

# Operation Manual

for

## Peak Series

of

## Audio/Video Matrix Units

This is a pre-release version of our new manual coming out soon. Some of the new RS-232 command pages may have errors. The matrix functions work properly but the manual may describe it incorrectly. If you have trouble getting a command to work, call us to ensure it is outlined in the manual correctly.



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Read all instructions before connecting or operating the A/V Matrix. Pay particular attention to the safety information. Keep this manual so you can refer to these safety instructions.

**WARNING:** There are no user serviceable parts inside. Refer all servicing to qualified service personnel.

**WARNING:** To reduce risk of fire or electric shock, do not expose the RC-8-MX to extreme heat, extreme cold, moisture or water. Do not allow foreign objects to get into the enclosure. If the unit is exposed to moisture, or a foreign object gets into the enclosure, immediately disconnect the power cord from the wall. Take the unit to a qualified service person for inspection and the necessary repairs.

Clean the A/V Matrix only with a dry cloth or a vacuum cleaner. Do not use water, solvents, or any other liquid to clean the A/V Matrix.

Place the A/V Matrix on a fixed, level surface strong enough to support its weight. Keep the A/V Matrix away from heat sources such as radiators, heat registers, stoves, or any other appliance that produces heat.

The A/V Matrix from 90 to 250 VAC power sources. It may also be operated from either 50 Hz or 60 Hz line frequencies. The unit is autosensing for power configuration.

Connect the A/V Matrix to the power outlet only with the supplied 3-prong grounded power supply cord or an exact equivalent. The cable should be connected to a properly grounded 3-conductor wall outlet. Do not modify the supplied cable in any way. Extension cords must be rated for adequate current.

Do not route the power cord where it can be crushed, pinched, bent at severe angles, exposed to heat, or damaged in any way. If the cord shows any sign of wear or damage, immediately stop using it and obtain a proper replacement from a qualified service agency or from the Avocation Systems service department.

If the A/V Matrix shows signs of improper operation, or if it has been dropped or damaged in any way, immediately disconnect the power cord from the power outlet. Take the A/V Matrix to a qualified service technician or send it directly to Avocation Systems for inspection and the necessary repairs.

# Safety Instructions

**1 Read Instructions** - All the safety and operating instructions should be read before the appliance is operated.



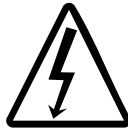
## CAUTION

RISK OF ELECTRICAL SHOCK  
DO NOT OPEN



CAUTION: DO NOT REMOVE COVER.  
NO USER SERVICABLE PARTS INSIDE.  
REFER SERVICING TO QUALIFIED  
SERVICE PERSONNEL.

**2 Retain Instructions** - The safety and operating instructions should be retained for future reference.



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

**3 Heed Warnings** - All warnings on the appliance and in the operating instructions should be adhered to.



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

**4 Follow Instructions** - All operating and other instructions should be followed.

**5 Water and Moisture** - The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

**6 Carts and Stands** - The appliance should be used only with a cart or stand that is recommended by the manufacturer.

**6A** An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



**7 Wall or Ceiling Mounting** - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.

**8 Ventilation** - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface, that may block the ventilation openings; or placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

- 9 Heat** - The appliance should be situated away from heat sources such as radiators, stoves, or other appliances that produce heat.
- 10 Power Sources** - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
- 11 Power-Cord Protection** - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
- 12 Cleaning** - The appliance should be cleaned only as recommended by the manufacturer.
- 13 Nonuse Periods** - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
- 14 Object and Liquid Entry** - Care should be taken so that objects do not fall into and liquids are not spilled into the inside of the appliance.
- 15 Damage Requiring Service** - The appliance should be serviced by qualified service personnel when:
- A. The power-supply cord or the plug has been damaged.
  - B. Objects have fallen, or liquid has been spilled into the appliance.
  - C. The appliance has been exposed to rain.
  - D. The appliance does not appear to operate normally or exhibits a marked change in performance.
  - E. The appliance has been dropped, or the cabinet is damaged.
- 16 Servicing** - The user should not attempt to service the appliance beyond those means described in the operating instructions. All other servicing should be referred to qualified service personnel.
- 17 Power Lines** - An outdoor antenna should be located away from power lines.
- 18 Grounding or Polarization** - The precautions that should be taken so that the grounding or polarization is not defeated.

Be careful when unpacking the A/V Matrix and the Matrix Keypads. This electronic package is susceptible to dropping or holding heavy objects on top of it. Save the original package and all enclosed packing material in case the unit needs to be returned. Damage due to shipping in cartons other than the original package are not covered under the warranty.

Make sure you fill out and return the warranty card. This document along with the sales receipt will give you the purchase date in case the unit needs to be returned for repair under warranty service.

Any modifications or improper use of the A/V Matrix or the Matrix keypad will void the warranty. Please read all information and instructions concerning this system before installing.

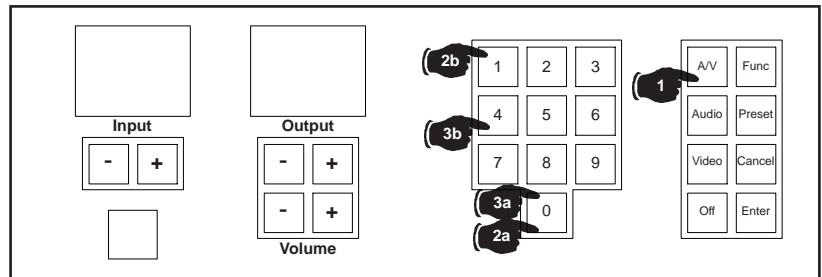
For any questions or concerns about the A/V Matrix and/or the Matrix Keypads, please call Avocation Systems, Inc. We are happy to answer any questions you may have or any problems you may be experiencing. If you are unsure of any aspects of your installation please contact one of our technicians before you start your installation. Avocation Systems, Inc. we will assist you in any way we can.

