

SW AV Series

FOUR, SIX, EIGHT, AND TWELVE INPUT
COMPOSITE VIDEO, S-VIDEO,
AND STEREO AUDIO SWITCHERS

- Composite video, S-video, and stereo audio models
- Four, six, eight, and twelve inputs
- Dual video outputs for S-video and/or composite video
- Dual audio outputs on RCA and/or captive screw connectors
- Vertical interval switching for glitch-free transitions
- Input autoswitching capabilities
- NTSC, PAL, or SECAM compatible
- Input audio gain and attenuation
- Audio breakaway
- Variable audio output gain adjustments
- Contact closure control for four and six input models
- RS-232 control
- Rugged metal enclosure
- Rack-mountable



The Extron SW AV Series consists of 28 high-performance composite video, S-video, and stereo audio switchers. Compact in size with a number of powerful and easy-to-use features, there is a SW AV suitable for just about any A/V application.



Extron® Electronics

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DESCRIPTION

The Extron **SW AV Series** is a line of high-performance, vertical interval composite video, S-video, and stereo audio switchers. Offering the ultimate in flexibility, the SW AV Series switchers are available with up to 12 inputs. Composite and S-video switchers feature a genlock input and loop-through, providing synchronization of video signals of one device with those from another video source and resulting in smooth and clean transitions when switching between inputs. Each model with audio includes adjustable gain and attenuation, allowing users to set the individual input audio levels, providing no significant difference in volume when switching between sources. All of the switchers can be controlled via the front panel buttons, RS-232, contact closure on four & six input models only, or via two different, optional remote control devices: the Extron KP 6 keypad and IR 102 universal remote kit.

Composite Video Models



SW 12AV RCA

Composite models have 300 MHz (-3dB) of bandwidth. Video inputs are on female BNC connectors. Two individually buffered composite video outputs are also on female BNC connectors.

Balanced/unbalanced stereo audio is accepted on 3.5 mm captive screw connectors, while unbalanced stereo audio is accepted on RCA connectors for SW RCA models. Dual audio outputs are on RCA and/or captive screw connectors.

Model	Audio In	Audio Out	Video In	Video Out
SW 6V	—	—	6	2*
SW 8V	—	—	8	2*
SW 12V	—	—	12	2*
SW 4AV	4	2	4	2*
SW 4AV RCA	4	2	4	2*
SW 6AV	6	2	6	2*
SW 6AV RCA	6	2	6	2*
SW 8AV	8	2	8	2*
SW 8AV RCA	8	2	8	2*
SW 12AV	12	2	12	2*
SW 12AV RCA	12	2	12	2*

* Dual buffered composite outputs for simultaneous display

S-Video Models



SW 12SVA

S-video models have 250 MHz (-3dB) of bandwidth. Video inputs are on female 4-pin mini DIN connectors. There are two individually buffered and active video outputs: one for composite video on a female BNC connector, one for S-video on a female 4-pin mini DIN connector.

Balanced/unbalanced stereo audio is accepted on 3.5 mm captive screw connectors, while unbalanced stereo audio is accepted on RCA connectors for SW RCA models. Dual audio outputs are on RCA and/or captive screw connectors.

Model	Audio In	Audio Out	Video In	Video Out
SW 6SV	—	—	6	2*
SW 8SV	—	—	8	2*
SW 12SV	—	—	12	2*
SW 4SVA	4	2	4	2*
SW 4SVA RCA	4	2	4	2*
SW 6SVA	6	2	6	2*
SW 6SVA RCA	6	2	6	2*
SW 8SVA	8	2	8	2*
SW 8SVA RCA	8	2	8	2*
SW 12SVA	12	2	12	2*
SW 12SVA RCA	12	2	12	2*

* Dual buffered composite and S-video outputs for simultaneous display

Stereo Audio Models



SW 8A

Audio-only models accept balanced/unbalanced stereo audio on 3.5 mm captive screw connectors, or unbalanced stereo audio on RCA connectors for SW RCA models.

