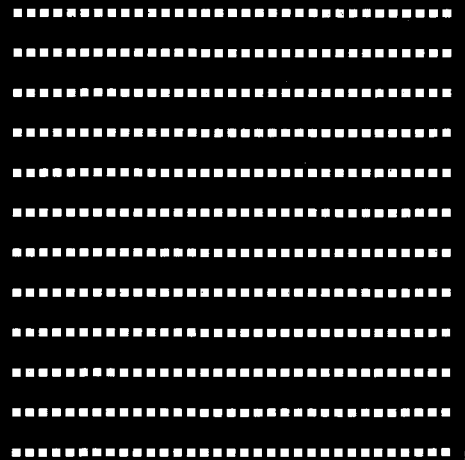


**OPERATING
INSTRUCTIONS**

**MIDI
MANAGER™**

**TOTAL MIDI
MANAGEMENT**



WARNING; TO PREVENT ELECTRICAL SHOCK OR FIRE HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE, BEFORE USING THIS APPLIANCE, READ THE OPERATING GUIDE FOR FURTHER WARNINGS.

Thank you for purchasing the Peavey Audio Media Research™ MIDI Manager™. The MIDI Manager is user friendly, handling the 16 standard MIDI channels. It is a professional quality MIDI Management system which will command the functions of even the most complex of MIDI systems. It does this by receiving commands sent to it by any MIDI device then translating and sending these commands as other MIDI commands which are user expandable and preprogrammable.

OPERATING YOUR MIDI MANAGER™

Setup and Connection

- Unpack the unit carefully, being sure to save all packing materials for future use.
- Take a moment to familiarize yourself with the controls and features of this unit.
- Browse through this manual before operating the unit to determine your areas of specific interest.

NOTE: CAUTION - Do not power any of the units up at this time; never connect or disconnect the ports of any MIDI devices while they are in a powered up (turned on) condition. Failure to observe this precaution may result in damage to MIDI devices. MIDI ports do not have any audio information in them. Never connect them to audio amplifiers.

- Plug in your MIDI devices and/or external controllers into the appropriate MIDI ports on the rear of the unit.
- Plug the external power supply into the POWER IN jack on the rear of the MIDI Manager, then plug the main supply into an AC outlet.

OPERATING SECTION

NOTE: refer to the REFERENCE section at the rear of this manual for further information on the unit's individual controls.

POWERING UP

SELECTING THE MIDI CHANNEL THAT THE MIDI MANAGER WILL BE LISTENING TO.

1. Push in the button marked POWER.
2. When the unit is first powered up, the Display Window shows the legend

Peavey Audio Media Research™ MIDI MANAGER SOFTWARE VERSION 1.0

LISTENING ON CHANNEL # 'N'

(NOTE: 'N' represents a MIDI channel number between 1 and 16.)

This initial power up display will be shown for 2.5 seconds. During this time you should select the MIDI channel that the MIDI Manager should be listening to for MIDI input commands. If you wish to change the listening channel, press the "+" or "-" buttons until you find the channel that you require. Wait 2.5 seconds and the display will automatically change to show a preset. You can now select all the programs remotely via your MIDI controller (a good example of an external MIDI control device is the Peavey Audio Media Research™ MIDI Director™).

MANUAL OPERATION

This unit may be manually controlled without the use of a remote MIDI by using the front panel controls.

THE PRESET WINDOW

This is what a typical preset window looks like:

XMIT PRESET	1	MIDI CHAN	1
PROGRAM	1	OUTPUT	AUX= ØH

The legend in the top left hand position XMIT PRESET shows the current preset that is being requested.

MIDI CHAN shows the MIDI channel number that the requested preset will be transmitted on.

PROGRAM 1 shows the MIDI command that will be transmitted. OUTPUT shows which MIDI out ports are selected to send the information on.

AUX= is for entering the DB 9 output data which is not a part of this unit's normal program preset select commands. It's number is entered in hexadecimal code.

SELECTING A PRESET

After the unit is powered up and the MIDI channel select display has reverted to normal, you will see the preset window displayed. To select another preset, use the "+" or "-" and/or PRESET buttons on the MIDI Manager front panel or alternatively a MIDI controller. Select your required preset number. The number located to the right of the XMIT PRESET legend will change in response to your actions. The changed number will have an * in response in front of it which tells you that it is pre-selected but has not been transmitted. To transmit this pre-selected preset, press the CALL button. The * will no longer appear as this preset has now been transmitted and is now active within your MIDI equipment. The number to the right of the PROGRAM legend now shows a different value which may or may not correspond to the number of the preset, depending on the way in which you have programmed the unit (see programming the presets).

