

V olume indicating equipment

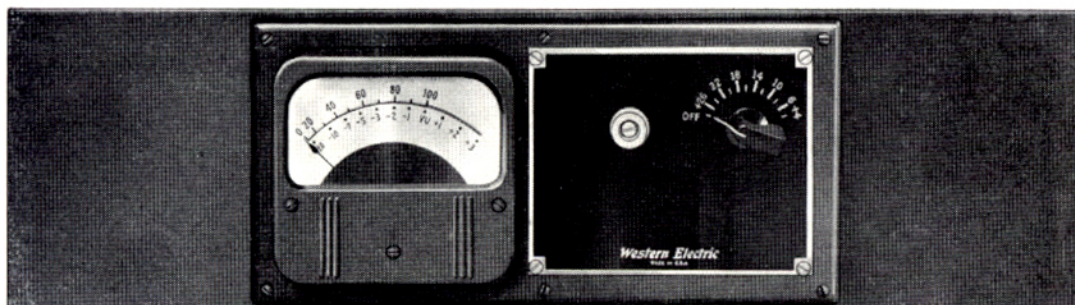


Figure 1 — 754A Volume Indicator Equipped With KS-8218 Volume Indicator Meter.

754A AND 754B VOLUME INDICATING EQUIPMENT

Use — These volume indicators are designed primarily for use in program line transmission systems, for radio telephone broadcasting, and for speech input and public address systems.

Description—They are of panel type construction, suitable for mounting on a 19" relay rack or bay cabinet and differ only in that the 754B has provision for an increased sensitivity of 10 db when terminating a line.

The KS-10065 Meter Cabinet is intended primarily for use by a control engineer in riding gain on a program where the instrument is always used in the same circuit at the same level. While means for adjustment during installation is provided, a range switch for the adjustment of sensitivity is not required under these conditions.

The KS-8218, KS-8208 and KS-8207 Meters are used in the 754 Type Volume Indicators and in the Meter Cabinet and differ only in the choice of scales and illumination. The KS-8218 Meter has an emphasized arbitrary voltage scale of 0 to 100 and a subordinated vu scale, indirectly illuminated by lamps mounted inside the front cover of the meter case. The KS-8208 differs from the KS-8218 in that the scales are reversed, the vu scale being emphasized. The KS-8207 Meter is similar to the KS-8208 except that the scales are not illuminated. The readings of these instruments are based on the accepted standard reference level for broadcast use.

Features

- Excellent frequency response.
- Does not introduce distortion into circuit terminated.
- Rugged construction.

754A VOLUME INDICATOR

A volume level indicating device which is direct reading when bridged on a 600 ohm circuit. It includes a switch for adjusting the sensitivities over a range from +4 to +26 vu at the 0 vu or 100 mark on the scale (about two-thirds full scale).

As there is a choice of meters (KS-8218, KS-8208 or KS-8207) the meter is not supplied as part of the indicator assembly and should be specified separately on the order. A blank plate is available which covers the meter mounting space in installations where the meter is mounted in a control desk or console apart from the 754A Volume Indicator. This plate also should be ordered separately, if desired.

Specifications

Frequency Response: ± 0.2 db 50 to 15,000 cycles.

Distortion: Less than the equivalent of 0.2 per cent rms is introduced into a 600 ohm circuit due to the bridging of the volume indicator.

Source Impedance: 7500 ohms when the meter is indicating at the 0 vu or 100 mark.

Bridging Loss: Approximately 0.3 db from 50 to 15,000 cycles when connected to 600 ohms.

Range of Measurements: +4 vu to +26 vu in circuits of 600 ohms impedance for a deflection to the 0 vu or 100 mark on the meter. -16 to +29 for the whole meter scale.

Dimensions: 19" wide, 5-7/32" high, 5-3/16" overall depth which includes 1-3/16" meter projection.

Western Electric

Mounting: Assembled on a 5-7/32" x 19" non-magnetic panel arranged for relay rack or cabinet mounting.

