



Technical Data

TYPE 377A RECEIVER



The CEI Type 377A Receiver is a wideband HF receiver covering 500 kHz to 10 MHz in one band. It is an all solid-state receiver designed for FM, AM, or CW reception over its entire tuning range. The receiver is particularly suitable for RFI detection and predetection recording. A six-digit Nixie display is used to indicate the frequency to which the receiver is tuned. By using the display's decimal shift feature, the indicated frequency is within 10 Hz of the received frequency throughout the tuning range. A bandwidth of 2 MHz is maintained through the RF tuner and is available for viewing at a signal monitor output jack. The RF tuner and IF amplifier utilize dual gate MOS field effect transistors in all critical stages for maximum sensitivity and dynamic range. The dynamic range is further expanded by use of a front-panel controlled five-position input attenuator which provides a maximum of 40-dB signal attenuation.

A digital automatic frequency control (DAFC) circuit in the 377A permits locking the receiver's local oscillator to the counter for the frequency display. In addition to counteracting local oscillator drift, the DAFC circuit, in effect, acts as a frequency synthesizer to provide the equivalent of 950,000 crystal-controlled frequencies, each separated by 10 Hz, when used in the decimal shift mode. Thus the 377A can be locked to a particular frequency whether or not a signal is present.

Four front-panel selectable IF bandwidths are provided: 6, 20, 100, and 400 kHz. The 100-kHz bandwidth is usable above 550 kHz, and the 400-kHz bandwidth is usable above 700 kHz. The 100-kHz and 400-kHz bandwidths were previously unavailable in HF receivers. A 455-kHz IF is used when the 6-kHz or the 20-kHz bandwidth is selected. A 21.4-MHz IF is used when the 100-kHz or the 400-kHz bandwidth is selected. Rear-panel predetection outputs of both intermediate frequencies are provided.

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SPECIFICATIONS

Tuning Range	500 kHz to 10 MHz in one band
Types of Reception	AM, FM, and CW
Noise Figure	7 dB, maximum
Sensitivity:	
6-kHz Bandwidth	AM: 0.5- μ V input, modulated 50% at 1-kHz rate, produces 10 dB (s plus n)/n, minimum FM: 0.8- μ V input, modulated at 400-Hz rate with 2-kHz deviation, produces 20 dB (s plus n)/n, minimum
20-kHz Bandwidth	AM: 0.8- μ V input, modulated 50% at 1-kHz rate, produces 10 dB (s plus n)/n, minimum FM: 1.5- μ V input, modulated at 1-kHz rate with 7-kHz deviation, produces 20 dB (s plus n)/n, minimum
100-kHz Bandwidth	AM: 2.5- μ V input, modulated 50% at 1-kHz rate, produces 10 dB (s plus n)/n, minimum FM: 1.7- μ V input, modulated at 1-kHz rate with 35-kHz deviation produces 20 dB (s plus n)/n, minimum
400-kHz Bandwidth	AM: 7.0- μ V input, modulated 50% at 1-kHz rate, produces 10 dB (s plus n)/n, minimum FM: 2.0- μ V input, modulated at 1-kHz rate with 150-kHz deviation, produces 20 dB (s plus n)/n, minimum
Input Impedance	50 ohms, nominal
Input Attenuator	0 dB, 10 dB, 20 dB, 30 dB, and 40 dB
IF Bandwidths	6 kHz, 20 kHz, 100 kHz, or 400 kHz, selectable by front-panel switch. 100-kHz IF bandwidth usable over tuning range of 550 kHz to 10 MHz. 400-kHz IF bandwidth usable over tuning range of 700 kHz to 10 MHz.
Image Rejection	80 dB, minimum
IF Rejection.	65 dB, minimum
IF Frequencies	21.4 MHz and 455 kHz
Digital AFC.	Holds receiver tuning within ± 1 kHz of the indicated frequency in the normal AFC mode, and within ± 100 Hz in the decimal shift AFC mode.
Audio Outputs	Two: front-panel phone jack (2000 ohms, nominal) and rear-apron audio, 100 milliwatts (600 ohms, balanced or unbalanced)
Predetection Outputs	21.4 MHz and 455 kHz
Predetection Output Level	25 mV, minimum, into 50-ohm load for input signals above AGC threshold
Signal Monitor Output Frequency	21.4 MHz
Video Output Level	5 volts peak-to-peak into 91-ohm load
Video Amplifier Response	Within 3 dB from 20 Hz to 400 kHz
Input Power	115/230 Vac, 50-400 Hz
Power Consumption.	25 watts
Dimensions	19 inches wide, 3.5 inches high, and 18 inches deep
Weight.	25 lbs., approximately

PRICE: \$4,500.00

FOB Rockville, Maryland. Taxes extra where applicable. Price and specifications subject to change without notice.