PROGRAMMING THE PRESETS

Prepare your unit for this exercise by selecting preset #1 window. To do this, simply push preset button #1. You will see the window below:

XMIT PRESET	* 1:	MIDI CHAN	1:
PROGRAM	1:	OUTPUT	AUX= ØH

1. Press the MODE switch once. The program LED will illuminate, and the display window will change to show programming status. It will now look like this:

PROGRAM NORMAL PRESET	1:	MIDI CHAN	1:
PROGRAM	1:	OUTPUT	AUX= ØH

Within this program mode you can:

- Select a preset number by pushing the PARAM button until the number to the right of the PROGRAM NORMAL PRESET legend flashes. Use the "+", the "-" or the PRESET buttons to select the PRESET number that you require.
- Change the MIDI transmit channel number by pushing the PARAM button until the number to the right of the MIDI CHAN legend flashes. Use the "+" the "-" or the PRESET buttons to select the MIDI channel number that you require.
- Change the Transmitted MIDI command by pushing the PARAM button until the PROGRAM 1 legend flashes. Use the "+" and the "-" to select the desired MIDI command, or the PRESET buttons to select the appropriate number that you require.
- Change the MIDI OUTPUT number by pushing the PARAM button until the number to the right of the OUTPUT legend flashes. Use the "+" and the "-" or the PRESET buttons to select the OUTPUT number that you require. Programmable alternatives are active ports 1, 2, 3, 4, ALL Ports or the symbol which indicates that no MIDI OUT PORTS are active.
- Change the AUX hex number by pushing the PARAM button until the number to the right of the Aux = legend flashes. Use the "+" and the "-" buttons to select the AUX hex number that you require.
- Any of these changes may be stored to memory at any time by pushing the STORE button and holding it until the STORE IN PROCESS legend is no longer displayed. This 'store' procedure takes approximately five seconds and is intended as a safeguard to prevent inadvertent storing of changed data.

ALT SECTION

There are two alt option levels - one for the control mode, and one for the program mode.

CONTROL ALT WINDOW

When the MIDI Manager is in control mode and the ALT button is pressed, the Display Window changes and will show a number of alternate options. This is what a typical transmit ALT window looks like:

ALT OPTIONS :	Ø-AUX PORT	1-PRESETS
2-CHAINS	3-BYPASS	ALT-EXIT

5. Press the parameter button to move the cursor over the Hex parameter that you wish to change. Use the + or - buttons to set up the Hex number that you require. Press the parameter button to move the cursor over the next Hex parameter that you wish to change. Continue in this way until you have finished all the Hex entries that you require. Press and hold the 'STORE' button until the 'STORE IN PROCESS' legend disappears and is replaced by the Hex Preset Programming window. You have now created a chain of Hex coded MIDI commands and the window will look something like this (depending on the code that you have entered):

```

HEX PRESET 1 DATA =      FA * 0: 0: 0: 0: 0:
0: 0: 0: 0: 0: 0: 0: 0: 0: 0: 0: 0: 0: 0:
  
```

In this case we have programmed only one Hex MIDI Hex command 'FA', or 'Song Start'. A string of commands may be entered to transmit many MIDI commands at the same time. There will always be a * character after the last Hex command that you have programmed in. This will also be the last command to be transmitted in the data stream from this particular preset.

6. Exit this facility by pressing the ALT button to re-enter the ALT program window or if you wish to access the modified preset, press the MODE button.

If you press the CALL button at this stage, this preset will be transmitted.
 NOTE: SEE MIDI TO HEX CONVERSION section for more information concerning Hexadecimal coding.

PROGRAM CHAINS WINDOW

On this program level you may also program the CHAINS facility.

'CHAINS' represents the facility to transmit a stream of MIDI information which consists of a number of the MIDI Manager's presets. The objective is to link many MIDI commands and transmit them on a 'First In First Out' (FIFO) basis so that all these pre-programmed events are executed at the press of one button. Assuming that you have chosen to program the CHAINS facility from the PROGRAM ALT WINDOW level above (see PROGRAM ALT WINDOW procedure). We suggest that you try the following example:

CHAINS PROGRAM EXAMPLE

CHAINS represents the facility to transmit a stream of MIDI information which consists of a number of command presets of the MIDI Manager. It is necessary at this point to consider what some of these presets may be in order to illustrate what form a CHAIN may take. Let's define a hypothetical preset situation:

Sent from MIDI Manager Preset #10
 MIDI Manager sends MIDI song #3, programs 8, 77 and 43 from Output 1.

