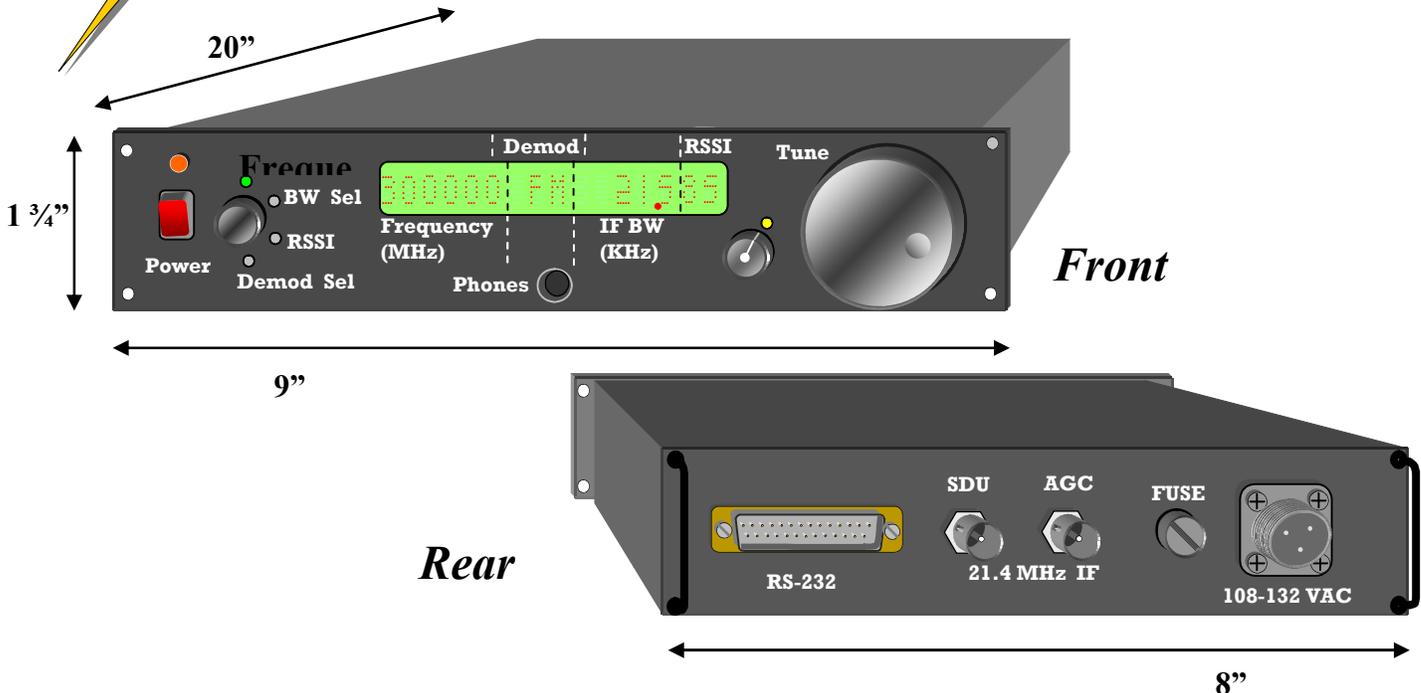


ZEUS Technology Systems, Inc.
 Technical Data Sheet

ZRW-230
 Wide Band Receiver



DESCRIPTION

The ZRW-230 is a wideband receiver / multi-mode demodulator covering the 20 to 3000 MHz range, with a tuning resolution of 100 HZ, (10 HZ in the single sideband mode). The ZRW-230 provides superior performance (10 dB Noise Figure; 90 dB Image Rejection; -100 dBm, max spurious; and 0 dBm 3rd Order Intercept) in spite its Half Rack size. IF bandwidths are selectable from 12.5 KHZ to 1.0 MHz. The ZRW-230 may be operated manually from the front panel controls and displays, or remotely under RS-232 interface control via a rear mounted 25 pin "D" connector. Front panel displays include tuned Frequency, selected Demodulation, selected IF Bandwidth and RSSI. Both SDU and AGC 21.4 MHz IFs are available via rear mounted BNC connectors. The rear mounted AC power receptacle is a military style positive lock to prevent disconnects under strenuous operating conditions.

FEATURES

- Frequency Coverage: **20 to 3000 MHz**
- Demodulation: **AM; FM; USB; LSB** and CW
- Low Noise Figure: **10 dB, max 500-3000 MHz**
- Low Phase Noise: **-60 dBc/Hz @ 1 KHz; -95 dBc/Hz @ 20 KHz, max (20-1000 MHz); -92 dBc/Hz @ 20 KHz, max (1000-3000 MHz)**
- Image Rejection: **90 dB, typ.**
- IF Outputs: **AGC and SDU @ 21.4 MHz**
- Selectable 21.4 MHz IF bandwidths: **12.5; 25; 50; 100; 500 KHz and 1.0 MHz**
- Ac-coupled **Audio Output**
- **Freq, Demod, IF BW and RSSI** displays
- **RS-232, and Manual Control**
- Small size: **Half Rack: 1 3/4 "x 8 3/4 "x 20"**
- Light weight: **≤ 12 lbs**

ZRW-230 SPECIFICATIONS

Frequency Range	20 to 3000 MHz
Tuning Resolution	100 Hz (10 Hz SSB)
RF Input	50 Ohm (2.0:1 VSWR, typ.)
Max Input w/o damage	+20 dBm
Detection Modes	AM, FM, USB, LSB, and CW
Preselection	Tracking below 500 MHz, partial octave 500 – 3000MHz
Internal Reference	+/- 1.0 ppm
Noise Figure	10 dB, max., 20 – 3000 MHz
3rd Order Intercept	0 dBm, typ.
2nd Order Intercept	+45 dBm , typ.
Internally Generated	
Spurious	-100 dBm equivalent RF input, max.
Image Rejection	90 dB, typ.
Phase Noise	-60 dBc/Hz @ 1 KHz -95 dBc/Hz @ 20 KHz, max.(20–1000 MHz) -92 dBc/Hz @20 KHz, max(1000-3000 MHz)
Tuning Time (STEP)	1 ms, max. to within 1 KHz of final frequency
LO Level @ RF Input	-90 dBm, max.
Gain Control Modes	95 dB typical range
AFC	Automatic, with disable
IF Outputs	AGC @ 21.4 MHz, -30 dBm nominal SDU @ 21.4 MHz, +20 dB relative
IF Bandwidths	4 selectable from 12.5, 25.0, 50.0, 100.0, 200.0, 500.0 KHz, and 1.0 MHz
Video Output Level	0.5 V p-p into 600 Ohms (30% deviation in FM or 50% AM modulation)
Audio Output	headphone jack
COR/Squelch (TTL Output)	55 dB range, min.
RSSI Output	0 – 99 count via Front Panel display, or I/O
Control Interface	RS –232
Power	108 – 132 VAC, 30 W, nominal
Operating Temperature Range	-20 to +60 °C
NonOperating Temperature Range	-40 to +85 °C
Humidity	95% relative, non-condensing
Weights & Dimensions	
Height	1.75 in
Width	8.75 in
Depth	20.0 in
Weight	12 lbs.