data	Gain(dB)	Data	Gain(dB)	Data	Gain(dB)	Data	Gain(dB)
		20H -	- 3.2	40H -	0.0	60H -	3.2
		21H -	- 3.1	41H -	0.1	61H -	3.3
		22H -	- 3.0	42H -	0.2	62H -	3.4
		23H -	- 2.9	43H -	0.3	63H -	3.5
04H -	6.0	24H -	- 2.8	44H -	0.4	64H -	3.6
05H -	5.9	25H -	- 2.7	45H -	0.5	65H -	3.7
06H -	5.8	26H -	- 2.6	46H -	0.6	66H -	3.8
07H -	5.7	27H -	- 2.5	47H -	0.7	67H -	3.9
08H -	5.6	28H -	- 2.4	48H -	0.8	68H -	4.0
09H -	5.5	29H -	- 2.3	49H -	0.9	69H -	4.1
0AH -	5.4	2AH -	- 2.2	4AH -	1.0	6AH -	4.2
0BH -	5.3	2BH -	- 2.1	4BH -	1.1	6BH -	4.3
0CH -	5.2	2CH -	- 2.0	4CH -	1.2	6CH -	4.4
0DH -	5.1	2DH -	- 1.9	4DH -	1.3	6DH -	4.5
0EH -	- 5.0	2EH -	- 1.8	4EH -	1.4	6EH -	4.6
0FH -	- 4.9	2FH -	- 1.7	4FH -	1.5	6FH -	4.7
10H -	- 4.8	30H -	- 1.6	50H -	1.6	70H -	4.8
11H -	- 4.7	31H -	- 1.5	51H -	1.7	71H -	4.9
12H -	- 4.6	32H -	- 1.4	52H -	1.8	72H -	5.0
13H -	- 4.5	33H -	- 1.3	53H -	1.9	73H -	5.1
14H -	- 4.4	34H -	- 1.2	54H -	2.0	74H -	5.2
15H -	- 4.3	35H -	- 1.1	55H -	2.1	75H -	5.3
16H -	- 4.2	36H -	- 1.0	56H -	2.2	76H -	5.4
17H -	- 4.1	37H -	- 0.9	57H -	2.3	77H -	5.5
18H -	- 4.0	38H -	- 0.8	58H -	2.4	78H -	5.6
19H -	- 3.9	39H -	- 0.7	59H -	2.5	79H -	5.7
1AH -	- 3.8	3AH -	- 0.6	5AH -	2.6	7AH -	5.8
1BH -	- 3.7	3BH -	- 0.5	5BH -	2.7	7BH -	5.9
1CH -	- 3.6	3CH -	- 0.4	5CH -	2.8	7CH -	6.0
1DH -	- 3.5	3DH -	- 0.3	5DH -	2.9		
1EH -	- 3.4	3EH -	- 0.2	5EH -	3.0		
1FH -	- 3.3	3FH -	- 0.1	5FH -	3.1		

Appendices

●Decimal and Hexadecimal table

(Hexadecimal number is shown with H.)

In MIDI documentation, data values and addresses/sizes of system exclusive messages etc. are expressed as hexadecimal values for each 7 bits.

The following table shows how these correspond to decimal numbers.

Deci	Hexa	Deci	Hexa	Deci	Hexa	Deci	Hexa
0	00H	32	20H	64	40H	96	60H
1	01H	33	21H	65	41H	97	61H
2	02H	34	22H	66	42H	98	62H
3	03H	35	23H	67	43H	99	63H
4	04H	36	24H	68	44H	100	64H
5	05H	37	25H	69	45H	101	65H
6	06H	38	26H	70	46H	102	66H
7	07H	39	27H	71	47H	103	67H
8	08H	40	28H	72	48H	104	68H
9	09H	41	29H	73	49H	105	69H
10	0AH	42	2AH	74	4AH	106	6AH
11	0BH	43	2BH	75	4BH	107	6BH
12	0CH	44	2CH	76	4CH	108	6CH
13	0DH	45	2DH	77	4DH	109	6DH
14	0EH	46	2EH	78	4EH	110	6EH
15	0FH	47	2FH	79	4FH	111	6FH
16	10H	48	30H	80	50H	112	70H
17	11H	49	31H	81	51H	113	71H
18	12H	50	32H	82	52H	114	72H
19	13H	51	33H	83	53H	115	73H
20	14H	52	34H	84	54H	116	74H
21	15H	53	35H	85	55H	117	75H
22	16H	54	36H	86	56H	118	76H
23	17H	55	37H	87	57H	119	77H
24	18H	56	38H	88	58H	120	78H
25	19H	57	39H	89	59H	121	79H
26	1AH	58	3AH	90	5AH	122	7AH
27	1BH	59	3BH	91	5BH	123	7BH
28	1CH	60	3CH	92	5CH	124	7CH
29	1DH	61	3DH	93	5DH	125	7DH
30	1EH	62	3EH	94	5EH	126	7EH
31	1FH	63	3FH	95	5FH	127	7FH

