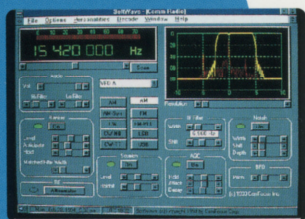
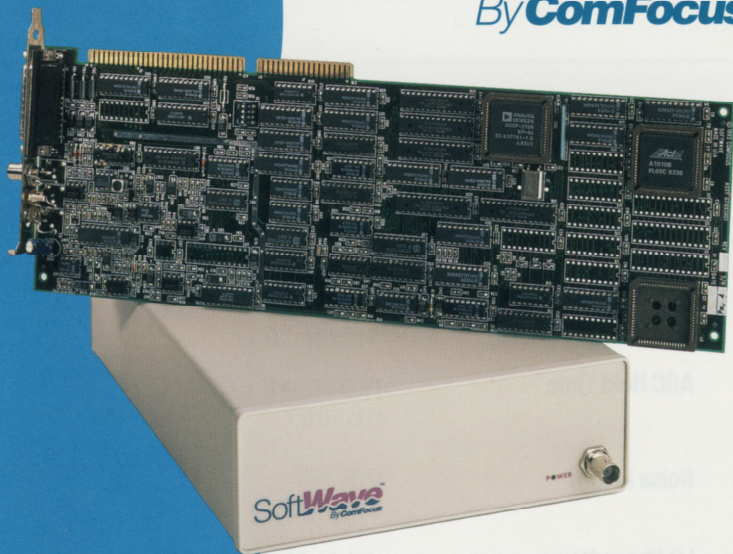


# SoftWave™

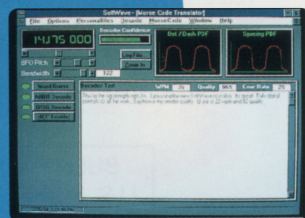
By ComFocus



*The Communications Radio. One of SoftWave's six different radio "Personalities." Tune continuously, in 1 Hz precision, in HF and VHF and see the signal in real time on the Spectrum Analyzer. Optimize the IF Filter to one of 46 settings from 11 kHz to 49 Hz. Because you **see** the signal, you can adjust the notch filter and view the results! All of this flexibility is achieved using advanced digital signal processing.*



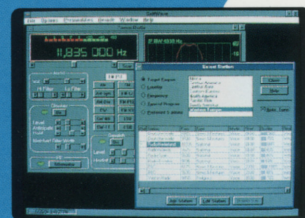
*The VHF Radio. A separate "Personality" for the VHF enthusiast. Continuous coverage from 108 to 174 MHz. Name your own scanning group or use one provided by SoftWave. Customize and set priority frequencies for each scanning group. Create your own customized VHF database. Identify stations by name, frequency, location or any other method you choose. Scanning step size and dwell time are completely variable. SoftWave is incredibly flexible.*



*Using SoftWave's proprietary Digital Decoding Techniques, the Morse Code Translator displays the decoded text right on the screen! "Zoom" the filter in to 49 Hz. SoftWave automatically eliminates excessive fading, maintains accurate frequencies and reduces noise. Using the Spectrum analyzer, digital "Tone-Tag" demodulation, and narrow band filters, the operator can receive and decode signals that are almost inaudible. Save the text to a disk or print a copy at your convenience. No thresholds to adjust or lessons to learn.*



*Click on the World Radio to "Hear the world at a glance." Fully digital controls tune up to 100 stations per second while indicating reception quality for each. Select one of several maps, click on a country and review the list of programs in the selected area. No need for propagation tables. Sort by region, country, frequency, program type or your own list of preferred stations. Easy to use, this feature is great for the first time or novice listener.*



*Choose the Select Station option to review SoftWave's database of worldwide programming. Select a station by geographic area, type of programming, frequency band, or your own list of preferred stations. Add, edit or create your own custom groups of programs for any frequency in the HF or VHF bands. Narrow the choices to what's on the air now, or in an hour (or two). Select "Auto Tune" and scroll through the database, listening to the world!*

**SoftWave is the first fully integrated digital communications receiver for Microsoft Windows. SoftWave combines a high performance receiver, digital signal processor, spectrum analyzer, multi-mode demodulator, decoder, database and Windows program in one product.**

Just like the modem opened the door to a world of BBS's and on-line services, SoftWave opens the door to wireless communications on the PC. SoftWave combines the user-friendly environment of Microsoft Windows with the fascination of Shortwave and VHF Radio. SoftWave includes:

#### SIX RECEIVERS IN ONE PRODUCT:

- AM DX Radio
- Communications Radio
- VHF Radio
- World Radio
- Time Synch Radio
- Wideband Spectrum Analyzer

The AM DX Radio is linked to SoftWave's database, including the current FCC AM Broadcast Database. Identify any distant station with a few clicks of the computer mouse.

