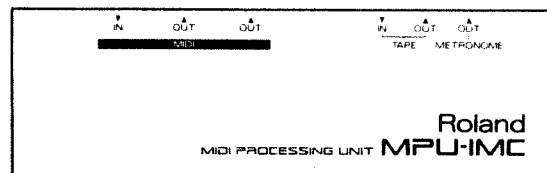


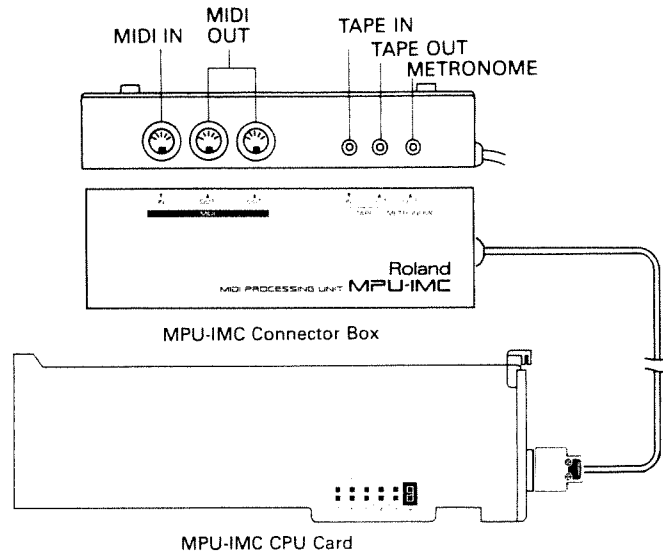
MIDI PROCESSING UNIT

MPU-IMC

The Roland MPU-IMC features the functions of the MIDI Processing Unit MPU-401 plus the interface with an IBM's Micro Channel computer. No need to say, the software such as commands and data format are exactly the same as the MPU-401. Please read the MPU-401's Technical Reference Manual:



Panel Description



■ MIDI and MPU-IMC

There are various ways of producing music by using computers. For example, a computer may play music data with its own sound source, and a robot may play the keyboard instead of a man. The most common method of creating computer music, however, is playing the electronic musical instruments featuring MIDI by a host computer. MIDI (Musical Instruments Digital Interface) is an international standard for digitally communicating musical information (e.g. pressing keys, using bender, etc.). MIDI Processing Unit MPU-IMC is an interface for a computer and MIDI instruments (sound source). The signals used by computers and MIDI devices are both digital but totally different languages like English and Japanese. The MPU-IMC is a micro computer that works as an interpreter of a computer and MIDI sound modules, allowing the host computer to concentrate specifically on the music.

■ Compatible Models

The MPU-IMC is compatible with the following computers which incorporate IBM Micro Channel Architecture:

IBM PS/2 Models 50, 50Z, 55, 60, 70, P70, and 80

- * IBM is a trademark of the International Business Machines Corporation.
- * Personal System/2, Personal System/55, and Micro Channel are trademarks of the International Business Machines Corporation.

■ Supplied Diskette

Contained within the supplied 3.5 inch diskette are the Adapter Description Files necessary for configuring the computer so it recognizes the MPU-IMC.