Sent from MIDI Manager Preset #15
 MIDI Manager sends a logic signal from the AUX logic port to an EAC-8 unit, thus closing a relay and causing a tape machine to enter the 'record ready' mode.

Sent from MIDI Manager Preset #12
 MIDI Manager sends a logic signal from the AUX logic port to the same EAC-8 unit and closes another relay and causing the tape machine to roll in 'record' mode.

The MIDI Manager presets can be linked to form a chain which is accessed by sending a single command to the unit.

To do this we need to program a chain:
 1. Enter the ALT mode either by pressing the ALT button for direct access from the XMIT PRESET WINDOW, or as a continuation of the PROGRAM ALT WINDOW facility.

NOTE: If you are accessing CHAINS as a continuation of the PROGRAM ALT WINDOW facility, select CHAINS by pressing PRESET button #2, bypass step 2 and go directly to step 3.

2. Select CHAINS by pressing PRESET button #2, the MIDI Manager will be in the CHAINS transmit mode. Select PROGRAM via the MODE button.

3. At this stage you will see the chain program shown in the display window. It will look similar to this:

NOTE: If a chain has been previously programmed into this preset, then the appearance of the window will be slightly different, as there will be some numeric values shown.

The active parameter number will be flashing (we'll call this the 'cursor', and the * after a parameter number indicates the last preset to be transmitted in the chain.)

```

PGM CHAIN 1 1* 1: 1: 1: 1: 1:
1: 1: 1: 1: 1: 1: 1: 1: 1: 1:
  
```

Program the chain like this: Use the PARAMETER button to move the cursor from left to right in order to select the preset number that you want to modify, or use the store button to move from right to left. Don't push and hold the store button unless you want to store the material. Just push and quickly release it to perform a right to left move. Enter or change the particular parameter that you require. When you have programmed all the numbers in the window, are at the last number in the bottom right hand corner and want to continue your chain, just enter the number 255 at this point, and a fresh unprogrammed screen will appear.

When you have finished your modification or fresh chain, push and hold the STORE button until the STORE IN PROCESS message disappears. Your chain is now entered in the memory of the unit.

After carrying out the program routine for the hypothetical chain, your display window should now look like this:

```

PGM CHAIN: 1: 10: 15: 12* 1: 1: 1:
1: 1: 1: 1: 1: 1: 1: 1: 1: 1:
  
```

Having stored your new chain to memory, push the MODE button once. This will exit you from the program mode and place you in the transmit mode. This window will appear:

```

XMIT CHAIN: * 1 10: 15: 12
  
```

This window confirms that all this information will be sent when you access and transmit the chain. So at the touch of one button; the CHAINS facility will transmit all this pre-recorded data, causing all the events outlined in the previous example to occur.

Exit the CHAINS mode by pressing the ALT button. This will place you back in the ALT options display, where you may then select another facility to program. To send a chain from a remote MIDI controller, simply send a 'Song Select' instruction to select a particular chain and a 'Song Start' command to transmit the data.

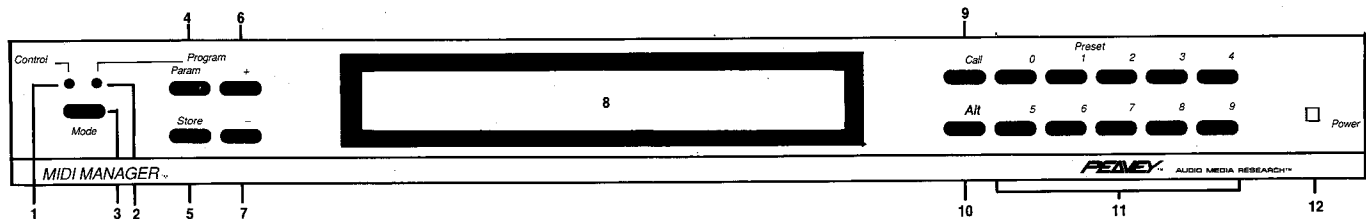
SUMMARY OF PROGRAMMING CHAIN PARAMETERS

- Press the ALT button to enter the ALT mode.
- Press button #2 to enter the CHAINS facility
- Press the MODE button, and the red LED will light up indicating that you are in the PROGRAM mode.
- Press the PARAM button to select the first CHAIN parameter for new programming.
- Press the +/- or the PRESET buttons to modify this CHAIN parameter.
- Press the PARAM button again and use the +/- or the PRESET buttons to modify the next CHAIN parameter. Continue in this manner until you have modified the chain parameters to your satisfaction.
- Press the STORE button to save your modified CHAIN parameter program.

