



The Reliable One

MultiView
Matrix 16x16
CAT5 Switch
Quick
Reference
&
Setup
Guide

Magenta Research Ltd

934 Federal Road, Brookfield, CT 06804 USA
(203) 740-0592 FAX (203) 740-0596
www.magenta-research.com

Magenta Research and the Magenta Research logo are trademarks of Magenta Research Ltd.
All other brands, product names, and trademarks are the property of their respective owners.
Copyright 2003 Magenta Research Limited. All rights reserved.

© 2004 by Magenta Research Ltd. All rights reserved.

Magenta Research Ltd.
934 Federal Rd.
Brookfield, CT. 06804 USA

This document and the Magenta Research Ltd. products to which it relates, and the copyright in each, is the property of Magenta Research Ltd. Neither the document nor the products may be reproduced by any means, in whole or in part, without the prior written permission of Magenta Research Ltd. Magenta Research Ltd makes no warranty or representation, either express or implied, with respect to this software or documentation, including their quality, performance, merchantability, or fitness for a particular purpose. As a result, this software or documentation are licensed "as is" and you, the licensee, are assuming the entire risk as to their quality and performance.

In no event will Magenta Research Ltd be liable for direct, indirect, special, incidental, or consequential damages arising out of the use of or inability to use the software or documentation.

All trademarks are the property of the respective owners.

Thank you for your purchase of the Magenta Research MultiView Matrix 16x16 CAT5 Switch. The MultiView Matrix 16x16 CAT5 Switch is designed for plug and play operation. Fully compatible with all versions of the MultiView 450/1000/1500 series of single and multi port CAT5 transmitters/receivers.

NOTE: CAT5 cabling must be pinned to the TIA-EIA T568B wiring specification. This equipment is not intended for, nor does it support connection through an ethernet network. Do not connect these devices to any sort of networking or telecommunications equipment.

Please refer to the following pages to set up and use the MultiView Matrix 16x16 CAT5 Switch.

MultiView Matrix 16x16 CAT5 Switch Operation

Keypad Description:

The MultiView Matrix 16x16 CAT5 Switch provides a front-panel keypad that may be used to configure the input to output channel assignments. Additionally, these assignments may be saved as preset configurations. Sixteen configurations may be saved for later use.

When an input or output channel is selected, the key will be illuminated. Pressing an input or output key will “toggle” the selection. It is not necessary to press the **CANCEL** key to remove only the selected key from the current assignment. The **CANCEL** key is used to abort any operation in progress, and will also re-initialize all input and output key selections. The **ENTER** key will update the matrix assignments with the current selection.

The MultiView Matrix 16x16 CAT5 Switch will “remember” the current preset configuration if power is removed, and will return to this state when power is restored. If the current configuration has not been saved as a preset however, the unit will recall the last saved preset.

An eight by eight display is furnished to provide the user with a visual overview of the current matrix assignments.

Input to Output Assignment:

To assign an input channel (source) to an output channel (destination), press the desired input key on the top row, and the desired output key(s) on the bottom row of the selection keypad. If any outputs are assigned to the selected input channel, the keys will be illuminated. When all assignments have been made, press the **ENTER** key to update the matrix, or press the **CANCEL** key to start again.

Multiple output channels may be assigned to a single input channel, but only one input channel may be assigned to each output channel. To turn an output channel off, press only the output key, then the **ENTER** key.

Pressing an input or output key will “toggle” the selection. It is not necessary to press the **CANCEL** key to remove only the selected key from the current assignment.

Pressing an input key will illuminate the input key and all outputs assigned to this input. To re-assign the outputs to a new input, press the input key again, then press the new input key. Press the **ENTER** key to update the matrix, or press the **CANCEL** key to start again.

To turn an output channel off, make sure no inputs are selected, then press only the output key, and the **ENTER** key.

MultiView Matrix 16x16 CAT5 Switch Operation, cont.

Preset Command:

To save the current matrix configuration, press the **STORE** key, then the input key that corresponds to the preset you wish to overwrite (1 – 16). Press the **ENTER** key to save or the **CANCEL** key to start again.