Finish: Dark aluminum gray on the front and light gray enamel on the rear. The panel has a photo-etched designation plate finished in black satin with chromium trim.

754B VOLUME INDICATOR

This Indicator has the same circuit and utility as the 754A. In addition it has a key by means of which the volume indicator circuit is changed to terminate a circuit in 600 ohms and give an increased sensitivity of 10 db. With this key operated to give increased sensitivity the volume indicator should not, of course, be bridged across a line.

The mechanical design and finish of the 754B are similar to those of the 754A. The electrical characteristics, other than sensitivity, and the choice of meters also are the same.

KS-8218-1 METER



The KS-8218-1 Meter is of the copper-oxide, rectifier type. From 25 to 16,000 cycles per second the response is uniform within 0.5 db (0.5 vu as read on the vu scale). As a result of refinements in design of this industry standard meter and of associated rectifier elements, an accuracy of approximately 3 percent of the voltage required for a deflection to the 0 vu or 100 mark is obtainable at any point of the scale at a room temperature of 75° F. Among the features of this instrument are:

Frequency and Temperature Stability — The response is uniform for all frequencies between 35 and 10,000 cycles per second to within 0.2 db (0.2 vu as read on the vu scale). The effect of temperature on the readings is less than 0.2 vu between 50° and 110° F.

Scale Reading — The KS-8218-1 Meter is provided with a type B scale in which the 0 to 100 scale is emphasized and the vu scale subordinated. The meter scale is long (arc length 3.3 inches) and the reference point so located that about two-thirds of the total scale length is utilized. This, together with the cream yellow scale and bold figures, reduces eye-strain and fatigue. The scale is indirectly illuminated by lamps mounted within the meter case which are accessible by removing the front of the meter.

The sensitivity of the meter in series with 3600 ohms

external resistance is such that a deflection to the 0 vu or 100 mark is obtained when 1.228 volts a-c is impressed across the combination. This corresponds to a volume level of +4 vu in a 600 ohm circuit.

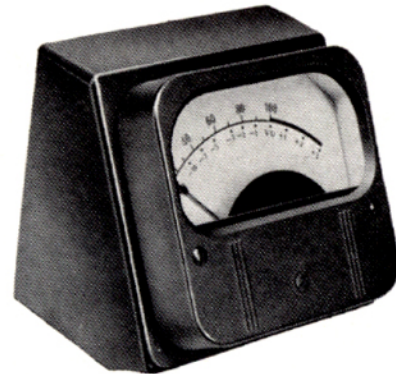
KS-8208 METER

The KS-8208 Meter is essentially the same as the KS-8218 except that it is provided with a type A scale in which the vu scale is emphasized and the 0 to 100 scale subordinated.

KS-8207 METER

The KS-8207 Meter is essentially the same as the KS-8208 Meter except that no provision is made for illuminating the scale.

KS-10065 METER CABINET



The KS-10065 Meter Cabinet contains a complete volume indicator circuit which is essentially the same as that of the 754A Volume Indicator except that it is without a range switch and adjustable calibrating resistance and is designed for permanent bridging across a 600 ohm circuit of suitable level in a speech input channel. When shipped, the input circuit of this cabinet is arranged to give a meter deflection to the 0 vu or 100 mark (about two-thirds full scale) with an input level of +18 vu.

Instructions which accompany the KS-10065 cabinet give suitable values of fixed resistances which may be substituted in the input circuit to adjust its sensitivity over a range from +4 to +38 vu. These values are for a deflection to the 0 vu or 100 mark on the meter. Taking into account the whole meter scale, these ranges are extended to volumes which are 20 vu lower than, and 3 vu higher than the values just given.

Specifications

The KS-10065 Meter Cabinet is aluminum cast and measures 4 3/4" long by 4-5/16" high. It is finished in dark aluminum gray. This cabinet is arranged to mount the KS-8218, KS-8208 or KS-8207 meter. Meters are not furnished as part of the cabinet and should be specified separately on the order.