MERGE COMMAND

This is the command that controls the MIDI outputs to which MIDI input data will be merged. If you press button #4 from the ALT menu you will select the MERGE option. The Display Window will show the legend 'MIDI MERGES TO OUTPUT 'N' ('N' being a variable from 1 to 4 representing one of the four outputs, ALL representing all of the four outputs, or NONE representing no merged output). Use the +/- or the PRESET buttons to modify this number. The +/- buttons will auto-scroll through output numbers 1 to 4, then to ALL, NONE and back through all the options. PRESET buttons 1 thru 4 will access output numbers 1 to 4. Press the STORE button until the STORE IN PROGRESS legend is replaced by the MIDI MERGE window.

**REFERENCE SECTION
FRONT PANEL FACILITIES**



1, 2, 3. CONTROL/PROGRAM/MODE cluster: This is where you tell the MIDI Manager whether it is to control external devices, or program itself in preparation for external controlling. When the MODE button is pressed, it will toggle between the CONTROL and PROGRAM functions. LED indicators show which mode you are in. The PROGRAM Indicator is red in color to convey an 'alert' condition to you, so that you do not program the unit inadvertently.

1. CONTROL LED: This green LED illuminates when the MIDI Manager is in the control or transmit mode. It shows that the machine is ready to transmit information to other MIDI devices that are connected to one or more of the MIDI outputs located on the back of the unit. No programming is possible when this LED is on.

2. PROGRAM LED: This red LED illuminates when the MIDI Manager is in the program mode. It shows that the machine is ready to receive program information from the front panel controls or from an external MIDI device. Unless you need to program the unit, the green (1 CONTROL) LED will be illuminated.

3. MODE Button: Each time that this button is pressed, the MIDI Manager will toggle between the PROGRAM or CONTROL Modes.

4. PARAM Button: This is used when in the PROGRAM mode to cycle through the parameters within the memories of the MIDI Manager. Access to parameters and for parameter modification is gained by using the + and - buttons to the right of the PARAM button and the PRESET buttons. Its use changes depending on which facility is being utilized. Check the operating examples for more information.

5. STORE Button: This is principally used to store modified information into the unit's memory. To store, press and hold down this button: the message 'STORE IN PROCESS' will appear on the screen. When the storing process is complete, (approximately five seconds) the screen messages will revert to those displayed before the storing process was commenced. The press and hold feature is designed into the unit for data safeguard reasons, so that the unit does not become changed by mistake. If you press the store button by accident, release it quickly and your data will be unaffected. NOTE: The store button is at times used for functions other than storing. Check the operating examples for more information.

6. + Button: Pushing this will increment the numbers or commands currently the subject of your modification displayed in the PROGRAM WINDOW. It will increment the numbers once each time that you push it. If you push and hold this button, it will auto-scroll increment the numbers. Check the operating examples for more information.

7. - Button: Pushing this will decrement the numbers or commands currently the subject of your modification displayed in the PROGRAM WINDOW. It will decrement the numbers once each time that you push it. If you push and hold this button, it will auto-scroll decrement the numbers. Check the operating examples for more information.

8. PROGRAM DISPLAY WINDOW: This liquid crystal display shows all relevant current operating information. Here you can see what functions and programs are currently under review, selection or modification. It is illuminated for clear viewing under subdued lighting conditions.

9. CALL Button: Is used to call up programmed material and transmit commands.

Calls up a program pre-selected by the PRESET or +/- buttons. Select the desired program number by pressing its number on the PRESET or +/- buttons. It will then appear in the Display Window above of the currently active program. Follow this by pressing CALL and your program will then be transmitted.

EXAMPLE: The currently active program is 11 and the left side of the Display Window shows the legend.

XMIT PRESET 11 11

PROGRAM 11

select the numerals 99 (for program #99) by the PRESET or +/- buttons, and the Display Window will show

XMIT PRESET [99

PROGRAM 11

This now shows [99 in the Display Window (desired program preset). Press the CALL button, and the Display Window shows the legend

XMIT PRESET 99

PROGRAM 99

showing that program 99 is now active and has been transmitted.