Please read this manual carefully and completely before operating the A/V Matrix. It gives details in operation, configurations, descriptions, adjustments, trouble shooting, problems, performance, and convenience of use.

# Switching Sources Using the Front Panel

There are two ways to switch audio and video inputs together to an output

The first way uses the A/V button along with the keypad.

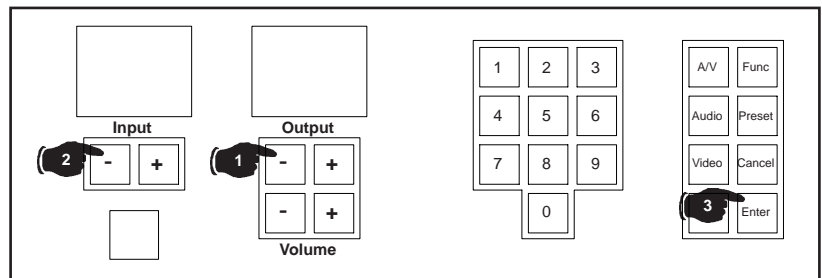


- 1) Press the A/V button  
*When this button is pressed, the input and output displays will go blank*
- 2) Select the input number through the keypad such as 01 for input number 1  
*As you input the numbers they will show up on the Input LED*
- 3) Select the output number through the keypad such as 04 for output number 4  
*As you input the numbers they will show up on the Output LED*

The matrix will automatically enter this and switch input number 1 to output 4

The second method uses the Input and Output keys under the LED displays.

- 1) Select the output number you wish to change by pressing the - and + keys under the Output LED (the Input LED will show the current input switched to that output).
- 2) Select the input number you wish to route to the output by pressing the - and + keys under the Input LED.
- 3) Press the Enter key to switch and save the selection.

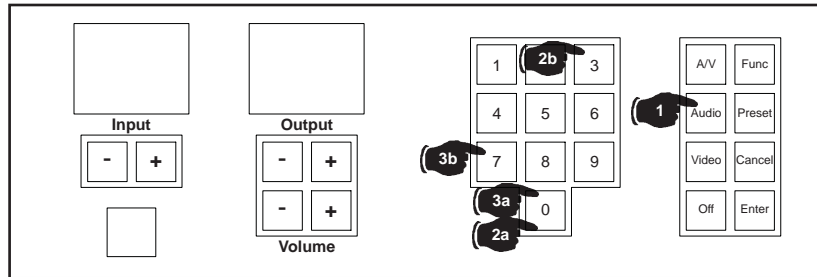


## Note:

If at any point you make an error, you can press the cancel button and start over.

## To switch audio to an output.

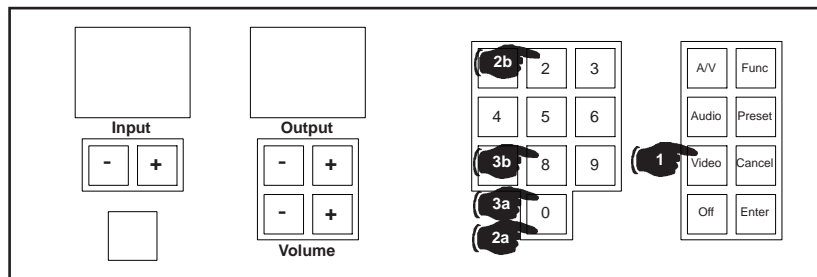
- 1) Press the Audio button
- 2) Select the input number through the keypad such as 03 for input number 3
- 3) Select the output number through the keypad such as 07 for output number 7



The matrix will automatically enter this and switch audio input number 3 to output 7.

## To switch video only to an output.

- 1) Press the Video button
- 2) Select the input number through the keypad such as 02 for input number 2
- 3) Select the output number through the keypad such as 08 for output number 8



The matrix will automatically enter this and switch video input number 2 to output 8

### Note:

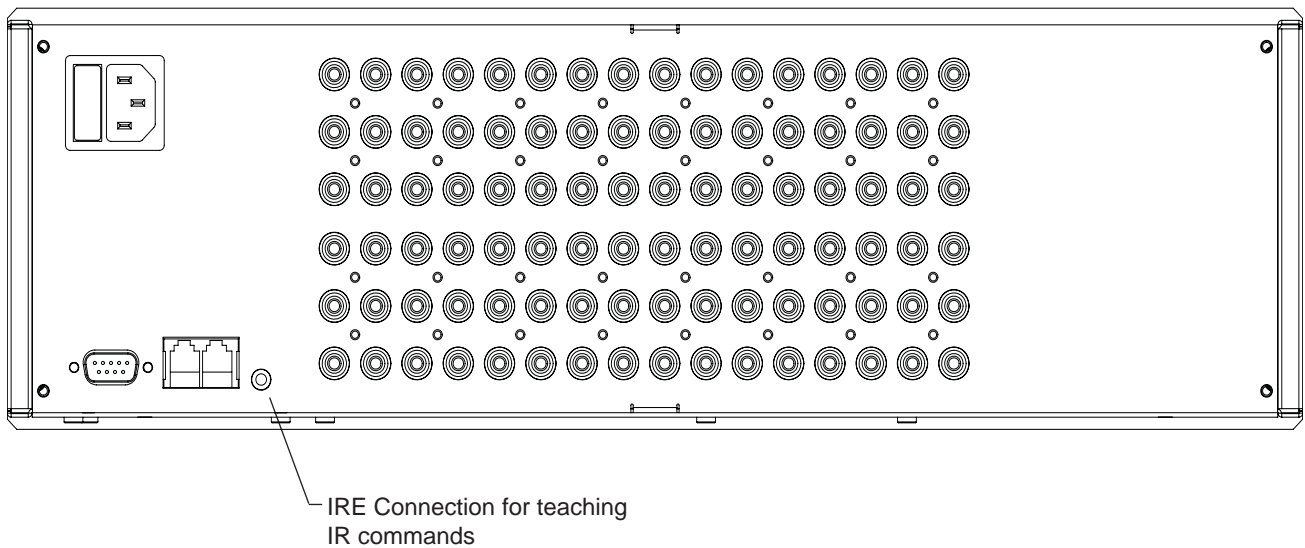
If at any point you make an error, you can press the cancel button and start over.

