

# QUALITY AMPLIFIER

## *High-grade Instrument with Separate Control Unit*

**T**HE new "QUAD" equipment introduced by the Acoustical Manufacturing Company, Huntingdon, comprises a high grade, low-distortion amplifier similar to the earlier type QA12, and a separate quality control unit with a well-thought out system of frequency compensation designed to give the best available performance with all types of input and under varying listening conditions.

The control unit comprises a master volume control, bass and treble balance controls giving both rise and fall, variable-slope low-pass filters for the suppression of high-order background and interference frequencies and a master control selector switch with facilities for quick reference to "straight-line" amplification without disturbing any other control settings. Alternative "cut-

off" frequencies centred on 6,000 and 8,000 c/s are available and the rate of attenuation above these frequencies is continuously variable from 10db/octave to 100db/octave.

From tests we have made it is evident that these characteristics have been well chosen to cope with all types and conditions of record and radio programmes. The best modern recordings can be played "neat" without correction, when in absolutely new condition, but after a score or so of playings even "vintage" records, from the point of view of frequency range and low intermodulation and tracing distortion, benefit from a moderate filter slope above 8 kc/s.

With a separate low-pass filter to deal with deficiencies in the input signal, the conventional bass and treble control can be applied to the correction of room acoustics or loudspeaker deficiencies and once set need no further adjustment. This is a distinct advantage, as was proved by a comparative test in which a programme with over-emphasized sibilants was subdued by the two alternatives available: the variable-slope filter went straight to the heart of the trouble, whereas the conventional top-cut control alone made appreciable incursions into middle frequencies before satisfactory suppression was achieved.

The QUAD amplifier and control unit can be confidently recommended to those who have discovered the inadequacy of the simpler tune controls; the wider scope extends the useful life of records, and the settings of the various controls can be used as a criterion of the quality of the input.

Frequency response in the basic amplifier is 20 to 20,000 c/s  $\pm 0.3$  db, and at 12 watts output the total distortion is not more than 0.25 per cent. Response is independent of volume control within 1 db.

The price of the QUAD equipment—amplifier, control unit and connecting cable—is £33.

Acoustical  
manufacturing  
"Quad" 12-watt  
amplifier and  
quality control  
unit.