10. ALT Button: This gives access to the four major parameter groups: AUX PORT, PRESETS, CHAINS and BYPASS. These may be examined and/or reprogrammed at this level. After calling up a program via the preset buttons, pushing the ALT button will cause these parameter groups to be shown in the Display Window. They are all aspects of the particular program that you have called up. NOTE: To exit the ALT mode, push the ALT button again and you will be back at program level. See ALT section for a more detailed description of the ALT facilities. Please examine the operating examples for more information.

11. PRESET Buttons: These are used to select a particular program and to change preset and parameter numbers. See (5) CALL button and check the operating examples for more information.

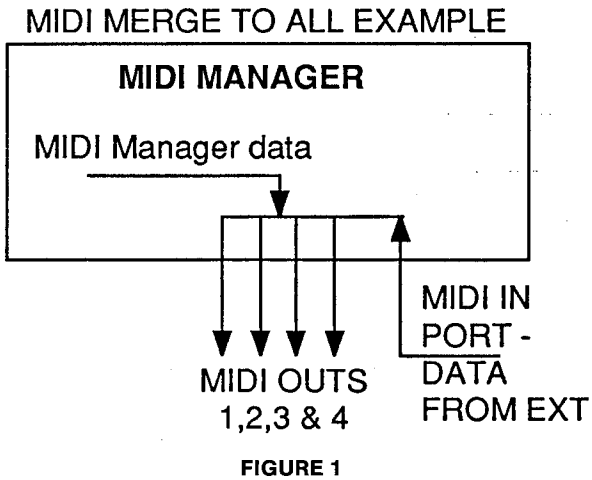
12. POWER: This powers the unit up or down. When the unit is first powered up, the Display Window shows the legend Peavey Audio Media Research™ MIDI MANAGER SOFTWARE VERSION 1.0 LISTENING ON CHANNEL #N (NOTE: 'N' represents a MIDI channel number between 1 and 16.)

This initial power up display will be held for 2.5 seconds and this is the time for you to select which MIDI channel the MIDI Manager should be listening on for its MIDI input commands. If you wish to change the listening channel, press the +/- buttons until you have completed your selection. Wait 2.5 seconds and the display will revert to normal. This new listening channel information will be automatically stored in memory until you change it by powering down and up to re-enter this facility. Normal power up/down cycling and/or disconnection of the unit from external power sources will not affect this setting. If no listening channel change is required, simply wait 2.5 seconds and the display will revert to normal.

The first display to be presented will be MIDI Preset #1, and you may then perform your selection using the procedure above - see #5 CALL button.

NOTE: When the MIDI Manager is powered down, all program information previously stored is preserved.

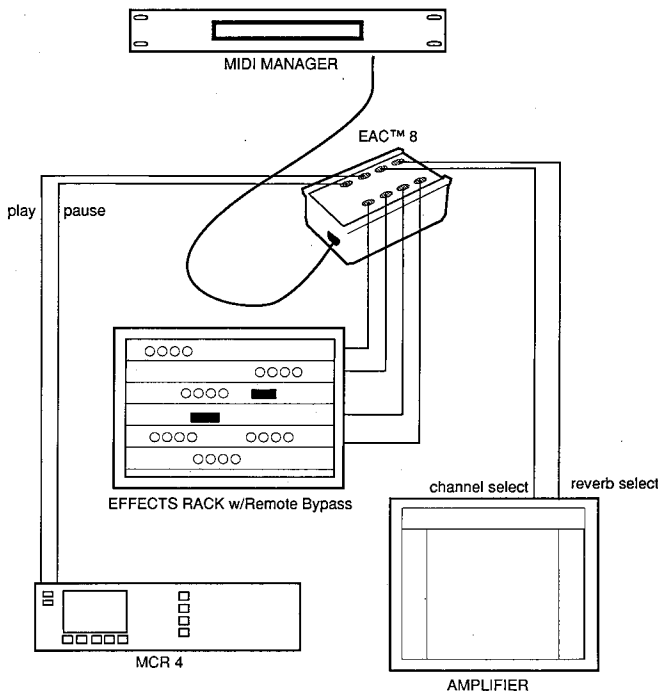
Press ALT and then preset button #1 to exit to the preset window.
See Figure 1.



