



HIGH QUALITY
TUNER UNIT
(TYPE HR/1)

The HR/1 is a radio tuner unit specifically designed for use with the QA12/P amplifier. It has been developed solely to obtain the maximum possible quality from transmissions in good or reasonably good reception areas. The unit is necessarily unselective, and no attempt has been made to provide reception from long-distance transmissions. Provided, however, that the signals from the desired stations arrive at the aerial free from adjacent channel interference, the reproduction obtained will be limited solely by the quality capabilities of the transmitter itself.

HR/1 CIRCUIT DETAIL

Two R.F. stages are employed and the aerial is coupled to the first grid via a potentiometer, no tuned circuit being used. This method of sensitivity control has been selected in preference to other methods in order to obtain R.F. amplification which is linear and hence free from envelope distortion. For the same reason, no A.V.C. is employed.

The R.F. stages are followed by a detector so arranged by a form of direct coupling that the ratio of DC to AC diode loading is unity, the result being that the detector will accommodate 100% modulated signals without distortion.

A composite type 20 filter follows the detector, switched as follows:—

1st position - UNLIMIT

All audio frequencies are passed to the amplifier and the R.F. tuned circuits are heavily damped for wide range response.

2nd position - 9 Kcs

All audio frequencies above 9 Kcs are suppressed and some damping removed from the tuned circuits.

Response: up to 8 Kcs level
9 Kcs - 20 db.
over 10 Kcs - 50 db.

3rd position - 7 Kcs

As position 2 but audio filter operating at 7 Kcs.

Response: up to 6 Kcs level
7 Kcs - 20 db.
over 8 Kcs - 50 db.

The tuner unit covers the medium and long wave bands and the dial is calibrated in kilocycles and metres. Switching and compensation is incorporated for gramophone input. Since the audio filter section is in operation on gramophone, no other filtering is required. The compensation is normally adjusted for a type C pickup unless otherwise specified.

The tuner unit takes its power supply from the QA12/P amplifier.

Dimensions: 9½" x 7" x 6"

Valve types: EF. 37—EF. 37—EB. 34.

A mains suppressor condenser is supplied with each unit.

TYPE 20 FILTER

The loudspeaker and amplifier described in this leaflet will reproduce everything from a gramophone record, including needle tracing distortion, cross modulation, and other effects associated with gramophone records. It is therefore essential that such distortions are filtered out for practical listening.

The HR/1 tuner unit incorporates this necessary filtering which is in operation for radio and record reproduction. Should the amplifier and loudspeaker be required without the tuner unit for the reproduction of records only, then a separate filter must be fitted between pickup and amplifier. The type 20 filter is available for this purpose.

The filter modifies the high frequency response to that laid down by leading recording engineers and is designed to obtain the optimum musical reproduction from a commercial record.

The filter may be switched in and out so that advantage may be taken of new and improved recording techniques as these develop.

Source impedance: 20,000 ohms.

Characteristics: 0 - 6,000 c.p.s. level
7,000 c.p.s. - 20 db
9,000 c.p.s. - 50 db

The filter is supplied in a mu-metal box and instructions for connecting the filter to various pickups are supplied.

Dimensions: 1½" x 1½" x 1½" (suitable for fitting under motorboard).

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