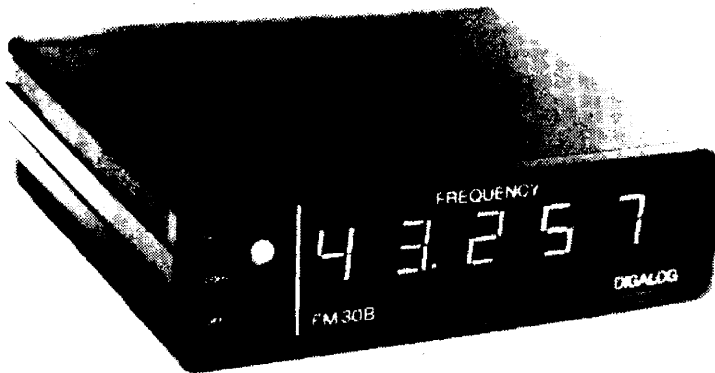


FM-30 B FREQUENCY MONITOR

OWNERS MANUAL



DIGALOG TECHNOLOGY, INC.

4216 North Maxson Road

El Monte, California 91732 U.S.A.

FREQUENCY MONITOR

Model FM-30 B

Operation Manual

3-1-82

**This manual applies directly to
Digalog Technology, Inc. (D.T.I.) Model FM-30 B**

CERTIFICATION

D.T.I. certifies that this instrument was thoroughly tested and inspected and found to meet the published specifications. Each unit is exposed to a minimum of 48 hours of burn in.

ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

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Thank you for selecting Digalog products. We feel the FM-30 B counter is one of the best equipment investments, offering the finest in Quality, Performance and Value.

The Digalog Communications Frequency Counter, Model FM-30 B, is designed to facilitate thru-line frequency monitoring. The resolution switch allows you to read direct to the nearest 1,000 hertz in the 1 KHz. mode or to the nearest 100 hertz in the .1 KHz. mode.

EXAMPLE: 28.500 MHz. in the 1 KHz. mode.
 8.5000 MHz. in the .1 KHz. mode.

Note the first significant digit 2 is not displayed, but the digit is considered as a part of the actual frequency.

THRU-LINE OPERATION

1. Connect the antenna, load to the "antenna" connector (SO239) on the rear of the counter chassis.
2. Connect the transmitter to the "radio" connector (SO239) on the rear of counter chassis.
3. For D.C. operation plug in power cord supplied and connect the red lead to a suitable power source. The black lead is the ground connection.

4. For A.C. operation plug in optional power supply (P.S. 110) to a 110 V 60 Hz power source. The power cord simply plugs into the power connector of counter.
5. Key the transmitter and check the indicated frequency on the counter. Compare this frequency with the prescribed frequency for the channel used. The difference indicates the amount of error present. (See channel to frequency conversion chart.)

CAUTION:

Use a dummy load to prevent on the air interference.

SINGLE SIDE BAND OPERATION

Single side band transmissions operate without a carrier until modulation occurs. Normal voice modulations display a non-stable amplitude and frequency, which will create an erratic indication on the frequency counter. This condition can be overcome by introducing a carrier or continuous tone when the transmitter is keyed.

EXAMPLE: C.W. side tone, inserting carrier or whistling a stable tone into the microphone. All tests should be conducted with a dummy load to prevent on the air interference.

SPECIFICATIONS

| | |
|----------------------------|---|
| Frequency range | 1 MHz. to 40 MHz. |
| Input impedance | 50 ohms |
| Input sensitivity | less than 1 watt |
| Max input power | 500 watts P.E.P. |
| Frequency stability | ± 10 P.P.M. 10° - 40° c |
| Accuracy | ± 10 P.P.M. ± 1 count (L.S.D.**) |
| Frequency resolution | 1 KHz., 100 Hz. |
| Gating speed | .012 sec. 1 KHz., .12 sec. 100 Hz. |
| Power consumption | 290 ma. @ 12 V.D.C. |
| Input voltage | 10 V. to 16 V.D.C. |
| Display | Five digit 1/2" high seven segment light emitting diodes. |

** (L.S.D.) Least significant digit

U.S. AMATEUR RADIO FREQUENCY ALLOCATIONS UP TO 10 METERS

| BAND | FREQUENCY |
|-------------|----------------------|
| 160 | 1.800 — 2.000 MHz. |
| 80 | 3.500 — 4.000 MHz. |
| 40 | 7.000 — 7.300 MHz. |
| 30 | 10.100 — 10.150 MHz. |
| 20 | 14.000 — 14.350 MHz. |
| 17 | 18.068 — 18.168 MHz. |
| 15 | 21.000 — 21.450 MHz. |
| 12 | 24.890 — 24.990 MHz. |
| 10 | 28.000 — 29.700 MHz. |