



## KEY FEATURES

- Balanced (XLR) and Unbalanced (BNC) connector models  
SWR-2755B-M Output Switcher  
SWR-2755B-F Input Switcher  
SWR-2755B-U Unbalanced Switcher
- Crosstalk < -150 dB @ 20 kHz (balanced)
- 1 MHz bandwidth and low noise performance provides transparent audio switching
- Expands analyzer and generator capability up to 192 inputs and 192 outputs

## Expanding the channel input and output capabilities of Audio Precision analyzers

The **SWR-2755B Series** of programmable switchers are accessory units for Audio Precision's APx500 Series audio analyzers, as well as prior legacy analyzers such as the 2700 Series. The SWR-2755B switchers can be used to expand an analyzer's inputs and outputs to as many as 192 channels to interface with multi-channel devices or "bed of nails" production test fixtures.

**SWR-2755B** switchers use highly reliable electro-mechanical relays to best preserve the signal integrity of the analog generator and signals from the device under test (DUT). Unlike conventional industrial audio signal routing switchers, the SWR-2755B achieves exceptional performance, such as 1 MHz bandwidth, low noise, and excellent crosstalk performance, less than -150 dB at 20 kHz in balanced operation. These switchers are transparent to audio signals and do not degrade audio measurement performance.

The switchers are controlled by our proprietary APIB interface, and operation is integrated into Audio Precision's control software. APx analyzers address the switchers using the USB-APIB accessory. Channel-in-use LEDs next to each connector indicate channel activity.

There are three versions of SWR-2755B switchers:

- The **SWR-2755B-M** is used as a balanced output switcher, and is fitted with 12 XLR male connectors and 2 XLR female connectors.
- The **SWR-2755B-F** is used as a balanced input switcher, and is fitted with 12 XLR female connectors and 2 XLR male connectors.
- The **SWR-2755B-U** is an unbalanced switcher that can be configured as either an output switcher or an input switcher. It is fitted with 14 BNC connectors.

*All switchers have rear panel connectors paralleled with the A and B connectors for convenience.*

An output switcher (either -M or -U) is used to connect the analyzer generator outputs to multiple DUT inputs. An input switcher (either -F or -U) is used to connect multiple DUT outputs to the instrument analyzer inputs.

The core of each switcher is a balanced 12 x 2 cross point matrix. Either of the two common points can be connected, under software control, to any of the twelve selectable points on each switcher. The internal circuits are of balanced design but may be used with unbalanced circuits in the BNC (-U) connector version, which is implemented with floating (ungrounded) connector shells.

Up to 16 input switchers and 16 output switchers can be used in a system, enabling testing of DUTs with a total of up to 192 inputs and/or outputs. Additional switchers are "daisy-chained" on the APIB bus. Configuration switches on the SWR-2755B rear panel enable setting the APIB address of each switcher to the desired bank of channel numbers: 1-12, 13-24, etc.

