Roland

FADER UNIT

DM-80F

OWNER'S MANUAL

CONTENTS

INTRODUCTION

Thank you for purchasing the Roland DM-80-F fader unit, a component of the DM-80 hard disk recording system.

Inside the DM-80 is a fully automated 24-bit digital mixer. The mixer includes 8 track inputs, plus 4 auxiliary input channels for incoming mixer feeds, digital or analog. Each input has volume, pan and 2 band EQ, and all signal processing is performed in the digital domain.

The DM-80-F Fader Unit provides physical controls for this mixer. All adjustments to the DM-80-F are immediately transmitted to the DM-80. 24-bit interpolation yields a smooth mix without annoying steps.

In conjunction with Track Manager, up to four DM-80-F Fader Units can be used to produce a 32 track stereo mix.

The DM-80's mixer also includes automation much like that found on traditional consoles. All actions on the fader unit will be recorded by the DM-80's compu mixer. The automated mix can be updated with new values as many times as you wish.

All mix parameters are automated and are available for real time record and update. Each parameter can also be selected for record, update, or manual control. Mix automation is stored with the Project file and automatically loaded with the Project.

FEATURES

Eight channel mixer controller.

Provides physical controls for the DM-80's internal mixer.

Fader, Pan and EQ functions for each input.

Two pairs of auxiliary inputs.

Master output faders

All adjustments to the DM-80-F are immediately transmitted to the DM-80.

All actions on the fader unit are recorded by the compu mixer.

PRECAUTIONS

POWER SUPPLY　Do not connect the DM-80-F to anything other than the DM-80-4 or DM-80-8 rack mount unit or the DM-80-R Remote Unit.

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

Never use benzene, thinner, alcohol or solvents of any kind to avoid the risk of discoloration or deformation.

OTHER　Do not subject the DM-80-F to strong shocks.

The DM-80-F may produce some heat when operating normally.

Do not subject the unit to temperature extremes (e.g.. direct sunlight in an enclosed vehicle). Avoid using or storing the unit in dusty or humid areas or areas that are subject to high vibration levels.

This unit may interfere with radio or television reception. Do not operate in the vicinity of such receivers.

Do not allow objects or liquids of any kind to penetrate the unit. In the event of such an occurrence, discontinue use immediately. Contact qualified service personnel as soon as possible.

Should a malfunction occur (or if you suspect there is a problem) discontinue use immediately. Contact qualified service personnel as soon as possible.

INSTALLATION

S Y S T E M CONFIGURATION

The DM-80 system is available in two versions: the DM-80-4 which contains four tracks and a single 100MB hard disk drive; and the DM-80-8 which contains eight tracks and two 100MB hard disk drives. The term DM-80 is used to mean either of these models, and the DM-80-F can be used to control either version.

The DM-80-F is normally utilized in conjunction with either the DM-80-R Remote Unit or Roland's Track Manager software for the Apple Macintosh computer.

Note: Either the DM-80-R remote or the Track Manager software may be used to control the DM-80, but not both simultaneously.

D M   B U S S CONNECTIONS

The Fader Unit is connected between the rack unit and system controller, such as the DM-80-R or Apple Macintosh computer running Track Manager software.

Note: Use the cables packed with the DM-80-4/8 and the DM-80-F. If any other than the above cables are used, damage to the units may occur.

Note: When making connections, be sure the DM-80-4/8 is powered off. Do not apply power until after all connections have been made. If not, the DM-80 system will not function.

Warning: Never disconnect any DM BUSS cable while operating the DM-80 system. If a DM BUSS cable is disconnected and then re-connected, the system will cease functioning. You will need to power off the unit before it can be restarted. If this occurs, all unsaved data will be lost.

Warning: The above conditions also apply to a system being controlled by Track Manager software. Never disconnect any cable between the computer and DM-80 system—whether DM BUSS, MIDI or RS-422—or the system may cease functioning. You will need to power off the computer and DM-80 and restart. If this occurs, all unsaved data will be lost.

