TECHNICAL DATA



6/1/71 - 170.50 RECEIVER **TYPE 595**



FEATURES

The Type 595 Receiver provides AM, FM and CW reception in the 220 to 440-MHz frequency range. It is a triple conversion unit with a first IF of 60 MHz for high image rejection, a second IF of 21.4 MHz and a third IF of 455 kHz. Three IF bandwidths may be selected by means of a front-panel switch: 10 kHz, 20 kHz, or 50 kHz. A crystal filter is used to set the 50-kHz bandwidth; ceramic filters are used for the 10- and 20-kHz bandwidths. A built-in signal monitor with a maximum sweep width of 300 kHz and a resolution of 2.5 kHz is provided. The signal monitor has a three-position marker switch which provides for marker off, a center-frequency marker to indicate the center of the IF passband, and markers every 50 kHz on both sides of the center-frequency marker. Other features of the 595 include a carrier operated relay (COR) and an independently variable beat frequency oscillator (BFO). A steel tape dial is used to indicate the frequency to which the receiver is tuned. The receiver's 220-MHz tuning range is spread over 26 inches of tape for readability and resetability.

SPECIFICATIONS

Frequency Range	220-440 MHz in one band
Types of Reception	AM, FM, and CW
IF Bandwidths	10 kHz, 20 kHz, and 50 kHz
Noise Figure	9 dB, maximum
Sensitivity:	
50-kHz Bandwidth	AM: 2.0 µV input modulated 50% by 1-kHz tone produces 10-dB (s+n)/n, minimum
	FM: 3.2 µV input modulated at 1-kHz rate with
	17-kHz deviation produces 21-dB (s+n)/n, minimum
20-kHz Bandwidth	AM: 1.3 μV input modulated 50% by 1-kHz tone

WATKINS-JOHNSON COMPANY

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Courtesy of http://BlackRadios.terryo.org

20-kHz Bandwidth (Continued)	FM: 2.3-µV input modulated at 1-kHz rate with 7-kHz deviation produces 21-dB (s+n)/n, minimum
10-kHz Bandwidth	AM: 0.9-μV input modulated 50% by 1-kHz tone
io-knz balldwidtli	produces 10-dB (s+n)/n, minimum
	FM: 1.6 μV input modulated at 1-kHz rate with
	3.5-kHz deviation produces 21-dB (s+n)/n,
	minimum
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Image Rejection	65 dB, minimum
IF Rejection	90 dB, minimum
Local Oscillator Output	50 mV, minimum
Local Oscillator to Antenna Conduction	15 μV, maximum
IF (predetection) Output	10 mV, minimum, into 50-ohm load for input signal
	levels above AGC threshold
Output Stability with AGC:	
50-kHz Bandwidth	AM: Output varies less than 4 dB for input signal
	range of 3.6 μV to 100 mV
	FM: Output varies less than 2 dB for input signal
	range of 3.0 μ V to 100 mV
20-kHz Bandwidth	AM: Output varies less than 4 dB for input signal
	range of 2.5 μV to 100 mV
10-kHz Bandwidth	AM: Output varies less than 4 dB for input signal
	range of 1.8 μV to 100 mV
Video Output Level	2 volts, rms, minimum, across 100 Ω load
Video Frequency Response	Within 3 dB from 20 Hz to 25 kHz (50-kHz bandwidth)
Audio Output	100 mW, minimum, into 600-ohm load or headphones
Audio Amplifier Frequency Response	Within 3 dB from 100 Hz to 20 kHz
BFO Range	±6 kHz, minimum
AFC Capability	Externally controlled
Signal Monitor Section:	
Sweep Width	0 to 300 kHz
Resolution	2.5 kHz
Sweep Rate	22.5 Hz, nominal
Flatness of Response	±1 dB
Input Power Required	115/230 Vac, 50-400 Hz
Power Consumption	16 watts
Weight	18 lbs., approximately
Dimensions	3.5 inches high, 17.5 inches deep, and 19 inches
	wide
	wide

Please contact us or our representative in your area for further information. Specifications subject to change without notice.