

BROADBAND RECEIVER

Model BR-640A

BROADBAND RADIO FREQUENCY RECEIVER FOR USE WITH PULSED ULTRASONIC INSTRUMENTATION WHERE EXCELLENT LINEARITY ALONG WITH FAST RECOVERY FROM OVERLOAD AND GOOD NOISE FIGURE ARE REQUIRED



- 64 DB GAIN
- 79 DB GAIN CONTROL
- WIDE FREQUENCY RANGE
- ADJUSTABLE FREQUENCY RESPONSE
- OVERLOAD PROTECTION AND FAST RECOVERY

Frequency Range of 100 kHz to 50 MHz.

The BR-640A maintains excellent recovery characteristics over its full frequency range. However, when working in the mid to high frequency range, some improvement in recovery time can be achieved by invoking one of the high pass filters. Cut-off frequencies of 100 kHz, 500 kHz, or 1 MHz may be selected. Typically, when single transducer (pulse-echo) operation is employed, high voltages are applied to the receiver input during the driving pulse. The BR-640A input is protected against high voltages and an average power input up to 2 Watts. When used with a RITEC diplexer the voltage and power to the receiver input will be radically reduced without reduction in signal. The diplexer removes the duty cycle limitations imposed by the 2 Watt resistor.

Control of High Frequency Response.

The high frequency response of the receiver may also be limited by selecting either the 12 MHz or the 3 MHz low pass filter. This has the advantage of reducing noise and rejecting high frequency spurious signals.

Large Gain Control Range.

The gain of the unit may be set from -15 to +64 dB in 1 dB steps without sacrificing the 6 dB noise figure except in the very low gain settings. This method of control allows the gain to be set accurately and reproducibly with imperceptible drift.

High or Low Input Impedance.

The unit features either a 50 Ω or high-impedance input (switch selectable) and a 50 Ω output with a 1 Volt peak to peak swing capability. Auxiliary power is also available for external modules such as pre-amps.



SPECIFICATIONS

BANDWIDTH: (at 3 dB points): 100 kHz to 50 MHz
(typically 70 MHz)

GAIN RANGE: -15 dB to + 64 dB in 1 dB steps

NOISE FIGURE: ~6dB

INPUT IMPEDANCE: 50 Ω or 10 k Ω paralleled by 25 pF
(switch selectable)

OUTPUT LEVEL: 1 Volt Peak to Peak into a 50 Ω load

HIGH PASS FILTER: 100 kHz, 500 kHz, or 1 MHz
(switch selectable)

LOW PASS FILTER: 3 or 12 MHz (switch selectable)

AUXILIARY POWER OUTPUT: ± 15 & ± 5 Volts,
regulated

INPUT POWER: 100, 120, 220, or 240 V at 50 to 60 Hz;
30 Watts

CABINET SIZE: 17" (43.2 cm) wide x 3" (7.6 cm) high
x 9" (22.9 cm) deep

WARRANTY: All RITEC instruments are warranted against defects in materials and workmanship for a period of one year after date of shipment.

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