Model	Audio In	Audio Out
SW 6A	6	2*
SW 6A RCA	6	2*
SW 8A	8	2*
SW 8 RCA	8	2*
SW 12A	12	2*
SW 12A RCA	12	2*

* Dual buffered stereo audio outputs for simultaneous distribution

FEATURES

- **Inputs** – Four, six, eight and twelve input models are available for composite, S-video, and stereo audio.
- **Outputs** – Dual video outputs on 4-pin Mini DIN and/or BNC, dual audio outputs on RCA and/or 3.5 mm captive screw, connectors.
- **Vertical Interval Switching** – Switches are prompted to occur during the vertical blanking period for crisp, clean broadcast quality switches.
- **Video genlock** – All video models include broadcast quality NTSC/PAL/SECAM video genlock capabilities, providing synchronization of video signals of one device with those from another video source and resulting in smooth and clean transitions when switching between inputs.
- **Autoswitching** – Allows any input to be selected automatically when the switcher detects a source, making it ideal for automatic routing and unattended operation.
- **Encoding capabilities** – S-video models encode S-video to composite video, providing simultaneous output on composite video and S-video outputs. With two buffered outputs, the S-video models have the flexibility of utilizing two different signal formats on the output.
- **Quad standard** – The SW AV series are capable of switching NTSC 3.58, NTSC 4.43, PAL, and SECAM video (quad-standard) for worldwide compatibility.
- **Balanced and unbalanced stereo audio** – Offers the convenience and option of accepting either balanced or unbalanced stereo audio signals on 3.5 mm captive screw connectors, or unbalanced audio on RCA connectors for SW RCA models.
- **Input audio gain and attenuation** – The SW AV series allows users to set the level of audio gain or attenuation (-18dB to +24dB). Individual input audio levels may be adjusted so there is no noticeable volume difference between sources.
- **RS-232 control** – A rear panel, RS-232 port enables control via a third party control system. Extron's Simple Instruction Set (SIS™) allows for quick and easy programming.
- **Contact closure** – contact closure via a 9-pin remote control port allows for additional control options. The KP 6 keypad remote control that switches the inputs on the SW AV switchers (four and six input models only) from a remote location can be used. It comes with a 25-foot (8 meters) cable to connect the KP 6 to the contact closure.
- **IR control** – With the optional IR 102 kit, the SW AV switchers can be easily controlled with an IR 102 handheld remote.
- **Rack-mountable** – Each model is housed in a rugged, 1U high, full rack enclosure, and can be mounted into any rack or under a desk.
- **Internal international power supply** – The 100-240VAC, 50/60Hz, autoswitchable, internal power supply of the SW AV Series provides worldwide power compatibility.



IR 102 Universal Remote Kit



KP 6 Remote Control Keypad

PART NUMBERS

Composite Video & Stereo Audio Switchers

Composite Video Switchers		Part Number
SW 6V	Six Input Composite Video Switcher	60-487-01
SW 8V	Eight Input Composite Video Switcher	60-482-01
SW 12V	Twelve Input Composite Video Switcher	60-483-01

Composite Video & Audio Switchers		Part Number
SW 4AV	Four Input Composite Video & Audio Switcher	60-484-21
SW 4AV RCA	Four Input Composite Video & Audio Switcher (RCA) ..	60-484-31
SW 6AV	Six Input Composite Video & Audio Switcher	60-487-21
SW 6AV RCA	Six Input Composite Video & Audio Switcher (RCA)	60-487-31
SW 8AV	Eight Input Composite Video & Audio Switcher	60-482-21
SW 8AV RCA	Eight Input Composite Video & Audio Switcher (RCA) ..	60-482-31
SW 12AV	Twelve Input Composite Video & Audio Switcher	60-483-21
SW 12AV RCA	Twelve Input Composite Video & Audio Switcher (RCA) ..	60-483-31

S-video & Stereo Audio Switchers

S-video Switchers		Part Number
SW 6SV	Six Input S-video Switcher	60-487-02
SW 8SV	Eight Input S-video Switcher	60-482-02
SW 12V	Twelve Input S-video Switcher	60-483-02

