

TWR8, TWR16, TWR24 SERIES RECEIVER DISTRIBUTION PANELS





TWR8 SERIES

TWR16 SERIES

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.

Telewave receiver panels are fully shielded, and each panel has sufficient bandwidth to cover an entire commercial or Public Safety band. Standard panels have one input, 8 or 16 outputs, and a -20 dB sample port on a 7" x 19" panel. A 24 channel model is available for 700/800 MHz only. For sites with limited rack space, the Telewave 1R and 2R series of compact panels is also available with 8 or 16 channels in 1 rack unit (1.75" H), or up to 32 channels on a 3.5" panel.

Additional panels may be added at any time to increase the number of available outputs. New panels can be directly coupled to existing panels without additional parts or tuning. Successful multicoupling generally requires some type of

Telewave Receiver Distribution filtering between the receiver Telewave can supply panels for panel and antenna. Telewave manufactures a wide range of high quality preselector systems for transmitters and receivers.

> Telewave receiver panels use highquality 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. A -20dB sample port is also provided for connection of external signal analyzers.

> 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. 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" panel. The preamplifier provides as much as +18 dB system gain to overcome splitting and cable losses.

operation on +12 to +24 VDC, and 120 or 220/240 VAC. Other voltage options are available on request. A battery backup on the DC input can provide uninterrupted operation during a site power failure (charging output not supplied). Tuning range and bandwidth varies depending on frequency band and system components. Please contact Telewave to discuss your requirements with a sales engineer to ensure maximum system performance.



