

SW VGA_{xi} / MAC_{xi} Switchers

The SW VGA_{xi} / MAC_{xi} are 350 MHz bandwidth switchers are housed in rack mountable, 1U high, half width metal enclosures with internal, universal 100 - 240 VAC 50/60 Hz power supplies. They have built-in standard contact closure remote control capability with Tally through the 25 pin Contact Remote connector (see Contact Remote pin assignments - Figure 4-A). Optional remote controls available for both switcher types are the KP-10 wired remote with 25 foot cable, the IR-10 Infrared remote control with an operating range of approximately 30 feet and the RS-232 2,4,6,8 Contoller. VGA_{xi} switchers are available with 2, 4 or 6 inputs while the SW MAC_{xi} is only available with 2 inputs. If more than 2 MAC inputs are required, the SW4 VGA_{xi} or SW6 VGA_{xi} may be used with VGA/MAC adapters (see connection diagram in Figure 3-A and Part Numbers on Page 5).

Auto-switching

Auto-switching is a feature of the SW VGA_{xi} and SW MAC_{xi} switchers that can be enabled/disabled using a switch on the rear panel (see item E in Figure 2-A). With the AUTO/MANUAL switch in the AUTO position, the front panel AUTO SWITCH ACTIVE LED is ON, the input selection buttons are disabled, and the switcher automatically selects the highest number input that has sync pulses available.

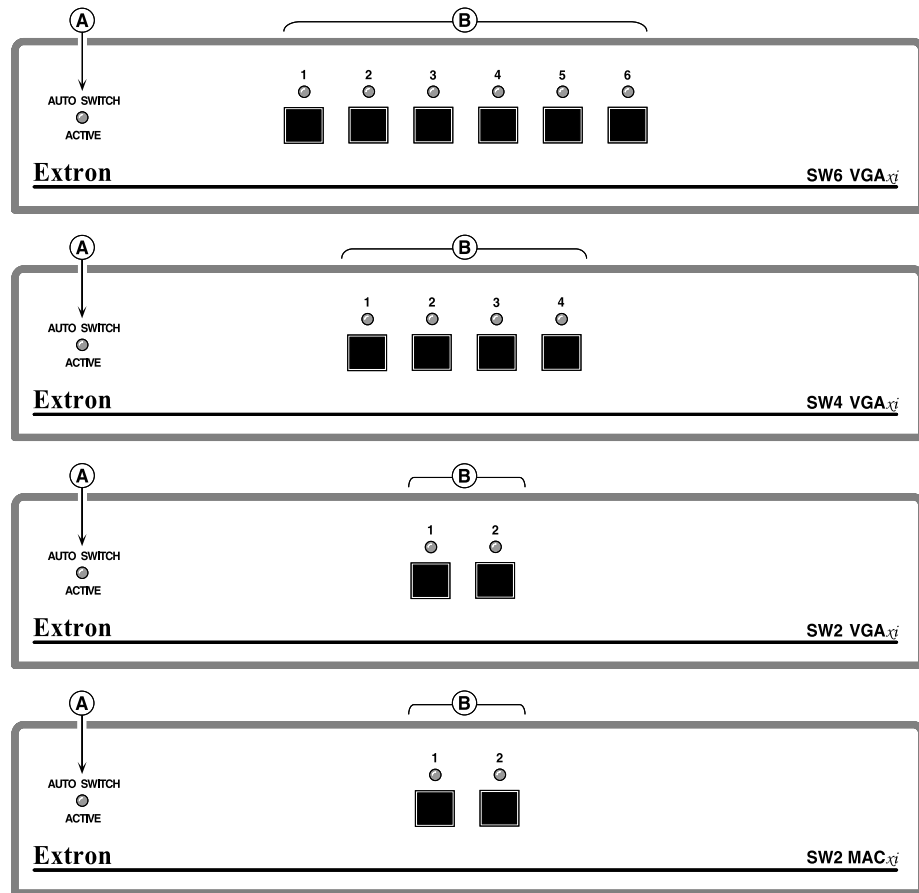


Figure 1-A

Front Panel Component Descriptions

The letters next to the following descriptions match the circled letters in Figure 1-A above.