## Teaching IR Matrix Control Commands

The Matrix can be controlled via IR commands taught through the IR Emitter Output.

Place an IRE (IR Emitter) into the connector and place the emitter on the learning device.

You must use the RS-232 port to tell the matrix to teach the IR commands. See the RS-232 section for cabling and commands to use.



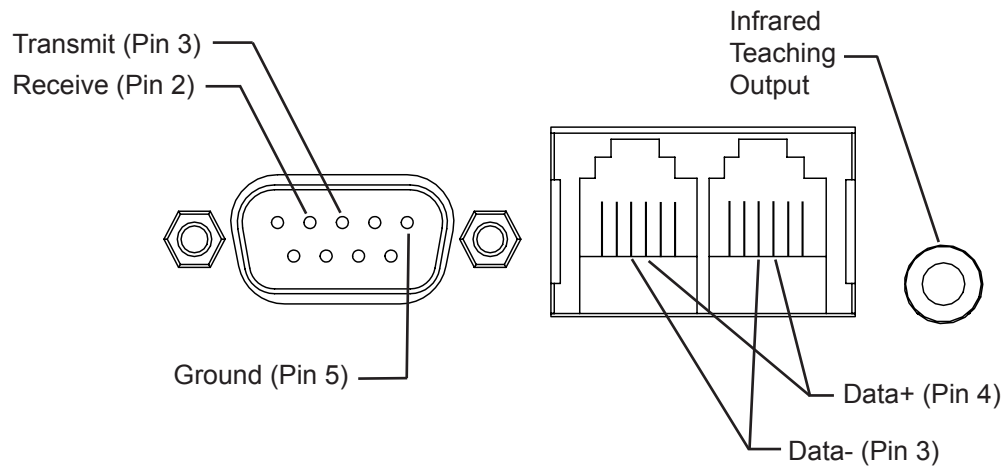


## Section C - Control Connections

The MTX series of matrices can be controlled via RS-232, RS-485 and infrared.

RS-232 Connections to the matrix typically use a null modem cable from the controller.  
The default communications parameters are:

Baud Rate	19200 baud
Bits	8
Parity	None
Stop Bits	1

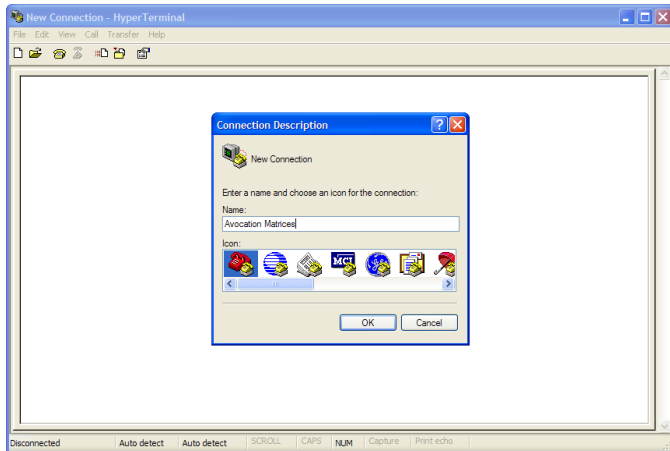


RS-485 communications use the same baud rate as RS-232. Both RJ-12 connectors are tied together to allow daisy chained communications.

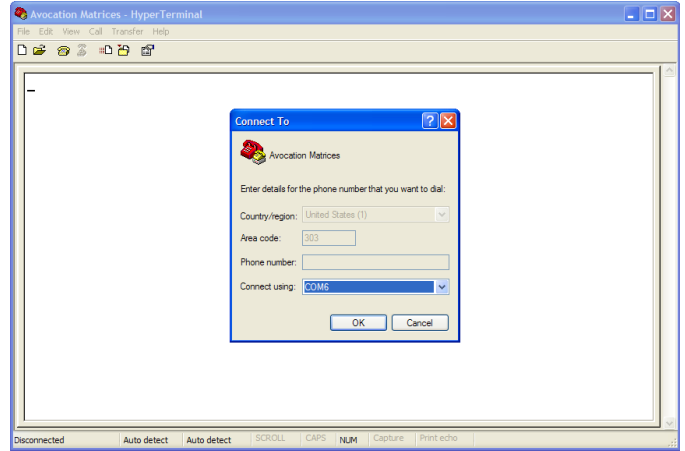
# Using Windows Hyperterminal

The MTX Series is controllable through any terminal software such as Hyperterminal. The following setup can be used to allow easy communications to the MTX unit.

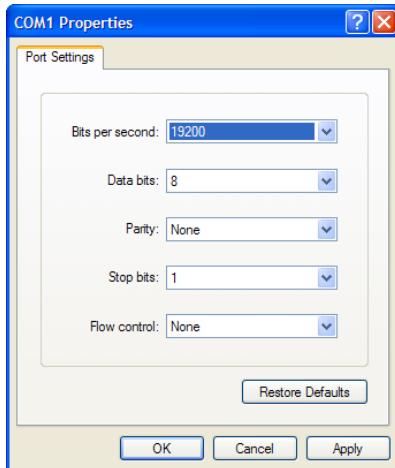
1) Open Hyperterminal under Accessories => Communications => Hyperterminal



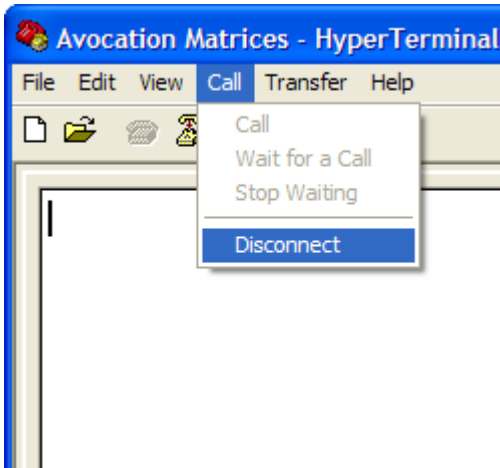
Provide a name for the connection and click OK.