Root Directory

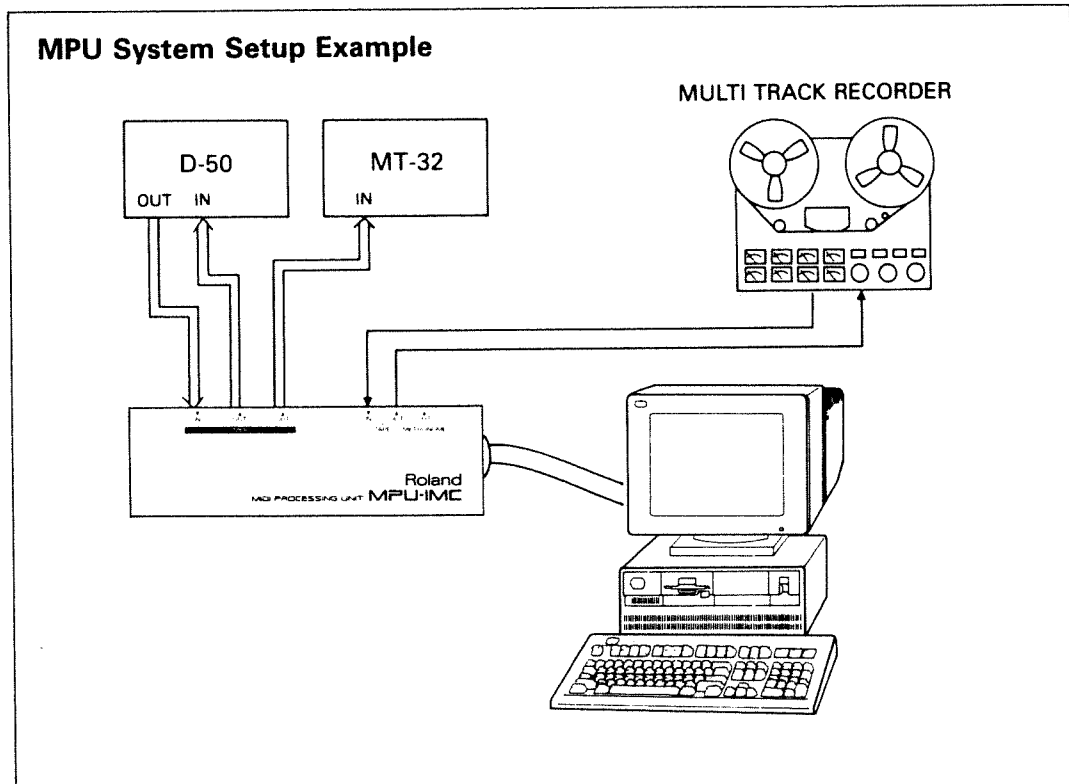
@6COF.ADF	ADF for MPU-IMC (English)
Sub-directory	JAPANESE
@6COF.ADF	ADF for MPU-IMC (Japanese)
Sub-directory	ENGLISH
@6COF.ADF	ADF for MPU-IMC (English)

When configuring the computer, the ADF in the root directory (Eng.) will be read.

■ Before employing the MPU-IMC

The following procedures need to be performed in order to use the MPU-IMC CPU card with your computer.

- ① Boot the computer using the Reference Diskette supplied with the computer. The protect tab on the diskette should be at the "off" position.
 - ② From the menu select "Copy an option diskette."
 - ③ Copy onto the Reference Diskette the ADF (Adapter Description File) from the diskette supplied with the MPU-IMC.
 - ④ Turn power off, then insert the MPU-IMC CPU card into the slot.
 - ⑤ Once again, using the Reference Diskette, boot the computer.
The "Adapter Error" screen will appear, and you will see the prompt, "Automatically Configure the system? (Y/N)."
 - ⑥ If you select "Y" the MPU-IMC CPU card will be readied for use.
- * For details, refer to "Quick Reference", supplied with the computer.
- ⑦ Take the cable coming from the connector box and connect it to the connector on the CPU card's rear panel. After making the connection, fasten it securely in place using the two screws.



Apart from the function as an interpreter, the MPU-IMC features the following functions.

a. MIDI Clock Output

The MPU-IMC sends out MIDI clock for synchronization with a rhythm machine through the MIDI OUT Connector.

b. Tape Sync Function

For multitrack recording, the TAPE IN and OUT Connectors can be used to synchronize the first recorded sound with the later recorded one.

c. Metronome Function

Metronome sound can be obtained in the tempo and time set with the computer. This is extremely useful for recording the music played on the keyboard into the computer. If you find the metronome sound too small, connect a monitor amplifier to the Metronome Out Jack.

NOTE

The function of the MPU-IMC available differs depending on the software used. Please read the instructions of each software. Also, for technical details of the MPU-IMC, read the 401 Technical Reference Manual (optional).

■ Important notes

[Concerning the power supply]

- Whenever you make any connections with other devices, always turn off the power to all equipment first. This will help in preventing malfunction, and damage to speakers.

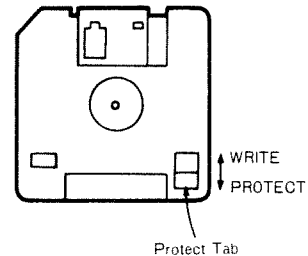
[Concerning placement]

- Avoid using or storing the unit in the following places, as damage could result.
 - Places subject to extremes in temperature. (Such as under direct sunlight, near heating units, above equipment generating heat, etc.)
 - Places near water and moisture. (Baths, washrooms, wet floors, etc.) Places otherwise subject to high humidity.
 - Dusty environments.
 - Places where high levels of vibration are produced.
- Placing the unit near power amplifiers or other equipment containing large transformers may induce hum.
- Should the unit be operated nearby television or radio receives, TV pictures may show signs of interference, and static might be heard on radios. In such cases, move the unit out of proximity with such devices.

[Handling of disks]

- Disks consist of a film-like substance onto which a magnetic coating has been applied. Since this surface is called upon to store data with precision at a very high density, please follow the following precautions:
 - Never touch the magnetic surface.
 - Never store disks where exposed to direct sunlight, or in strictly confined environments, such as the interior of an automobile. (Allowable temperature range: 5 to 50°C.)
 - Do not allow disks to come near strong magnetic fields, such as that generated by speakers.