- A Auto Switch Active LED - ON = Auto switch mode active (Rear panel Auto/Manual switch UP)
- B Input selection switches and LEDs - LED for selected input will be ON.

Features

- Two, four or six inputs available, depending on the model
- 350 MHz bandwidth (-3 dB)
- Auto-switchable (switch selectable)
- 25 pin contact closure remote control connector
- Unselected inputs are 75 ohm terminated
- Tactile switch buttons with LEDs
- 1U, 1/2 rack width enclosure
- Internal universal power supply
- Input/Output connectors - VGA_{xi} = Female 15 pin HD, MAC_{xi} = Female 15 pin D
- VGA_{xi} is compatible with IBM PS/2, VGA, SuperVGA, XGA, VESA and XGA-2 computers. Mac and Quadra may be used with SW 2 MAC_{xi}, or, if more than two inputs are required, SW 4/6 VGA_{xi} switchers may be used with optional MAC/VGA adapter (26-340-01 or 26-340-02).

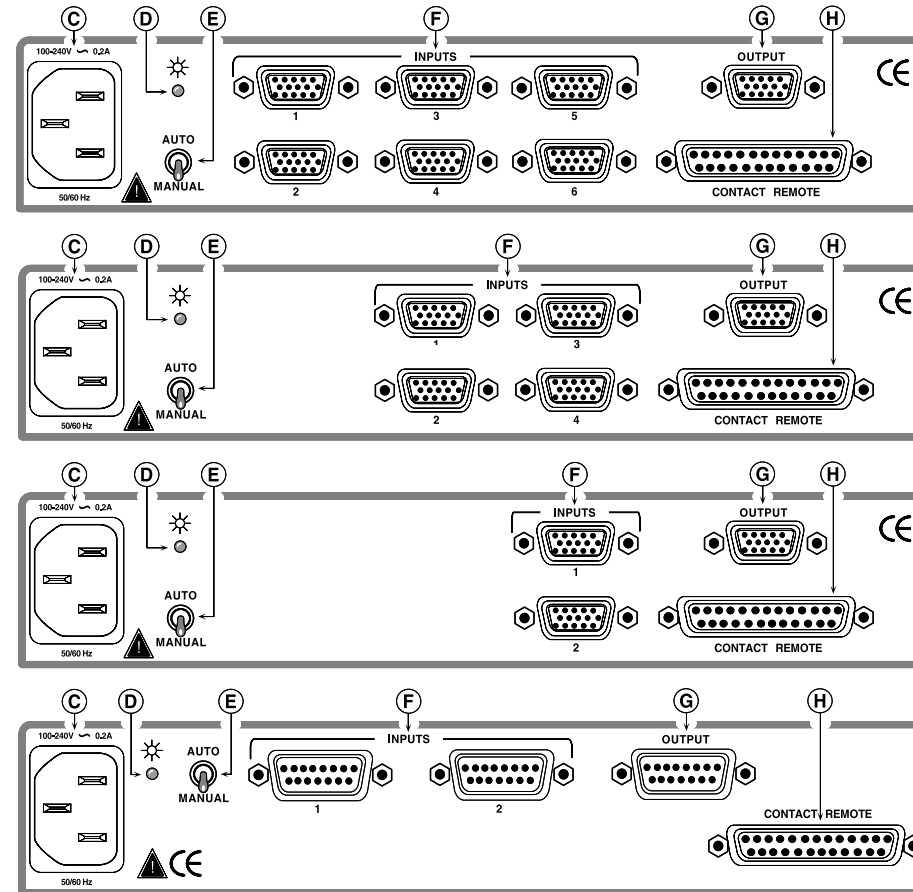


Figure 2-A

Rear Panel Component Descriptions

The letters next to the following descriptions match the circled letters in Figure 2-A above.

