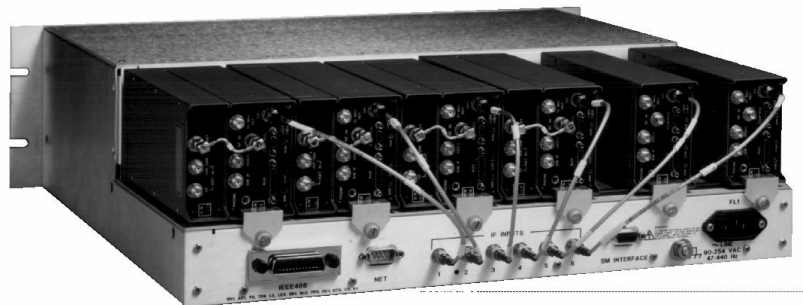# Technical Data

wj **WATKINS-JOHNSON**

May 1997

Microceptor Equipment Frame WJ-9904

The WJ-9904 Equipment Frame holds up to six independently configured WJ-8654 *Microceptors*. It allows any combination of narrowband or wideband *Microceptor* Receivers, with frequency extenders, covering 0.5 MHz to 2.4 GHz. The receivers must include the Blind-mate Connector option, which allows the user to plug them into the rear of the frame where all the inputs and outputs are available. An operator may choose from several interface options. The frame includes a universal-input AC-power supply that powers the installed receivers and options. It also includes mounting holes to support rack slides. The standard WJ-9904 front panel has no keypad or display. The basic WJ-9904 allows an operator to control each receiver from its individual RS-232/RS-422 port or connect them to a serial multidrop bus that controls all six receivers.

Features

❑ *Up to 6 WJ-8654 Receivers with or without frequency extenders*

❑ *Support for both narrowband & wideband receivers*

❑ *Independent RS-232 remote interface/ receiver*

❑ *Optional IEEE-488 remote interface*

❑ *Receiver I/O connectors at rear of frame*

❑ *Universal-input AC-power supply*

❑ *Optional front-panel controller*

❑ *Optional digitized IF pan data*

Specifications

Max Power Consumption	80 W, nominal (fully loaded with 6 WJ-8654/HFBMC Receivers, 9904/FP/488, & 9904/SM Signal Monitor module)
Cooling method	Fan-forced air
Operating Temperature	0 to 50°C

Height	Width[1]	Depth[1]	Weight[1]	
			Empty[2] Frame	Frame w/6[3] WJ-8654s
5.25 in (13.34 cm)	19 in (48.26 cm)	20 in (50.8 cm)	11 lbs 4.98 kg	31.8 lbs 14.38 kg

[1] Excludes connectors & handles
[2] Includes front panel and IEEE-488 interface
[3] Includes front panel, signal monitor, IEEE-488 interface

Frame Inputs/Outputs
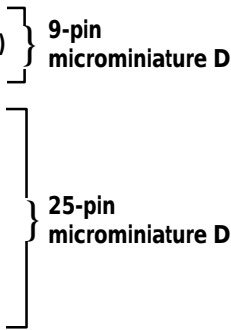
- AC power: 90 to 250 VAC, 47 to 400 Hz
- Optional IEEE-488 interface with 9904/BFP/488 or 9904/FP/488
- WJ-9605 control jack with 9904/BFP/488
- Switched audio output (9-pin D connector)
- Signal Monitor option includes dedicated RS-232 interface (9-pin D connector)
- Receiver signals (1 set per receiver installed)
  - VHF/UHF Antenna input (SMA)
  - HF-antenna input with 8654/HFBMC option (SMA)
  - Signal Monitor 21.4-MHz wideband IF (SMA) (not available with 9904/SM)
  - Switched 21.4-MHz IF output (SMA)
  - Video output (SMA)
  - 10-MHz internal-reference output (SMA)

  - Headphone output (1/8-in stereo jack) ⎫
  - RS-232 serial-receiver control (without 9904/BFP/488 or 9904/FP/488) ⎬ 9-pin microminiature D
  - Switched audio output ⎭

  - CMOS level input for Wake-up mode
  - RS-422 & -485 serial-receiver control
  - RS-232 auxiliary receiver control
  - Sync in/out ⎬ 25-pin microminiature D
  - Line & switched audio outputs
  - Received signal-strength indicator output
  - COR output
  - Spectrum invert-signal outputs

Options

Model	Function	Physical Characteristics
9904/BFP/488 IEEE-488 Host Interface	• Allows IEEE-488 control of receivers • Permits operation with remote front panel • Provides separate 38.4-k baud serial-communications path for each receiver and a signal monitor	• IEEE-488 printed circuit assembly & jack • WJ-9605 control jack instead of front panel • Plug-in microcontroller card to convert IEEE-488 communications from the host to RS-232 and connect various receivers or optional signal monitor • Excludes 9904/FP/488 option
9904/FP/488 Front Panel	Permits local control of receivers	• Excludes 9904/BFP/488 • Adds integral front-panel display, keypad & IEEE-488 Host Interface, plus: 1. 8-line by 40-character, backlit, Supertwist LCD 2. Parameter adjust encoder 3. Tuning encoder 4. Softkeys 5. Headphone jack & volume control
9904/SM Signal Monitor module	• Returns digitized IF pan data from any of the 6 receivers to a controlling computer • Controlled through the frame's IEEE-488 interface, or through the RS-232, or RS-422 interfaces of the WJ-9168	• WJ-9168 Signal Monitor module • 6-to-1 IF switch • SM port (9-pin D connector)