Recall Command:

To recall a saved preset configuration, press the **RECALL** key, then the input key that corresponds to the preset you wish to recall (1 – 16). Press the **ENTER** key to load the preset configuration or the **CANCEL** key to start again.

All Off Command:

To turn all outputs off simultaneously, hold the **CANCEL** key for approximately five seconds.

MultiView Matrix 16x16 CAT5 Serial Control/Command

RS-232 Protocol:

7-bit ASCII: 8 data bits, no parity, 1 stop bit, 9600 bps (9600 8N1)

All commands are Upper Case.

RS-232 Hardware interface:

<u>Label</u>	<u>Signal</u>
TX+	RS-232 Transmit (TD)
TX-	Not Used
RX+	RS-232 Receive (RD)
RX-	Not Used
GND	GND

Commands:

<u>Command</u>	<u>Description</u>	<u>ASCII</u>	<u>Hex</u>
"O"	"Output"	"O"	4F
"P"	"Preset"	"P"	50
"R"	"Recall (Preset)"	"R"	52
"S"	"Status Report"	"S"	53
"?"	"ID Report"	"?"	3F
"C"	"Clear Working Preset"	"C"	43

Command Strings:

A valid command string will begin with a Command character, and terminate with a "Carriage Return" (<CR>). The format is as follows:

Output Commands:

The following Output Command formats shall be used:

Oxx=<CR> : Report an output (x) channel configuration.

Device replies with:

Oxx=yy<CR><LF>

Parameters:

x = Output channel (1 - 16)

y = Input channel assigned to selected output channel (0 = OFF)

Oxx=yy<CR> : Configure an output (x) channel.

Device replies with:

Oxx=yy<CR><LF>

Parameters:

xx = Output channel (1 - 16)

yy = Input channel assigned to selected output channel (0 = OFF)

Preset Commands:

The following Preset Command formats shall be used:

Pxx<CR> : Report a preset (x) configuration.

Device replies with:

Pxx=aa,bb,cc,dd,de,ff,gg,hh, ii, jj, kk,ll,,mm,nn,oo,pp<CR><LF>

Parameters:

xx = Preset (0 - 16) – If x = 00, the current (working) configuration is reported.

aa = Output 1 input selection (0 = OFF)

bb = Output 2 input selection (0 = OFF)

:

pp = Output 16 input selection (0 = OFF)

Pxx<CR> : Saves current (working) configuration as a preset (xx) configuration.

Device replies with:

Preset xx Stored! <CR><LF>

Parameters:

xx = Preset (1 - 16)

Pxx=a,b,c,d,e,f,g,h,i,j,k,l,m,n,o,p<CR> : Configures a preset.

Device replies with:

Preset xx Stored! <CR><LF>

If xx = 00 or if x = a recalled preset, the current working preset is reported as:

P00=a,b,c,d,e,f,g,h,i,j,k,l,m,n,o,p<CR><LF>

If xx = a stored preset, the new preset configuration will be saved in preset memory location xx.

Parameters:

xx = Preset (0 - 16)

aa = Output 1 input selection (0 = OFF)

bb = Output 2 input selection (0 = OFF)

:

pp = Output 16 input selection (0 = OFF)

Recall Commands

The following Recall Command formats shall be used:

Rxx<CR> : Recall preset (xx) and copy to current working preset.

Device replies with:

P00=a,b,c,d,e,f,g,h,i,j,k,l,m,n,o,p<CR><LF

Parameters:

aa = Output 1 input selection (0 = OFF)

bb = Output 2 input selection (0 = OFF)

:

pp = Output 16 input selection (0 = OFF)

Status Commands

The following Status Command formats shall be used:

S=<CR> : Report master device status.

