

Table 1-1. Type WJ-8718 Series HF Receiver, Specifications

Tuning Range	5 kHz to 29.99999 MHz.
Detection Modes	Standard: AM, FM, CW.
Optional: LSB, USB, ISB.	
Frequency Display	7 digit, LED's.
Frequency Resolution/Readout	10 Hz.
Frequency Stability	6×10^{-8} per day, 2×10^{-6} per year.
Input Impedance	50 Ω , unbalanced, nominal.
Antenna Input Protection	The antenna input withstands the effects of RF power to +15 dBm and static build-up.
IF Bandwidths (3 dB)	Standard: 0.3, 1, 3.2, 6, and 16 kHz.
IF Shape Factor	IF BW 60 dB: 3 dB, Typical
	0.3 kHz 7.0:1
	1 kHz 4.5:1
	3.2 kHz 2.5:1
	6 kHz 2.3:1
	16 kHz 2.0:1
Sensitivity	(0.2-30 MHz, see CW Sensitivity for extended frequency range)
AM Sensitivity	
(6 kHz IF Bandwidth)	A 1.7 μ V signal 50% AM modulated at a 400 Hz rate produces at least a 10 dB (S+N)/N ratio at the audio output.
FM Sensitivity	
(16 kHz IF Bandwidth)	A 2.5 μ V signal FM modulated at a 400 Hz rate to a 4.8 kHz peak deviation produces at least a 17 dB (S+N)/N ratio at the audio output.
CW Sensitivity	
(0.3 kHz IF Bandwidth)	
200 kHz-30 MHz	A 0.4 μ V signal produces a 16 dB (S+N)/N ratio at the audio output.
50 kHz-200 kHz	A 0.63 μ V signal produces a 16 dB (S+N)/N ratio at the audio output.
15 kHz-50 kHz	A 1.4 μ V signal produces a 16 dB (S+N)/N ratio at the audio output.
5 kHz-15 kHz	A 63 μ V signal produces a 16 dB (S+N)/N ratio, typically at the audio output.
ISB, (USB, LSB) Sensitivity	
(3 kHz SSB Bandwidth)	A 0.56 μ V signal produces a 10 dB (S+N)/N ratio at the audio output.
Gain Control Modes	Manual, Fast AGC, Slow AGC.
AGC and Manual Range	100 dB, minimum.
AGC Threshold	3.0 μ V, typical.
AGC Attack Time	15 ms, maximum.
AGC Release Time	Fast AGC: 25 ms, maximum. Slow AGC: 4 sec, maximum.

Table 1-1. Type WJ-8718 Series HF Receiver, Specifications (Continued)

Audio Outputs:	
ISB Output	100 mW, maximum across 600 Ω .
Line Audio	1 W minimum, across 600 Ω for an input signal of 3 μ V, 30% AM modulated at a 400 Hz ratio.
Headphone Output*	30 mW, minimum, for an input signal of 3 μ V, 30% AM modulated at a 400 Hz rate.
Audio Distortion	Less than 5% at rated audio output.
Audio Frequency Response	± 1.5 dB from 100 Hz to 8 kHz, 1 kHz reference frequency.
Final IF Output	20 mV, minimum, into 50 Ω for input signals greater than 3.0 μ V.
Frequency Control	Manual or Remote options.
Synthesizer Lock-Up Time	3 ms, typical; 10 ms, maximum.
Synthesized BFO	455 kHz ± 8.9 kHz in 100 Hz steps.
IF Rejection	Greater than 90 dB.
Image Rejection	Greater than 90 dB.
Intermodulation Distortion:	
3rd Order Input Intercept Point	+20 dBm, minimum for signals separated by 30 kHz, (performance may degrade below 3 MHz).
Unwanted Sideband Rejection	50 dB at 350 Hz into unwanted sideband.
Reciprocal Mixing	With a desired signal of 25 μ V in the 3.2 kHz IF bandwidth, the desired signal-to-noise ratio is greater than 20 dB, when an undesired signal 70 dB higher in amplitude and 30 kHz removed in frequency is present.
Cross Modulation	With a desired signal of 10 μ V an undesired signal 70 dB higher, 30% AM modulated produces less than 10% cross modulation for frequency separation of greater than 50 kHz in the 1 kHz IF bandwidth.
Antenna Conducted Oscillator Radiation	-87 dBm, maximum.
Signal Meter	Indicates carrier level or line audio level.
Operating Temperature Range	0 $^{\circ}$ C to 50 $^{\circ}$ C.
Power Consumption	0.6 A at 115 Vac, approximately.
Power Requirements	110/220 Vac $\pm 15\%$ 48-420 Hz.
Power Interrupt	With Manual Control Module option, storage of frequency data automatically occur. Upon restoration of power, the receiver returns to the previously tuned frequency.

Table 1-1. Type WJ-8718 Series HF Receiver, Specification (Continued)

Size	5.25 inches high, 19 inches wide and 19.4 inches deep.
Weight	35 pounds (15.75 kilograms), approximately.

* **Note:** The stereo headphone output provides 30 mW for each output on on stereo phone plug. Refer to Figure 1-2.

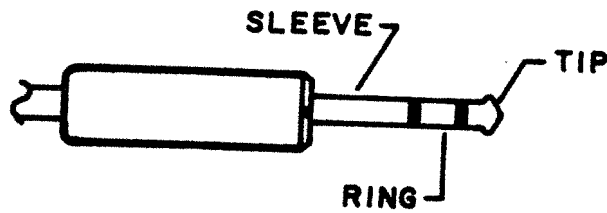


Figure 1-2. Tip-Ring-Sleeve Plug Outline Drawing.