CONNECTING THE FADER TO THE RACK UNIT

Connect the cable packed with the DM-80-4/8 to the jack labeled DM Buss Out. Connect the other end of this cable to the jack labeled DM Buss In on the rear panel of the DM-80 rack unit, as shown below.
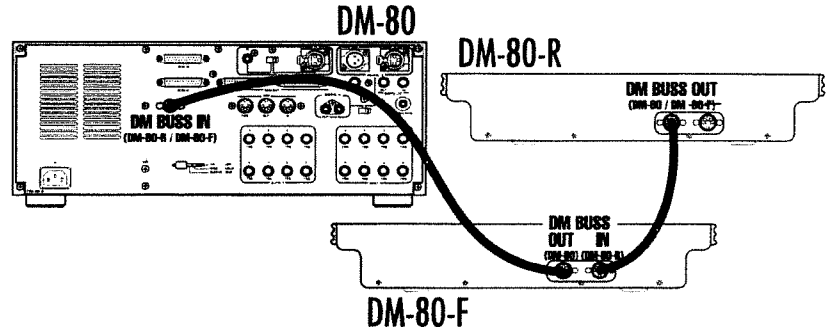
CONNECTING THE DM-80-R REMOTE UNIT

Use the cable supplied with the DM-80-F. Connect the cable between the DM Buss In connector on the fader unit and the DM Buss Out connector on the remote's rear panel, see diagram above.

CONNECTING ROLAND TRACK MANAGER SOFTWARE

Track Manager duplicates the functions of the remote unit on the Apple Macintosh screen.

Follow the diagram below. Using the cable supplied with the DM-80-F, connect the DM Buss In connector on the fader unit to the DM Buss Out connector on an IB-1 Interface Box. Connect the MIDI OUT of the IB-1 to the MIDI IN of your Macintosh MIDI interface. Connect the MIDI OUT of the MIDI interface to the MIDI IN of the IB-1.
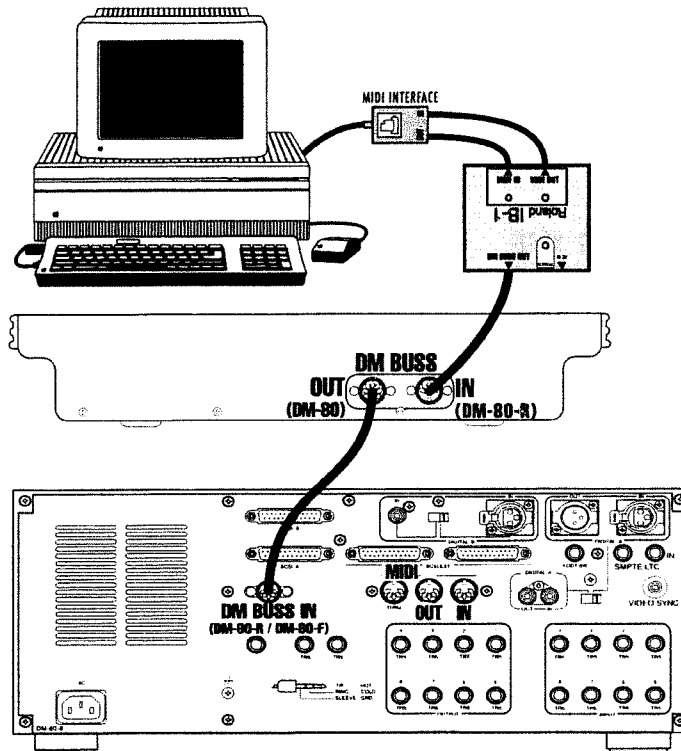
USING MORE THAN ONE FADER UNIT

Up to four DM-80 rack units can be operated simultaneously as one system with up to 32 tracks, controlled from the Track Manager software. Up to four DM-80-F units can also be employed as the console for this large system.