Device replies with:

Pxx= aa,bb,cc,dd,ee,ff,gg,hh,ii,jj,kk,ll,mm,nn,oo,pp <CR><LF>
P01= aa,bb,cc,dd,ee,ff,gg,hh,ii,jj,kk,ll,mm,nn,oo,pp <CR><LF>
P02= aa,bb,cc,dd,ee,ff,gg,hh,ii,jj,kk,ll,mm,nn,oo,pp <CR><LF>
P03= aa,bb,cc,dd,ee,ff,gg,hh,ii,jj,kk,ll,mm,nn,oo,pp <CR><LF>
P04= aa,bb,cc,dd,ee,ff,gg,hh,ii,jj,kk,ll,mm,nn,oo,pp <CR><LF>
P05= aa,bb,cc,dd,ee,ff,gg,hh,ii,jj,kk,ll,mm,nn,oo,pp <CR><LF>
P06= aa,bb,cc,dd,ee,ff,gg,hh,ii,jj,kk,ll,mm,nn,oo,pp <CR><LF>
P07= aa,bb,cc,dd,ee,ff,gg,hh,ii,jj,kk,ll,mm,nn,oo,pp <CR><LF>
P08= aa,bb,cc,dd,ee,ff,gg,hh,ii,jj,kk,ll,mm,nn,oo,pp <CR><LF>
P09= aa,bb,cc,dd,ee,ff,gg,hh,ii,jj,kk,ll,mm,nn,oo,pp <CR><LF>
P10= aa,bb,cc,dd,ee,ff,gg,hh,ii,jj,kk,ll,mm,nn,oo,pp <CR><LF>
P11= aa,bb,cc,dd,ee,ff,gg,hh,ii,jj,kk,ll,mm,nn,oo,pp <CR><LF>
P12= aa,bb,cc,dd,ee,ff,gg,hh,ii,jj,kk,ll,mm,nn,oo,pp <CR><LF>
P13= aa,bb,cc,dd,ee,ff,gg,hh,ii,jj,kk,ll,mm,nn,oo,pp <CR><LF>
P14= aa,bb,cc,dd,ee,ff,gg,hh,ii,jj,kk,ll,mm,nn,oo,pp <CR><LF>
P15= aa,bb,cc,dd,ee,ff,gg,hh,ii,jj,kk,ll,mm,nn,oo,pp <CR><LF>
P16= aa,bb,cc,dd,ee,ff,gg,hh,ii,jj,kk,ll,mm,nn,oo,pp <CR><LF>

Parameters:

xx = Current (working) preset If xx = 01 – 16 then a stored preset is loaded. If any output configuration is changed after loading a stored preset, then xx = 00.

aa = Output 1 input selection (00 = OFF)

bb = Output 2 input selection (00 = OFF)

:

pp = Output 16 input selection (00 = OFF)

ID Commands

The following ID Command formats shall be used:

? <CR> : Report ID / firmware version

Device replies with:

MV16X16 Core vx.y<CR><LF>

MV16X16 Panel vx.y<CR><LF>

Parameters:

x = Major firmware revision

y = Minor firmware revision

Clear Working Preset

This command will turn all outputs off immediately.

C<CR> : Clear working preset

Device replies with: **P00=00,00,00,00,00,00,00,00, 00,00,00,00,00,00,00<CR><LF>**

Address Configuration Commands:

The following Address Configuration Command formats shall be used:

A=<CR> : Report device hardware address configuration.

Device replies with:

A=xx<CR><LF>

Parameters:

xx = Device address

A=xx<CR> : Configure device hardware address.

Device replies with:

A=xx<CR><LF>

Parameters:

xx = Hardware Address ("00" – "99")

Address Prefix:

The address prefix byte shall be formatted as the binary address value (0x00 : 0x63)+ 0x80.

The address byte shall not be formatted, nor interpreted as an ASCII character.

Examples:

Hardware address = "01", address prefix = 0x81

Hardware address = "99", address prefix = 0xE3

All command strings **must** be preceded by an address prefix byte when operating in addressable mode.

Notes:

1. All commands (except the address prefix byte) are "echoed" at the terminal prompt.
2. Any invalid command sequences will return an error prompt / string.
3. In addressable mode (RS-485 ONLY), each command string **must** be preceded by an address prefix byte.