



**TABLE AND DIAGRAMS OF SWITCH UNITS**

Switch	LW	MW	SW2	SW1	Gram.
S1	---	---	---	---	C
S2	---	---	---	C	C
S3	---	---	C	C	---
S4	---	C	C	C	---
S5	---	---	---	---	---
S6	---	---	C	---	---
S7	---	C	---	---	---
S8	C	---	---	---	---
S9	---	---	---	---	C
S10	---	---	---	C	---
S11	---	---	C	---	---
S12	---	C	---	---	---
S13	C	---	---	---	---
S14	---	C	---	---	---
S15	C	---	---	---	---
S16	---	---	---	---	C
S17	---	---	---	C	C
S18	---	---	C	C	---
S19	---	---	C	C	---
S20	---	---	C	---	---
S21	---	C	---	---	---
S22	C	---	---	---	---
S23	---	---	---	C	---
S24	---	---	C	---	---
S25	---	C	---	---	---
S26	C	---	---	---	---
S27	C	---	---	---	---
S28	---	---	---	---	C
S29	---	---	---	C	C
S30	---	---	C	C	---
S31	---	C	---	---	---
S32	C	---	---	---	---
S33	---	---	---	---	C
S34	---	---	---	C	C
S35	---	---	C	C	---
S36	---	C	---	---	---
S37	---	---	---	C	---
S38	---	---	C	---	---
S39	---	C	---	---	---
S40	C	---	---	---	---
S41	---	---	---	---	C
S42	C	C	C	C	---
S43	---	---	---	---	C

The contacts are switched into circuit by eight press-button switches, each of which is associated with one contact. The ninth button is marked "manual," and when depressed it releases any automatic button that may be depressed.

The circuit of the auto-mechanism starts at a chassis connection which goes to one end of the common motor winding via a built-in thermal switch (normally closed). The free ends of the two reversing windings of the motor each go (via sliding contacts) to one of the sectors of the split selector drum. Each selector contact goes to one side of its associated press-button switch. The other side of each switch is common, and goes to one end of an extra secondary winding on T2, the other end of which goes to chassis, and thus completes the circuit.

When a contact is switched into circuit, the motor is energised, its automatic clutch operates, and drives the gang one way or the other until the contact reaches the gap in the split selector drum, when the motor (and gang) stops.

While the motor is running, a switch mounted on its casing closes, and as this switch is connected across the secondary of T1, it temporarily mutes the speaker.

Another subsidiary circuit is that incorporating the selector adjustment lamp. A tag on a flying lead (which can be connected to any adjustable contact) goes, via the lamp, and a 15 Ω resistance, to the side of the heater secondary of T2 which is not connected to chassis. This lamp lights when the tag is connected to a contact resting on the selector drum, but goes out when the contact is adjusted so that it is over the gap in the selector drum, and this serves as a visual means of adjusting the contact to the correct position for any station which has previously been tuned in manually.

The tuning motor operates on 17.6 V, 30 W. The resistance across the two tags connected to the selector drum is 5 Ω, and from each tag to chassis tag, 5.5 Ω. The resistance of the motor secondary on T2 is 0.3 Ω.

**CIRCUIT ALIGNMENT**

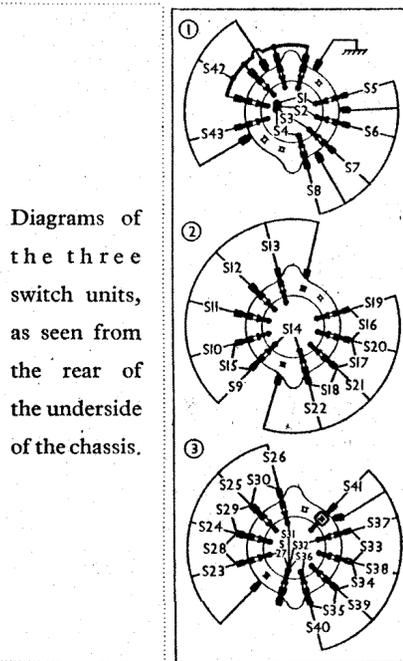
NOTE:—Our SW1 is the lowest wavelength range, and corresponds to makers' SW2, and vice-versa.

**IF Stages.**—Switch set to LW, turn gang to maximum, volume control to maximum and tone control fully clockwise, and short circuit C52. Connect signal generator to chassis and to control grid (top cap) of V2, via a 0.1 μF condenser, leaving the existing connection in place. Feed in a 465 KC/S signal, and adjust C59, C60, C61 and C62, in that order, for maximum output. Re-check, then remove short from C52.

**RF and Oscillator Stages.**—With gang at maximum, pointer should cover small vertical white line below the LW calibration line, on the right. Connect signal generator, via a suitable dummy aerial, to A and E sockets.

**LW.**—Switch set to LW, turn gang to minimum, and feed in a 725 m (413.8 KC/S) signal. Adjust C58 for maximum output. Feed in an 850 m (353 KC/S) signal, tune it in, and adjust C45 and C49 for maximum output. Feed in a 1,900 m (158 KC/S) signal, tune it in, and adjust C54 for maximum output, while rocking the gang for optimum results. Re-check all settings.

**MW.**—Switch set to MW, turn gang to minimum, and feed in a 195 m (1,538 KC/S) signal. Adjust C57 for maximum output. Feed in a 210 m (1,429 KC/S) signal, tune it in, and adjust C44 and C48 for maximum output. Feed in a 530 m (566 KC/S) signal, tune it in, and adjust C53 for maximum output, while rocking the gang for



Diagrams of the three switch units, as seen from the rear of the underside of the chassis.

optimum results. Re-check all settings.

**SW2.**—Switch set to this band (H.M.V. SW1), and turn gang to minimum. Feed in a 30 m (10 MC/S) signal, and adjust C56 for maximum output. Feed in a 32 m (9.38 MC/S) signal, and tune it in. Adjust C43 and C47 for maximum output. Feed in an 86 m (3.88 MC/S) signal, tune it in, and adjust L11 (loop of wire joining C16 to chassis), while rocking the gang, for maximum output. Adjustment is by opening out, or pinching in, the loop. Re-check all settings.

**SW1.**—Switch set to this band (H.M.V. SW2), and turn gang to minimum. Feed in a 13 m (23.08 MC/S) signal, and adjust C55 (by sliding plunger, and then locking), for maximum output. Feed in a 14 m (21.43 MC/S) signal, and tune it in. Adjust C42 and C50 for maximum output (as C55) while rocking the gang. Feed in a 30 m (10 MC/S) signal, tune it in, and adjust loop at C15 end of L9 for maximum output, while rocking gang. Re-check all settings.

NOTE.—The adjustments to L11 and the loop of L9 will not be necessary unless the wiring has been seriously disarranged, or L10 or L9 have been replaced.