S-video & Audio Switchers		Part Number
SW 4SVA	Four Input S-video & Audio Switcher	60-484-22
SW 4SVA RCA	Four Input S-video & Audio Switcher (RCA)	60-484-32
SW 6SVA	Six Input S-video & Audio Switcher	60-487-22
SW 6SVA RCA	Six Input S-video & Audio Switcher (RCA)	60-487-32
SW 8SVA	Eight Input S-video & Audio Switcher	60-482-22
SW 8SVA RCA	Eight Input S-video & Audio Switcher (RCA)	60-482-32
SW 12SVA	Twelve Input S-video & Audio Switcher	60-483-22
SW 12SVA RCA	Twelve Input S-video & Audio Switcher (RCA)	60-483-32

Stereo Audio Switchers

Stereo & Audio Switchers		Part Number
SW 6A	Six Input Audio Switcher	60-487-20
SW 6A RCA	Six Input Audio Switcher (RCA)	60-487-30
SW 8A	Eight Input Audio Switcher	60-482-20
SW 8A RCA	Eight Input Audio Switcher (RCA)	60-482-30
SW 12A	Twelve Input Audio Switcher	60-483-20
SW 12A RCA	Twelve Input Audio Switcher (RCA)	60-483-30

Accessories

Accessories	Part Number
KP6 Keypad Remote Control	60-111-20
IR 102 Universal Remote kit	70-224-01
IR 102 Handheld Remote	70-224-10
Under-desk Mount Kit	70-077-01

VIDEO

Gain	Unity
Bandwidth	
Composite video models	300 MHz (-3dB)
S-video models	250 MHz (-3dB)
Differential phase error	<1.0°, 0 to 10 MHz
Differential gain error	<1.0%, 0 to 10 MHz
Crosstalk	<-60dB @ 5 MHz
Switching speed	<20 ms (max.)

VIDEO INPUT

Number/signal type	
SW 6/8/12V, SW 4/6/8/12AV/AV RCA, SW 6/8/12A/A RCA	4, 6, 8, or 12 (depending on the model) composite video
SW 6/8/12 SV, SW 4/6/8/12SVA/SVA RCA	4, 6, 8, or 12 (depending on the model) S-video
Connectors	
SW 6/8/12V, SW 4/6/8/12AV/AV RCA, SW 6/8/12A/A RCA	4, 6, 8, or 12 (depending on the model) BNC female
SW 6/8/12 SV, SW 4/6/8/12SVA/SVA RCA	4, 6, 8, or 12 (depending on the model) 4-pin mini DIN female
Minimum/maximum levels	0.4V to 2.0V p-p with no offset
Impedance	75 ohms
Return loss	-40dB @ 0 to 10 MHz
Maximum DC offset	5.0V

VIDEO OUTPUT

Number/signal type	
Composite video models	2 buffered composite video
S-video models	1 buffered S-video, 2 buffered composite video
Connectors	
Composite video models	2 BNC female
S-video models	1 BNC female, 1 4-pin mini DIN
Minimum/maximum levels	0.4V to 2.0V p-p
Impedance	75 ohms
Return loss	-30dB @ 5 MHz
DC offset	±5mV maximum with input at 0 offset
Switching type	Vertical interval

SYNC

Genlock connectors	2 BNC female (1 input, 1 loop-through)
Standards	NTSC 3.58, NTSC 4.43, PAL, SECAM

AUDIO

Gain	Adjustable
	When gain is set to unity (0dB), balanced output from captive screw connectors or unbalanced output from RCA connectors will have a 0dB gain; unbalanced output from captive screw connectors will be attenuated by 6dB.
Frequency response	20 Hz to 20 kHz, ±0.5dB
THD + Noise	>0.04% @ 1 kHz at rated maximum output drive
S/N	>90dB at rated maximum output drive