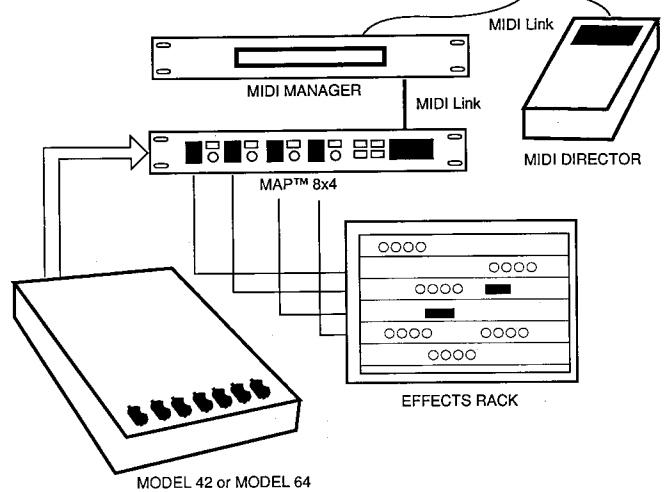
APPLICATIONS

- Figures 2 and 3 show a typical application of the MIDI Manager™. In the first example the MIDI Manager is used with the Peavey Audio Media Research™ MAP™ 8 x 4, MIDI Director™, Model 64 Mixer, and a number of Peavey Audio Media Research™ effects units. As you can see, the mixer is routed to the IN/OUT jacks on the rear of the MAP 8 x 4, and the effects units are assigned to the SEND/RETURN jacks. The MIDI Manager and MIDI Director are providing instant remote MIDI access to all the patches on the MIDI Manager as well as changing presets on the Peavey Audio Media Research™ DSR™ 1000. This can be thought of in much the same way as the remote control on a television set. Simply selecting a number on the MIDI Director and pressing PRESET will access that program through the MIDI Manager instantly. For more information ask your Peavey Audio Media Research™ dealer for literature on these two products.

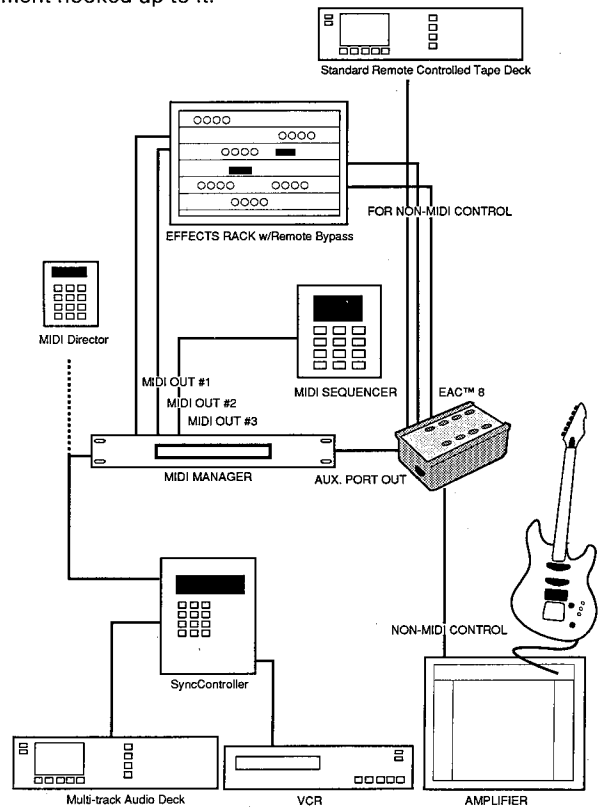
*MIDI Manager and the EAC™ 8
Event Automation Control Applications*



*MIDI Manager and the MAP™ 8x4
Signal Processing Patch Automation*

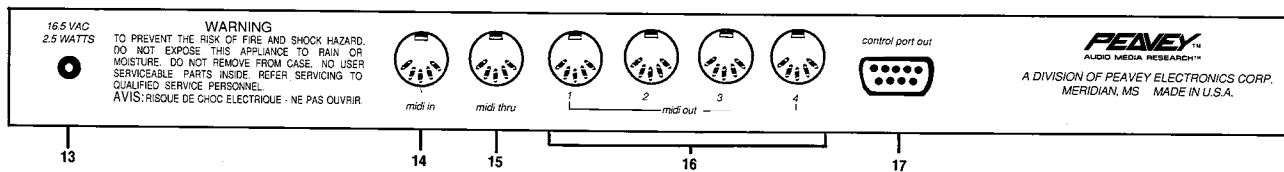


Here is an example of the MIDI Manager with a selection of equipment hooked up to it:



NOTE: Your MIDI Manager has a battery backup built into it, so that all STORED information will be held in memory even if the unit is disconnected from power and stored away for some time.

