

340A RECEIVER



FEATURES

The 340A Receiver is a wideband voltage-tuned unit with exceptional signal handling ability. It has a typical 3rd Order Intermodulation Input Intercept Point of -3 dBm. Designed for RFI and EMI detection, the 340A provides single band tuning from 1 to 900 kHz. Selectable IF bandwidths of 1, 6, 20, and 50 kHz have been provided to facilitate the detection of both wideband and narrowband signals. An electronic counter with a five-digit readout is used to display the tuned frequency with an accuracy of ± 10 Hz. A digital automatic frequency control (DAFC) circuit in the receiver permits locking the unit's oscillator to the counter's reference source in 10-Hz increments over the entire tuning range. Provisions are made to remotely control the receiver tuned frequency, selection of IF bandwidth and setting of the gain.

Three detection modes are provided in the receiver: AM, FM, and CW. In addition, there are three gain control modes: Manual, AGC, and Logarithmic. Selecting CW operation automatically selects the manual gain mode. Both AM and CW operation are available in all four IF bandwidths. FM operation is available in the 20 and 50 kHz IF bandwidths. Separate de-

coupled outputs are included for the AM and FM detectors. Audio outputs are available at a front-panel phones jack and a rear-panel barrier strip connector.

Outputs from the 340A Receiver, in addition to AM and FM detectors, logarithmic video and audio mentioned above, include predetection IF centered at 455 kHz, analog tuning voltage, AGC output voltage, and a signal monitor output centered at 2 MHz suitable for use with the SM-8421 Signal Monitor.

All active elements in the 340A are solid state. A front-panel attenuator permits reducing the input level in 20-dB steps up to a maximum of 60 dB of attenuation. A signal strength meter indicates the relative level of incoming signals. All rear-panel connectors are type BNC except for the 600-ohm balanced antenna and remote tuning input which are triaxial types to provide a balanced antenna input circuit and minimize hum pickup which could cause incidental FM of the local oscillator. The unit is designed for mounting in a standard 19-inch rack and occupies 3.5 inches of vertical rack space. It operates from a 115 or 230 Vac, 50-400 Hz prime power source.

For Further Information Please Contact:

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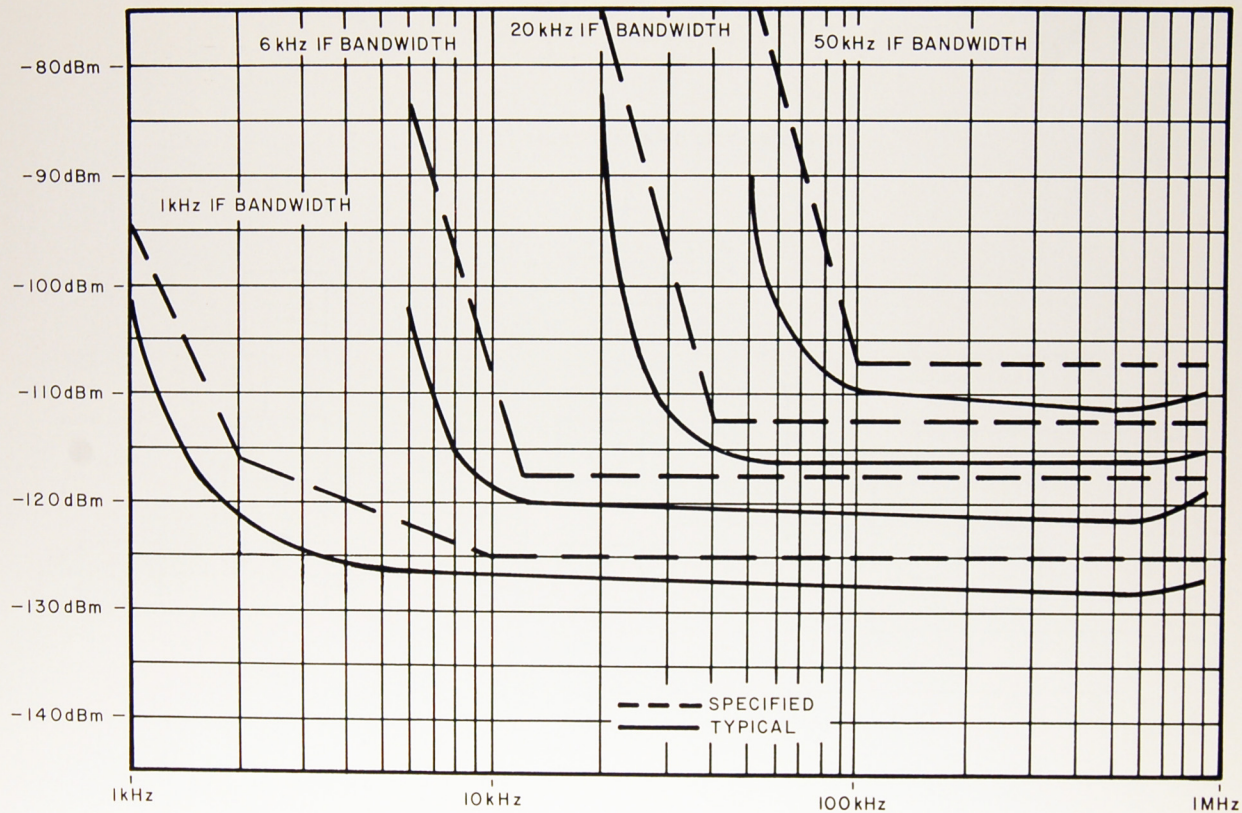
Printed in U.S.A.

