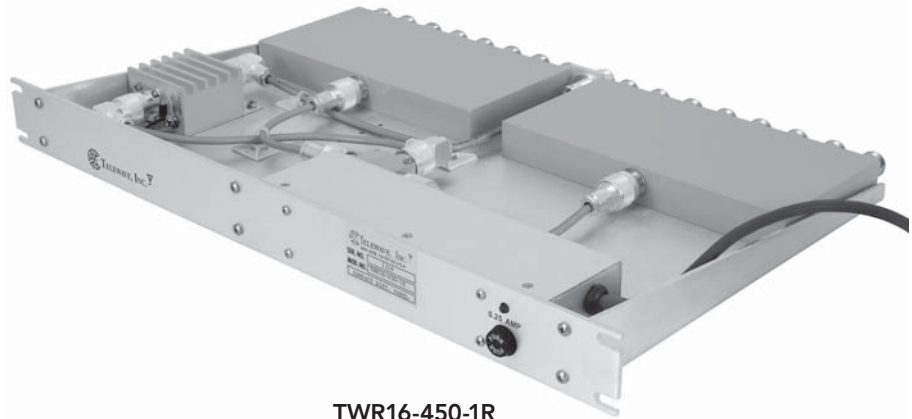


## TWR8, TWR16 -1R SERIES COMPACT RECEIVER PANELS

### FEATURES

- 25 dB MINIMUM PORT TO PORT ISOLATION
- N OR BNC CONNECTORS
- 0.7 TO 2.5 dB TYPICAL NOISE FIGURE
- MODULAR DESIGN
- VHF-LOW/HIGH, UHF, 700/800/900 TRUNKING
- NO TUNING REQUIRED
- 1 RACK UNIT HIGH (1.75")
- 24 AND 32 CHANNELS AVAILABLE IN 2 RU



TWR16-450-1R

Telewave Compact Receiver Distribution Panels are used at medium to high density sites to feed multiple receivers from a common antenna, reducing cost and tower loading, while providing consistent signal quality, output isolation, and higher output levels. A typical receiver distribution panel includes a power supply, inline low noise preamplifier, and one or two 8-way splitters all on a single 19" tray. The preamplifier provides as much as +18 dB system gain to overcome splitting and cable losses.

Telewave 1R panels provide full performance in only 1RU (1.75" x 19" W). The 8 channel unit can be easily field expanded to 16 channels, or a distribution network of 64 channels, by using four expansion panels with 16 channels each. All receiver panels are fully shielded, and each panel has sufficient bandwidth to cover an entire commercial or Public Safety band.

New panels can be directly coupled to existing panels without additional parts or tuning. Successful multicoupling generally requires some type of filtering between the receiver panel and antenna. Telewave manufactures a wide range of high quality preselector systems for transmitters and receivers.

Telewave receiver panels use high-quality splitters which provide two, four, or eight 50 ohm balanced outputs from one input, with 20-30 dB of isolation between ports. The antenna port is tuned with a matching network to insure a balanced input. The output level at any splitter port will be down at least 3 dB from the input as a result of the split, and preamplification is usually required.

These units, with their specially designed power supply, can be powered from an AC or DC source. The internal DC input circuitry will allow the external input DC voltage to vary between +11.5 VDC to +15 VDC, while keeping the DC output

voltage constant. This feature allows the preamplifier to perform at its rated gain, 1 dB compression point, and 3rd order intercept point. This design is especially suited for battery, solar panels, and thermal generator sources. An external DC-DC converter allows operation from DC inputs as low as +9.5 VDC.

The 1R series ships standard with an inline low noise bipolar preamplifier. Optional items include PHEMT preamps for lower noise figure, high 3rd order intercept preamps for RF congested sites, redundant preamps for maximum reliability at remote sites, and broadband preamps for multi-band applications.

## TWR8, TWR16 -1R SERIES

MODEL	FREQUENCY RANGE	PORTS	BANDWIDTH	OPTIONS
TWR8-030-1R, 1RA	30-88 MHz	8	58 MHz	1
TWR8-050-1R, 1RA	50-500 MHz	8	400 MHz	1
TWR8-050-1RTT	50-500 MHz	8	400 MHz	2
TWR8-150-1R, 1RA	132-174 MHz	8	42 MHz	1
TWR8-150-1RTT	132-174 MHz	8	42 MHz	2
TWR8-450-1R, 1RA	406-512 MHz	8	40 MHz	1
TWR8-450-1RTT	406-512 MHz	8	40 MHz	2
TWR8-760-1R, 1RA	763-824 MHz	8	40 MHz	1
TWR8-760-1RTT	763-824 MHz	8	40 MHz	2
TWR8-860-1R, 1RA	806-960 MHz	8	40 MHz	1
TWR8-860-1RTT	806-960 MHz	8	40 MHz	2
TWR16-030-1R, 1RA	30-88 MHz	16	58 MHz	1
TWR16-050-1R, 1RA	50-500 MHz	16	400 MHz	1
TWR16-050-1RTT	50-500 MHz	16	400 MHz	2
TWR16-150-1R, 1RA	132-174 MHz	16	42 MHz	1
TWR16-150-1RTT	132-174 MHz	16	42 MHz	2
TWR16-450-1R, 1RA	406-512 MHz	16	40 MHz	1
TWR16-450-1RTT	406-512 MHz	16	40 MHz	2
TWR16-760-1R, 1RA	763-824 MHz	16	40 MHz	1
TWR16-760-1RTT	763-824 MHz	16	40 MHz	2
TWR16-860-1R, 1RA	806-960 MHz	16	40 MHz	1
TWR16-860-1RTT	806-960 MHz	16	40 MHz	2

**OPTIONS:**

- 0-10 dB step attenuator
- 1 amp. meter movement & DC injector to power Tower Top Preamp.

**NOTES**

- All unused ports must be terminated with 50 ohms. TWL-01 terminating resistor is available for this purpose.
- Panel gain is measured from the input port to any output port. Gain is adjusted at the factory according to individual system requirements. Standard gain is 6 dB +/- 1 dB if not specified.
- Tuning range and bandwidth vary depending on frequency band and system components.
- Exact frequencies and system gain must be specified with order.

**COMMON SPECIFICATIONS**

Impedance / VSWR (typ)		50 ohms / 1.3:1
Isolation port to port (min / typ.)		30-174 MHz: 20 dB / 25 dB 216-960 MHz: 25 dB / 30 dB
System gain (factory adj.)	8 ch. / 16 ch.	0-18 +/-1 dB / 0-15 +/-1 dB
Noise figure (max)		2.5 dB
Third-order intercept (typ)		+36 dBm
Intermodulation (typ)		-130 dB for -30 dBm input
Temperature range		-40°C to +60°C
Power requirements	AC	120 VAC (std.) 220/240 VAC (opt.)
	DC	+11.5 to +15 VDC (regulated output) +12 to +24 VDC (direct to preamp)
Connectors		Input - N Female Output - N or BNC Female (opt.)
Dimensions (HWD) in. (cm)		1.75 x 19 x 11 (4.5 x 48.3 x 27.9)
Weight lb. (kg)	8 ch / 16 ch	6.5 (3.0) / 8.5 (3.9)