CASCADING AUDIO THROUGH MULTIPLE UNITS

When using more than one DM-80, you can utilize the internal mixer's Aux Inputs to cascade several units into a single stereo mix, as shown in the diagram on the next page. The cascaded unit will appear on the AUX faders. Refer to the DM-80-4/8 manual for more information.

FOLLOW THE DIAGRAM BELOW
WHEN CONNECTING SEVERAL UNITS TOGETHER:
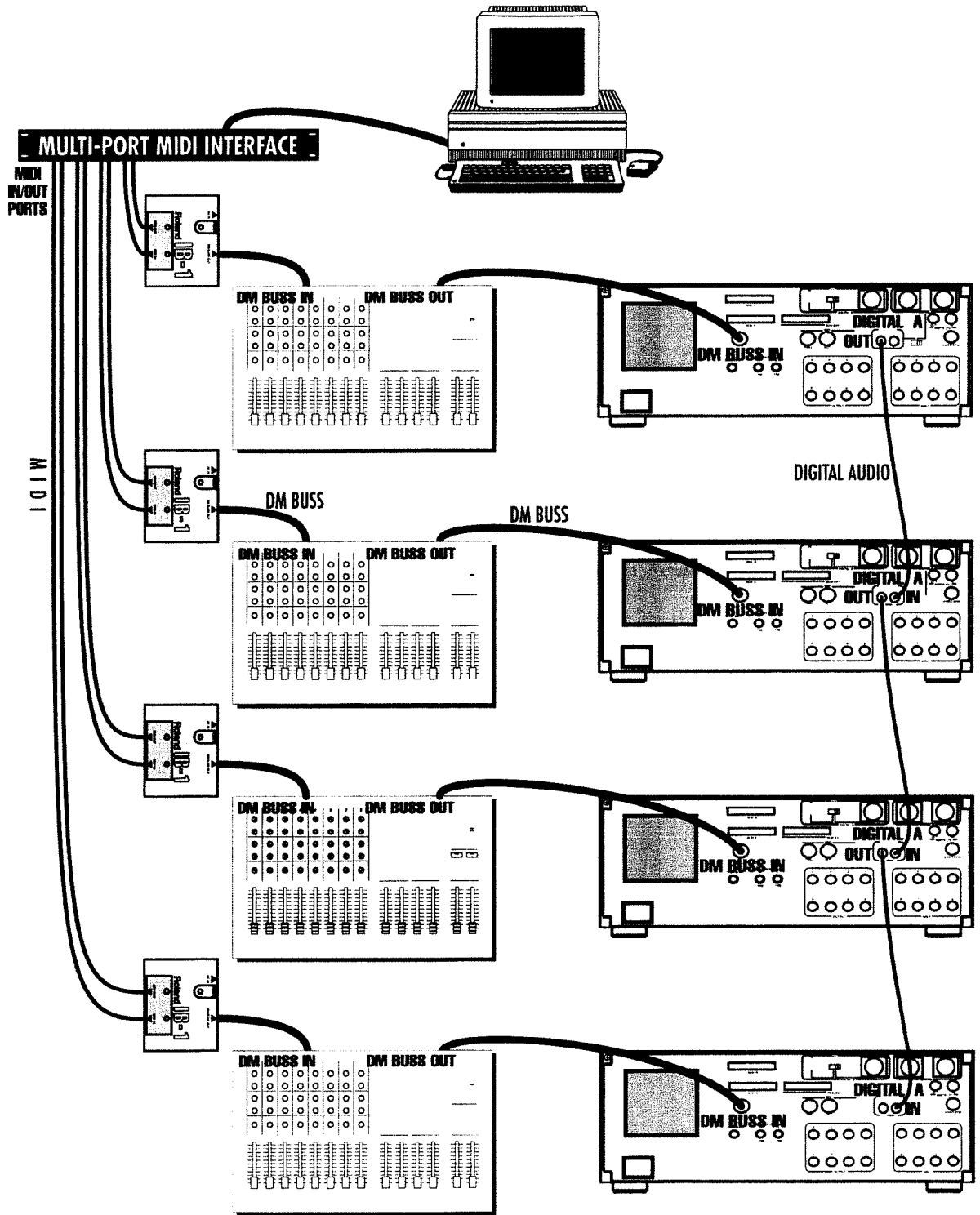
CONTROLS AND INDICATORS