- C AC power connector - Standard IEC power connector (100 - 240 VAC 50/60 HZ)
- D Power LED - ON if AC power is present
- E AUTO/MANUAL switch - Down = normal mode, UP = Auto switch mode
- F VGA Input connectors
- G VGA Output connector
- H Contact Remote connector - 25-pin contact closure connector - see Page 4 for details.

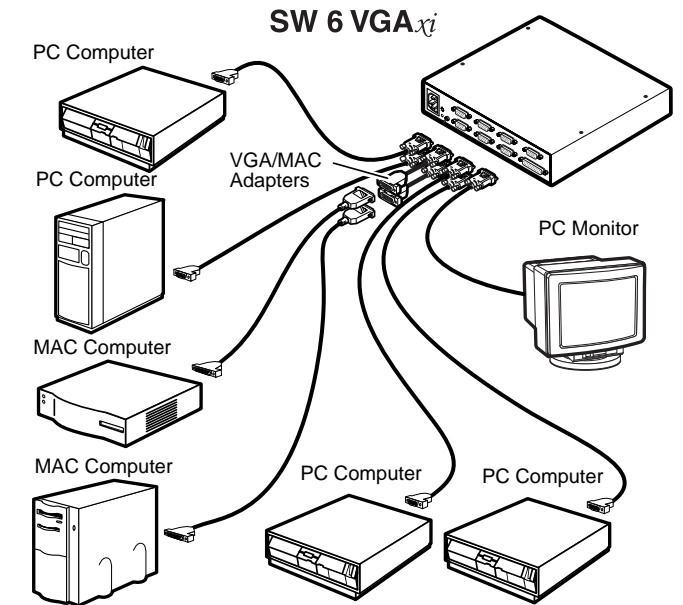


Figure 3-A SW 6 VGA_{xi} switcher diagram

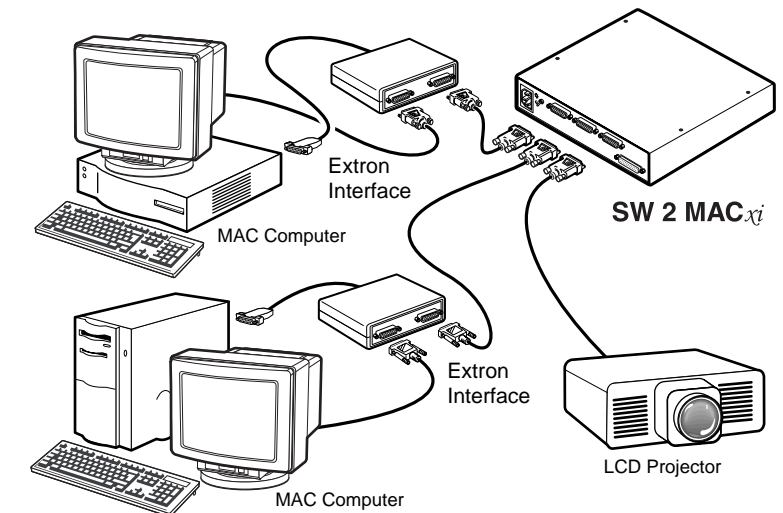


Figure 3-B SW 2 MAC_{xi} switcher diagram

REMOTE Connector - The Remote connector provides a way to control the VGA_{xi} / MAC_{xi} switchers using contact closure devices such as the following:

- Extron KP-10 (wired remote keypad, IR-10 (infrared remote), RS-232 2-4-6-8 (Host computer)
- Third Party Remote Control - Information below may be used to design a third party remote control.

Remote connector pin assignments are shown in the table below (Figure 4-A). To select a different switcher input number through the remote connector, momentarily connect the pin for the desired input number (#) to logic ground (pin 25).