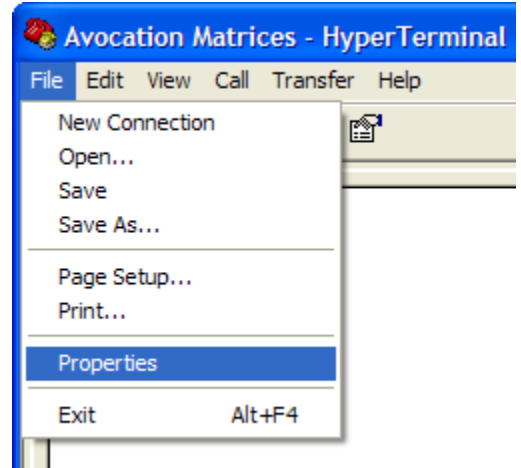
Select the COM port to use



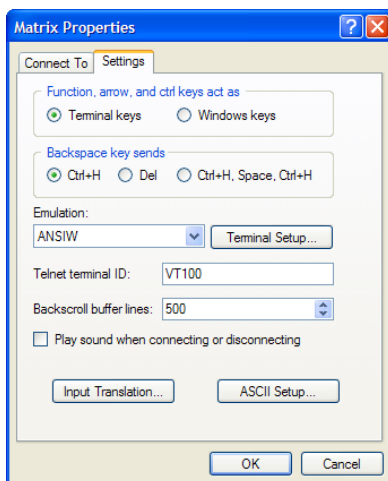
Select the COM properties



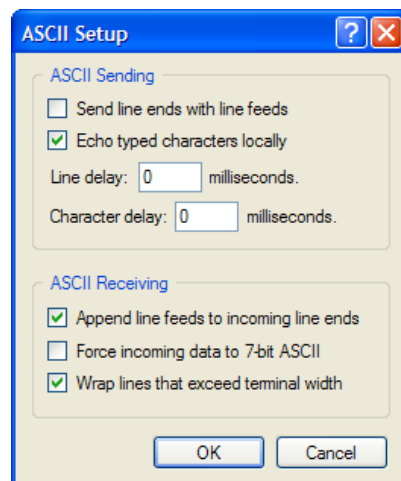
Disconnect



Select File => Properties



Select the Settings Tab  
Select ASCII Setup



Check "Echo typed characters locally" and  
"Append line feeds to incoming line ends"

Select OK until all the setup windows are closed.

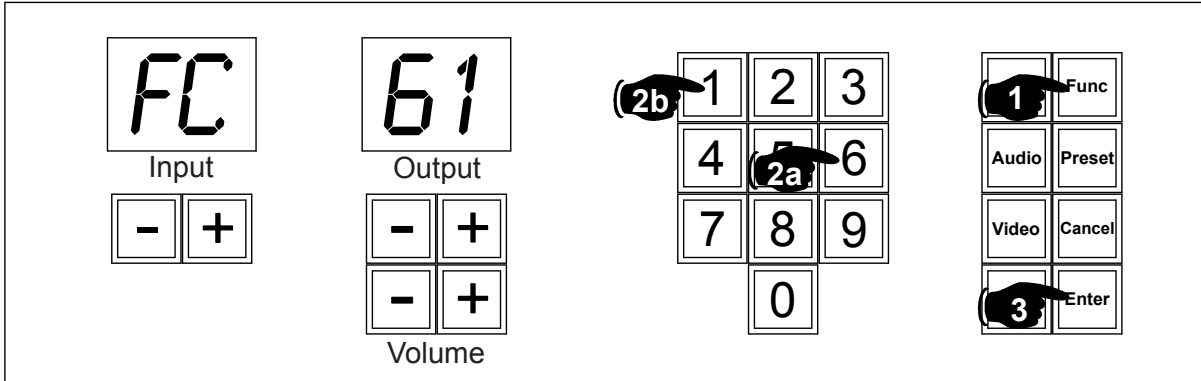


Hit "Enter" to make the connection.

## Changing the Units Baud Rate

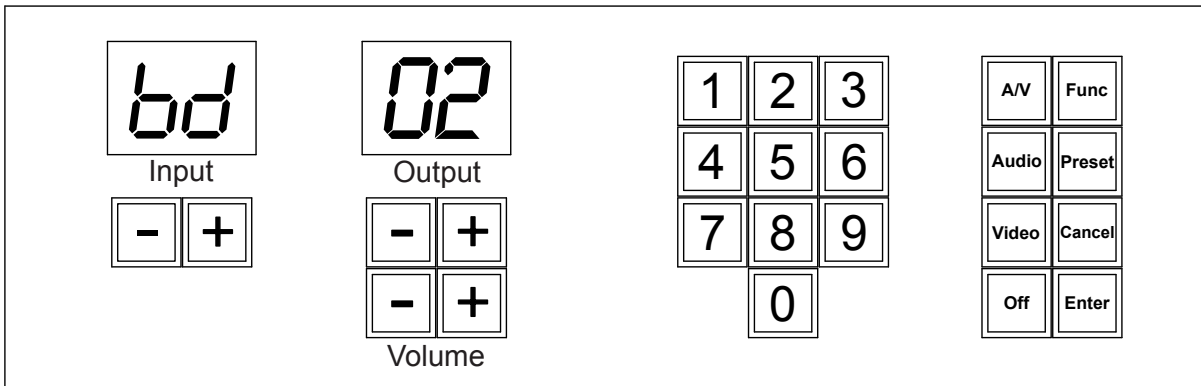
The MTX baud rate for communications is changed through the the front panel by using the following keystrokes.