AUGUST 1975

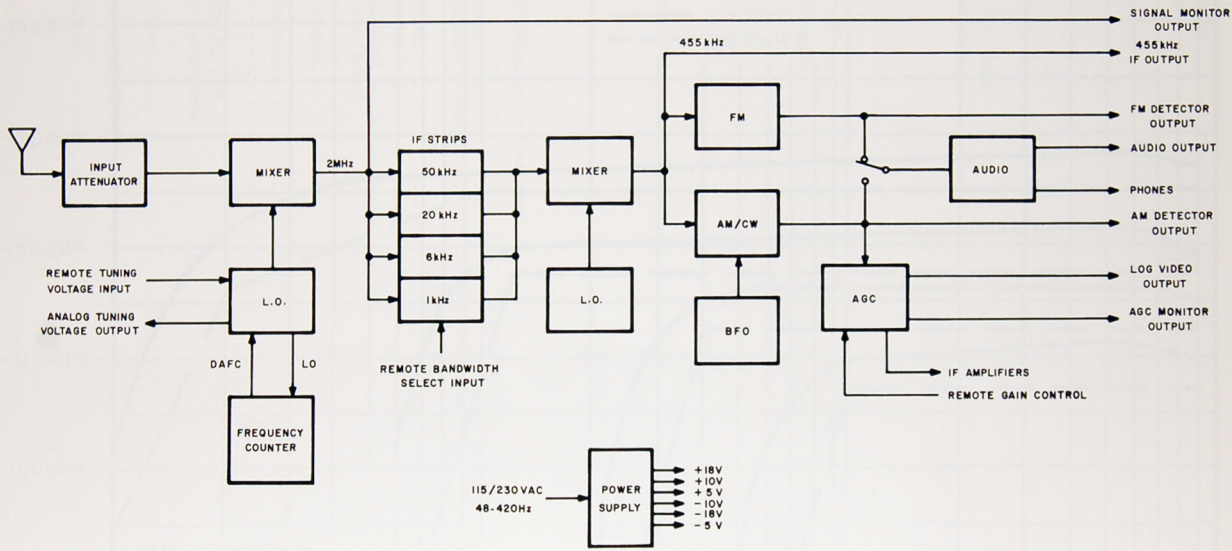
Specifications subject to change without notice.

SPECIFICATIONS

Tuning Range	1 kHz to 900 kHz in one band
Types of Reception	AM, FM, and CW
Input Impedance.	50 ohms, unbalanced, or 600 ohms, balanced
IF Frequencies	2 MHz and 455 kHz
IF Bandwidths.	1, 6, 20, or 50 kHz
Noise Figure	7 dB, maximum
Image Rejection.	70 dB, minimum
IF Rejection.	70 dB, minimum
Sensitivity (50-ohm input)	
1-kHz Bandwidth.	AM: 0.25 μ V input modulated 50% by 400-Hz tone produces 10 dB (s plus n)/n, minimum CW: 0.13 μ V input produces 10 dB (s plus n)/n, minimum
6-kHz Bandwidth.	AM: 0.64 μ V input modulated 50% by 1-kHz tone produces 10 dB (s plus n)/n, minimum CW: 0.33 μ V input produces 10 dB (s plus n)/n, minimum
20-kHz Bandwidth	AM: 1.2 μ V input modulated 50% by 1-kHz tone produces 10 dB (s plus n)/n, minimum CW: 0.58 μ V input produces 10 dB (s plus n)/n, minimum FM: 1.2 μ V input modulated at 1-kHz rate with 7-kHz deviation produces 17 dB (s plus n)/n, minimum
50-kHz Bandwidth	AM: 1.8 μ V input modulated 50% with 1-kHz tone produces 10 dB (s plus n)/n, minimum CW: 0.9 μ V input produces 10 dB (s plus n)/n, minimum FM: 1.8 μ V input modulated at 1-kHz rate with 17-kHz deviation produces 17 dB (s plus n)/n, minimum
Lowest Tuned Frequency for Maximum	
Sensitivity.	See Sensitivity curves
Audio Output Level	10 mW into 600-ohm load
455-kHz Predetection IF Output	20 mV, minimum, into 50-ohm load for input signals above AGC threshold
AM Detector Output.	0 to +5V into 10 k Ω load
FM Detector Output.	\pm 1V into 10 k Ω load
Tuning Voltage Output	0 to +10V into 10 k Ω load
Logarithmic Video Output	60 dB range, minimum. Output changes from 0.1V to 1V over range.
Signal Monitor Output.	Centered at 2 MHz
AGC Output	0 to -5V into 10k Ω load
Conducted LO Radiation	10 μ V, maximum
Digital AFC.	Holds receiver within \pm 10 Hz of indicated frequency over operating temperature range
Incidental FM (DAFC off).	5 Hz peak, maximum
Beat Frequency Oscillators	Two: One crystal controlled to zero beat with IF and one variable \pm 10 kHz around IF
Remote Tuning Input	-10V to +10V into 10 k Ω load tunes receiver from lowest frequency to highest frequency
Operating Temperature Range	0 $^\circ$ to 50 $^\circ$ C
Input Power	115/230 Vac \pm 10%, 48-420 Hz
Power Consumption.	21 watts, approximately
Dimensions	3.5 inches high, 19 inches wide, and 16 inches deep
Weight.	18 pounds, approximately



SENSITIVITY CURVES



340A-SIMPLIFIED BLOCK DIAGRAM