

ASG Products
SAP-912 TW Source Assign Panel

Owners Guide

Preliminary



bexel

Version 1 – 6/29/12

REV-1

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1.1 Introduction

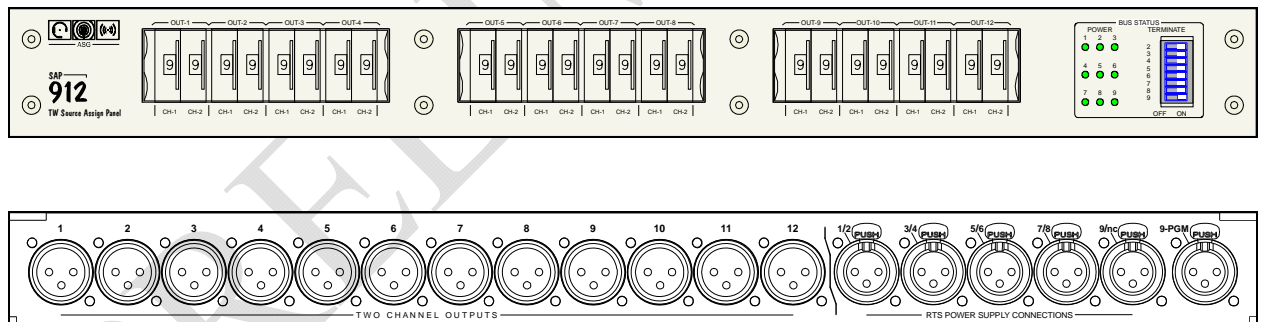
The SAP-912 Source Assign Panel provides a convenient method, using industry standard XLR-3 connectors, to route 12 RTS- TW Intercom User Stations to up to nine, wet or dry RTS TW Intercom channels.