* Decimal values such as MIDI channel, bank select, and program change are listed as one (1) greater than the values given in the above table.

* A 7-bit byte can express data in the range of 128 steps. For data where greater

precision is required, we must use two or more bytes. For example, two hexadecimal numbers aa bbH expressing two 7-bit bytes would indicate a value of aa x 128 + bb.

* In the case of values which have a ± sign, 00H = -64, 40H = ±0, and 7FH = +63, so that the decimal expression would be 64 less than the value given in the above chart. In the case of two types, 00 00H = -8192, 40 00H = ±0, and 7F 7FH = +8191.

* Data marked "nibbled" is expressed in hexadecimal in 4-bit units. A value expressed as a 2-byte nibble 0a 0bH has the value of a x 16 + b.

<Ex.1> What is 5AH in decimal system?

5AH = 90 according to the above table.

<Ex.2>What in decimal system is 12034H in hexadecimal of every 7 bit?

12H = 18, 34H = 52 according to the above table. So 18 x 128 + 52 = 2356.

<Ex.3> What in decimal system is 0A 03 09 0D in nibble system?

0AH = 10, 03H = 3, 09H = 9, 0DH = 13 according to the table.

So ((10 x 16 + 3) x 16 + 9) x 16 + 13 = 41885.

<Ex. 4> What in nibble system is 1258 in decimal system?

```

16) 1258
   78 ... 10
   16)  78 ... 14
     16)  14 ...  4

```

0 = 00H, 4 = 04H, 10 = 0EH, 10 = 0AH According to the table.

So it is 00 04 0E 0AH.

●Example of system exclusive message and Checksum calculation

On Roland system exclusive message (DT1), checksum is added at the end of transmitted data (in front of F7) to check the message is received correctly. Value of checksum is defined by address and data (or size) of the system exclusive message to be transmitted.

How to calculate checksum (Hexadecimal number is shown with H.)

Checksum is a value which lower 7 bit of the sum of address, size and checksum itself turns to be 0.

If the address of the system exclusive message to be transmitted is aa bb cCH and data or size is dd ee fFH,

aa + bb + cc + dd + ee + ff = sum

sum / 128 = quotient and odd

When odd is 0, 0 = checksum

When odd is other than 0, 128 - odd = checksum

MIC MODELING PREAMP

Date : Jan. 1, 2002

Model MMP-2

MIDI Implementation Chart

Version : 1.00

Function...	Transmitted	Recognized	Remarks
Basic Default Channel Changed	16 X	16 X	
Mode Default Messages Altered	Mode 3 X X	Mode 3 X X	
Note Number : True Voice	X X	X X	
Velocity Note On Note Off	X X	X X	
After Key's Touch Channel's	O X	X X	Level Meter
Pitch Bend	X	X	
Control 0, 32 Change 1 2	O X X	O X X	Effect Bank select
Program Change : True Number	O 0 - 63	O 0 - 63	Effect Patch
System Exclusive	O	O	Parameter
System : Song Position Common : Song Select : Tune Request	X X X	X X X	
System : Clock Real Time : Commands	X X	X X	
Aux : All Sound Off Messages : Reset All Controllers : Local On/Off : All Notes Off : Active Sensing : System Reset	X X X X X X	X X X X X X	
Notes			

Mode 1 : OMNI ON, POLY
Mode 3 : OMNI OFF, POLYMode 2 : OMNI ON, MONO
Mode 4 : OMNI OFF, MONOO : Yes
X : No

Specifications

Analog Input

Connector:
XLR-3-31 type (balanced)
1/4 inch TRS phone type (balanced)

Input Impedance:
40k Ω

Phantom Power:
DC 48 V and 7m A when the output is shorted

PAD:
20 dB pad

Maximum Input Level:
+ 2 dBu (PAD off)
+22 dBu (PAD on)

Nominal Input Level:
-64 dBu – +4 dBu

Equivalent Input Noise:
-132 dBu (IHF-A typ.)