REAR PANEL FACILITIES



13. POWER SUPPLY SOCKET + 16.5 volts AC: Provided for connection of the external +16.5 volts AC power supply. Insert the power supply barrel plug fully into the socket before making the AC outlet connection.

CAUTION: Use only the power supply provided with the product. If the original power supply must be replaced, consult your dealer or the factory for assistance in obtaining the correct replacement. Failure to use the correct power supply could result in fire or shock hazard, extensive circuit damage, decreased performance, or non-operation.

14. MIDI IN SOCKET: A standard DIN connector which allows a MIDI controller to interface with the MIDI Manager's processor. When such an interface is established, programs stored within the processor memory may be recalled from any remote MIDI controller, such as the Peavey Audio Media Research™ MIDI Director™.

15. MIDI THRU SOCKET: Provided to allow chaining of MIDI-compatible devices without the use of Y-type cables or connectors. Any and all control signals received at the MIDI In socket will be routed unaltered to the MIDI Thru socket.

16. MIDI OUTPUTS: The four connectors are used in the MIDI Manager to send MIDI data to keyboards and other devices and are provided for independent and programmed transmission of MIDI commands to other MIDI compatible devices on any of the 16 MIDI channels. The use of the output connectors is defined via the Program display window when the unit is in the PROGRAM mode and the output parameter is selected.

17. CONTROL PORT OUT: This DB9 socket is used to take logic commands from the MIDI Manager to other 5 volt logic operated equipment such as the Peavey Audio Media Research™ EAC™ 8. See Figure 5 for the pin-out detail.

NOTE: This DB9 socket is for connection to compatible CMOS 5 volt logic type equipment only. If in doubt contact your dealer.

MIDI MANAGER AUX PORT (DB 9 CONNECTOR)			
Pin #	Description	Pin #	Description
1	Aux 0	6	Aux 5
2	Aux 1	7	Aux 6
3	Aux 2	8	Aux 7
4	Aux 3	9	Ground
5	Aux 4		

Figure 5

SPECIFICATIONS:

Inputs: MIDI In standard 5 pin DIN socket

Outputs: MIDI Thru standard 5 pin DIN socket, FOUR MIDI Thru standard 5 pin DIN sockets

Power Supply Requirements: Only use the Peavey Audio Media Research™ 16.5 VAC 1000 ma External Power Supply as supplied with the unit.

MIDI CAPABILITIES:

128 MIDI Program Presets

128 MIDI Preset Chains

16 MIDI Channels

1 MIDI Input

1 MIDI Thru

4 MIDI Outputs

MIDI RECEIVE IMPLEMENTATION

Program Preset (1-128) - Preset Select/Transmit

Song Select (1-128) - Chain Select

Song Start - Chain Transmit

MIDI Transmit Implementation:

MIDI Program Preset (1-128)

MIDI Start

MIDI Stop

MIDI Continue

MIDI Song Select (1-128)

MIDI System Reset

MIDI Merge to any or all Outputs

Any MIDI Command via Hexadecimal Programming Mode

Auxiliary Outputs:

8-Bit Parallel Auxiliary Output Port - 9 Pin (DB9)

Dimensions: 19" W x 1.75" (standard 1 U. rack) H x 7.5" D. (48 x 4.5 x 19 cm)

Weight: 6 lbs. (2.7 Kg.)

MIDI APPENDIX

HEXADECIMAL PROGRAM ENTRY MODE

This method of programming is provided for those inclined to extend the use of the MIDI Manager to MIDI Commands other than those program Preset Select Commands shown in the PRESET WINDOW. Using the Hexadecimal method, the MIDI Manager can

be programmed to transmit any of the entire library of MIDI Commands listed in the MIDI specification. To enter the Hexadecimal PROGRAM ENTRY MODE simply perform the following steps:

1. With the unit in the PRESET window push the MODE button once to enter the PROGRAM mode.
2. Push the PARAMETER button until the number to the right of the AUX legend is flashing.
3. Use the +/- buttons to enter the desired Hexadecimal number.
4. Press and hold the STORE button until the STORE IN PROCESS legend is replaced by the PRESET window.

MIDI TO HEX CONVERSION

In order to access the various MIDI Commands that you will need, use the MIDI specification to determine the binary code for the Command that you need.