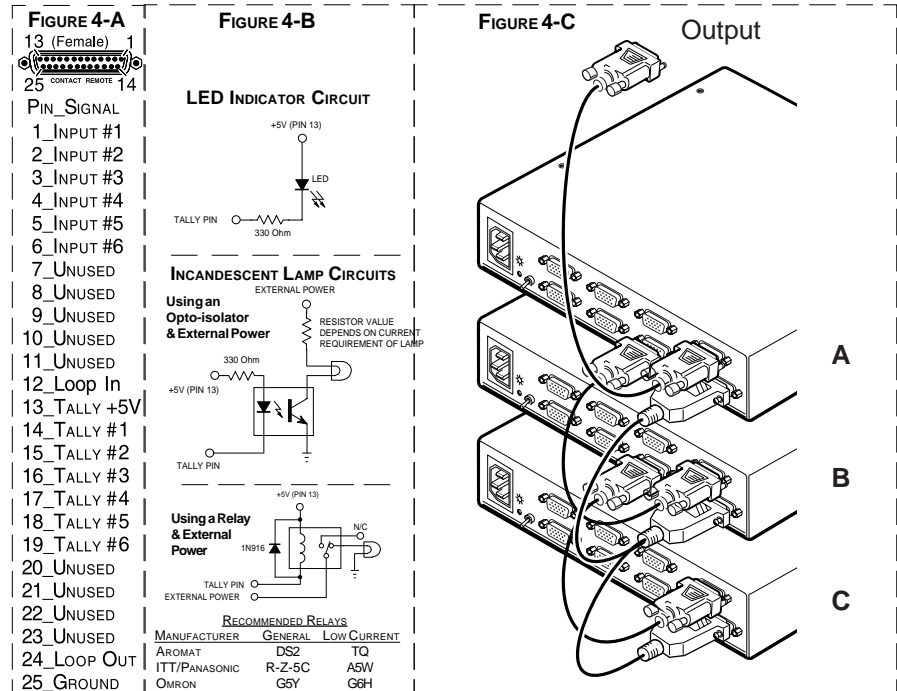
NOTE — The duration of a momentary connection is defined as 250 — 500 milli-seconds.

The Tally pins can be used for remote indication of the switcher's selected input. Tally #1 - #6 (pins 14 -19) will indicate the switcher's selected input # with a logic low (0 volts), the Tally pins are normally at logic high (5 volts). For example, with switcher input #2 selected, the front panel LED for that input would be ON and Tally #2 (pin 15) would be 0 volts while the remaining Tally pins would be 5 volts.

The schematics shown below (Figure 4-B) may be used as a guide to design and build indicator circuits for the Tally pins. An example of an LED circuit is shown at the top, two versions of incandescent lamp driver circuits are shown below the LED circuit.

The +5 volt source on remote connector pin 13 is limited to 100mA, if a different voltage or a higher current is required, an external voltage source will be necessary.

Looping is a configuration technique (see Figure 4-C) that enables the total number of inputs to a switcher (A) to be increased by connecting its highest input to the output of another switcher (B). A Loop control signal from switcher B (Loop Out - Remote connector pin 24) to switcher A (Loop In - Remote connector pin 12) will cause switcher A to select its highest input when an input selection is made on switcher B. If a third switcher (C) is added, its output would connect to the highest input on switcher B and its Loop Out signal would connect to switcher B's Loop In. An input selection on Switcher C would cause switcher B to select its highest input and signal switcher A to select its highest input. The selected input on switcher C would be available at Switcher A's output. An input selection on Switcher A would drop Switchers B and C out of the loop until a selection is made on either B or C.



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VGA connector pin-9 is normally not used and does not exist in most cases, however, some equipment/applications may require the signal on input connector pin-9 to be passed to output connector pin-9. If this is a requirement, it will be necessary to solder one or more jumpers onto the inside of the rear panel. The jumpers (JMP1 - JMP6) are shown on the Printed Circuit Board layout below. The switcher model determines which jumper applies to which input as follows:

	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5	INPUT 6
SW6 VGA _{xi}	JMP1	JMP2	JMP3	JMP4	JMP5	JMP6
SW4 VGA _{xi}	JMP3	JMP4	JMP5	JMP6		
SW2 VGA _{xi}	JMP5	JMP6				

To access the inside of the rear panel, **DISCONNECT POWER** and remove four screws from the top of the switcher. The bottom panel can then be removed. Unplug the two cables connected to the circuit board enabling it to be removed.

