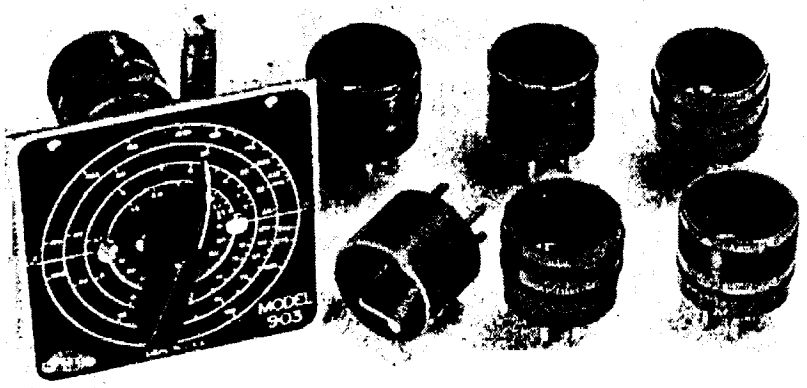
MODEL 903 ABSORPTION WAVE METER



In transmitter design and construction by the amateur in his shop or in the commercial laboratory, few instruments are as necessary as the absorption wave-meter. With it operation of oscillator, amplifier and double stages . . . super-regenerative and other receivers . . . may be investigated and checked rapidly and effectively .Of particular importance, frequency multiplying stages driven by a low frequency oscillator can be checked to insure output on the correct harmonic.

MODEL 903 Absorption Frequency Meter covers the unusually wide frequency range from 1600 kcs. up through the new amateur and civilian 400/500 megacycle ranges. It consists of an etched aluminum panel carrying a 600-series ,low-loss Steatite insulated tuning capacitor, inductor socket and resonance-indicating lamp and socket. A knob and pointer permit accurate setting of the tuning capacitor to any point upon eight scales; seven directly calibrated frequency ranges, the eighth scale 0-100. With suitable inductor plugged into the rear socket and held near a transmitter tank circuit, resonance and approximate frequency is indicated either by dip of plate current meter or by the indicator lamp.

The extreme frequency range of MODEL 903 Absorption Frequency Meter is made possible by two different types of tuned circuits. Upon six ranges the tuning capacitor is in parallel with the selected inductor wound upon a low-loss TYPE 125 "Micanol" plug-in form and functions as a conventional parallel-tuned resonant circuit. Upon the seventh, or 400/500 megacycle range, the inductor is a plug-in quarter-wave transmission line with series tuning.

MODEL 903 ABSORPTION FREQUENCY METER. Complete as above, 7-band, with calibrated, etched aluminum panel and indicator lamp, less inductors. Size 3½" square, 3¾" deep overall. Packed in substantial carton 3¾" x 4"; weight 12 oz. Code ABMET. **NET PRICE $3.30**

TYPE 100 INDUCTOR. Plug-in inductor with built-in indicator lamp coupling coil. Range 1600/3700 kcs. Packed in substantial carton 1½" x 1½" x 1¾"; weight 1½ oz. Code ONEIN. **NET PRICE $ .65**

TYPE 101 INDUCTOR. Same as above, but 3500/8000 kcs. Code TWOIN. **NET PRIC $ .65**

TYPE 102 INDUCTOR. Same as above, but 8000/15000 kcs. Code TREIN. **NET PRICE $.65**

TYPE 103 INDUCTOR. Same as above, but 17/40 mcs. Code FORIN. **NET PRICE $ .65**

TYPE 104 INDUCTOR. Sam6 as above, but 40/100 mcs. Code FIVIN. **NET PRICE $.65**

TYPE 105 INDUCTOR. Same as above, but 100/300 mcs. Code SIXIN. **NET PRICE $.65**

TYPE 106 INDUCTOR. Plug-in quarter-wave transmission line. Range 400/500 mcs. No indicator lamp coupling coil. Other wise as above. Code SEVIN. **NET PRICE $.65**

INSTRUCTIONS FOR MODEL 903 ABSORPTION FREQUENCY METER

By means of seven plug-in inductors (#100 thru #106) Model 903 covers the ranges of 3.5 thru 300 mcs. and 400 thru 500 mcs. Its accuracy is that usual to absorpti wavemeters -- adequate to determine whether final transmitter output is upon proper oscillator harmonic, to determine presence of r.f. power in transmitter tank circuits, for neutralization of power amplifiers, and for tracing of parasitic oscillation. Nominal calibration accuracy is to ±5%, but may become less as a function of coupling of the inductor to a tank circuit. No absorption frequency meter should be depended upon to make certain that a variable frequency oscillator (or its harmonic) is within an amateur band.

Model 903 panel carries 8 concentric graduation rings from top to bottom. Read as follows:

#1 (top scale) Inductor #105 -- 100 thru 300 mcs.
#2 Inductor #103 -- 17 thru 40 mcs.
#3 " #101 -- 3.5 thru 8 mcs.
#4 " #100 -- 1.6 thru 3.7 mcs.
#5 Reference Scale graduated 0-100
#6 Inductor #102 - 8 thru 19 mcs.
#7 " #104 -- 40 thru 100 mcs.
#8 (bottom scale) Inductor #106 -- 400 thru 500 mcs.

Do not burn out indicator lamp (Mazda #44) by bringing Model 903 inductor too close to a power amplifier tank circuit. Where power is not sufficient to light 903 resonance indicator lamp, resonance will be indicated by a change in reading of a milliammeter in the tube circuit being checked. In checking receiver circuits, resonance of 903 frequency meter with its inductor closely coupled to a receiver oscillator circuit will usually be indicated by stopping of oscillation.

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Made in U.S.A.