



VGA MATRIX SWITCHER'S MANUAL



Milestone's "VGA MATRIX" Switcher is a unit whereby multiple (2/4/8) VGA input can be switched to two (2) or multiple (simultaneous) VGA output or you can selected different inputs on different outputs at a time means, any permutation or combination is possible by using this device. This unit is user configurable through it's front panel. (i.e. you can attach two projectors on the same unit and at a same time you can see different output on both the projectors.)

Models Available :	
ML 402 VGA	4 VGA input > 2 VGA out
ML 404 VGA	4 VGA input > 4 VGA out
ML 802 VGA	8 VGA input > 2 VGA out

Features :	
Installation	Easy to Install 100% Plug and Play Unit
Sharing	2/4/8CPU > 2 Projectors or Monitors output
Compatibility	100 % compatible to VGA, SVGA, XGA, EVGA, SXGA
Selection	Channels Selectable from: <ul style="list-style-type: none">• Individual front panel local key pad• Individual Remote key pad (<i>optional</i>)• RF Remote Controller (<i>optional</i>)• RS232C Interface• RS485 / 422 Interface (<i>optional</i>)• Active PCs selected or scanned in Auto / Scan Mode
Indication	LED Indication for working channel
VGA Output	Gain Control output for it's optimal viewing
Output Distance	100 Meter on good quality cable
VGA Cables	Can use Standard VGA Cables for I/P and O/P (Male to Male D-15)



Technical Details:			
Technical Specifications	ML402 VGA Matrix	ML404 VGA Matrix	ML802 VGA Matrix
VGA I/P (D15 Female)	4	4	8
VGA O/P (D 15 Female)	2	4	2
I/P indication	LED	LED	LED
Power indication	LED	LED	LED
Key Pad Selection	1 to 2	1 to 4	1 to 8
Remote contact closer Port	D9M x 1	D9M x 1	D9M x 1
RS232 Interface port	D9F x 1	D9F x 1	D9F x 1
Gain controlled VGA out	Yes	Yes	Yes
Operations by Remote	30 Meter	30 Meter	30 Meter
Mains Input (AC.)	230 V	230 V	230 V
Dimension (Table Top)	288x130x52	288x130x52	288x130x68
Dimension (Rack Mount)	19" 1U	19" 2U	19" 2U
Weight for (Table top)	1770g	1950g	2000g
Weight for (Rack Mount)	3000g	4200g	4250g

Operation :

In this microprocessor based unit you can set all your inputs and outputs through unit's front panel.

How to set your Matrix Switcher:

Local key pad (1 – 8)

Select the required channel from the front panel key pad as per the procedure given below.



VGA Input	Wanted VGA O/P on channel 1 / 2	Then press following keys
Input 1	Output 1	1 & 1
Input 2	Output 1	2 & 1
:	:	:
:	:	:
Input 8	Output 1	8 & 1
Input 1	Output 2	1 & 2
Input 2	Output 2	2 & 2
:	:	:
Input 8	Output 2	8 & 2
Input 1 / 2 / ...8	Do not want o/p for selected input	1 / 2 / 8 & 3 for blank o/p 1
Input 1 / 2 / ...8	Do not want o/p for selected input	1 / 2 / 8 & 4 for blank o/p 2

Note:

X=any key for input port (1-8)

Press x key & 3 is a port locking function for port 1

Press x key & 4 is a port locking function for port 2

(if you do not want some specific channel's input on some specific output (no. 1 or 2) then in that case you should select that input (i.e. if you do not want output for input no 2) then you should press 2 & 3. here no 3 will lock your output no 1 for that particular channel (No.2) and if you want to lock output no 2 then for that press (2 & 4) to block output port no. 2. (above switching should be done within 5 seconds.))

When the 1st key is pressed, TR LED on front panel (Transition LED) gets ON and after 2nd key is pressed the respective channel gets selected and TR LED goes OFF. If TR LED is on it means it is waiting for 2nd key to be pressed. If 2nd key is not pressed within 5 seconds TR gets OFF and waits for 1st key to be pressed again (Normal Condition).



Remote contact closure / Remote keypad

Rear panel has a D9 Male connector, operational at a distance of 50 meters. Milestones remote key pad or any other remote contact closure can be connected at this connector.

The connector diagram for D9 male connector is as follows:

D-9 Male -1 (Back panel <u>Select port of unit</u>)	Channels (1 – 8)
1	Key 1
2	Key 2
:	:
8	Key8
9	GRD

Note: to select Key 1, short 1 and 9 through contact switch or use Milestone’s remote keypad or RF / IR remote controller.

Remote RS232 Interface:

D9 female connector from rear panel is used for operating the switcher through RS232 interface.

The pin configurations are:

D-9 Male (RS-232 Port of Unit)	Channels
3	RX
5	GRD



The simple command used for selecting the channels is

Input Channel	Required output on	Decimal	ASCII
Channel 1	Output 1	1*1!	312A3121
Channel 2	Output 1	2*1!	322A3121
:	:	:	:
:	:	:	:
Channel 8	Output 1	8*1!	382A3121
Channel 1	Output 2	1*2!	312A3221
Channel 2	Output 2	2*2!	322A3221
:	:	:	:
:	:	:	:
Channel 8	Output 2	8*2!	382A3221

Communication parameters are 9600 baud, 8-bit, 1 stop bit and no parity.

Notes:

- Please check earthing before installing the switcher to avoid ghost images and flickering.
- For switchers optimal result, use 4+3 core class II electronic VGA Cable