

MSW Mini Switcher Series

COMPOSITE VIDEO, S-VIDEO, AND SDI SWITCHERS

- Three models available
 - Composite
 - S-video
 - SDI - Serial Digital Interface
- Two buffered outputs
- Choice of control for ease of integration
 - RS-232 Serial
 - Front panel
 - Contact Closure
 - Auto Switching
- S-video and composite video output on S-video model; built in encoder for S-video model
- Rack-mountable 1U, quarter rack width metal enclosure
- External international power supply included



MSW 4V rs



MSW 4SV rs



MSW 4V SDI rs

The Extron MSW - Mini Switcher Series is a family of compact four input, two parallel output switchers for composite video, S-video, and SDI video sources. The MSW Series is designed for easy integration in a variety of applications, including classrooms, conference rooms, video production facilities, or anywhere compact video signal switching is required.



Extron® Electronics

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DESCRIPTION

The Extron **MSW Series** comprises four input, active mini switchers for switching composite video, S-video, and SDI video signals. All three models include two parallel outputs which simplify video system designs by eliminating the need for a separate video distribution amplifier. The MSW 4SV rs model, for S-video sources, features a built-in video encoder for simultaneous output of S-video and composite video. The MSW 4V SDI features two reclocked SDI - Serial Digital Outputs that comply with the SMPTE 259M digital video standard.

All MSW models are equipped with front panel, contact closure, and RS-232 serial control. In addition, the switchers can be set for input auto-switching for use in unattended system applications. They are housed in a durable, 1U one-quarter rack width metal enclosure and include an external, international power supply.

FEATURES

- **Inputs** – Four composite video – MSW 4V rs, S-video – MSW 4SV rs, or serial digital component video – MSW 4V SDI rs.
- **Dual Parallel Outputs** – All MSW rs models feature two parallel outputs. The MSW 4SV rs has one S-video and one composite video output. The MSW 4V SDI rs has two reclocked SMPTE-259 serial digital video outputs.
- **Autoswitching** – Allows any input to be selected automatically when the switcher detects an active source; ideal for automatic routing and unattended operation.
- **RS-232 Control** – Using RS-232 serial commands, systems can be controlled and configured via the Extron Windows®-based control program, or integrated into third-party control systems.
- **Contact closure remote control**
- **External international power supply** - Provides worldwide power compatibility (part # 70-055-01).
- **Rack-mountable** – Each model is housed in a 1U high, quarter rack width metal enclosure.

SPECIFICATIONS

VIDEO — MSW 4V RS, MSW 4SV RS

| | |
|-----------------------|--------------------|
| Gain | Unity |
| Bandwidth | |
| MSW 4V | 250 MHz (-3 dB) |
| MSW 4SV | 250 MHz (-3 dB) |
| Crosstalk | <-60 dB @ 3.58 MHz |
| Switching speed | 20 ms (max.) |

VIDEO — MSW 4V SDI RS

| | |
|-----------------------------------|--|
| Resolution..... | 8 or 10 bits, automatic |
| Operation standards | 143 Mb/s (4fsc NTSC) |
| | 177 Mb/s (4fsc PAL) |
| | 270 Mb/s (4:2:2) component video |
| | 360 Mb/s (4:2:2) widescreen, autoselect |
| Equalization and reclocking | Automatic for up to -30 dB of cable loss |
| Automatic data rate clock | Yes |

VIDEO INPUT

| | |
|--------------------------|------------------------|
| Number/signal type | |
| MSW 4V rs | 4 composite video |
| MSW 4SV rs | 4 S-video |
| MSW 4V SDI rs | 4 serial digital video |

