



RESISTANCES

		Values (ohms)
R1	Aerial circuit shunt ...	5,000
R2	V1 CG decoupling ...	500,000
R3	V1 osc. CG resistance ...	50,000
R4	V1 osc. anode HT feed ...	20,000
R5	Osc. reaction damping ...	50
R6	V1, V2 SG's HT feed ...	30,000
R7	IF stopper ...	50,000
R8	V3 signal diode load ...	500,000
R9	Manual volume control ...	1,000,000
R10	V3 triode anode load ...	250,000
R11	AVC line decoupling ...	500,000
R12	V3 AVC diode load ...	250,000
R13	V1, V2, V4 GB and AVC delay resistances ...	200
R14		400

CONDENSERS

		Values (μF)
C1	Aerial coupling potential divider ...	0.005
C2	Aerial LW fixed trimmer ...	0.000025
C3	V1 osc. CG condenser ...	0.0001
C4	V1 osc. anode coupling ...	0.01
C5	HT circuit RF by-pass ...	0.1
C6	Osc. circ. LW tracker ...	0.00023
C7	V2 CG decoupling ...	0.1
C8	V1, V2 SG's decoupling ...	0.1
C9	IF by-pass ...	0.0005
C10	Coupling to V3 AVC diode ...	0.000025
C11	AF coupling to V3 triode ...	0.01
C12	AF coupling to T1 ...	0.01
C13	Fixed tone corrector ...	0.005
C14	HT reservoir condenser ...	2.0
C15	Auto GB circuit by-pass ...	25.0
C16	Aerial circuit SW trimmer ...	—
C17	Aerial circuit MW trimmer ...	—
C18	Aerial circuit LW trimmer ...	—
C19	Aerial circuit tuning ...	—
C20	Oscillator circuit tuning ...	—
C21	Osc. circ. SW trimmer ...	—
C22	Osc. circ. MW trimmer ...	—
C23	Osc. circ. LW trimmer ...	—
C24	Osc. circ. MW tracker ...	—
C25	1st IF trans. pri. tuning ...	—
C26	1st IF trans. sec. tuning ...	—
C27	2nd IF trans. pri. tuning ...	—
C28	2nd IF trans. sec. tuning ...	—
C29		—

* Electrolytic. † Variable. ‡ Pre-set.

OTHER COMPONENTS

		Approx. Values (ohms)
L1	Aerial SW coupling coil ...	0.3
L2	Aerial SW tuning coil ...	Very low
L3	Aerial MW tuning coil ...	2.5
L4	Aerial LW tuning coil ...	34.0
L5	Osc. circ. SW tuning ...	Very low
L6	Osc. circ. MW tuning ...	5.25
L7	Osc. circ. LW tuning ...	16.5
L8	Osc. SW reaction ...	42.0
L9	1st IF trans. { Pri. ...	7.5
L10	1st IF trans. { Sec. ...	7.5
L11	2nd IF trans. { Pri. ...	7.5
L12	2nd IF trans. { Sec. ...	5.0
L13	Speaker speech coil ...	4.0
T1	Intervalve auto-trans, total ...	3,500-0
T2	Speaker input { Pri. ...	500-0
	trans. { Sec. ...	0.4
S1-S10	Waveband switches ...	—
S11	HT circuit switch ...	—
S12	LT circuit switch ...	—

VALVE ANALYSIS

Valve voltages and currents given in the table below are those to be expected when the receiver is operating with no signal input and the volume control at maximum. Voltage readings should be taken with a high-resistance meter, whose negative lead is connected to chassis.

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 TH2	{ 129 Oscillator 55	{ 1.2 3.0	52	0.8
V2 VP2B	129	1.5	52	0.6
V3 TDD2A	45	0.7	—	—
V4 PM22A	128	2.0	129	0.3

GENERAL NOTES

Switches.—S1-S10 are the waveband switches, in a single, double-sided rotary unit beneath the chassis. A diagram showing the unit in detail is inset in the top left-hand corner of the circuit diagram, where it is viewed in the direction indicated by the arrow in our under-chassis view. The table below gives the switch positions for the three control settings, starting from the fully anti-clockwise position of the control. A dash indicates open, and C, closed.

Switch Table

Switch	LW	MW	SW
S1	—	—	C
S2	—	C	C
S3	—	C	C
S4	—	C	C
S5	C	—	—
S6	—	—	C
S7	—	C	—
S8	C	—	C
S9	—	—	C
S10	—	C	C

Coils.—All the RF and oscillator coils L1-L8 are in a single tubular unit mounted horizontally across the chassis deck beneath the trimmer assembly. The IF transformers L9, L10 and L11, L12 are in two screened units with their associated trimmers, mounted horizontally beneath the chassis.

CIRCUIT ALIGNMENT

IF Stages.—Connect signal generator via a 0.1 μF condenser to control grid (top cap) of V1 and chassis, turn the volume control to maximum, switch set to MW and adjust pointer to 580 m on scale. Feed in a 464 KC/S (646.55 m) signal, and adjust C26, C27, C28 and C29 for maximum output.

RF and Oscillator Stages.—With the gang at maximum, the pointer should be horizontal. Transfer signal generator leads to A and E sockets via a suitable dummy aerial.

MW.—Switch set to LW, tune to 1,200 m on scale, feed in a 1,200 m (250 KC/S) signal, and adjust C24 roughly. Tune to 1,714 m (spot on scale), feed in a 1,714 m 175 KC/S signal, and adjust C25 roughly. Switch set to MW, tune to 214 m (spot on scale), feed in a 214 m (1,400 KC/S) signal, and adjust C23, then C18, for maximum output. Feed in a 500 m (600 KC/S) signal, tune it in, and adjust C25 for maximum output, while rocking the gang for optimum results. Repeat the 214 m adjustment.

LW.—Switch set to LW, tune to 1,200 m on scale, feed in a 1,200 m (250 KC/S) signal, and adjust C24, then C19, for maximum output.

SW.—Switch set to SW, insert a 400 Ω resistance as a dummy aerial in the signal generator lead, tune to 20 m (spot on scale), feed in a 20 m (15 MC/S) signal, and adjust C22, then C17, for maximum output.

KOLSTER-BRANDES - 800