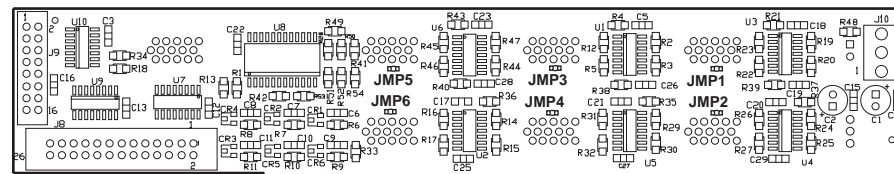


Figure 5-A

Specifications

Video	Input Video Signal Level	0 to 2 volts p-p
	Video Gain	Unity
	Frequency Range (H. Sync)	15-145 kHz
	Frequency Range (V. Sync)	30-170 Hz
	RGB Video Bandwidth	350 MHz (-3 dB) (VGA _{xi} and Mac _{xi})
	Input Impedance	75 Ohms
	Output Impedance	75 Ohms
	Termination Impedance	75 Ohms
	Sync Input Impedance	510 Ohms
Connectors	Input and Output VGA _{xi}	15 pin HD D-Sub (Female)
	Input and Output Mac _{xi}	15 pin D-Sub (Female)
	Contact Remote	25 pin D-Sub
Control System	Contact Closure	Momentary (100 ms min.), w/Tally feedback
	Loop Signal	Momentary low, 1 ms min, 5 ms max
General	Operation Temperature	0°-50° C
	Storage Temperature	-40° to +70° C
	Humidity	10% to 90% non condensing
	MTBF Demonstrated	30,000 Hours
	Vibration	NSTA 1A in carton
	Approvals	CE, UL Listed, FCC Class A
Power Supply	Internal	100-240 VAC 50/60 Hz, 0.2A max.
	Dimensions	8.75" W x 9.5" D x 1.75" H 22.2 cm W x 24 cm D x 4.4 cm H
	Shipping Weight	3 lbs (1.4 kgs) - VGA _{xi} and Mac _{xi}
	Warranty	2 years parts and labor
Part Numbers	SW2 VGA _{xi}	60-257-01
	SW4 VGA _{xi}	60-258-01
	SW6 VGA _{xi}	60-259-01
	SW2 MAC _{xi}	60-261-01
	VGA/MAC Adapter (Composite Video)	26-340-01
	VGA/MAC HV Adapter (MAC H/V sync)	26-340-02
	KP-10 wired keypad remote control	60-111-01
	IR-10 Infrared remote control	70-036-01
	RS-232 2-4-6-8 Controller	60-112-01



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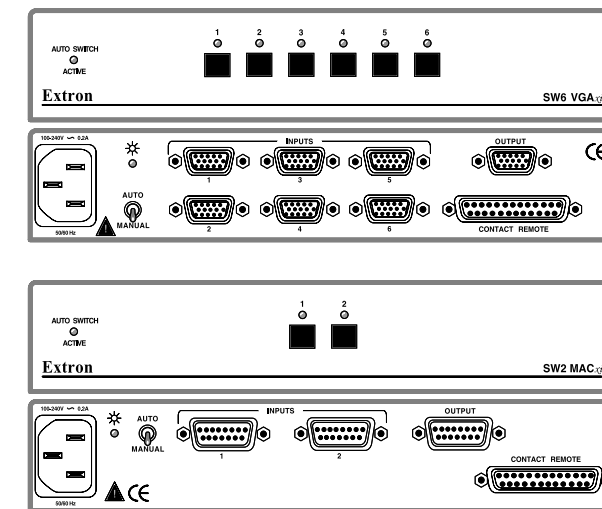
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- SW2 VGA_{xi}
- SW4 VGA_{xi}
- SW6 VGA_{xi}
- SW2 MAC_{xi}