



## VGA SWITCHER'S MANUAL



Milestone's "VGA" Switcher is a unit whereby multiple (2/4/8/16) VGA can be switched to two (2) or multiple (simultaneous) VGA output. The switchers are user configurable for Manual or Auto switching (Scanning) Modes. This auto switching can be enable or disable via rear panel slide switch. Auto switching allows any input of the switcher to be selected automatically.

| Models Available : |                          |
|--------------------|--------------------------|
| ML 202 VGA         | 2 VGA input > 2 VGA out  |
| ML 402 VGA         | 4 VGA input > 2 VGA out  |
| ML 802 VGA         | 8 VGA input > 2 VGA out  |
| ML 1602 VGA        | 16 VGA input > 2 VGA out |

| Features :      |   |
|-----------------|---|
| Installation    | Easy to Install 100% Plug and Play Unit   |
| Sharing         | 2/4/8/16 CPU > 2 Projectors or Monitors output  |
| Compatibility   | 100 % compatible to VGA, SVGA, XGA, EVGA,   |
| Selection       | Channels Selectable from : <ul style="list-style-type: none"> <li>• Individual front panel local key pad</li> <li>• Individual Remote key pad (<i>optional</i>)</li> <li>• RF Remote Controller (<i>optional</i>)</li> <li>• RS232C Interface</li> <li>• RS485 / 422 Interface (<i>optional</i>)</li> <li>• Active PCs selected or scanned in Auto / Scan Mode</li> </ul> |
| 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)   |



| <b>Models:</b>             |            |            |            |            |
|----------------------------|------------|------------|------------|------------|
| Technical Specifications   | ML202 VGA  | ML402 VGA  | ML802 VGA  | ML1602 VGA |
| VGA I/P (D15 Female)       | 2          | 4          | 8          | 16         |
| VGA O/P (D 15 Female)      | 2          | 2          | 2          | 2          |
| I/P indication             | LED        | LED        | LED        | LED        |
| Power indication           | LED        | LED        | LED        | LED        |
| Key Pad Selection          | 1 to 2     | 1 to 4     | 1 to 8     | 1 to 16    |
| Remote contact closer Port | N/A        | D9M x 1    | D9M x 1    | D9M x 2    |
| RS232 Interface port       | N/A        | D9F x 1    | D9F x 1    | D9F x 1    |
| Gain controlled VGA out    | Yes        | Yes        | Yes        | Yes        |
| Operations by Remote       | N/A        | 30 Meter   | 30 Meter   | 30 Meter   |
| Mains Input (AC.)          | 230 V      | 230 V      | 230 V      | 230 V      |
| Dimension (Table Top)      | 183x130x58 | 288x130x52 | 288x130x68 | N/A        |
| Dimension (Rack Mount)     | 19" 1U     | 19" 1U     | 19" 2U     | 19" 2U     |
| Weight for (Table top)     | 1700g      | 1950g      | 2300g      | N/A        |
| Weight for (Rack Mount)    | 3000g      | 3500g      | 4250g      | 4770g      |

**Operation :**

There are three options to operate this unit

- A. Manual Mode
- B. Scan Mode
- C. Auto Scan Mode (Sync detection)

*Note : Above mode ( B and C ) is not available in ML202 VGA / VGA Audio Switcher.*



**A. Manual Mode Installation:**

Selection of Manual mode:

To use the switcher in manual mode keep slide switch on manual mode on back panel of the unit.

Local Keypad:

Select the required channel from the front panel key pad .

Remote contact closure / remote keypad

Rear panel has a D9 Male connector, where you can connect Milestone RF/IR/ cable through remote contact closure or you can connect programmable any other key pad or remote which is available in market.

The connector diagram for D9 male connector is as follows:

| <b>D-9 Male -1 (Back panel <u>Select port</u> of unit)</b> | <b>Channels (1 – 8)</b>  |
|--|--------------------------|
| 1  | CH1                      |
| 2  | CH2                      |
| :  | :                        |
| 8  | CH8                      |
| 9  | GRD                      |
| <b>D-9 Male -2 (Back panel <u>Select port</u> of unit)</b> | <b>Channels (9 – 16)</b> |
| 1  | CH9                      |
| 2  | CH10                     |
| :  | :                        |
| :  | :                        |
| 8  | CH16                     |
| 9  | GRD                      |

Note : to select channel 1, short 1 and 9 through contact switch or use Milestone’s remote keypad.



**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

| Channel    | Decimal | ASCII  |
|------------|---------|--------|
| Channel 1  | 1!      | 31, 21 |
| Channel 2  | 2!      | 32, 21 |
| :          | :       | :      |
| :          | :       | :      |
| Channel 9  | 9!      | 39, 21 |
| Channel 10 | a!      | 61, 21 |
| Channel 11 | b!      | 62, 21 |
| :          | :       | :      |
| Channel 16 | g!      | 67, 21 |

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

**B. Scanning Mode: (Auto Switching):**

For scanning mode, keep slide-switch in scan position on back panel. Scanning time for each channel is 5 seconds.

*In scan mode scanning of all PCs are done regardless of the PCs are ON or OFF.*



### **C. Auto Scanning Mode:**

In this mode scanning will be done for activated PCs only. (It detects the sync signal) So if you have connected PC 1-3 & 4 then in that case it will go from 1 to 3 and 4 and It will not select channel 2.

### **Notes:**

- Please check earthing before installing the switcher to avoid ghost images and flickering.
- For switchers optimal result use 4+3 class II electronic VGA Cable
- We can also provide you ML204 / 404 / 804 / 203 Switchers
- Model 203 is special unit with standby output for unselected input.