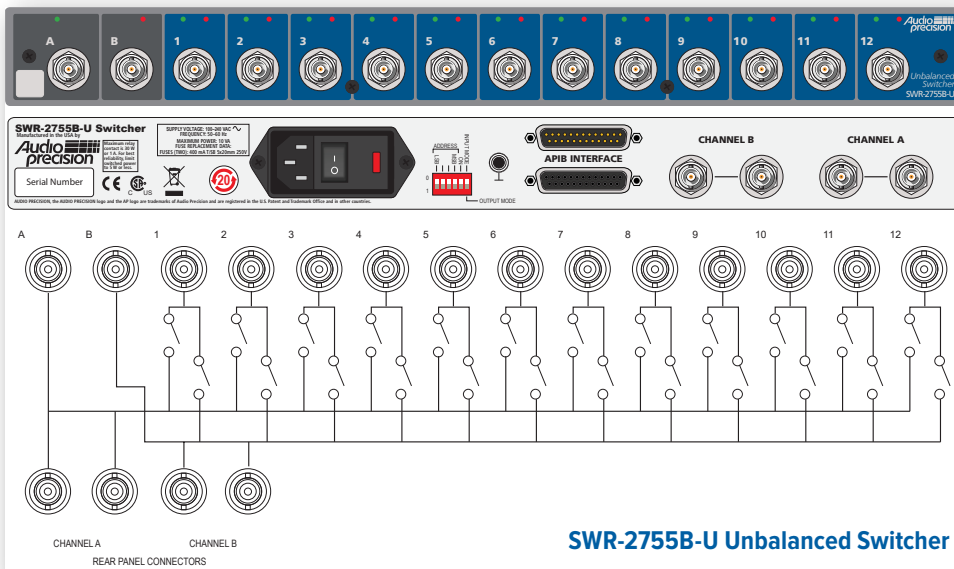
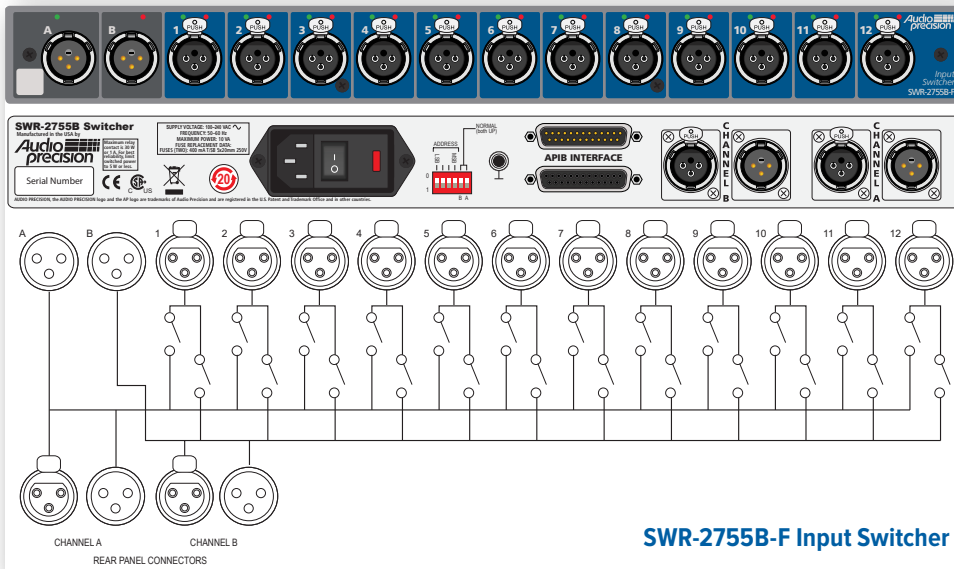
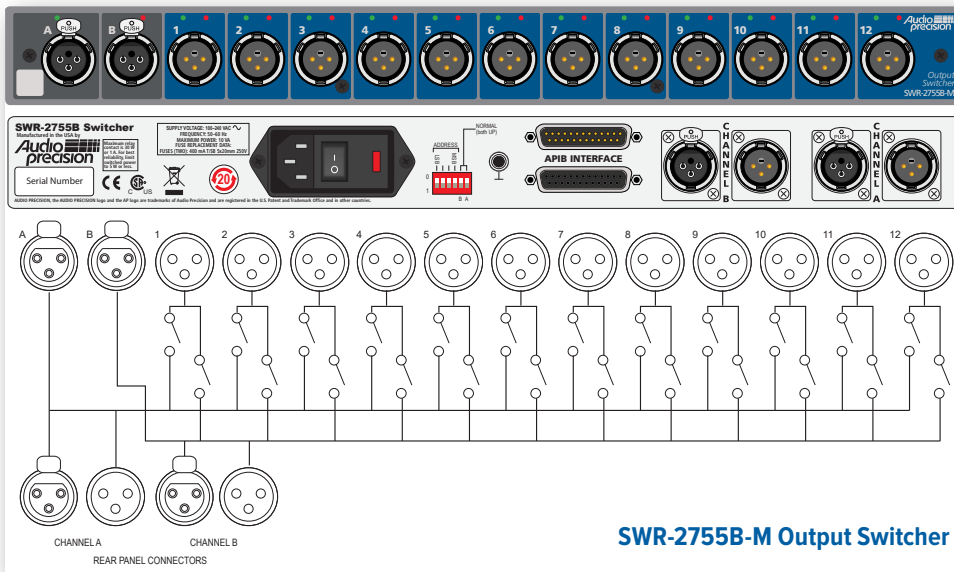
The diagrams on page two are simplified, showing single switches where multiple relay contacts are connected in a more complex arrangement to achieve isolation & crosstalk requirements.



APx500 Series audio analyzer



2700 Series audio analyzer



## KEY SPECIFICATIONS

### ELECTRICAL CHARACTERISTICS

#### Max Voltage Rating

42.4 Vpk, 30 Vrms

#### Max Signal Power<sup>1</sup>

5 W or 200 mA

#### Crosstalk<sup>1</sup> - Balanced 600 $\Omega$ Load (-F or -M)

-151 dB @ 20 kHz

-140 dB @ 100 kHz

#### Crosstalk<sup>1</sup> - Unbalanced 600 $\Omega$ Load (-U)

-140 dB @ 20 kHz

-128 dB @ 100 kHz

#### Noise<sup>1</sup>

Typical noise performance does not degrade the noise performance of APx555 analyzers

#### Loss @ 1 MHz<sup>1</sup>

< 0.8 dB (typical)

#### Series Resistance

< 0.3  $\Omega$  per leg (typical)

#### Shunt Capacitance

Typically < 100 pF from signal path to chassis (100 nF from BNC shell to chassis on -U versions)

#### Reverse Termination (-M only)

604  $\Omega$ , 250 mW maximum

### GENERAL CHARACTERISTICS

#### Power Requirements

Universal 100–240 VAC ( $\pm 10\%$ ), 50–60 Hz

#### Temperature Range - Operating

0° C to +45° C

#### Temperature Range - Storage

-40° C to +75° C

#### Humidity

0% to 90% (non-condensing)

#### Max Operating Altitude

2,000 m

#### Dimensions

16.774 in x 1.75 in x 10.5 in  
(42.60 cm x 4.45 cm x 26.67 cm)

#### Weight

9.0 lbs  
(4.08 kg)

### REGULATORY COMPLIANCE<sup>2</sup>

#### EMC

Directives 2014/30/EU

#### Safety

Directive 2014/35/EU  
CAN/CSA-C22.2 No. 61010  
IEC 61010

#### RoHS

EN50591  
RoHS 2 Restricted Substances

### Notes

1: Please consult the SWR-2755B user manual for full specifications and required supplemental information

2: Please consult the SWR-2755B user manual for a complete listing of all regulatory compliance and accompanying supplemental information



Accredited by A2LA  
under ISO/IEC: 17025  
for equipment calibration