1.2 Features

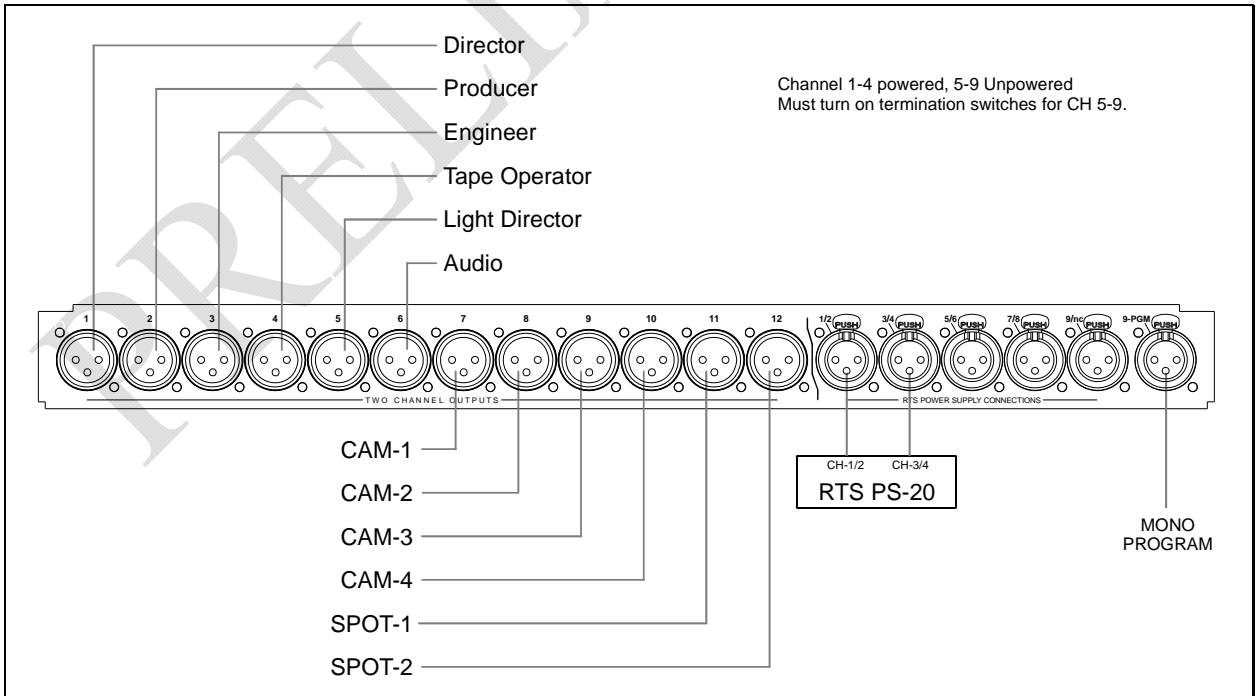
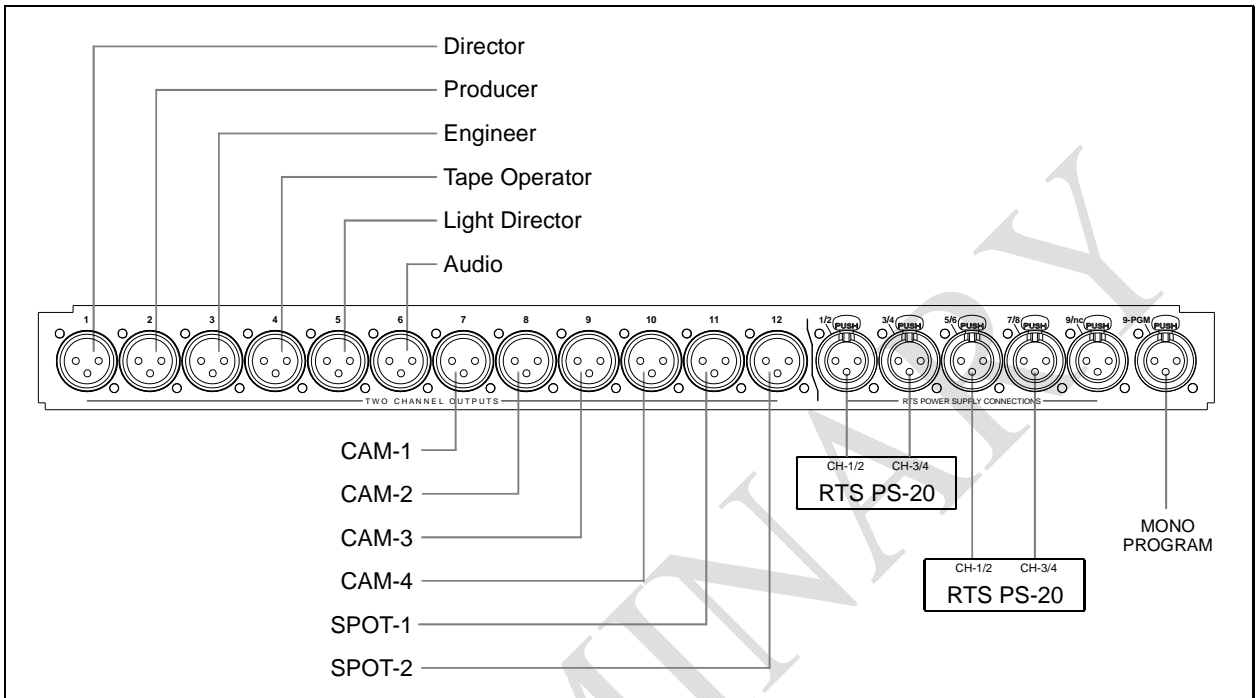
Using 24, ten position (0-9) thumbwheel switches, 12, 2-channel user stations can be independently connected to one of the nine busses.