- 1) Press the "Func" button
- 2) Enter "6" and "1" then press "Enter".  
The display will show the current baud rate selected.
- 3) Enter the two digits for the baud rate that you want to select then press "Enter".



Valid baud rates are:

- 00 = 4800
- 01 = 9600
- 02 = 19200 (default)
- 03 = 38400
- 04 = 57600
- 05 = 115200



To change baud rates:

Enter the two digit code for the baud rate required and press Enter

## Section D - Commands

The Peak series of matrices have a number of commands for control and query to allow full control. Each command is listed in this section with a description and example to help understand the commands.

The following commands are available:

### Audio Routing and Status

MXxxAii00 .....	audio input to output .....	A4
MXxxAii01,o2,o3,o4,o5,o6,o7,o8 .....	audio input to multiple outputs .....	A4
MXxxAAii .....	audio input to all outputs .....	A4
MXxxABooyy .....	balance .....	A4
MXxxABAy .....	balance for all outputs .....	A4
MXxxAFoo .....	audio output off .....	A5
MXxxAMoo .....	audio mute (on, off, toggle) .....	A5
MXxxAPiyy .....	Sensitivity .....	A5
MXxxAPAy .....	all inputs to sensitivity yy .....	A5
MXxxAUooyy .....	Volume to a particular .....	A5
MXxxAUAy .....	all outputs to volume level yy .....	A6
MXxxAYoo .....	Volume step up .....	A6
MXxxAZoo .....	Volume step down .....	A6
MXxxSA(oo) .....	status of audio route (s) .....	A6
MXxxSAA .....	status of all audio items .....	
MXxxSAB(oo) .....	status of audio balance(s) .....	
MXxxSAM(oo) .....	status of of audio mute(s) .....	
MXxxSAP(ii) .....	status of sensitivity level(s) .....	
MXxxSAU(oo) .....	status of volume level(s) .....	
MXxxZ50ooyy .....	set maximum volume for output .....	
MXxxZ51 .....	read all maximum volume settings .....	
MXxxZ57y .....	set volume enable .....	
MXxxZ58 .....	read volume enable .....	
MXxxZ59y .....	set sensitivity enable .....	
MXxxZ60 .....	read sensitivity enable .....	

### Video Routing and Status

MXxxViio0 .....	Video input to output .....	
MXxxViio1,o2,o3,o4,o5,o6,o7,o8 .....	video input to multiple outputs .....	
MXxxVFoo .....	video output off .....	
MXxxVAii .....	route video input to all outputs .....	
MXxxSV(oo) .....	status of video route(s) .....	

### Digital Audio Routing and Status

MXxxDiio0 .....	Digital input to output .....	
MXxxDiio1,o2,o3,o4,o5,o6,o7,o8 .....	input to multiple outputs .....	
MXxxDAii .....	send Digital input to all .....	
MXxxDFoo .....	Digital output off .....	
MXxxSD(oo) .....	status of digital route(s) .....	

### Audio/Video/Digital Routing and Status

MXxxBiio0 .....	A/D/V input to output .....	
MXxxBiio1,o2,o3,o4,o5,o6,o7,o8 .....	input to multiple outputs .....	
MXxxBAii .....	send A/D/V input to all .....	
MXxxBFoo .....	A/D/V output off .....	
MXxxBS .....	A/D/V straight through .....	
MXxxSB(oo) .....	status of A/D/V route(s) .....	

## General Status

MXxxS ..... all status returned

## Configuration Commands

MXxxZ01 ..... read audio inputs  
MXxxZ02 ..... read video inputs  
MXxxZ03 ..... read audeo outputs  
MXxxZ04 ..... read video outputs  
MXxxZ05 ..... read option flags  
MXxxZ06 ..... read hardware type (model number)  
MXxxZ07 ..... read hardware code  
MXxxZ08 ..... read hardware revision  
MXxxZ09 ..... read software revision  
MXxxZ10 ..... read serial number  
MXxxZ11 ..... read mfg date  
MXxxZ13 ..... set/read enable/disable front panel control  
MXxxZ17 ..... set/read volume mode  
MXxxZ18 ..... set/read mute release mode  
MXxxZ21 ..... set/read response mode  
MXxxZ53 ..... Set/Read select digital with analog  
MXxxZ54 ..... Set/Read select digital with video

## IR Teaching Commands

MXxxZ52 ..... Teach IR code  
MXxxZ56vv..... Set/read number of times to repeat on IR teaching

## Preset Commands

MXxxZ23yy..... set preset name  
MXxxZ24yy..... read preset name  
MXxxZ25yy..... clear preset name  
MXxxZ26xxyyiioo ..... set audio preset  
MXxxZ27xxyy ..... read audio preset  
MXxxZ28xxyy ..... clear audio preset  
MXxxZ29xxyyiioo ..... set digital preset  
MXxxZ30xxyy ..... read digital preset  
MXxxZ31xxyy ..... clear digital preset  
MXxxZ32xxyyiioo ..... set video preset  
MXxxZ33xxyy ..... read video preset  
MXxxZ34xxyy ..... clear video preset  
MXxxZ35xxyyiioo ..... set A/D/V preset  
MXxxZ36xxyy ..... read A/D/V preset  
MXxxZ37xxyy ..... clear A/D/V preset  
MXxxZ38xxyyiioo ..... set volume Preset  
MXxxZ39iioo..... read volume Preset  
MXxxZ40ooyy..... clear volume Preset  
MXxxZ41xxyyiioo ..... set balance Preset  
MXxxZ42iioo..... read balance Preset  
MXxxZ43ooyy..... clear balance Preset  
MXxxZ44xxyyiioo ..... set Sensitivity Preset  
MXxxZ45ooyy..... read Sensitivity Preset  
MXxxZ46ooyy..... clear Sensitivity Preset  
MXxxZ47pp ..... Save current setup as preset no. pp  
MXxxZ48xx..... read complete preset  
MXxxZ49xx..... run preset number xx

