



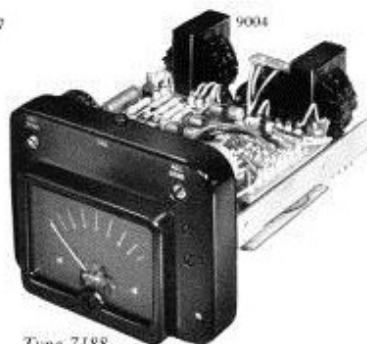
Programme Meters (V.U and P.P)



Type 6289.



Type 6288.



Type 7188.

THE NEED for the visual monitoring of sound intensity, or 'volume', arises because the ear is unable to discern accurately differences in loudness to the same fine degree as it discriminates variations of pitch. Two different methods have been adopted to overcome this defect and both are widely used, one relying on peaks in level for its operation, and using a peak programme meter, and the other relying more on overall energy level (r.m.s) of the outgoing signal, which is recorded on a volume unit meter.

Owing to the many variations of audio equipment which are required by various broadcasting authorities, both p.p and v.u meters are manufactured for use in consoles and rack equipment, the two meters being fully interchangeable.

V.U Meter Type BD 529

This standard v.u meter is 4½ in. square and has black and red marking on a white dial. There are two concentric scales, the upper is marked 0-100 and corresponds to the percentage modulation on the transmitter, and this is related to the lower v.u scale, 100% modulation coinciding with 'v.u' (corresponding to a level of +4 dBm).

Data Summary

Scale range: 23 v.u (approximately).
Sensitivity: +4 dBm for 'v.u' reading.
Frequency range: 30 c/s per second to 15 kc/s per second with an accuracy of 0.5 dB.
Speed of registration: 0.3 seconds.
Fall-back time: 0.3 seconds (approximately).
Input impedance: 7500 Ω.

P.P Meter Unit Type 6288 V.U Meter Unit Type 6289

Both of these units are extensions to the new unit system of amplifiers, described on pages 47 and 48. Each is built on a double-width chassis. The input impedance of each unit has been increased to 30,000 ohms, thereby reducing the loading of the line. Both units now have amplifiers, fitted with gain controls, adjustable in 2 dB steps, allowing lines of different levels (from -10 dBm to +10 dBm) to be monitored. Provision is made for feeding additional slave meters.

The specifications of each of these units is the same as those of the Types BD 520E and BD 529 respectively except for the details listed in the data summaries below.

Data Summary

P.P METER TYPE 6288
Input impedance: 30,000 Ω.
Range: Reads '4' on meter for inputs from -10 dBm to +10 dBm adjustable in 2 dB steps.
Power supplies: 300 V, 7.5 mA h.t. 6.3 V, 0.8A r.m.s l.t.

V.U METER TYPE 6289
Input impedance: 30,000 Ω.
Range: Reads 'v.u' on meter for inputs from -10 dBm to +10 dBm adjustable in 2 dB steps.
Power supplies: 300 V 7.5 mA h.t. 6.3 V 0.5A r.m.s l.t.

Peak Programme Meter Type BD 520E

This meter is engraved in white on a black dial and has, behind the meter, a valve amplifier designed and extensively used by the B.B.C. It requires h.t and heater supplies which can be taken from the console supply or from a separate power unit.

Data Summary

Scale range: 26 dB (approximately).
Sensitivity: 8 dBm maximum at half scale.
Frequency range: 20 c/s per second to 20 kc/s per second with an accuracy of ±0.5 dB.
Speed of registration: 4 milliseconds.
Fall-back time: 3 seconds (approximately).
Input impedance: 10,000 Ω, bridging.
Power supplies: 200-250 V, 50-60 c/s a.c.

Peak Programme Meter Type 7188

This is a transistorized unit with a performance similar to that of the Peak Programme Meter Type BD 520E.

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