TWR8-, 16-, 24- SERIES

TWR8-030 30-88 MHz 8 58 MHz 0-18 dB TWR8-050 50-512 MHz 8 400 MHz 0-18 dB TWR8-150 132-174 MHz 8 42 MHz 0-18 dB TWR8-250 216-250 MHz 8 34 MHz 0-18 dB TWR8-350 300-400 MHz 8 40 MHz 0-18 dB TWR8-450 400-512 MHz 8 40 MHz 0-18 dB TWR8-760 763-824 MHz 8 40 MHz 0-18 dB TWR8-860 806-960 MHz 8 40 MHz 0-18 dB TWR16-030 30-88 MHz 16 58 MHz 0-15 dB TWR16-030 30-88 MHz 16 40 MHz 0-15 dB TWR16-150 132-174 MHz 16 40 MHz 0-15 dB TWR16-150 132-174 MHz 16 40 MHz 0-15 dB TWR16-350 300-400 MHz 16 40 MHz 0-15 dB TWR16-350 300-400 MHz 16 40 MHz 0-15 dB TWR16-360 80	MODEL	FREQUENCY	PORTS	BANDWIDTH	GAIN	
TWR8-150 132-174 MHz 8 42 MHz 0-18 dB TWR8-250 216-250 MHz 8 34 MHz 0-18 dB TWR8-350 300-400 MHz 8 40 MHz 0-18 dB TWR8-450 400-512 MHz 8 40 MHz 0-18 dB TWR8-760 763-824 MHz 8 40 MHz 0-18 dB TWR8-860 806-960 MHz 8 40 MHz 0-18 dB TWR16-030 30-88 MHz 16 58 MHz 0-15 dB TWR16-050 50-512 MHz 16 400 MHz 0-15 dB TWR16-150 132-174 MHz 16 42 MHz 0-15 dB TWR16-250 216-250 MHz 16 34 MHz 0-15 dB TWR16-350 300-400 MHz 16 40 MHz 0-15 dB TWR16-350 300-400 MHz 16 40 MHz 0-15 dB TWR16-760 763-824 MHz 16 40 MHz 0-15 dB TWR16-760 763-824 MHz 16 40 MHz 0-15 dB TWR24-760 763-824 MHz 24 40 MHz 0-15 dB TWR24-760 763-824 MHz 24 40 MHz 0-12 dB TWR24-860 806-960 MHz 24 40 MHz 0-12 dB TWR24-860 806-960 MHz 25 dB 216-960 MHz: 25 dB / 30 dB Noise figure (typ) 2.5 dB Third order intercept +36 dBm Intermodulation (typ) -130 dB for -30 dBm input Sample port -20 dB Temperature range -40°C to +60°C Power requirements AC 120 VAC (std.) 220/240 VAC (opt.) DC +11.5 to +15 VDC (power reverting) +12 to +24 VDC (direct to preamp) Connectors Input - N Female Output - N or BNC Female (opt.) Dimensions (HWD) in. (cm) 7 x 19 x 3 (17.8 x 48.3 x 7.6)	TWR8-030	30-88 MHz	8	58 MHz	0-18 dB	
TWR8-250 216-250 MHz 8 34 MHz 0-18 dB TWR8-350 300-400 MHz 8 40 MHz 0-18 dB TWR8-450 400-512 MHz 8 40 MHz 0-18 dB TWR8-760 763-824 MHz 8 40 MHz 0-18 dB TWR8-860 806-960 MHz 8 40 MHz 0-18 dB TWR16-030 30-88 MHz 16 58 MHz 0-15 dB TWR16-050 50-512 MHz 16 400 MHz 0-15 dB TWR16-250 216-250 MHz 16 42 MHz 0-15 dB TWR16-350 300-400 MHz 16 40 MHz 0-15 dB TWR16-450 400-512 MHz 16 40 MHz 0-15 dB TWR16-450 400-512 MHz 16 40 MHz 0-15 dB TWR16-760 763-824 MHz 16 40 MHz 0-15 dB TWR16-860 806-960 MHz 16 40 MHz 0-15 dB TWR24-760 763-824 MHz 24 40 MHz 0-12 dB TWR24-760 763-824 MHz 24 40 MHz 0-12 dB TWR24-860 806-960	TWR8-050	50-512 MHz	8	400 MHz	0-18 dB	
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TWR24-860 806-960 MHz 24 40 MHz 0-12 dB COMMON SPECIFICATIONS Impedance / VSWR (typ) Isolation RX-RX (min / typ.) 50 ohms / 1.3:1 Isolation RX-RX (min / typ.) 30-174 MHz: 20 dB / 25 dB 216-960 MHz: 25 dB / 30 dB Noise figure (typ) 2.5 dB Third order intercept +36 dBm Intermodulation (typ) -130 dB for -30 dBm input Sample port -20 dB Temperature range -40°C to +60°C Power requirements AC 120 VAC (std.) 220/240 VAC (opt.) DC +11.5 to +15 VDC (power reverting) +12 to +24 VDC (direct to preamp) Connectors Input - N Female Output - N or BNC Female (opt.) Dimensions (HWD) in. (cm) 7 x 19 x 3 (17.8 x 48.3 x 7.6)	TWR16-860	806-960 MHz	16	40 MHz	0-15 dB	
COMMON SPECIFICATIONS Impedance / VSWR (typ) 50 ohms / 1.3:1 Isolation RX-RX (min / typ.) 30-174 MHz: 20 dB / 25 dB 216-960 MHz: 25 dB / 30 dB Noise figure (typ) 2.5 dB Third order intercept +36 dBm Intermodulation (typ) -130 dB for -30 dBm input Sample port -20 dB Temperature range -40°C to +60°C Power requirements AC 120 VAC (std.) 220/240 VAC (opt.) DC +11.5 to +15 VDC (power reverting) +12 to +24 VDC (direct to preamp) Connectors Input - N Female Output - N or BNC Female (opt.) Dimensions (HWD) in. (cm) 7 x 19 x 3 (17.8 x 48.3 x 7.6)	TWR24-760	763-824 MHz	24	40 MHz	0-12 dB	
Impedance / VSWR (typ) 50 ohms / 1.3:1 30-174 MHz: 20 dB / 25 dB 216-960 MHz: 25 dB / 30 dB 2.5 dB	TWR24-860	806-960 MHz	24	40 MHz	0-12 dB	
