

# 9611B

## Switch & Distribution Unit



### Key Features

- Automatic selection of redundant inputs
- 12 Outputs
- Flexible signal configuration
- RS-232 control port
- High channel isolation

### Key Benefits

- Distributes multiple signal types
  - 100 Hz – 10 MHz
  - Any IRIG timecode
  - 1 PPS – 10 MPPS
- Comprehensive alarm reporting
- CE/UL compliant

The 9611B Switch & Distribution Unit is an intelligent switching, monitoring and distribution system, packaged in a 1U, rack-mount chassis.

The 9611B can be set up to distribute a wide range of signal formats; low noise sine waves, IRIG timecodes or pulse formats from either one of two inputs to all twelve outputs. The 9611B allows the user to deploy one model type to support multiple signaling formats which lowers support and logistics costs.

The 9611B provides for both manual and autoswitching. When in autoswitching mode, the 9611B will detect any input or output failure based on the signal type being propagated. In the Auto mode, any primary source input failure causes the unit to switch from primary to secondary source. Alarms will be indicated by all user interfaces including the front panel and Command Line Interface.

### User Interfaces

The 9611B is controlled via two user interfaces. Front panel controls and indicators and a command line interface (CLI) over a RS 232 Serial port connection.

### Front Panel Controls and Indicators

The 9611B processes two signal inputs (A and B). Either input may be designated primary and the other as secondary. In the auto mode, the unit will automatically switch from primary to secondary in the event that the primary input fails. There are three push buttons (input A, Auto, and input B) that allow the input mode to be selected. Pressing input A or input B will force the selected input to be sent to all channels to use the selected input. Pressing Auto will activate the automatic switchover mode. The twelve LED's numbered one through twelve are either green to indicate that the channel signal is present and active, or red to indicate that the channel signal has failed.

When any alarm (A, B or 1-12) is set, the alarm indicator turns from green (normal) to red (alarm). Once the failure is remedied, the alarm can be deactivated by pressing the alarm pushbutton, or issuing a command over the CLI. If the alarm is cleared, all alarm indicators, return to the normal green color.

### Command Line Interface

The 9611B instrument has a serial port interface. Communication between the instrument is achieved by running a communications program on a PC, and connecting the RS 232 serial ports of the PC and 9611B via a serial cable.

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## SPECIFICATIONS

### INPUTS (2)

• RF	
Frequency	100 Hz - 10 MHz
Level	1 V rms (15 dBm max)
Impedance	50 Ω or 1 kΩ
Isolation A to B	>85 dB
• Pulse/DC IRIG time code	
Frequency	1 PPS to 10 MPPS
Level	0 - 6 V p-p
Duty Cycle	0 to 100%
Impedance	50 Ω or 1 kΩ
• AM IRIG timecode	
Frequency	1 PPS to 10 MPPS
Level	0 - 6 V p-p
Modulation Frequency	Up to 1 MHz
Code Format	Any IRIG Format, IEEE 1344, NASA 36, 2137, XR3
Impedance	50 Ω or 1 kΩ

### OUTPUTS (12)

• RF	
Frequency	100 Hz to 10 MHz
Level	1 V rms (15 dBm max)
Gain	0 dB, Jumper selectable
	0 +1 dB, +2 dB
Harmonic	<-40 dBc
Non-Harmonic	<-80 dBc
Load Impedance	50 Ω
Isolation	>80 dB
• Additive Phase Noise	Measured at 10 MHz, +10 dBm input level
1Hz	-125 dBc/Hz
10Hz	-135 dBc/Hz
100Hz	-135 dBc/Hz
1kHz	-145 dBc/Hz
10kHz	-155 dBc/Hz
• Pulse/DC IRIG	
Frequency	1 PPS - 10 MPPS
Level	5 V peak
Rise Time	<20 ns
Fall Time	<20 ns
Jitter	<200 ps rms
Skew	<+/-2 ns output to output
Load impedance	50 Ω
• AM IRIG Timecode	
Frequency	1 PPS to 10 MPPS
Level	0 - 6 V p-p
Modulation Frequency	Up to 1 MHz
Code Format	Any IRIG Format, IEEE 1344, NASA 36, 2137, XR3
Load Impedance	50 Ω
• Alarm Input	
Normal State	2.2 to 5.0 V (TTL High) Configured via CLI. Can be High or Low
Alarm State	<0.8 V (TTL Low)
Connectors	BNC
Qty	2 (1 for A input & 1 for B input)
Enable/Disable	Configured via CLI. Default is disabled

### Status

- Senses signal presence on all inputs and outputs
- Green/Red LEDs on front panel
- Relay contact close on rear panel
- RS-232 interface for monitor and control

### Environmental & Physical Specifications

• Operating Temperature	0° C to +50° C
• Storage Temperature	-40° C to +70° C
• Humidity	
Operating	10% to 90% non-condensing
Non-operating	5% to 95%
• Altitude	
Operating	0 to 5,000 feet
• Power Requirements	100 - 240 VAC, 20 W, 50 - 60 Hz

### Dimensions

• Height	1.725"
• Width	16.98"
• Depth	15.00"
• Weight	7 lbs

### Standards

• CE	
Emissions	EN 55022
Immunity	EN 55024
Safety	EN 60950-1
• UL	60950-1
• FCC	Part 15 Subpart B



9611 Back View



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