

# H.M.V. MODELS 400 & 425

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## -tone Monitor and Static Limiter.

Two interesting features are incorporated in these models and deserve mention. They are the Tone Monitor and the Static Limiter and these will be dealt with separately.

The **Tone Monitor** is a five-position two-bank switch, which in its various positions alters the selectivity of the I.F. channel and the degree of negative feed-back which is applied through a resistance-capacity network to a tap on the volume control from the secondary of the output transformer.

**1st Position (Wide Range).**—In this position the selectivity of the I.F. channel is broadened by switching a tertiary winding in series with the secondary of the 1st I.F. transformer (I.F.T. 1), and at the same time open-circuiting a tertiary winding on the 3rd I.F.T. transformer (I.F.T. 3).

**2nd Position (Normal):** In this position the I.F. channel selectivity is restored to normal.

**3rd Position (Bass):** In this position the I.F. selectivity remains normal, but the constants of the negative feed-back system are altered to give high-note cut and bass boost.

**4th Position (Speech):** In this position the I.F. selectivity remains normal, but the constants of the negative feed-back system are again altered, this time to give a flat bass response and treble boost.

**5th Position (Overseas):** In this position the tertiary windings on the I.F. trans-

formers are once more switched into circuit in exactly the same positions as in the 1st position of the switch, the constants of the negative feed-back system remaining the same as in the 4th position of the switch. The effect is to give a flat bass response and treble cut, together with broad tuning. When used as a gramophone, only the 2nd, 3rd, and 4th positions of the switch are effective.

The **Static Limiter** is controlled by a switch located on the back of the chassis in the case of Model 400 and on the control panel in Model 425. It is intended to limit the peak level of static, or electrical disturbances of peaky-wave-form, to a value not greatly exceeding the level of the carrier of the station being received, thus preventing the drowning of the signal by very loud bursts of static. It is useful chiefly in long distance reception of speech, and in short-wave reception where electrical interference is severe. It usually has a slightly detrimental effect on the tone of musical reception, and should therefore be switched off when not required. It has no effect on the sensitivity or selectivity of the receiver.

## NOTE ON VOLUME CONTROL.

During early production of these receivers, a carbon resistor of 10,000 ohms having an adjustable clip was connected between the tap and earth lug of the volume control, and was used to adjust the resistance from tap to earth closely to the required value of 2,500 ohms. Should such a receiver be encountered, this resistance should be checked and adjusted if necessary to give the correct resistance.

