

THRP-1548, 4548, 7648, 8648 HIGH PERFORMANCE REPEATER PANEL

The Telewave.io High-Performance Repeater Panel greatly improves the effective sensitivity and selectivity of a repeater receiver for extended mobile and portable coverage and provides maximum intermodulation protection for the transmitter.

The THRP panel uses a dual isolator with a 50-watt termination on the second stage output and a low pass filter for transmitter IM protection. This combination provides more than 60 dB of IM protection over a ± 5 MHz bandwidth and transmitter 2nd harmonic attenuation of over 50 dB.

The duplexer utilizes four 4" cavities in a pass/reject configuration. This duplexer has only 1.8 dB insertion loss, and provides over 110 dB isolation. The receiver side of the duplexer is interconnected to two 8" high "Q" bandpass cavities, to form a narrow pass-band preselector.

The output of the preselector is coupled to one of two types of low-noise preamplifiers. The standard configuration uses a TLA series low-noise bipolar preamp. This preamp is recommended for areas that are prone to lightning damage or high ambient signal levels.

The optional TGA series preamps use a PHEMT amplifier for higher sensitivity. This preamp is recommended for sites with low existing RF noise levels.

The THRP series puts all this equipment on one 14" x 19" panel, pretuned and ready to install. The total price is less than if the equipment was purchased separately, and requires less rack space.



THRP-7648 FRONT



THRP-7648 BACK

FREQUENCY RANGES	
THRP-1548	138-174 MHz
THRP-4548	400-512 MHz
THRP-7648	763-869 MHz
THRP-8648	806-960 MHz

SPECIFICATIONS		PREAMP	Bipolar	PHEMT (opt.)
Frequency range	138-960 MHz	Gain - Antenna to RX	+8 to +20 dB	+8 to +15 dB
Frequency separation (min)	3 MHz	Noise figure (typ.)	2.5 dB	0.7 dB
Power input (continuous)	100 Watts	3rd order intercp.	+35 dBm	+25 dBm
VSWR (max)	1.22:1	Input power	+12 to +24 VDC	+9 to +18 VDC
TX-RX isolation (typ.)	110 dB	Current (typ.)	170 mA	40 mA
Insertion loss TX to Antenna (typ.)	1.8 dB			
TX 2nd harmonic attn. (typ.)	50 dB			
Antenna to TX isolation (typ.)	75 dB at 5 MHz			
RX-TX isolation (typ.)	120 dB			
Temperature range	-30°C to +40°C			
Connector type	N Female			
Finish	Grained aluminum			
Dimensions (HWD) in. (cm)	14 x 19 x 12 (35.6 x 48.3 x 30.5)			
Net weight lb. (kg)	25 (11.4) (400-860 MHz)			