EQ SECTION

This section contains the settings for the High and Low frequency equalizers on each input. You can set the EQ corner frequency and level here.
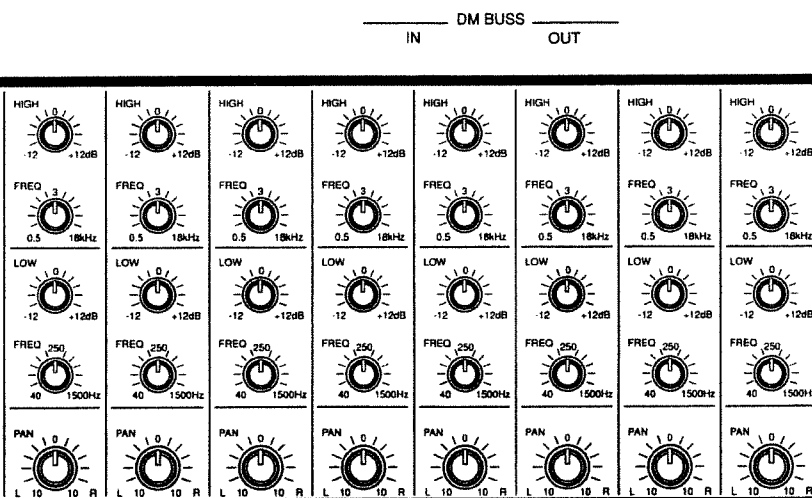
PAN CONTROLS

These are the Pan settings for all eight input channels, for the DM-80's stereo master mix. The Pan controls do not affect the DM-80's individual outputs.
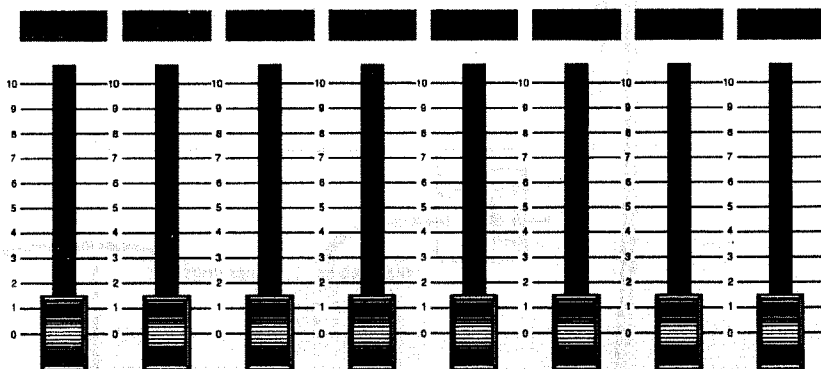
INPUT FADERS

These are the Level settings for all eight input channels.

Roland DM-80F

FADER UNIT

POWER

MIX MODE
COMPU   MANUAL
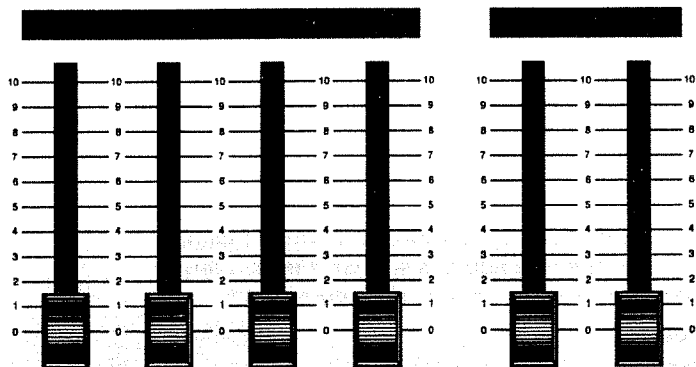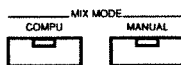
MIX MODE SWITCHES

These select the DM-80's mix automation mode.

