## Tekron Communication Systems

## RSS-2AV Video & Stereo-Audio +SAP Automatic Redundancy Switch

The RSS-2AV chassis incorporates two independent (2X1) automatic video/audio switches with separate stereo-audio inputs, plus SAP audio-follow. It is designed to provide redundancy to TV channels received over fiber, from satellite and other digital transport links. It is versatile in monitoring NTSC/PAL video formats and detecting Video Freeze-Frame failure condition of channels received over digital transport feeds, for which only video sync monitoring is not sufficient.

Each switch module in the chassis can accept two video/audio input channels to switch automatically to the backup input channel when Video-freeze condition is detected, or either the main input video Sync or both Left & Right audios drop below their respective Threshold level setting. The RSS will switch back automatically to the main input after the faulty signal is restored to a level above its threshold setting.

As in all other Tekron RSS automatic switching and redundancy products, the RSS-2AV incorporates a fail-safe design, that will pass-through the main input channel to the output on loss of power to the RSS station.

The RSS-2AV monitors independently the main video and Left/Right audio inputs of each switch module installed in the chassis for its automatic switching operation, and for remote alarming & status monitoring over TCP/IP-Networks.

The RSS-2AV design incorporates adjustable delays (before alarming & switching) on signal drop & restoration, which delays are remotely set from the Web-page over the Network. For added protection, the Threshold circuit is designed with built-in Hysteresis to create a buffer between drop & restore conditions to prevent excessive switching in the event of channel intermittent problems.

The integrated TCP/IP port is designed with SNMP protocol for alarming, Email alarm and remote monitor/control by Network Operation Center over the Network. In addition, it incorporates an embedded Web-Server that allows regional & local technical personal remote access using standard Web browser, for status monitoring and switch override/control from a Web-page. It is also be used to change Network setting remotely, as well as switch delays before switching and disable automatic return & front panel toggle switch.

Front panel status LED are available to indicate video and audio monitor condition and the switch position for each switch module in the chassis, with a toggle switch for local switch override and control.

# GENERAL FEATURES

**CHASSIS:**        - 1U high – 19" Rack-mount chassis.

                         - 85-235Volt AC supply input.

**SWITCH:**         - Chassis incorporates (2) independent switches.

                         - 2X1 Video/stereo-audio +SAP-audio switch.

**FRONT PANEL:** - Channel input selection toggle switch override.

                         - Switch and manual override status LEDs.

                         - Video & audio presence status LEDs.

**BACK PANEL:**   - **Connectors per switch module**
                      **BNC connectors (75-Ohm)**
                         2-Video inputs
                         1-Video output

                 - **Terminal (screw type) plug-in connectors**
                        2-Balanced Left, right & SAP audio inputs
                        1-Balanced Left, right & SAP audio output

                 - **RJ-45 Connector**
                      IP-Ethernet Network connection for
                      remote Monitoring, alarm and control

**INTERNAL SETTINGS:**

                 **Automatic switching & Alarm Thresholds**
               ➢Video & audio Threshold levels (Individually adjustable)
               ➢Built-in Hysteresis (Fixed)

**WEB-PAGE SETTINGS:**

                 **Automatic switching & Alarm Delays**
               ➢Delay before switching on signal drop
               ➢Delay before switch-back on signal restoration

# SPECIFICATIONS

## VIDEO AUDIO MONITORING SPECIFICATIONS

Video Sync level, Video freeze-frame and Left & Right audios of the main input of each switch module are monitored separately.

Internal Threshold adjustments for monitored signal
- Default Video Sync setting 20-IRE, adjustable between 15-35 IRE,
  With a fixed Hysteresis of +/- 2IRE.
- Default audio level 30dB below nominal level of +6dBu.

Remotely adjustable delays before switching to backup input
- Delay settings are adjustable from the Web-page.
- Default Video delay 45-seconds, adjustable 0-999 seconds.
- Default Audio delay 60-seconds, adjustable 0-999 seconds.
- Default switch return delay 10-seconds, adjustable 0-999 seconds.

## INPUT SWITCH SELECTION

The detection circuit switches automatically to the backup input if the main input drops below its threshold level. The switch can be set (remotely from Web-page) to remain switched to main input while backup input is unavailable, if backup monitoring option is installed.

Switch is equipped with passive by-pass circuit to pass the main input to the output on loss of power to the RSS-2AV chassis.

The front panel toggle switch can override the switch automatic operation and allows selection between the main and backup inputs.

Remote control (Via Web-page & SNMP over the Network) overrides both front panel toggle switch and switch automatic operation.

## VIDEO/AUDIO INPUT/OUTPUT SPECIFICATIONS

Two video & balanced (Left, Right & SAP) audio inputs to one-output

Video: 1-volt p/p input level (Internally 75-ohm terminated)
Audio: No restriction on level.

Video: 75-ohm impedance - BNC connector
Audio: No restriction - Plug-in (screw type) terminal

## REMOTE MONITOR AND SWITCH CONTROL:

RJ-45 connector for TCP/IP Network connection
 - Web-page Monitor and control (for local/regional staff access)
 - SNMP alarm, monitor and switch control (for Network-Operation access)
 - Email text-message alarm sent selected mail recipients
 - Network and snmp-trap & Email recipients setting from the Web-page

# Tekron Communication Systems

## RSS-2AV
## VIDEO & STEREO-AUDIO
## WITH SAP
## MULTI-CHANNEL
## AUTOMATIC SWITCH STATION



BALANCED AUDIO
TERMINAL CONNECTIONS

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TC1 | MAIN - BACKUP BALANCED AUDIO INPUTS | LEFT AUDIO MAIN INPUT + (A) - | | RIGHT AUDIO MAIN INPUT + (A) - | | SAP AUDIO MAIN INPUT + (A) - | | LEFT AUDIO BACKUP INPUT + (B) - | | RIGHT AUDIO BACKUP INPUT + (B) - | | SAP AUDIO BACKUP INPUT + (B) - | |
| TC2 | BALANCED AUDIO EMERGENCY INPUT AND SWITCH OUTPUT | OPTION INPUT + (C) - | | OPTION INPUT + (C) - | | OPTION INPUT + (C) - | | LEFT AUDIO SWITCH OUTPUT + - | | RIGHT AUDIO SWITCH OUTPUT + - | | SAP AUDIO SWITCH OUTPUT + - | |

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