MXxxZ98 ..... reset unit  
MXxxZ99 ..... search for unit

Legend:

xx = unit ID number 00 to 15  
 ii = input number 00 to 64  
 oo = output number 01 to 64  
 yy = value to set

# Audio Routing Commands

<b>MXxxAiioo&lt;CR&gt;</b>	
Route an audio input to an audio output	MX00A0103<CR>
	Routes audio input 1 to output 3
<b>Response: MXxx-Audio=ii to oo&lt;CR&gt;</b>	

<b>MXxxAio1,o2,o3,o4,o5,o6,o7,o8&lt;CR&gt;</b>	
Route an audio input to as many as 10 outputs	MX00A0101,02,03,04,05,06,07,08,09,10<CR>
	Routes audio input 1 to outputs 1 to 8
	MX00A0101,02,03,04<CR>
	Routes audio input 1 to outputs 1 to 4
<b>Response: MXxx-Audio=ii to oo&lt;CR&gt;</b> (for each route made)	

<b>MXxxAAii&lt;CR&gt;</b>	
Routes an audio input to all outputs	MX00AA02<CR>
	Routes audio input 2 to all audio outputs
<b>Response: MXxx-Audio=ii to oo&lt;CR&gt;</b> (for each route made)	

<b>MXxxABooyy&lt;CR&gt;</b>	
Sets a balance level for an output	MX00AB0249<CR>
yy=00 for full left yy=49 for center yy=99 full right	Output 2 is set for equal balance between left and right channels.
<b>Response: MXxx-Balance oo set to yy&lt;CR&gt;</b>	

<b>MXxxAFoo&lt;CR&gt;</b>	
Turn an audio output off	MX00AF03<CR>
	Turn off audio output number 3
<b>Response: MXxx-Audio=00 to oo&lt;CR&gt;</b>	

<b>MXxxAMoo(y)&lt;CR&gt;</b>	
Mute an audio output	MX00AM03<CR>
absence of (y) will result in a toggle of the mute adding (y) is optional for setting a mute directly y = 0 turns off the mute for the output y = 1 turn on the mute for the output	Toggle the mute of output 3
	MX00AM021<CR>
	Enables the mute for output 2
<b>Response: MXxx-Audio=00 to oo&lt;CR&gt;</b> (for each route made)	

<b>MXxxAPIiyy&lt;CR&gt;</b>	
Set the level adjustment for an audio input	MX00AP0132<CR>
yy = 00 to 48 yy = 32 for 0dB pass yy adjusts in 0.5dB steps	Sets audio input 1 to 0dB pass
<b>Response: MXxx-Sensitivity ii set to yy&lt;CR&gt;</b>	

<b>MXxxAPAyy&lt;CR&gt;</b>	
Set the level adjustment for all audio inputs	MX00APA32<CR>
yy = 00 to 48 yy = 32 for 0dB pass yy adjusts in 0.5dB steps	Sets all audio inputs to 0dB pass
<b>Response: MXxx-Sensitivity ii set to yy&lt;CR&gt;</b> (for each input changed)	

<b>MXxxAUooyy&lt;CR&gt;</b>	
Sets an audio output volume level	MX00AU0132<CR>
yy = 00 (-64dB Minimum) yy = 32 (0dB Pass Through) yy = 48 (+32dB Maximum)	Sets audio output 1 to 0dB pass
<b>Response: MXxx-Volume oo to yy&lt;CR&gt;</b>	

<b>MXxxAUAyy&lt;CR&gt;</b>	
Sets all audio outputs to a volume level	MX00AUA32<CR>
yy = 00 (-64dB Minimum) yy = 32 (0dB Pass Through) yy = 48 (+32dB Maximum)	Sets all audio outputs 1 to 0dB pass
<b>Response: MXxx-Volume oo to yy&lt;CR&gt;</b> (for each output changed)	

<b>MXxxAYoo&lt;CR&gt;</b>	
Step an audio output volume up one level	MX00AY03<CR>
	Step up audio output number 3 up one step
<b>Response: MXxx-Volume oo to yy&lt;CR&gt;</b>	



<b>MXxxAZoo&lt;CR&gt;</b>	
Step an audio output volume down one level	MX00AY03<CR>
	Step down audio output number 3 up one step
<b>Response: MXxx-Volume oo to yy&lt;CR&gt;</b>	

<b>MXxxSA(oo)&lt;CR&gt;</b>	
Query for the status of an audio route.	MX00SA<CR>
	Returns the status of all the audio routes
	MX00SA04<CR>
	Returns the routing status of audio output number 4
<b>Response: MXxx-Audio=ii to oo&lt;CR&gt;</b> (each output will be sent if output number not specified)	

<b>MXxxSAB(oo)&lt;CR&gt;</b>	
Query for the status of an audio output balance	MX00SAB<CR>
	Returns the balance status of all the audio outputs
	MX00SAB04<CR>
	Returns the balance status of audio output number 4
<b>Response: MXxx-Balance oo set to yy&lt;CR&gt;</b> (each output will be sent if output number not specified)	

<b>MXxxSAM(oo)&lt;CR&gt;</b>	
Query for the mute status of an audio output	MX00SAM<CR>
	Returns the mute status of all the audio outputs
	MX00SAM04<CR>
	Returns the mute status of audio output number 4
<b>Response: MX00-Output 01 is Muted&lt;CR&gt;</b> (each output will be sent if output number not specified)	