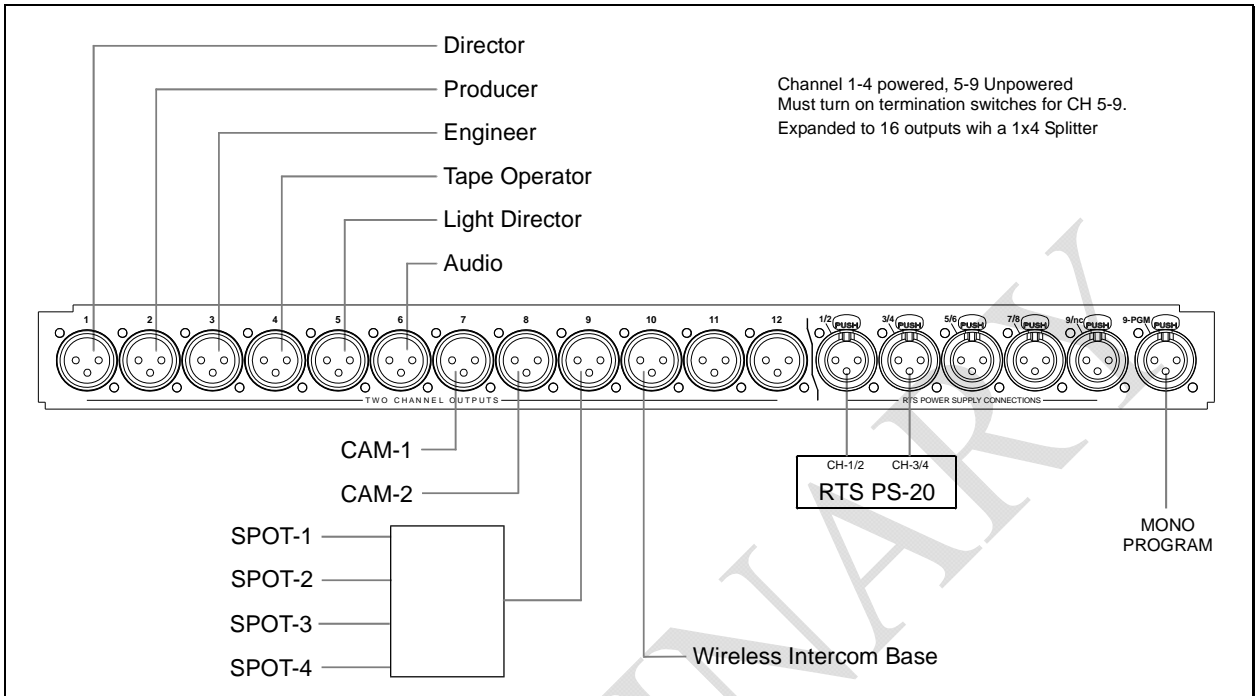
To accommodate situations that do not include a power supply on every channel, local termination switches are provided on the front panel along with power indicators for each supply channel.

1.3 Panel Drawings





1.4 System Drawing






2.1 Precautions

2.1.1 Explanations

	Identifies safety information
	Identifies important performance information
<i>Note</i>	Identifies important operator actions

2.1.2 Applications

2.1.2.1 Environmental

-  Do not expose the equipment contained in the racks to rain or excessive moisture. Extended time at locations outside near oceans should be avoided due to heavy salt content in the air.

2.1.2.2 Electrical

-  State the maximum voltage operating range

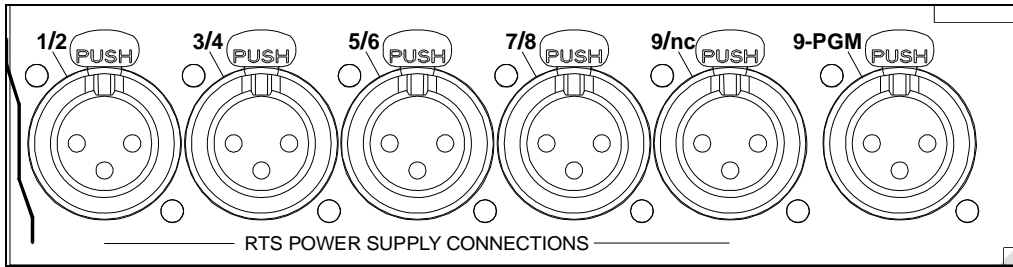
2.1.2.3 Physical

-  Express Physical Limitations

2.2 Connecting the SAP-912 to Power Supply Sources

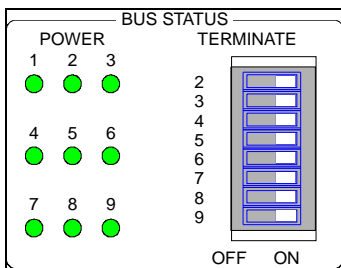
The SAP-912 supports up to nine wet or dry source busses. Each of these connects to the rear-panel via 3-PIN XLR female connectors. Channels 1-8 each carry two channels with connectors identified as **1/2**, **3/4**, **5/6**, **7/8**. Channel nine is carried on a single connector identified as **9/nc**. In addition, **CH-9** supports a dry/balanced signal source such as a mono program input. This is provided on a separate 3-Pin XLR female connector identified as **9-PGM**.

2.2.1 Rear Panel Power Supply Connections



When using powered WET sources, the front panel **BUS STATUS** indicators will illuminate. Each channel is equipped with an independent indicator.

2.2.2 Front Panel Status Indicators



2.2.2 Front Panel Terminations Switches

The **TERMINATE** switches allow the use of busses that are not connected to an RTS power supply. Since an un-terminated bus is unusable and has the potential to cause extremely high and distorted audio levels in the user's ear, these switches provide termination when external power supplies are not available.

Note Only channels 2-9 have switches. Channel #1 is the primary use channel. It will always have external termination and power.

