

# MT-4Z VHF Receiver

SPEC SHEET

(VR-4Z150-00-000)

The MT-4Z VHF receiver is an evolution of Zetron's renowned MT-4E Class A and Class B VHF receivers. It features the same reliability and low-current capabilities as the MT-4E, but in a 100% software defined radio module.

The new software tunable filter enables easy adjustment of the receiver across the entire VHF band (136 – 174MHz) without having to physically access the preselector. Adjustments are made easily via the Zetron RSS radio configuration tool.

## FEATURES

- Fully software-tunable filter enables adjustment over the entire VHF (136 – 174MHz) band without any special tools
- Environmentally and mechanically robust to operate in the harshest remote conditions
- Fully compatible with all other MT-4E modules and the SR-39 sub rack
- Standards-based, vendor neutral operation in analog, P25, and mixed-mode
- Optional helical filter for classic MT-4E style operation

## Specifications

### Dimensions (HxWxD)

Metric: 71 x 128 x 190 mm  
Imperial: 2.8 x 5.1 x 7.5 inches

### Weight

Metric: 1.2kg  
Imperial: 2.5lbs

### Operating Temperature

- 40°C to + 60°C (100% Duty Cycle)

### Number of Channels

32

### Current Draw

≤ 115mA ± 10%

### Sensitivity

≤ -118 dBm

### Adjacent Channel Rejection (Analog NB/WB)

≥ 60 dB / ≥ 75 dB

### Intermodulation Rejection

≥ 80 dB

### Hum & Noise Ratio

≥ 45 dB

A separate optional MT-4Z helical filter module is available for order. The module integrates into the receiver enabling the user to switch between the new software tuned filter and the classic MT-4E style helical filter. Users may switch freely between the two via the RSS radio configuration software application.

Ideal for both fixed and tactical VHF applications, the receiver is fully compatible with all existing MT-4E configurations, including repeaters, base stations, crossband, paging, voting & simulcast, and more.



**Spurious Response Rejection**  
≥ 90 dB

**Receiver Throughput Delay**  
≤ 125 ms

**Audio Distortion**  
≤ 2%

**Frequency Stability (VHF)**  
± 0.5ppm (-30 to 60°C)

**IC Certification Number**  
CAN ICES-3 (B)/NMB-3(B)

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## MT-4E & MT-4Z Receiver Comparison Chart

Specification	MT-4E Class B	MT-4E Class A	MT-4Z
Number of RF Channels	32	32	32
Channel Spacing	12.5, 15, 25, 30 kHz	12.5, 15, 25, 30 kHz	12.5, 15, 25, 30 kHz
Dimensions	71 x 128 x 190 mm	71 x 128 x 190 mm	71 x 128 x 190 mm
Frequency Band	136 to 174 MHz	136 to 174 MHz	136 to 174 MHz
Operating Current	≤ 115 mA	≤ 250 mA	≤ 115 mA
Noise Figure	6.1dB	6.1dB	Software Filter: 4.53dB Helical Filter: 4.33dB
Adjacent Channel Rejection (Analog)	≥ 40dB	≥ 45dB	≥ 60dB
Adjacent Channel Rejection (P25)	≥ 60dB	≥ 60dB	≥ 60dB
Co-Channel Rejection (P25)	≤ 9dB	≤ 9dB	≤ 9dB
Intermodulation Rejection (Analog NB/WB)	≥ 70dB	≥ 75dB	≥ 80dB
Intermodulation Rejection (P25)	≥ 70dB	≥ 80dB	≥ 80dB
Blocking Rejection (Analog)	≥ 80dB	≥ 90dB	≥ 90dB
Spurious Response Rejection (Analog)	≥ 70dB	≥ 75dB	≥ 90dB
Spurious Response Rejection (P25)	≥ 70dB	≥ 90dB	≥ 90dB
Hum and Noise Ratio (NB)	≥ 28dB	≥ 34dB	≥ 40dB
Hum and Noise Ratio (WB)	≥ 30dB	≥ 40dB	≥ 45dB



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