1.3.3 OPTIONAL EQUIPMENT

The following optional equipment is available for use with the WJ-8626A-4 HF Receiver. For additional information concerning these options and others, contact the Watkins-Johnson Company, Gaithersburg, Maryland, or your Watkins-Johnson representative.

• Sub-Octave Preselector	WJ-8626A-4/PRE
• Wideband 455 kHz Signal Monitor Output (30 kHz BW), (standard output is 16 kHz BW)	WJ-8626A-4/SMO30
• Master/Handoff	WJ-8626A-4/MH
• FSK Demodulator	WJ-8626A-4/FSK
• Stand Alone Power Supply	WJ-8626A-4/MPS
• F1/F2 Sector Scan	WJ-8626A-4/SCAN
• Baseband Converter	WJ-8626A-4/BBC
• Wideband 10 MHz Output (100 kHz BW)	WJ-8626A-4/WBO

1.4 EQUIPMENT SPECIFICATIONS

See **Table 1-1** for WJ-8626A-4 HF Receiver specifications and **Table 1-2** for IF bandwidth options and sensitivity levels.

Table 1-1. WJ-8626A-4 HF Receiver Specifications

Tuned Frequency	5.0 kHz to 30.00000 MHz
Tuning Resolution	10 Hz
Synthesizer Tuning Speed	15 ms, typical
Antenna Conducted Local Oscillator Radiation	-87 dBm, maximum
Antenna Input Protection	The antenna input will withstand the effects of RF power to +27 dBm and static build-up. The protection circuit automatically resets.
Input Impedance	50 ohms, unbalanced, nominal
IF Bandwidths (3 dB)	Standard: 2.85 kHz; Optional: any four of the following: 0.2, 0.5, 1, 2, 3, 4, 6, 8, 12 or 16 kHz; USB, LSB
Detection Modes	Standard: FM, AM, CW, LSB and USB
Gain Control Modes	Manual, AGC
AGC and Manual Range	90 dB, minimum
AGC Threshold	3.0 microvolt, typical
AGC Attack Time	15 ms, maximum
AGC Release Time	FAST = 100 ms, maximum; SLOW = 2-4 Sec., nominal
Synthesized BFO	±8.0 kHz in 100 Hz steps
IF Rejection	Greater than 90 dB
Image Rejection	Greater than 90 dB

Table 1-1. WJ-8626A-4 HF Receiver Specifications (Continued)

Sensitivity	See IF Options and Sensitivity Table
IF Output	455 kHz, 20 mV into 50Ω, minimum, at 3 microvolt input level, IF BW limited
Signal Monitor Output	455 kHz, center frequency, 17 kHz bandwidth, 50Ω, output impedance
Third Order Input Intercept Point	+20 dBm, minimum for signals separated by 30 kHz minimum.
Video Amplifier Response	Within 3 dB from 20 Hz to 1/2 IF Bandwidth
Video Output Level	350 mV rms into 75 ohms
Video Distortion	Less than 5% total Harmonic Distortion in AGC or Manual Gain Modes
Phones Output	10 mW minimum into 600 Ω phones
Signal Strength Output	Shaped DC AM Detector output, 0 to +10 Vdc
Squelch/COR	Adjustable threshold from noise level to 80 dB above noise. COR holds a nominal 4 seconds after carrier disappears.
Digital Control	72 Bit Serial Word (WJ-9040 System compatible)
Environmental Conditions:	
Temperature, Operating	0° to +50°C
Size	5.2 inches (132 mm) high, 8.0 inches (203 mm) wide and 14.38 inches (365 mm) deep
Weight	Approximately 17 lbs (7.7 kg)
Power Consumption	Approximately 15 watts (From +8.2, ±18.3, +29 VDC)

Table 1-2. IF Bandwidth Options and Sensitivity Levels

	3 dB IF Bandwidth	IF Shape Factor (Typical) 50 dB:3 dB	RF Input Level Microvolts	dBm
WJ-9926A/200	200 Hz	10:1	0.50	-113
WJ-9926A/500	500 Hz	7:1	0.64	-111
WJ-9926A/1K	1 kHz	5:1	0.80	-109
WJ-9926A/2K	2 kHz	3:1	1.0	-107
WJ-9926A/3K	3 kHz	3:1	1.4	-104
WJ-9926A/4K	4 kHz	3:1	1.6	-103
WJ-9926A/6K	6 kHz	3:1	2.0	-101
WJ-9926A/8K	8 kHz	3:1	2.2	-100
WJ-9926A/12K	12 kHz	3:1	2.9	-98
WJ-9926A/16K	16 kHz	2:1	3.2	-97
WJ-9926A/USB	2.85 kHz	1.8:1	0.7	-110
WJ-9926A/LSB	2.85 kHz	1.8:1	0.7	-110
WJ-9926A/SSB (uses offset L.O.)	2.85 kHz	1.8:1	0.7	-110

Table 1-2. IF Bandwidth Options and Sensitivity Levels (Continued)

NOTE: Over the frequency range of 0.2 to 30 MHz, the RF input levels and IF Bandwidths specified above will:

1. Produce a minimum AM (S+N)/N ratio of 10 dB at the audio output for 50% AM modulation at a 400% Hz rate, (1 kHz and wider IF Bandwidths).

2. Produce a minimum CW (S+N)/N ratio of 16 dB at the audio output.

3. Produce a minimum FM (S+N)/N ratio of 17 dB at the audio output (10 kHz and wider IF Bandwidth).

4. Produce a minimum USB/LSB (S+N)/N ratio of 10 dB at the audio output (SSB Filters only).

Over the frequency range of 5 kHz to 200 kHz, the following applies:

CW Sensitivity (1 kHz IF Bandwidth)

200 kHz - 30 MHz	A 0.8 microvolt signal will produce at least a 16 dB (S+N)/N ratio at the audio output.
50 kHz - 200 kHz	A 1.8 microvolt signal will produce at least a 16 dB (S+N)/N ratio at the audio output.
15 kHz - 50 kHz	A 7.1 microvolt signal will produce at least a 16 dB (S+N)/N ratio at the audio output.
5 kHz - 15 kHz	A 128 microvolt signal will produce at least a 16 dB (S+N)/N ratio at the audio output.

When the optional switched sub-octave preselector option is installed, receiver sensitivity is decreased by 2 dB, maximum.