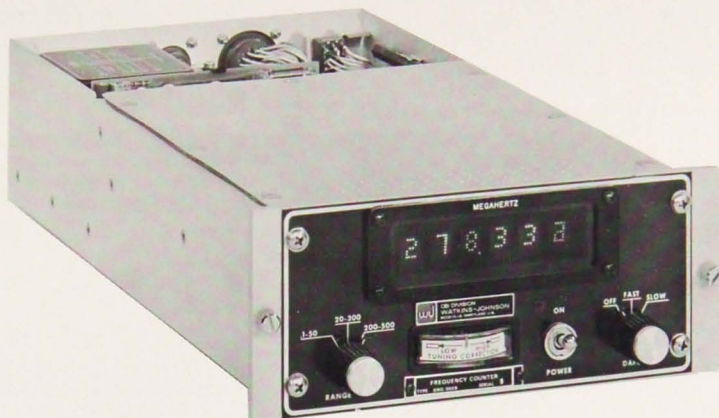


## FREQUENCY COUNTER DRO-302B



800

### FEATURES

The DRO-302B Frequency Counter is designed to indicate the tuned frequency of receivers over the frequency range of 100 kHz to 500 MHz. A six-digit light emitting diode (LED) display in the DRO-302B provides a readout accuracy of  $\pm 1$  kHz of the tuned frequency. In addition, Binary Coded Decimal (BCD) received frequency information is available at a rear-panel receptacle.

The DRO-302B also provides Digital Automatic Frequency Control (DAFC) for the receiver. DAFC permits locking a receiver to a desired frequency with a long-term stability approaching that of the counter's internal reference source. In addition to counteracting local oscillator drift DAFC, in effect, functions as a frequency synthesizer. In the 100 kHz to 50 MHz range the receiver can be locked in 100 kHz increments. Over the 20 to 500 MHz range, a receiver can be locked in 1 kHz increments.

An optional pre-scaler plug-in circuit module is available which allows the range of the DRO-302B Counter to be extended to 1000 MHz.

An information storage technique is used in the counter so that both the DAFC voltage and frequency information are continuously available. The LED display is continuous except during the up-date interval. This interval is only 100 $\mu$ sec so no flicker is seen on the display. The BCD frequency information is continuously available. By using the BCD output it is possible to read out the tuned frequency at a remote location.

The DRO-302B is built for mounting in an EF-201C Equipment Frame. It is a compact unit measuring 7.9 inches wide, 3.24 inches high, and 15.7 inches deep. Most active circuitry is on etched circuit, plug-in cards. Maximum use has been made of integrated circuits for reliability and compactness. Power connections to the unit are filtered to prevent the radiation of RFI. Front-panel controls and indicators are: a DAFC tuning correction meter, a DAFC selector switch, and a power on/off push-button switch.

For Further Information Please Contact:

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Specifications subject to change without notice.

## SPECIFICATIONS

Input Frequency Range .....	100 kHz to 560 MHz
Readout Frequency Range .....	100 kHz to 500 MHz (see note 1)
Input Impedance .....	50 ohms, nominal; BNC connector
Display .....	Six-digit LED decimal readout to nearest 1 kHz
Frequency Output .....	Parallel, 24-bits, 6 BCD digits, Logic "1" greater than +2.4V, Logic "0" less than +0.4V
Accuracy and Resolution .....	$\pm 100$ Hz, 100 kHz to 50 MHz; $\pm 1$ kHz, 20 to 500 MHz
DAFC Stability	
100 kHz to 50 MHz .....	Holds receiver to $\pm 100$ Hz for indefinite period
20-500 MHz .....	Holds receiver to $\pm 1$ kHz for indefinite period
DAFC Correction Voltage Swing .....	+2.5Vdc to -3.5Vdc
Sampling .....	Receiver sampled and updated every 12.5 or 22.5 ms depending receiver characteristics
LO Input Level .....	50 mV, minimum; 200 mV, maximum, into 50 $\Omega$ load
Input Power .....	115/230 Vac, $\pm 10\%$ , 48-420 Hz
Power Consumption .....	13 watts, approximately
Operation Temperature .....	0°C to 55°C
Dimensions .....	3.24 inches high, 7.9 inches wide, 15.7 inches deep
Weight .....	10 lbs., approximately

Note 1.—Frequency range may be extended to 1000 MHz by using an optional pre-scaler module, WJ Part number 79904.

Note 2.—The DRO-315 offers the identical specifications but in a full-rack package. See Technical Data Sheet 855.50.