Isolation RX-RX (min / typ.) 30-174 MHz: 20 dB / 25 dB 216-960 MHz: 25 dB / 30 dB Noise figure (typ) 2.5 dB Third order intercept Intermodulation (typ) 5ample port -20 dB -40°C to +60°C Power requirements AC 120 VAC (std.) 220/240 VAC (opt.) DC +11.5 to +15 VDC (power reverting) +12 to +24 VDC (direct to preamp) Connectors Input - N Female Output - N or BNC Female (opt.) Dimensions (HWD) in. (cm) 7 x 19 x 3 (17.8 x 48.3 x 7.6)	COMMON SPECIFICATIONS					
Noise figure (typ) 2.5 dB Third order intercept Intermodulation (typ) Sample port Temperature range Power requirements AC 120 VAC (std.) 220/240 VAC (opt.) DC +11.5 to +15 VDC (power reverting) +12 to +24 VDC (direct to preamp) Connectors Input - N Female Output - N or BNC Female (opt.) Dimensions (HWD) in. (cm) 7 x 19 x 3 (17.8 x 48.3 x 7.6)	Impedance / \	VSWR (typ)	50 ohm	50 ohms / 1.3:1		
Noise figure (typ) Third order intercept Intermodulation (typ) Sample port Temperature range Power requirements AC 120 VAC (std.) 220/240 VAC (opt.) DC +11.5 to +15 VDC (power reverting) +12 to +24 VDC (direct to preamp) Connectors Input - N Female Output - N or BNC Female (opt.) Dimensions (HWD) in. (cm) 7 x 19 x 3 (17.8 x 48.3 x 7.6)	Isolation RX-RX (min / typ.)		30-174	30-174 MHz: 20 dB / 25 dB		
Third order intercept Intermodulation (typ) Sample port Temperature range Power requirements AC 120 VAC (std.) 220/240 VAC (opt.) DC +11.5 to +15 VDC (power reverting) +12 to +24 VDC (direct to preamp) Connectors Input - N Female Output - N or BNC Female (opt.) Dimensions (HWD) in. (cm) 7 x 19 x 3 (17.8 x 48.3 x 7.6)			216-96			
Intermodulation (typ) Sample port -20 dB Temperature range -40°C to +60°C Power requirements AC 120 VAC (std.) 220/240 VAC (opt.) DC +11.5 to +15 VDC (power reverting) +12 to +24 VDC (direct to preamp) Connectors Input - N Female Output - N or BNC Female (opt.) Dimensions (HWD) in. (cm) 7 x 19 x 3 (17.8 x 48.3 x 7.6)	Noise figure (typ)		2.5 dB	2.5 dB		
Sample port Temperature range -40°C to +60°C Power requirements AC 120 VAC (std.) 220/240 VAC (opt.) DC +11.5 to +15 VDC (power reverting) +12 to +24 VDC (direct to preamp) Connectors Input - N Female Output - N or BNC Female (opt.) Dimensions (HWD) in. (cm) 7 x 19 x 3 (17.8 x 48.3 x 7.6)	Third order intercept		+36 dB			
Temperature range -40°C to +60°C Power requirements AC 120 VAC (std.) 220/240 VAC (opt.) DC +11.5 to +15 VDC (power reverting) +12 to +24 VDC (direct to preamp) Connectors Input - N Female Output - N or BNC Female (opt.) Dimensions (HWD) in. (cm) 7 x 19 x 3 (17.8 x 48.3 x 7.6)	Intermodulation (typ)			·		
Power requirements AC 120 VAC (std.) 220/240 VAC (opt.) DC +11.5 to +15 VDC (power reverting) +12 to +24 VDC (direct to preamp) Connectors Input - N Female Output - N or BNC Female (opt.) Dimensions (HWD) in. (cm) 7 x 19 x 3 (17.8 x 48.3 x 7.6)	Sample port					
Connectors Connectors Hope to the content of t	Temperature range		-40°C t			
Connectors Input - N Female Output - N or BNC Female (opt.) Dimensions (HWD) in. (cm) 7 x 19 x 3 (17.8 x 48.3 x 7.6)	Power require	ements A				
Output - N or BNC Female (opt.) Dimensions (HWD) in. (cm) 7 x 19 x 3 (17.8 x 48.3 x 7.6)		D	+11.5 to	+11.5 to +15 VDC (power reverting) +12 to +24 VDC (direct to preamp)		
	Connectors		Input - Output	Input - N Female Output - N or BNC Female (opt.)		
Weight lb. (kg) 8 / 16 / 24 ch 5.5 (2.5) / 6 (2.7) / 6.5 (2.9)	, , , ,		7 x 19 >	7 x 19 x 3 (17.8 x 48.3 x 7.6)		
	Weight lb. (k	g) 8 / 16 / 24 ch	5.5 (2.5	5.5 (2.5) / 6 (2.7) / 6.5 (2.9)		

NOTES

- 1. 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.
- 3. Tuning range and bandwidth vary depending on frequency band and system components.
- Exact frequencies and system gain must be specified with order.