



***OPERATING MANUAL***  
***FOR***  
***AUDIO VIDEO SWITCHER***

Milestone Electronics Pvt. Ltd.

# AUDIO VIDEO SWITCHER

AUDIO VIDEO SWITCHER by Milestone is a device that helps person/s to share AUDIO and VIDEO source with single/multiple projector providing display with Audio Output.

## Models available

ML 401 AUDIO VIDEO	4 Input source & 1 Video & 1 Audio output
ML 801 AUDIO VIDEO	8 Input source & 1 Video & 1 Audio output
ML 402 AUDIO VIDEO	4 Input source & 2 Video & 2 Audio output
ML 802 AUDIO VIDEO	8 Input source & 2 Video & 2 Audio output
ML 1602 AUDIO VIDEO	16 Input source & 2 Video & 2 Audio output
ML 2016 AUDIO VIDEO	2 Input source & 16 Audio Video outputs

## Features

<b>INSTALLATION</b>	Easy to install - plug and play kind.
<b>SHARING</b>	2/4/8/16 input source with single/multiple dual projector with audio system.
<b>COMPATIBILITY</b>	Fully compatible to composite video and audio output.
<b>SELECTION</b>	Channel selectable from <ul style="list-style-type: none"><li>● Individual front panel local keypad.</li><li>● Individual remote keypad (optional).</li><li>● Remote contact closure.</li><li>● RS232C interface.</li><li>● RS422/RS485 interface (optional).</li><li>● Scanned in scan mode.</li><li>● IR Control (optional).</li><li>● RF Control (optional).</li></ul>
<b>INDICATION</b>	LED indication for working set.
<b>VIDEO OUTPUT</b>	Gain controlled. (not for ML 401AV/801AV).
<b>CABLES</b>	Standard Audio Video cables (with RCA male connectors).

# SPECIFICATIONS

<b>MODEL</b>	<b>401/801 AUDIO VIDEO</b>	<b>402/802 AUDIO VIDEO</b>	<b>1602 AUDIO VIDEO</b>	<b>2016 AUDIO VIDEO</b>
<b>INPUT CONNECTORS</b>				
• RCA VIDEO	4/8	4/8	16	2
• RCA AUDIO (STERIO)	8/16	8/16	32	2
• EP (STEREO)	--	--	--	1
<b>OUTPUT CONNECTORS</b>				
• RCA VIDEO	1	2	2	16
• RCA AUDIO (STERIO)	1	2	2	32
<b>LED INDICATION</b>	1 to 4/8 , Scan, PWR	1 to 4, Scan, PWR	1 to 16, Scan, PWR	1,2, Scan, PWR
<b>KEYPAD SELECTION</b>	1 to 4/8	1 to 4	1 to 16	1 to 16
<b>REMOTE KEYPAD / CONTACT CLOSURE</b>	D9M × 1	D9M × 1	D9M × 1	D9M × 1
<b>RS 232 INTERFACE</b>	D9F × 1	D9F × 1	D9F × 1	D9F × 1
<b>GAIN CONTROLLED VIDEO OUTPUT</b>	-	YES	YES	YES
<b>OPERATING DISTANCE FROM REMOTE KEYPAD.</b>	50 M	50 M	50 M	50 M
<b>BUILT IN IR REMOTE</b>	Yes	Yes	---	Yes
<b>IR REMOTE EXTENDER CONNECTOR</b>	EP × 1	EP × 1	---	EP × 1
<b>MAINS INPUT (AC)</b>	230 V	230 V	230 V	230 V
<b>DIMENSION</b>				
• TABLE TOP (mm)	----	288×130×52	----	----
• RACK TYPE	----	----	2 U	2 U
<b>WEIGHT</b>	----	1970g /2300g	4770 g	4770 g

## OPERATION

### A. MANUAL MODE

Keep slide-switch to manual position.

#### ◆ Local Keypad

Select the required channel from the front panel keypad.

#### ◆ Remote contact closure/ remote keypad (IR or RF)

Rear panel has a D9 male connector, operational at a distance of 50 meters. Milestone's remote keypad 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	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.

#### ◆ Local IR Remote

Press required keys from the remote to select the Channel. Distance is limited to 2 to 3 meters. To extend the distance, on the rare side IR EXT. connector is provided. Connect the required sensor cable to this connector to increase the IR remote distance to approximately 30 meters.

◆ **Remote RS232 interface**

D9 female connector from rear panel is used for selecting the switcher through RS232C Interface.

The pin configurations are

D-9 FEMALE	SIGNAL
3	Rx
5	GRD

The simple command used for selecting the channels are

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.

Whenever any channel is selected there will be a feedback from the switcher on RS232 port i.e. when channel 1 is selected, switcher will send 1! on the serial port pin no. 2. Similarly 2! for channel 2 and so on.

B. **SCANNING MODE (Optional)**

For scanning mode, keep slide-switch at the rear panel in scan position. Scanning time for each channel is 20 seconds (default).

To stop the scanning press any channel key from the remote keypad. To start scanning again press Scan Key (Mute) from the remote keypad. Front Panel has LED to indicate Scan mode status.

