Radio Frequency Finder / Counter

Features

- 10 digit Liquid Crystal Display
- Low power consumption (Average 6 hour battery life)
- LED back light
- Supplied with NiCd pack, AC wall charger, telescopic antenna and interface cable
- Measures frequency and period
- Automatically holds and tunes ICOM CI-V or AOR receivers
- Filter prevents display of random noise
- Hold switch to lock display
- Low battery indicator
- Beeper
- 4 selectable gate speeds
- Ultra sensitive synchronous detector 16 section bargraph to show RF signal strength
- High speed 300 MHz direct counter with 0.1 Hz resolution

Controls

1. Power Switch. This slide switch turns the RF finder on which also initiates a 2 second test of all the LCD segments.
2. Com Switch. This slide switch selects either the ICOM CI-V receivers or the AOR receivers.
3. Range Switch. This should be switched to the 300 MHz position for frequencies between 1 MHz and 300 MHz and switched to the 3 GHz position for frequencies between 10 MHz and 3 GHz.
4. Lite Switch. This slide switch turns the LCD back light on and off.
5. Filter Switch. Slide the switch to turn the filter on and off.
6. Function Button. This selects the frequency or period. This button has four settings. One each for displaying frequency or period as these are received, and two settings for automatic hold and tune of the first frequency or period found.
7. Hold Button. This holds the current display and stops the RF finder from counting.
8. Gate Button. This selects the gate or measurement time. A longer gate time allows counting for longer period and results in higher accuracy.
9. Calibration. The calibration adjustment opening is located on the front panel of the RF finder. This allows access to the trimmer capacitor that provides about a 10 PPM adjustment range of the time base oscillator. This is not usually necessary but to do so read a signal of a known frequency before adjusting the trimmer for correct frequency display. If you calibrate at 4.1943 MHz or above then the RF finder will be more accurate.

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Specification

Frequency range	1 MHz - 3 GHz
Impedance	50 Ohms
Battery	Internal 4 x AA 600 mAH NiCd pack
Power	9 VDC 300 mA
Case	Stamped aluminum with black anodized finish
Size	100 mm high x 68 mm wide x 31 mm deep
Weight	250 g

The distance from which you will be able to receive frequencies will depend upon the type and location of the transmitting antenna, transmitter output power and the frequency in use.

Some typical distances are:

Cordless Phone	0,3 m
Cellular Phone	3 - 10 m
VHF Two Way Radio	3 - 15 m
UHF Two Way Radio	3 - 15 m

Input Sensitivity. (50 Ohms)

Max. input	+15 dBm (1,2 Volts)
Sensitivity at 100 MHz	< 0.8 mV
Sensitivity at 300 MHz	< 6 mV
Sensitivity at 1.0 GHz	< 7 mV
Sensitivity at 2.4 GHz	< 100 mV

Input Sensitivity. (1 Meg Ohm, 30pF)

Frequency Range	10 Hz – 50 MHz	< 10 mV at 10 Hz – 10 MHz < 20 mV at 10 MHz – 50 MHz

RF Signal Strength Bargraph

Frequency	Segment	Full Scale
27 MHz	7mV	100 mV
150 MHz	5 mV	90 mV
800 MHz	10 mV	200 mV

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Frequency Display Resolution

Range	Gate Time (Seconds)	LSD	Sample Display
300 MHz	0.0625	10 Hz	300.00000 MHz
	0.25	1 Hz	300.000000 MHz
	1.0	1 Hz	300.000000 MHz
	4.0	0.1 Hz	300.0000000 MHz
3 GHz	0.0625	1000 Hz	3000.000 MHz
	0.25	100 Hz	3000.0000 MHz
	1.0	10 Hz	3000.00000 MHz
	4.0	10 Hz	3000.00000 MHz

Attention! The device is completed with the telescopic antenna which has a working range from 100 MHz up to 460 MHz. For effective operation of the device outside of this range, we recommend to use other types of external antennas.