Analog Output

Connector:
XLR-3-32 type (balanced)

Output Impedance:
600 Ω

Recommended Load Impedance:
1k Ω or greater

Nominal Output Level:
-16 dBu / +4 dBu

Signal-to-Noise Ratio:
105 dB typ.

Digital Input

Connector: RCA for S/PDIF
Impedance: 75 Ω

Digital Output

Connector: XLR for AES/EBU, RCA for S/PDIF
Impedance: 110 Ω for AES/EBU, 75 Ω for S/PDIF

Signal Processing

A/D Conversion: 24-bit, 64 times oversampling
D/A Conversion: 24-bit, 128 times oversampling

Sample Rate

96.0kHz, 88.2k Hz, 48.0k Hz, 44.1k Hz

Frequency Response

96.0k Hz: 20 Hz – 40k Hz (+0.1 / -3.0 dB)
88.2k Hz: 20 Hz – 40k Hz (+0.1 / -3.0 dB)
48.0k Hz: 20 Hz – 20k Hz (+0.1 / -0.5 dB)
44.1k Hz: 20 Hz – 20k Hz (+0.1 / -0.5 dB)

Microphone Modeling

Reference Microphone:
DR-20, Small Dynamic Microphone,
Head-worn Dynamic Microphone,
Miniature Condenser Microphone, AKG C3000B, Flat

Modeling Microphone:
Small Dynamic, Vocal Dynamic, Large Dynamic,
Small Condenser, Large Condenser,
Vintage Condenser, Flat

Equalizer

4-Band parametric equalizer
Reference Frequency: 20 Hz – 20k Hz
Type:
Peaking, Low-Shelving, High-Shelving, Low-Pass,
High-Pass, Low-Pass2, Hi-Pass2, Band-Pass,
Band-Eliminate
GAIN: -15 dB – +15 dB

Compressor

Type: Solid, Tube1, Tube2, Tube3, Tube4
Knee Type: Hard or Soft knee

Other Effects

Expander, Enhancer, De-esser, Pre-amp Modeling

Display

20 characters, 2 lines (back light LCD)

Power Supply

AC 117 V, AC 230 V or AC 240 V

Power Consumption

9 W

Dimension

250 (W) x 165 (D) x 76 (H) mm
9-7/8 (W) x 6-1/2 (D) x 3 (H) inches

Weight

1.8 kg
4 lbs

Accessories

Owner's Manual, CD-ROM, AC Cord, USB Cable

(0 dBu = 0.775 Vrms)

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

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memo

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As of January 1, 2002 (Roland)

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



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



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

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

IMPORTANT SAFETY INSTRUCTIONS SAVE THESE INSTRUCTIONS

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

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any of the ventilation openings. Install in accordance with the manufacturers instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Never use with a cart, stand, tripod, bracket, or table except as specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.




For the U.K.

WARNING: THIS APPARATUS MUST BE EARTHED

IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.
 GREEN-AND-YELLOW: EARTH, BLUE: NEUTRAL, BROWN: LIVE

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

The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol  or coloured GREEN or GREEN-AND-YELLOW.

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

For EU Countries



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

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
 (1) This device may not cause harmful interference, and
 (2) This device must accept any interference received, including interference that may cause undesired operation.

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

For Canada

NOTICE

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

AVIS

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

This owner's manual is printed on recycled paper.

Roland Corporation

02897523

'02-2-E2-21KS

Download from [Www.Somanuals.com](http://www.somanuals.com). All Manuals Search And Download.

About the Phantom Power of the MMP-2

Limitations and Conditions of Condenser Microphone



The phantom power source of MMP-2 can drive Condenser Microphones with electrical specification 6.0mA or lower at 48V. Microphones that require more ampere is not supported. Please use phantom power supply devices separately.

Please see owner's manual of microphones regarding specification or conditions of use.

About Input Jacks



Phantom power is not supplied to 1/4 inch TRS phone jacks. If your microphone requires phantom power, please connect it to XLR jacks.

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