COMPU
In Compu Mixer mode, the mixer settings are automated. Mixes can be recorded, played back, updated, and edited in this mode.

MANUAL
In manual mode, the mixer settings are static. Programmed mix settings are ignored, and the output mix reflects the actual control positions on Fader unit.

AUX/MASTER SECTION

This displays the mixer Master Output levels as well as levels for the two pairs of auxiliary Inputs.

COMPU MIXER AUTOMATION

There are a large number of Compu mixer automation functions available in the DM-80 system. Most of these are controlled from the DM-80-R Remote control or Track Manager software.

SELECTING AUTOMATION

ALL ON OR OFF

The Mix Mode switches select the DM-80's mix automation mode; Compu or Manual. The LEDs on these switches light according to the current mode.

INDIVIDUAL TRACKS

When Compu mode is on, automation can be turned on and off for each track individually from the DM-80-R controller or Track Manager software.

The DM-80-R will display the automation status when in a Compu Mix screen. The Track Status Select indicators will display for each track:

> Green LED: Compu Mix Play
>
> Red LED: Compu Mix Recording
>
> No LED: Manual

See the DM-80-R Remote or Track Manager manuals for more information.

RECORDING MIXER SETTINGS

The following procedure uses the DM-80-R Remote. If you are using Track Manager as a controller, the procedure is similar. Please consult the Track Manager or DM-80-R manual for specific information.

• On the Fader unit, press COMPU.

• On the Remote, press MIXER.

• Select track(s) for recording by pressing the appropriate Track Status Select keys. The Track Status LEDs will flash red.

Caution: Be sure you are in a Compu Mix screen with mixer controls visible in the display, Otherwise the Track Status Select keys will choose tracks for sound playback.

• Press REC then PLAY. The Project plays back.

• Move the faders until the square mark indicating the physical position matches the slider on the display. When matched, the mark will disappear and record updating will start for that control.

Note: EQ settings start recording immediately.

• When finished, press STOP.

Move the fader until the square matches the fader on the screen:
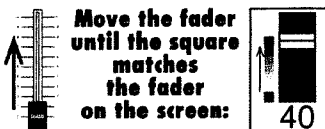
UPGRADES AND SERVICE

SYSTEM SOFTWARE

Roland will periodically release new versions of system software to fix problems or add new features. When software upgrade ROMs are available, you will need to bring your unit to a Roland Authorized Service Center for installation.

RETURNING FOR SERVICE

The DM-80-F has no user-serviceable parts. Attempts by unauthorized personnel to repair or modify the DM-80-F will void the warranty. If you have trouble with the unit, you must bring or sent it to an authorized Roland Service center. Consult your dealer or Roland for the nearest service center.

Use the original packing material that came with the DM-80-F to ship the unit. If the original packaging is not available, use a reinforced, sealable, foam-lined case.

TROUBLESHOOTING

IF THE DM-80 SYSTEM DOES NOT FUNCTION

• Check that the DM BUSS cables and connections are in the proper order.

• Turn off the power and remake the DM BUSS connections.

Warning: Never disconnect any DM BUSS cable while operating the DM-80 system. If a DM BUSS cable is disconnected and then re-connected, the system will cease functioning. You will need to power off the unit before it can be restarted. If this occurs, all unsaved data will be lost.

The above conditions also apply to a system being controlled by Track Manager software. Never disconnect any cable between the computer and DM-80 system—whether DM BUSS, MIDI or RS-422—or the system may cease functioning. You will need to power off the computer and DM-80 and restart. If this occurs, all unsaved data will be lost.

