### Courtesy of http://BlackRadios.terryo.org



WJ-9490

## SIGNAL PROCESSING MODULE

The WJ-9490 is a highly flexible audio-signal processing module which offers a variety of processing modes, ranging from FFT-based spectral analysis to decoding of cellular control signals.

- Decodes AMPS/NAMPS/TACS/NMT control signals
- Flexible tone decoding
- Signal classification
- Programmable frequency inversion
- Very low power consumption (1.6 watts maximum)
- RS-232 control interface
- 3.5 x 4.5 x 1.1 inch (8.89 x 11.43 x 2.79 cm) package



# SIGNAL PROCESSING MODULE

The WJ-9490A is a user-downloadable, highly flexible audio processing module. The BAE SYSTEMS-provided dowload supports decoding of AMPS, NAMPS, EACS and NMT cellular standards. An optional download is available to allow the unit to decode IS-136 cellular signals.

- User programmable Motorola DSP56301 with digitizer and analog reconstruction
- Standard decodes AMPS/NAMPS/TACS/NMT signals
- IS-136 download optional
- Very low power consumption
- RS-232 control
- 3.5 x 4.5 x 1.1 inch (8.89 x 11.43 x 2.79 cm) package

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### DIGITAL FDM DEMULTIPLEXER

The WJ-9548 is a compact, multichannel demodulator which incorporated the accuracy and repeatability of Digital Signal Processing (DSP) to achieve exceptional amplitude and group delay characteristics. An analog tuner in the front end of each channel demodulator permits a high-resolution analog-to-digital converter and a significant degree of filtering prior to the sampling process. These effects combine to produce superior noise performance and high dynamic range. The WJ-9548 merges analog and digital techniques to achieve significant performance enhancements relative to demultiplexer implementations which are purely analog or digital.

Due to its modular design, the WJ-9548 is configurable as a 6-, 12-, 18- or 24-channel unit.

Units with fewer than 24 channels are field-upgradable by installing 6-channel cardsets into the appropriate motherboard slots. Other options are also field-installable with similar ease.

- Tunable from 0 to 20 MHz in I-Hz steps
- Very low differential group delay & flat amplitude response
- 4 analog baseband inputs with nonblocking connection to any channel demodulator (8 analog baseband inputs on the WJ-9548-1)
- Scanning capability and preprogrammed CCITT frequency plans to facilitate tuning