SPECIFICATIONS

| | |
|--|---|
| Connectors | |
| MSW 4V rs, MSW 4V SDI rs | 4 female BNC |
| MSW 4SV rs | 4 female 4-pin mini DIN |
| Nominal level | 1 Vp-p for Y of S-video and for composite video |
| | 0.3 Vp-p for C of S-video |
| | 0.8 Vp-p for SDI |
| Minimum/maximum levels (MSW 4V rs, MSW 4SV rs) | 0.4 V to 2.0 Vp-p with no offset |
| Impedance | 75 ohms |
| Return loss | |
| MSW 4SV rs | <-25 dB, DC @ 10 MHz |
| Other models | <-40 dB, DC @ 10 MHz |
| DC offset (max. allowable)..... | 5.0 V |
| Input coupling | |
| MSW 4V rs, MSW 4SV rs..... | DC |
| MSW 4V SDI rs..... | AC |

VIDEO OUTPUT

| | |
|--|--|
| Number/signal type | |
| MSW 4V rs | 2 composite video |
| MSW 4SV rs | 1 S-video, 1 composite video |
| MSW 4V SDI rs..... | 2 reclocked SMPTE-259 serial digital component video |
| Connectors | |
| MSW 4V rs, MSW 4V SDI rs | 2 BNC female |
| MSW 4SV rs | 1 BNC female, (1) 4-pin mini DIN female |
| Minimum/maximum levels (MSW 4V rs, MSW 4SV rs) | 0.4 V to 2.0 Vp-p |
| Impedance | 75 ohms |
| Return loss | |
| MSW 4V/4SV rs | <-30 dB @ 5 MHz |
| MSW 4V SDI rs | <-25 dB @ 5 MHz |
| DC offset | ±5 mV maximum with input at 0 offset |
| Switching type (MSW 4V rs/4SV rs)..... | Vertical interval |
| Jitter (MSW 4V SDI rs)..... | <2 µs |
| Rise/fall time (20-80%, MSW 4V SDI rs) .. | 700 ps ±100 ps |
| Re-clocking (MSW 4V SDI rs) | Automatic, bypass mode for nonstandard rates |

SYNC

| | |
|----------------------------|----------------------------------|
| Standards | |
| MSW 4V rs, MSW 4SV rs..... | NTSC 3.58, NTSC 4.43, PAL, SECAM |
| MSW 4V SDI rs | SMPTE-259M |

CONTROL/REMOTE — SWITCHER

| | |
|------------------------------|--|
| Serial control port | 1 RS-232, 3.5 mm captive screw connector, 5 pole |
| Baud rate and protocol | 9600 baud, 8 data bits, 1 stop bit, no parity |
| Contact closure..... | (1) 3.5 mm captive screw connector, 5 pole |
| Program control | Extron's control/configuration program for Windows® Extron's Simple Instruction Set (SIS™) |

GENERAL

| | |
|---------------------------------------|--|
| External power supply | 100 VAC to 240 VAC, 50/60 Hz, external, autoswitchable; to 12 VDC, regulated |
| Power input requirements | |
| MSW 4V rs, MSW 4SV rs..... | 12 VDC, 0.2 A |
| MSW 4V SDI rs..... | 12 VDC, 0.4 A |
| Rack mount | Yes, with optional 1U rack shelf #60-190-01 or 60-190-20 |
| Enclosure type | Metal |
| Enclosure dimensions | 1.7" H x 4.3" W x 3.0" D (1U high, quarter rack wide) 4.3 cm H x 10.9 cm W x 6.5 cm D (Depth excludes connectors.) |
| Shipping weight | 3 lbs (2 kg) |
| Listings | UL, CUL |
| Compliances..... | CE, FCC Class A, VCCI, AS/NZS, ICES |
| Warranty | 3 years parts and labor |
| NOTE: All nominal levels are at ±10%. | |

| Model | Version Description | Part Number |
|---------------|---|-------------|
| MSW 4V rs | Four Input Composite Video Switcher | 60-480-11 |
| MSW 4SV rs | Four Input S-Video Switcher | 60-480-12 |
| MSW 4V SDI rs | Four Input SDI Video Switcher..... | 60-481-11 |

Specifications are subject to change without notice.



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