For example: MIDI START = 11111010 in Binary. Thus it is only a single byte command and will only use one byte of the possible 14 bytes available in the selected preset.

You'll next need to convert this Binary Code to a Hex Code using the following table:

Decimal	Binary	Hex.			
0	0000	0	8	1000	8
1	0001	1	9	1001	9
2	0010	2	10	1010	A
3	0011	3	11	1011	B
4	0100	4	12	1100	C
5	0101	5	13	1101	D
6	0110	6	14	1110	E
7	0111	7	15	1111	F

By dividing the byte into two 4-bit nibbles (or parts) as shown 11111010 = 1111 1010 = F A

F A is therefore the Hex number that you would enter into the Hex portion of the PRESET window in order to access the MIDI Command 'MIDI START'.

MANAGER MIDI IMPLEMENTATION INFORMATION

The MIDI Manager will recognize the commands listed below.
 SONG SELECT (selects a chain number)
 START (executes the chain function)
 PROGRAM PRESET (transmits the contents of the program preset number received)

SYSTEM EXCLUSIVE COMMANDS:

LOAD A PRESET (into the MIDI Manager)
 DUMP A PRESET (from the MIDI Manager)
 LOAD ALL PRESETS (into the MIDI Manager)
 DUMP ALL PRESETS (from the MIDI Manager)
 Formats for the above are shown below.

SYSTEM COMMON MESSAGES

	STATUS BYTE	DATA BYTE
Song Select	11110011	0bbb bbb
Start	1111 1010	

CHANNEL VOICE MESSAGES

	STATUS BYTE	DATA BYTE
Program Change	1100 nnnn	0ppp pppp

SYSTEM EXCLUSIVE MESSAGES

	STATUS BYTE	DATA BYTE
Load Preset	1111 0000 0000 0001 0000 0ppp 0bbbb bbbb 0000 data* 1111 0111	0000 nnnn
Dump Preset	1111 0000 0000 0010 0000 0ppp 0bbb bbbb 1111 0111*	0000 nnnn
Load All Presets	1111 0000 0000 0011 0000 data CHKSUM 1111 0111*	0000 nnnn
Dumps All Presets	1111 0000 0000 0100 0000 0111*	0000 nnnn

*See format below

bbb bbbb = Chain Number (0-127)

nnnn = MIDI Channel Number (0000 is Ch. #1, 1111 is Ch. #16)

ppp pppp = Program Preset Number (0-127) (Preset 1 = 000 0000)

ppp = Program Preset Number (0-7,000 is preset #1, 111 is preset #8)

CHKSUM = MODULO 128 SUM OF THE DATA AREA OF THE MESSAGE, INCLUDING THE TWO DATA BYTES SPECIFYING THE PRESET AND THE BANK NUMBER, CHKSUM IS COMPUTED TO FORCE THE SUM OF THE DATA AND THE CHKSUM TO EQUAL 0.

The LOAD PRESET command shown above is to be sent from an external device (such as a computer, another MIDI Manager etc.) to the MIDI Manager being loaded. 14 bytes (28 nibbles) must be sent.

The DUMP PRESET command shown above is to be sent from an external device to the MIDI Manager. The MIDI Manager will respond with the preset data in the same format as shown in the Load Preset command shown above.

The LOAD ALL PRESETS command shown above is to be sent from an external device to the MIDI Manager. The data consists of 14,366 nibbles, i.e., the data is transmitted as 2 bytes per memory location.

The DUMP ALL PRESETS command shown above is to be sent from an external device in the MIDI Manager. The MIDI Manager will respond by sending data in the format shown in the Load All data command format.

FOR ALL SYSTEM EXCLUSIVE MESSAGES, THE DATA IS TRANSMITTED AS TWO BYTES PER INTERNAL MEMORY LOCATION. THE DATA FORMAT IS AS SHOWN BELOW:

TRANSMITTED BYTE #1	0000MMMM	Most significant Nibble/Byte 1
TRANSMITTED BYTE #2	0000LLLL	Least significant Nibble/Byte 1
TRANSMITTED BYTE #3	0000MMMM	Most significant Nibble/Byte 2
TRANSMITTED BYTE #4	0000LLLL	Least significant Nibble/Byte 2
TRANSMITTED BYTE LAST	0000MMMM	Most significant Nibble/Byte N
TRANSMITTED BYTE LAST	0000LLLL	Least significant Nibble/Byte N