

EDDYSTONE MODULATION LEVEL INDICATOR CAT.NO.678

This Indicator provides a quick and accurate means of measuring the modulation percentage of the carrier and of checking the quality of the modulation. No power supplies of any kind are necessary, neither has any connection to be made to the transmitter. Supplied with the instrument are five coils, one each for the 1.7, 3.5, 7, 14 and 28 Mc/s amateur bands.

The operation of the Modulation Level Indicator is as follows.

For an initial test, stand the instrument (with the appropriate coil in position) some three or four feet away from the transmitter and switch on the carrier. With the switch at the rear of the instrument in the "Set Carrier" position, a reading will be obtained. The position of the instrument should be varied until the meter needle coincides with the "Set" mark on the scale. Then switch over to "% Mod" and the Indicator will read directly the percentage of modulation applied to the carrier. The instrument has been calibrated at 400 cycles and is reasonably accurate over the normal voice frequency range.

On plugging a pair of high resistance telephones into the jack at the rear, the quality of the modulation may be judged. Modulation depth will not be indicated while the telephones are in circuit.

The field strength near a transmitter will vary considerably, according to the input power, degree of screening, method of aerial feed etc. Should the field strength be such as to cause the needle to go off the scale, the sensitivity can be reduced by removing the pick-up rod or by detuning the instrument. The small ceramic tuning condenser is visible through a small hole at the rear and is adjusted with a screwdriver.

For field strength measurements at a distance, the tuned circuit in the Indicator should be brought into resonance with the transmitter frequency by the adjustment of the ceramic condenser. It may also be necessary to increase the amount of pick-up by attaching a short length of wire to the pick-up rod. When making such measurements, the instrument will of course be left with the switch in the "Set Carrier" position.

A further use for the Indicator is for checking harmonics by the absorption principle. The pick-up rod should be detached and the coil brought near the stage it is desired to check. If the harmonic is on or near the frequency band to which the instrument has been set, a large deflection will be registered and care is necessary to avoid the needle going off scale. If the harmonic is not the desired one little or no deflection will be obtained.

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