- Disks are provided with a protect tab which can be used to protect data from accidental erasure. It is recommended that you keep the tab at the protect position, and move it only when you need to write data to the disk.



[Maintenance]

- For everyday cleaning, wipe the unit with a soft dry cloth, or one that is dampened slightly. To remove dirt that is more stubborn, wipe using a mild, neutral detergent. Afterwards, make sure to wipe thoroughly with a soft cloth.
- Never apply benzene, thinners, alcohol or any like agents, to avoid the risk of discoloration and deformation.

[Other Precautions]

- Protect the unit from strong impact.
- Avoid getting any foreign objects (coins, wire, etc.), or liquids (water, drinks, etc.) into the unit.
- At any time that you notice a malfunction, or otherwise suspect there is damage, immediately refrain from using the unit. Then contact the store where bought, or the nearest Roland Service Station.

■MPU-IMC Hardware

I/O Port Address and Interrupt Line

When shipped, they are set as follows:

	Primary address	Alternate address
Data	Port:0330H	(1330H)
Command	Port:0331H	(1331H)
Status	Port:0331H	(1331H)

InterruptLine:IRQ9

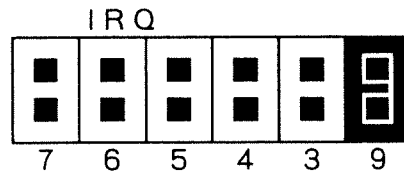
* At the factory, the unit is set to the Primary addresses. The addresses in parenthesis are alternates.

To change to an Alternate address, perform the following procedure:

- ① Boot the computer using the Reference Diskette, then select "Set Configuration" from the menu.
- ② From "Set Configuration", select "Change configuration" to change "Port Address Select" of MPU-IMC.

The next time the system is booted, the I/O ports will be configured in accord with the changes made in the settings.

* Interrupt Line can be changed by using the Jumper Switch.



At the factory, the Jumper Switch is set to IRQ9.

When changing the Interrupt Line, take off the Jumper Switch, and then set to the desired Interrupt Line.

■ Specifications

INPUT TERMINAL:

MIDI IN	1
MIDI OUT	2
TAPE IN	1
TAPE OUT	1
METRONOME OUT	1
D-Sub CONNECTOR (9 pin)	1
CARDEDGE CONNECTOR	1
(16bit Micro Channel)	

Dimensions:

Connector Box: 165(W) × 50(D) × 31(H)mm
6½" × 1½" × 1¼"
CPU Card: 318(W) × 107(D) × 22(H)mm
12½" × 4¾" × 7/8"

Weight:

Connector Box: 400g/14oz (including the cable)
CPU Card: 150g/5oz

*The specifications for this product are subject to change without prior notice, in the interest of improvement.

For the USA

RADIO AND TELEVISION INTERFERENCE

WARNING — This equipment has been verified to comply with the limits for a Class B computing device, pursuant to Subpart J, of Part 15, of FCC rules. Operation with non-certified or non-verified equipment is likely to result in interference to radio and TV reception.

The equipment described in this manual generates and uses radio frequency energy. If it is not installed and used properly, that is, in strict accordance with our instructions, it may cause interference with radio and television reception. This equipment has been tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J, of Part 15, of FCC Rules. These rules are designed to provide reasonable protection against such an interference in a residential installation. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by the following measure:

- Disconnect other devices and their input/output cables one at a time. If the interference stops, it is caused by either the other device or its I/O cable. These devices usually require Roland designated shielded I/O cables. For Roland devices, you can obtain the proper shielded cable from your dealer. For non Roland devices, contact the manufacturer or dealer for assistance.

If your equipment does cause interference to radio or television reception, you can try to correct the interference by using one or more of the following measures:

- Turn the TV or radio antenna until the interference stops.
- Move the equipment to one side or the other of the TV or radio.
- Move the equipment farther away from the TV or radio.
- Plug the equipment into an outlet that is on a different circuit than the TV or radio. (That is, make certain the equipment and the radio or television set are on circuits controlled by different circuit breakers or fuses.)
- Consider installing a rooftop television antenna with coaxial cable lead-in between the antenna and TV. If necessary, you should consult your dealer or an experienced radio/television technician for additional suggestions. You may find helpful the following booklet prepared by the Federal Communications Commission: "How to Identify and Resolve Radio — TV Interference Problems"

This booklet is available from the U.S. Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

For Canada

CLASS B

NOTICE

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

CLASSE B

AVIS

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

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