AUDIO INPUT

Number/signal type	
SW 6/8/12V, SW 4/6/8/12AV, SW 6/8/12 SV, SW 4/6/8/12SVA, SW 6/8/12A	4, 6, 8, or 12 (depending on the model) stereo, balanced/unbalanced
SW 4/6/8/12AV RCA, SW 4/6/8/12SVA RCA, SW 6/8/12A RCA	4, 6, 8, or 12 (depending on the model) stereo, unbalanced
Connectors	
SW 6/8/12V, SW 4/6/8/12AV, SW 6/8/12 SV, SW 4/6/8/12SVA, SW 6/8/12A	4, 6, 8, or 12 (depending on the model) 3.5 mm captive screw connectors, 5 pole

SW 4/6/8/12AV RCA, SW 4/6/8/12SVA RCA, SW 6/8/12A RCA	8, 12, 16, or 24 (depending on the model) RCA female
Impedance	>25 kohms unbalanced, 50 kohms balanced, AC/DC coupled
Nominal level	+4dBu (1.23V), 0dBu (0.775V), -10dBV (316mV), -20dBV (100mV), configurable
Maximum level	>+20dBu, (balanced or unbalanced) at stated %THD+N
Input gain adjustment	-18dB to +24dB, adjustable per input

AUDIO OUTPUT

Number/signal type	
SW 6/8/12V, SW 4/6/8/12AV, SW 6/8/12 SV, SW 4/6/8/12SVA, SW 6/8/12A	2 stereo, balanced/unbalanced
SW 4/6/8/12AV RCA, SW 4/6/8/12SVA RCA, SW 6/8/12A RCA	1 stereo, unbalanced 1 stereo, balanced/unbalanced
Connectors	
SW 6/8/12V, SW 4/6/8/12AV, SW 6/8/12 SV, SW 4/6/8/12SVA, SW 6/8/12A	2 3.5 mm captive screw connectors, 5 pole
SW 4/6/8/12AV RCA, SW 4/6/8/12SVA RCA, SW 6/8/12A RCA	2 RCA female 1 3.5 mm captive screw connector, 5 pole
Impedance	50 ohms unbalanced, 100 ohms balanced
Gain error	±0.1dB channel to channel
Nominal level	+4dBu (1.23V), 0dBu (0.775V), -10dBV (316mV), -20dBV (100mV), configurable
Maximum level (Hi-Z)	>+20dBu, balanced or unbalanced at stated %THD+N
Maximum level (600 ohm)	>+15dBm, balanced or unbalanced at stated %THD+N

NOTE: 0dBu = 0.775 volts (RMS).

CONTROL/REMOTE — SWITCHER

Serial control port	RS-232, 9-pin female D connector (also used for contact closure for SW 4/6 AV/AV RCA, SW 4/6SVA/SVA RCA, SW 6 SV/A/A RCA)
Baud rate and protocol	9600, 8-bit, 1 stop bit, no parity
Serial control pin configurations	2 = TX, 3 = RX, 5 = GND
Contact closure (SW 4/6 AV/AV RCA, SW 4/6SVA/SVA RCA, SW 6 SV/A/A RCA)	
1 9-pin female D connector (also used for RS-232)	
Contact closure pin configurations	(SW 4/6 – models only) 1 = input 1, 4 = input 2, 5 = GND, 6 = input 3, 7 = input 4, 8 = input 5, 9 = input 6
IR controller module	Extron IR 102 kit (optional)
Program control	Extron's control program for Windows® Extron's Simple Instruction Set™ – SIS™

GENERAL

Power	100VAC to 240VAC, 50/60 Hz, 20 watts, internal, autoswitchable
Temperature/humidity	Storage -40° to +158°F (-40° to +70°C) / 10% to 90%, non-condensing Operating +32° to +122°F (0° to +50°C) / 10% to 90%, non-condensing
Rack mount	Yes, with included brackets, part # 70-077-03. Also under-desk mountable with optional kit #70-077-01.
Enclosure type	Metal
Enclosure dimensions	1.75" H x 17.4" W x 8.5" D (1U high, full rack width) 4.4 cm H x 44.2 cm W x 21.6 cm D (Depth excludes connectors.)
Shipping weight	10 lbs (4.5 kg)
Vibration	ISTA/NSTA 1A in carton (International Safe Transit Association)
Listings	UL, CUL
Compliances	CE, FCC Class A, VCCI, AS/NZS, ICES



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