



**AUDIO VIDEO SWITCHER'S MANUAL**



Milestone's "AUDIO VIDEO" Switcher is a device that helps person/s to share multiple Audio and Video source with single / multiple projector.

Models Available :	
ML 401 AUDIO VIDEO	4 VIDEO + Audio input > 1 VIDEO + 1 Audio out
ML 402 AUDIO VIDEO	4 VIDEO + Audio input > 2 VIDEO + 2 Audio out
ML 802 AUDIO VIDEO	8 VIDEO + Audio input > 2 VIDEO + 2 Audio out
ML 1602 AUDIO VIDEO	16 VIDEO + Audio input > 2 VIDEO + 2 Audio out

Features :	
Installation	Easy to Install 100% Plug and Play Unit
Sharing	2/4/8/16 input with Audio > single or dual Projectors / Plasma & stereo Audio
Compatibility	100 % compatible to Composite Video and Audio output
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>• IR Remote Controller (<i>optional</i>)</li><li>• RS232C Interface (<i>Not applicable to ML401AV</i>)</li><li>• RS485 / 422 Interface (<i>optional</i>)</li></ul>
Indication	LED Indication for working channel
Video Input	Composite Video inputs
Audio Input	Stereo inputs for respective Video
Video Output	Gain Control output for it's optimal viewing ( <i>Not for ML401AV</i> )
Audio Output	Pre-amplified Stereo output



<b>Technical Specifications</b>				
Models	<b>ML401 AV</b>	<b>ML402 AV</b>	<b>ML802 AV</b>	<b>ML1602 AV</b>
VIDEO I/P (RCA)	4	4	8	16
VIDEO O/P (RCA)	1	2	2	2
Audio I/P (RCA)	4	4	8	16
Audio O/P (Captive screw)	1	1	1	1
Audio O/P (3.5mm Stereo)	1	1	1	1
Selected input indication	LED	LED	LED	LED
Power indication	LED	LED	LED	LED
Key Pad Selection	1 to 4	1 to 4	1 to 8	1 to 16
Remote contact closer Port	D9M x 1	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 Output	N/A	Yes	Yes	Yes
Operating by Remote	50 Meter	50 Meter	50 Meter	50 Meter
Mains Input (AC.)	230 V	230 V	230 V	230 V
Dimension (Table Top)	288x130x52	288x130x52	288x130x68	N/A
Dimension (Rack Mount)	19" 1U	19" 1U	19" 2U	19" 2U
Weight for (Table top)	1700g	1970g	2300g	N/A
Weight for (Rack Mount)	3000g	3500g	4250g	4770g

(# = Optional)

**All above units are available in 19"-1U or 19"-2U size at extra cost**



**Operation :**

There are two options to operate this unit

- A. Manual Mode
- B. Scan Mode

*Note : Above mode ( B ) is not available in ML401AV ( VIDEO 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 keypad.

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:

D-9 Male	Channels
1	CH1
2	CH2
:	:
:	:
8	CH8
9	GRD

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



### Remote RS232 Interface

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

The pin configurations are:

D-9 Male	Channels
3	RX
5	GRD

The simple command used for selecting the channels is

Input Channel	Decimal	ASCII
Channel 1	1!	31, 21
Channel 2	2!	32, 21
:	:	:
:	:	:
Channel 8	8!	38, 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 Video inputs are done regardless of the PCs are ON or OFF.*

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Please check earthing before installing the switcher to avoid ghost images and flickering & communication port problems

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