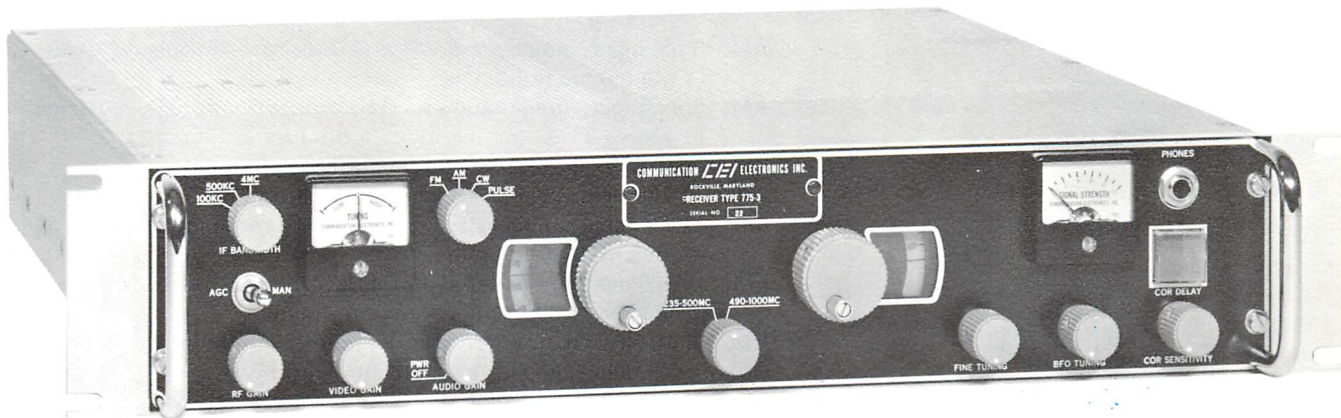




DATA
SHEET
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Technical Data

TYPE 775-3 RECEIVER (REPLACEMENT FOR TYPES 770A & 775 RECEIVERS)



The Type 775-3 Receiver is designed for the reception of AM, FM, CW, and pulse signals in the UHF frequency range of 235 to 1000 MHz. Modern components and techniques have been used to obtain maximum performance and retain the advantages of small size and low power consumption. A carrier operated relay (COR) circuit is standard on the 775-3.

A feature of the receiver is the unique AGC circuit, which has a charge time sufficiently short to permit operation on pulse widths as narrow as 1 microsecond and a discharge time sufficiently long to operate with pulse repetition rates as low as 50 pps. The loop gain of the AGC circuitry will hold the output pulse amplitude within narrow limits with large RF input level changes.

The pulse handling capability and selectable IF bandwidths makes this receiver a very versatile instrument.

SPECIFICATIONS

Type of Reception	AM, FM, CW, and Pulse; CW available on 100-kHz bandwidth only
Frequency Range	235-1000 MHz in two bands: Band A: 235-500 MHz; Band B: 490-1000 MHz
Signal Inputs	Antenna input for Band A - Antenna input for Band B Reference input for marker injection
Signal Outputs	Video output, audio output, signal monitor output, 21.4 MHz IF output, local oscillator output
Noise Figure	Band A: 10 dB maximum; Band B: 12 dB maximum
Image Rejection	Band A: 65 dB minimum; Band B: 75 dB minimum
IF Rejection	Band A: 80 dB minimum; Band B: 90 dB minimum
Oscillator Radiation at Input of Receiver	Band A: 8 μ V maximum; Band B: 75 μ V maximum
Antenna Input Impedance	Band A: 50 Ω , nominal; Band B: 50 Ω , nominal
IF Bandwidth	100 kHz, 500 kHz, and 4 MHz switchable from front panel
IF Frequencies	60 MHz; 21.4 MHz; 2.5 MHz, 100-kHz bandwidth only
Gain Control Characteristics	
Pulse AGC, 4-MHz Bandwidth	Charge time is sufficiently short to permit pulse widths as narrow

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SPECIFICATIONS (Cont'd)

	as 1 microsecond and as wide as a square wave. Discharge time is sufficiently long to operate with pulse repetition rates as low as 50 pps.
Normal AGC	Charge time: 0.3 sec, Discharge time: 0.3 sec
Manual Control	All IF's
Over-all Pulse Response for 4-MHz Bandwidth	Rise time or decay time no greater than 0.35 μ sec. Pulse sag no greater than 10% for an 800 μ sec pulse width
Sensitivity	
100-kHz Bandwidth	AM: 5 μ V input, modulated 50% at 1-kHz rate, produces 10 dB (s plus n)/n, minimum FM: 5 μ V input, modulated at 1-kHz rate with 30-kHz deviation, produces 21 dB (s plus n)/n, minimum FM Sensitivity: 0.1V per kHz deviation, minimum Pulse: -100 dBm tangential sensitivity, minimum
500-kHz Bandwidth	AM: 11 μ V input, modulated 50% at 1-kHz rate, produces 10 dB (s plus n)/n, minimum FM: 11 μ V input, modulated at 1-kHz rate with 150-kHz deviation, produces 21 dB (s plus n)/n, minimum FM Sensitivity: 0.02V per kHz deviation, minimum Pulse: -93 dBm tangential sensitivity, minimum
4-MHz Bandwidth	AM: 30 μ V input, modulated 50% at 1-kHz rate, produces 10 dB (s plus n)/n, minimum FM: 30 μ V input, modulated at 1-kHz rate with 1-MHz deviation, produces 21 dB (s plus n)/n, minimum FM Sensitivity: 0.004V per kHz deviation, minimum Pulse: -88 dBm tangential sensitivity, minimum
Audio Output	0.1 watt across 600 Ω , balanced or unbalanced
Video Output	0.7 volt rms across 100-ohm load
Video Amplifier Response	Within 3 dB from 20 Hz to 2 MHz
FM Output Stability	Less than 2-dB variation for inputs above 10 μ V
AM Output Stability	Less than 10-dB variation for 70-dB input change above 10 μ V
Signal Monitor Output Frequency	21.4 MHz
Signal Monitor Output Bandwidth	Compatible with CEI signal monitors to produce 3-MHz display
21.4-MHz IF Output	100 mV minimum into 50-ohm load available during 4-MHz operation only
Local Oscillator Output	50 mV minimum across 50 Ω
Beat Frequency Oscillator	Tunable over \pm 15 kHz on 100-kHz CW operation only
Carrier Operated Relay	
Sensitivity	Less than 1 μ V
Range	Adjustable to operate over an input signal level range of 1 μ V to greater than 500 μ V
Release Time	Slow: 6 second \pm 20%; Fast: less than 0.5 second
Front Panel Meters	Signal Strength, for AM, FM, and Pulse only; Tuning for AM and FM only
Dial Accuracy	Band A: 0.5%; Band B: 1.0%
Dial Resetability	0.25% (Fine tuning provided)
Power	115 or 230 Vac, 50-400 Hz, 60 watts (approximately)
Size	19 inches x 3.5 inches x 16 inches, rack mounted

PRICE: \$3,700

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