2.3 Connecting User Stations to the SAP-912

All user stations should connect with standard 3-PIN XLR Male to Female Shielded twisted Pair cabling. The shielding provides protection from extraneous noise and a return path for the Audio and power supply currents.

Note It is important to use cables that do not have PIN-1 tied to the case of the XLR connector

2.3.1 Increasing the Output capability of the SAP-912

Many times, 12 outputs are insufficient or a large number of users are located in a common area. To accommodate these situations, three methods are used:

- 1 Loop one user-station to another by using the "LOOP" connector located on the user station.
- 2 Use a "Y" cable to split the output to two users
- 3 Use an Intercom-Multiplier box (ASG IMB-111 or RTS TW-5W)



Caution should be used to not exceed the maximum current capability of any single output.

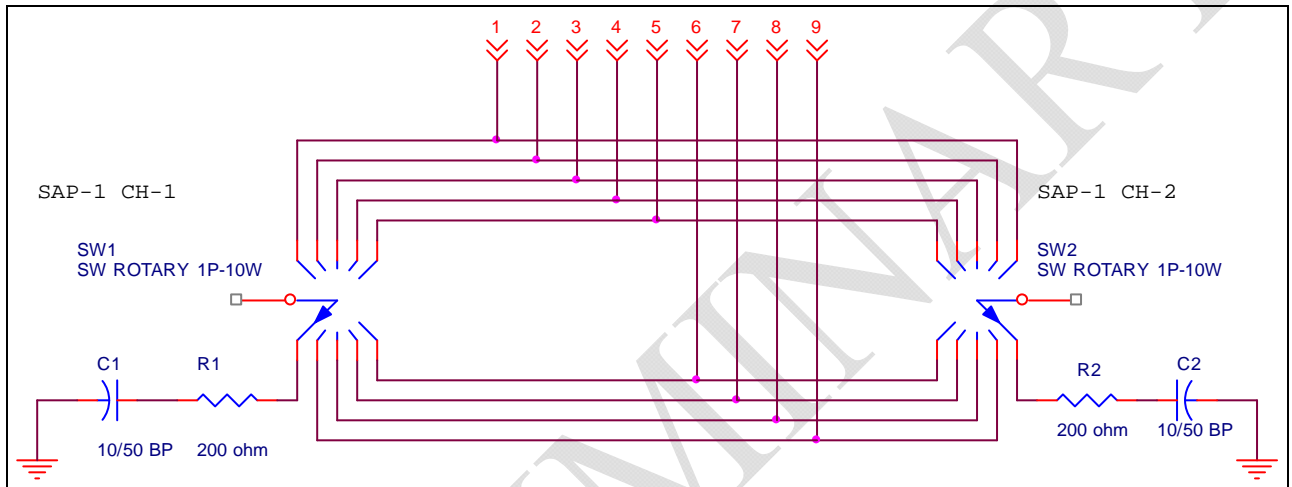
2.4 Channel Selector Switch Settings

An important feature of the SAP-912 is the ability to provide termination when the thumbwheel switch is in the "0" position. This is important for two reasons. First, if a channel assignment switch is rotated through the "0" position, the user will be protected from experiencing an un-terminated condition. Second, all the user stations connected to that output will share a common, isolated CH-2 circuit. This is helpful when more than nine channels are needed in a particular situation.

For example, with four follow-spot operators, their second channel could be an "ISO" just for those operators. In the case of a Camera operator that has an assistant, their two belt-packs, if looped together, could share an "ISO" between them without using one of the nine busses in the SAP.

3.1 Schematics

3.1.1 Switch Bank Wiring Detail



3.1.2 Front Panel Schematic

3.2.1 Distribution PCB Schematic

4.1 Electrical Specifications

4.2 Operational Voltages

The SAP-912 is designed to work within the electrical specifications set forth by the RTS TW conventions.

30.1V DC at a 200-ohm source Impedance. Exceeding this voltage or using a "Zero" ohm source impedance can greatly reduce the life-span (MTBF) of the channel selector switches.

To increase the life-span of the channel-selector switches, avoid repetitive switch setting changes while an output is under a load.

4.3 Maximum User Stations Per Output

4.3.1 Understanding Current Draw

4.3.2 Effect of Cable length on Performance

4.4 Program (CH-9) Input

The CH-9 Program input is transformer isolated and DC voltage protected to 50V DC. A maximum of +10dBm at 200Hz is allowed before transformer saturation distortion may become audible.

Specifications subject to change without notice.