<b>MXxxSAP(oo)&lt;CR&gt;</b>	
Query for the status of an audio input level	MX00SAP<CR>
	Returns the level of all the audio inputs
	MX00SAP04<CR>
	Returns the level of audio input number 4
<b>Response: MXxx-Sensitivity ii set to yy&lt;CR&gt;</b> (each input will be sent if input number not specified)	

<b>MXxxSAU(oo)&lt;CR&gt;</b>	
Query for the status of an audio output volume	MX00SAP<CR>
	Returns the volume of all the audio outputs
	MX00SAP04<CR>
	Returns the volume of audio output number 4
<b>Response: MXxx-Volume oo to yy&lt;CR&gt;</b> (each output will be sent if output number not specified)	

<b>MXxxZ50ooyy&lt;CR&gt;</b>	
Set the maximum volume level for an output	MX00Z500432<CR>
yy=00 to 48	Set the maximum volume for output 4 to 32
<b>Response: MXxx-Max Out Level for oo = yy&lt;CR&gt;</b>	

<b>MXxxZ51&lt;CR&gt;</b>	
Read the maximum volume level for all outputs	MX00Z51<CR>
	Read all output maximum volume levels
<b>Response: MXxx-Max Out Level for oo = yy&lt;CR&gt;</b> (each output will be sent)	

<b>MXxxZ57y&lt;CR&gt;</b>	
Enable/Disable volume control	MX00Z570<CR>
y=0 to disable volume control	Disable volume control in the matrix
y=1 to enable volume control	
	MX00Z571<CR>
	Enable volume control in the matrix
<b>Response: MXxx-Volume control enabled&lt;CR&gt;</b>	
<b>Response: MXxx-Volume control disabled&lt;CR&gt;</b>	

<b>MXxxZ58&lt;CR&gt;</b>	
Read volume control enable/disable status	MX00Z58<CR>
	Get the status of volume control ability
<b>Response: MXxx-Volume control enabled&lt;CR&gt;</b>	
<b>Response: MXxx-Volume control disabled&lt;CR&gt;</b>	

<b>MXxxZ59y&lt;CR&gt;</b>	
Enable/Disable sensitivity control	MX00Z590<CR>
y=0 to disable sensitivity control	Disable sensitivity control in the matrix
y=1 to enable sensitivity control	
	MX00Z591<CR>
	Enable sensitivity control in the matrix
<b>Response: MXxx-Sensitivity control enabled&lt;CR&gt;</b>	
<b>Response: MXxx-Sensitivity control disabled&lt;CR&gt;</b>	

<b>MXxxZ60&lt;CR&gt;</b>	
Read sensitivity control enable/disable status	MX00Z60<CR>
	Get the status of sensitivity control ability
<b>Response: MXxx-Sensitivity control enabled&lt;CR&gt;</b>	
<b>Response: MXxx-Sensitivity control disabled&lt;CR&gt;</b>	

## Video Routing Commands

<b>MXxxViio&lt;CR&gt;</b>	
Route a video input to an video output	MX00V0103<CR>
	Routes video input 1 to output 3
<b>Response: MXxx-Video=ii to oo&lt;CR&gt;</b>	

<b>MXxxViio1,o2,o3,o4,o5,o6,o7,o8,o9,o10&lt;CR&gt;</b>	
Route an video input to as many as 10 outputs	MX00V0101,02,03,04,05,06,07,08,09,10<CR>
	Routes video input 1 to outputs 1 to 10
	MX00V0101,02,03,04<CR>
	Routes video input 1 to outputs 1 to 4
<b>Response: MXxx-Video=ii to oo&lt;CR&gt;</b> (for each route made)	

<b>MXxxVAii&lt;CR&gt;</b>	
Routes a video input to all outputs	MX00VA02<CR>
	Routes video input 2 to all video outputs
<b>Response: MXxx-Video=ii to oo&lt;CR&gt;</b> (for each route made)	

<b>MXxxVFoo&lt;CR&gt;</b>	
Turn a video output off	MX00VF03<CR>
	Turn off video output number 3
<b>Response: MXxx-Video=00 to oo&lt;CR&gt;</b>	

<b>MXxxSV(oo)&lt;CR&gt;</b>	
Query for the status of a video route.	MX00SV<CR>
	Returns the status of all the video routes
	MX00SV04<CR>
	Returns the routing status of video output number 4
<b>Response: MXxx-Video=ii to oo&lt;CR&gt;</b> (each output will be sent if output number not specified)	

# Digital Routing Commands

<b>MXxxDiio&lt;CR&gt;</b>	
Route an digital input to an a/v output	MX00D0103<CR>
	Routes digital input 1 to output 3
<b>Response: MXxx-Digital=ii to oo&lt;CR&gt;</b>	

<b>MXxxDiio1,o2,o3,o4,o5,o6,o7,o8,o9,o10&lt;CR&gt;</b>	
Route an digital input to as many as 10 outputs	MX00D0101,02,03,04,05,06,07,08,09,10<CR>
	Routes digital input 1 to outputs 1 to 10
	MX00D0101,02,03,04<CR>
	Routes digital input 1 to outputs 1 to 4
<b>Response: MXxx-Digital=ii to oo&lt;CR&gt;</b> (for each route made)	

<b>MXxxDAii&lt;CR&gt;</b>	
Routes an a/v input to all outputs	MX00DA02<CR>
	Routes digital input 2 to all digital outputs
<b>Response: MXxx-Digital=ii to oo&lt;CR&gt;</b> (for each route made)	

<b>MXxxDFoo&lt;CR&gt;</b>	
Turn an digital output off	MX00DF03<CR>
	Turn off digital output number 3
<b>Response: MXxx-Digital=00 to oo&lt;CR&gt;</b>	