The Communications Radio is designed specifically for the serious shortwave listener. Continuous coverage from 0.5 to 30 MHz. Completely digital controls include volume, high and low filters, AGC, blanker, squelch, IF filter bandwidth, notch filter and more. The spectrum analyzer displays the received signal and IF filter characteristics in real time right on the screen. Choose from 46 IF filter settings and set the notch filter attenuation up to 60 dB. Search the database for what's on the air now or select "Auto Tune" as you scroll through the listings.

The VHF Radio receives signals from 108 to 174MHz. Scan your own custom database at a rate of up to 100 stations per second. Store thousands of stations in customized scanning groups.

Using a colorful map and SoftWave's database, the World Radio lets both novice and experienced listeners "hear the world at a glance." Most of the digital controls are removed from the screen and operate in the background automatically, allowing the novice a user friendly shortwave experience.

The Time Synch Radio automatically displays the signal strength of the primary WWV broadcasts. Select the strongest signal and hear the accurate time. You can even set your computer clock in local time and UTC. Using the WWV signal and SoftWave's digital signal processing, you can calibrate the receive frequency to less than 1 ppm.

The wide band Spectrum Analyzer displays all signals in bandwidths from 200 kHz to 5 MHz. This is great for investigating band activity.

Listen to Morse code and watch the screen as the decoded text appears on the Morse Code Translator. SoftWave tells you the transmit speed in words per minute, the error rate and relative signal quality.

Detailed installation instructions and operating manual make SoftWave easy for the PC or shortwave novice. Simply install the DSP card in your PC, connect the SoftWave receiver, install the software and you are ready to go. All power is delivered to the receiver through the RS-232 cable (included) from the PC.

The future of digital receivers is here and it is called SoftWave.

#### LIMITED WARRANTY

Standard Manufacturer Warranty:  
1 Year

#### ComFocus Corporation

6160 Lusk Blvd.,  
San Diego, CA 92121  
1-800-SOFT-WVE (763-8983)





## Specification Sheet

<b>Frequency Range</b>	0.5 to 30 MHz (HF) and 108 to 174 MHz (VHF)	<b>Notch Filter Attenuation</b>	Variable to -60dB
<b>Front Panel Tuning Resolution</b>	1 Hz	<b>Audio Output</b>	1 W with 8 $\Omega$ load
<b>Signal Processor</b>		<b>AGC Attack Time</b>	programmable in 64 steps, 5 msec to 10 sec
<b>Tuning Resolution</b>	0.18 Hz	<b>AGC Decay Time</b>	programmable in 64 steps, 5 msec to 10 sec
<b>Modes of Operation</b>	AM, Synchronous AM, FM, CW, CW-NB, CW-TT, LSB,USB	<b>AGC Hold Time</b>	programmable in 64 steps, 0 to 10 sec
<b>Internal Reference Stability</b>	Better than 1.0 PPM after warmup	<b>Noise Figure</b>	9 dB (HF) 11 dB (VHF)
<b>Synthesizer Lock Time</b>	<10 msec, typical	<b>LO Phase Noise</b>	-90 dBc/Hz at 10 kHz offset, typical
<b>Image Rejection</b>	>90 dB (HF) >50 dB (VHF)	<b>IF Filters</b>	45 MHz, 450 kHz
<b>IF Rejection</b>	>90 dB	<b>Dimensions</b>	7.3" x 2.4" x 10.4" (LxHxD)
<b>Dynamic Range</b>	97 dB	<b>Weight</b>	2 lbs. 14 oz.
<b>3rd Order Intercept Point</b>	2.5 dBm (HF), 20 kHz Spacing 5.5 dBm (VHF), 20 kHz Spacing	<b>Power Consumption</b>	8W

## Sensitivity (0.5 MHz to 30 MHz)

Modulation	IFBW (kHz)	(Minimum) S+N/N (dB)	HF 0.5 to 30 MHz Typ dBm/V	VHF 108 to 174 MHz Typ dBm/V
AM (50 % modulation at 1 kHz)	6.0	10	-110/1.42	-108/1.80
USB/LSB	3.2	10	-119/.502	-117/0.65
CW	0.3	10	-130/.142	-128/0.18



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