MIDI Implementation

The implementation chart above and implementation itself are intended to describe operation when the DM-80-F is connected to IB-1 to serve as an MIDI controller. Description on DM-80-F operation when it is connected to the DM-80-4/8 is not covered.

The IB-1 must be fed power through an AC adapter when used in conjunction with the DM-80-F. The direction "turn on the IB-1" in this implementation refers to connection of the AC adapter to AC outlet.

1. Setting MIDI channel

On power-up, the MIDI channel of the fader is set to 16. To change the default setting, first locate the desired channel number in the table below and set the corresponding fader as described. While holding down MANUAL and COMPU, turn on the power switch on the unit.

Fader 1 at up position	Channel 1
Fader 2 at up position	Channel 2
Fader 3 at up position	Channel 3
Fader 4 at up position	Channel 4
Fader 5 at up position	Channel 5
Fader 6 at up position	Channel 6
Fader 7 at up position	Channel 7
Fader 8 at up position	Channel 8
Fader AUX1 L at up position	Channel 9
Fader AUX1 R at up position	Channel 10
Fader AUX2 L at up position	Channel 11
Fader AUX2 R at up position	Channel 12
Fader MASTER L at up position	Channel 13
Fader MASTER R at up position	Channel 14

If two or more faders are set at up position, the highest channel number has the priority.
If no fader is set at up position, channel 15 remains effective.

2. Transmitted Data

■ Channel Voice Message

● Control change

Status	Second	Third
BnH	ccH	vvH

n = MIDI channel No. : 0 – FH (0 – 15)　　0 = ch. 1
　　　　　　　　　　　　　　　　　　　　　　15 = ch. 16
cc = Control Number : See * below.
vv = Value　　　　　　　 : 00H – 7FH (0 – 127)

* Controller	Control Change Number	MIDI Standard
FADER 1	10H (16)	General purpose controller – 1 MSB
FADER 2	11H (17)	General purpose controller – 2 MSB
FADER 3	12H (18)	General purpose controller – 3 MSB
FADER 4	13H (19)	General purpose controller – 4 MSB
FADER 5	14H (20)	Undefined
FADER 6	15H (21)	Undefined
FADER 7	16H (22)	Undefined
FADER 8	17H (23)	Undefined
PAN 1	18H (24)	Undefined
PAN 2	19H (25)	Undefined
PAN 3	1AH (26)	Undefined
PAN 4	1BH (27)	Undefined
PAN 5	1CH (28)	Undefined
PAN 6	1DH (29)	Undefined
PAN 7	1EH (30)	Undefined
PAN 8	1FH (31)	Undefined
LOEQ GAIN 1	20H (32)	General purpose controller – 1 LSB
LOEQ GAIN 2	21H (33)	General purpose controller – 2 LSB
LOEQ GAIN 3	22H (34)	General purpose controller – 3 LSB
LOEQ GAIN 4	23H (35)	General purpose controller – 4 MSB
LOEQ GAIN 5	24H (36)	Undefined
LOEQ GAIN 6	25H (37)	Undefined
LOEQ GAIN 7	26H (38)	Undefined
LOEQ GAIN 8	27H (39)	Undefined
HIEQ GAIN 1	28H (40)	Undefined
HIEQ GAIN 2	29H (41)	Undefined
HIEQ GAIN 3	2AH (42)	Undefined
HIEQ GAIN 4	2BH (43)	Undefined
HIEQ GAIN 5	2CH (44)	Undefined
HIEQ GAIN 6	2DH (45)	Undefined
HIEQ GAIN 7	2EH (46)	Undefined
HIEQ GAIN 8	2FH (47)	Undefined
AUX IN 1L	30H (48)	Undefined
AUX IN 1R	31H (49)	Undefined
AUX IN 2L	32H (50)	Undefined
AUX IN 2R	33H (51)	Undefined
MASTER L	34H (52)	Undefined
MASTER R	35H (53)	Undefined
LOEQ FREQ 1	46H (70)	Undefined
LOEQ FREQ 2	47H (71)	Undefined
LOEQ FREQ 3	48H (72)	Undefined
LOEQ FREQ 4	49H (73)	Undefined
LOEQ FREQ 5	4AH (74)	Undefined
LOEQ FREQ 6	4BH (75)	Undefined
LOEQ FREQ 7	4CH (76)	Undefined
LOEQ FREQ 8	4DH (77)	Undefined
HIEQ FREQ 1	4EH (78)	Undefined
HIEQ FREQ 2	4FH (79)	Undefined
HIEQ FREQ 3	50H (80)	General purpose controller – 5
HIEQ FREQ 4	51H (81)	General purpose controller – 6
HIEQ FREQ 5	52H (82)	General purpose controller – 7
HIEQ FREQ 6	53H (83)	General purpose controller – 8
HIEQ FREQ 7	54H (84)	Undefined
HIEQ FREQ 8	55H (85)	Undefined
MANUAL	56H (86)	Undefined
COMPU	57H (87)	Undefined