<b>MXxxSD(oo)&lt;CR&gt;</b>	
Query for the status of an digital route.	MX00SD<CR>
	Returns the status of all the digital routes
	MX00SD04<CR>
	Returns the routing status of digital output number 4
<b>Response: MXxx-Digital=ii to oo&lt;CR&gt;</b> (each output will be sent if output number not specified)	

<b>MXxxZ53(y)&lt;CR&gt;</b>	
Set/Read select digital with analog	MX00Z530<CR>
y = 0 digital will not switch with analog audio	Disconnect digital from routing with analog audio
y = 1 digital will switch with analog audio	
if y is not used the current setting will be returned	
<b>Response: MXxx-Digital will not switch with audio&lt;CR&gt;</b>	

<b>MXxxZ54(y)&lt;CR&gt;</b>	
Set/Read select digital with video	MX00Z541<CR>
y = 0 digital will not switch with video	Disconnect digital from routing with video
y = 1 digital will switch with video	
if y is not used the current setting will be returned	
<b>Response: MXxx-Digital will switch with video&lt;CR&gt;</b>	

## A/V Routing Commands

<b>MXxxBiio&lt;CR&gt;</b>	
Route an a/v input to an a/v output	MX00B0103<CR>
	Routes a/v input 1 to output 3
<b>Response: MXxx-A/V=ii to oo&lt;CR&gt;</b>	

<b>MXxxBii01,o2,o3,o4,o5,o6,o7,o8,o9,o10&lt;CR&gt;</b>	
Route an a/v input to as many as 10 outputs	MX00B0101,02,03,04,05,06,07,08,09,10<CR>
	Routes a/v input 1 to outputs 1 to 10
	MX00B0101,02,03,04<CR>
	Routes a/v input 1 to outputs 1 to 4
<b>Response: MXxx-A/V=ii to oo&lt;CR&gt;</b> (for each route made)	

<b>MXxxBAii&lt;CR&gt;</b>	
Routes an a/v input to all outputs	MX00BA02<CR>
	Routes a/v input 2 to all video outputs
<b>Response: MXxx-A/V=ii to oo&lt;CR&gt;</b> (for each route made)	

<b>MXxxBFoo&lt;CR&gt;</b>	
Turn an a/v output off	MX00BF03<CR>
	Turn off a/v output number 3
<b>Response: MXxx-A/V=00 to oo&lt;CR&gt;</b>	

<b>MXxxSB(oo)&lt;CR&gt;</b>	
Query for the status of an a/v route.	MX00SB<CR>
	Returns the status of all the a/v routes
	MX00SB04<CR>
	Returns the routing status of a/v output number 4
<b>Response: MXxx-A/V=ii to oo&lt;CR&gt;</b> (each output will be sent if output number not specified)	

# Configuration Commands

MXxxZ01<CR>	
Query how many audio inputs installed	MX00Z01<CR>
	Query how many audio inputs are installed
<b>Response: MXxx-Audio inputs = yy&lt;CR&gt;</b>	

MXxxZ02<CR>	
Query how many video inputs installed	MX00Z02<CR>
	Query how many video inputs are installed
<b>Response: MXxx-Video inputs = yy&lt;CR&gt;</b>	

MXxxZ03<CR>	
Query how many audio outputs installed	MX00Z03<CR>
	Query how many audio outputs are installed
<b>Response: MXxx-Audio outputs = yy&lt;CR&gt;</b>	

MXxxZ04<CR>	
Query how many video outputs installed	MX00Z04<CR>
	Query how many video outputs are installed
<b>Response: MXxx-Video outputs = yy&lt;CR&gt;</b>	

MXxxZ06<CR>	
Query matrix model number	MX00Z06<CR>
	Query for the model number of the matrix
<b>Response: MXxx-Model No. = MX-0808NAD/R&lt;CR&gt;</b>	

MXxxZ07<CR>	
Query for the matrix hardware level	MX00Z07<CR>
	Query for the hardware level in the matrix
<b>Response: MXxx-Hardware Code = MTX-1616-B&lt;CR&gt;</b>	

<b>MXxxZ08&lt;CR&gt;</b>	
Query matrix hardware revision level	MX00Z08<CR>
	Query how many video outputs are installed
<b>Response: MXxx-Hardware revision = 1.000&lt;CR&gt;</b>	

<b>MXxxZ09&lt;CR&gt;</b>	
Query for the matrix software revision level	MX00Z09<CR>
	Query for the software level in the matrix
<b>Response: MXxx-Software revision = 1.000&lt;CR&gt;</b>	

<b>MXxxZ10&lt;CR&gt;</b>	
Query for the matrix serial number	MX00Z10<CR>
	Query for the serial number of the matrix
<b>Response: MXxx-Serial No. = MTX09B1000&lt;CR&gt;</b>	

<b>MXxxZ13y&lt;CR&gt;</b>	
Enable/Disable front panel controls	MX00Z131<CR>
y = 0 for disable	Enables front panel controls (default mode)
y = 1 for enable	
<b>Response: MXxx-Front Panel is (locked/unlocked)&lt;CR&gt;</b>	

<b>MXxxZ17y&lt;CR&gt;</b>	
Set volume mode to linear or logarithmic	MX00Z251<CR>
y = 0 for linear	Sets volume to logarithmic mode (default mode)
y = 1 for logarithmic	
<b>Response: MXxx-Volume is Logarithmic&lt;CR&gt;</b>	

<b>MXxxZ18y&lt;CR&gt;</b>	
Set mute release on volume change	MX00Z251<CR>
y = 0 to keep mute on when volume is changed	Sets mute release to on (default mode)
y = 1 to turn mute off when volume is changed	
<b>Response: MXxx-Mute Release is (Enabled/Disabled)&lt;CR&gt;</b>	