When the MANUAL switch is pressed, the unit sends Value = 127.
When the MANUAL switch is released, the unit sends Value = 0.

When the MANUAL switch is pressed, the unit sends the position data of all the potentiometers.

When the COMPU switch is pressed, the unit sends Value = 127.
When the COMPU switch is released, the sends Value = 0.

MIDI Implementation Chart

Function ···		Transmitted	Recognized	Remarks
Basic Channel	Default	16		
	Changed	1 – 16		
Mode	Default	Mode 3		
	Messages	×		
	Altered	********		
Note Number	True Voice	×		
		********		
Velocity	Note ON	×		
	Note OFF	×		
After Touch	Key's	×		
	Ch's	×		
Pitch Bender		×		
Control Change	16 – 23	○ FADER 1 – 8		
	24 – 31	○ PAN 1 – 8		
	32 – 39	○ LOEQ GAIN 1 – 8		
	40 – 47	○ HIEQ GAIN 1 – 8		
	48 – 51	○ AUX IN 1L, 1R, 2L, 2R		
	52 – 53	○ MASTER L,R		
	70 – 77	○ LOEQ FREQ 1 – 8		
	78 – 85	○ HIEQ FREQ 1 – 8		
	86	○ MANUAL SW		
	87	○ COMPU SW		
Prog Change		×		
	True #	********		
System Exclusive		×		
System Common	Song Pos	×		
	Song Sel	×		
	Tune	×		
System Real Time	Clock	×		
	Commands	×		
Aux Messages	Local ON/OFF	×		
	All Notes OFF	×		
	Active Sense	×		
	Reset	×		

Notes

Mode 1 : OMNI ON, POLY   Mode 2 : OMNI ON, MONO   ○ : Yes

Mode 3 : OMNI OFF, POLY   Mode 4 : OMNI OFF, MONO   × : No

SPECIFICATIONS

GENERAL

REAR PANEL
DM Buss In jack
DM Buss Out jack

DIMENSIONS
430(W) x 268(D) x 68(H)mm
16¹⁵/₁₆" x 10⁹/₁₆" x 2¹¹/₁₆"

WEIGHT
2.93 Kg, 6.47 lbs

INCLUDED ITEMS

Owner's Manual
Connecting Cable (1m)

OPTIONS

Remote Controller (DM-80-R)
Track Manager Software for Apple Macintosh (DM-80-S)
Interface Box (IB-1)
Rack Mounting Angles, (RAD-80)

In the interest of product improvement, the specifications of this unit are subject to change without notice.

Information

●When you need repair service, call your local Roland Service Station or the authorized Roland distributor in your country as shown below.

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Roland Corp US
7200 Dominion Circle
Los Angeles, CA. 90040 - 3647
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☎ (213)685 - 5141

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5480 Parkwood
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