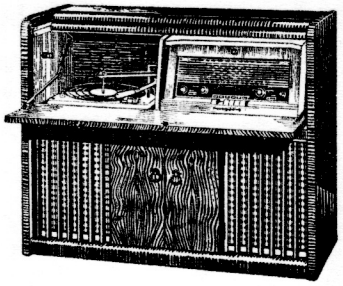
PHILIPS SERVICE NOTES



Philips "Westminster Hall"
Model F8Z96A

PHILIPS "WESTMINSTER HALL" MODEL F8Z96A

WAVERANGE
BC 520 kc/s, 1710 kc/s
5.6 mc/s—19.5 mc/s
Bandspread 25-31 metres

I. F.
455 kc/s

VALVES
ECH81, EBF89, 2 x EBC81
2 x ECC83, 1 x EF86, 1 x EM34,
4 x EL86, 2 x EZ81

LOUDSPEAKER
2 x AD3500 AM
2 x 9758A

VOLTAGE TABLE

Input at 230 volts. 0.65 amps. 130 watt.

Valve	*Plate*	*Screen*	*Cathode*	*Heater*
ECH81	Hexode 232v Triode 115v	85v	—	6.1
EBF89	232v	75v	—	6.1
EBC81 (1) EBC81 (2)	75v 75v	— —	— —	6.15 6.15
ECC83 RH channel	*230v Pin 6 150v Pin 1	— —	2.5v across R60 1v Pin 3	6.1
ECC83 LH channel	*230v Pin 1 150v Pin 6	— —	2.5v across R61 1v Pin 8	6.1
Bot LH channel EL86	*140v	*160v	11v	6.1
Top LH channel EL86	*165v	*140v	—	6.1
Top RH channel EL86	*165v	*140v	—	6.1
Bot RH channel EL86	*140v	*160v	11v	6.1
EZ81 (1)	290v A/c	—	320v DC	6.15
EZ81 (2)	290v A/c	—	320v DC	6.15
EM34	Target 265v Plate 120v Plate 238v	—	—	6.15
EF86	50v	50v	.9v	6.1

Voltages across C64—320v; C63—265v; C47—220v; C48—240v.
All readings taken with the Broadcast button depressed. The tuning condenser at minimum capacity, and the tone control in the maximum high, and low note positions. All voltages measured with a multimeter having a sensitivity of 20,000 ohms per volt on DC ranges and 1,000 ohm per volt on AC ranges. Voltage readings are taken between the points mentioned and chassis except those marked with an asterisk which are measured to the cathode of the same valve.

T-82 96A

ALIGNMENT OF RECEIVER

ALIGNMENT:—Turn the tuning condenser to Minimum Capacity position and adjust pointer to the edge of the gold calibration bars.

Waveband Switch Button	*Connect to Sig. Gen.*	*Trimming Frequency*	*Adjust to Max. Output Voltage*	*Sensitivity*
B.C. Gang open	Grid ECH81 via .01 Cond.	455 kc/s	(1) Diode Coil (2) Plate Coil EBF89 (3) Plate Coil ECH81 (4) Grid Coil EBF89	20 uv.
B.C. Gang open	Grid EBF89 via .01 Cond.	455 kc/s	——	1500 uv.
Broadcast	A & E via STD Dummy	550 kc/s	B.C. Osc. Coil Slug Aerial Coil on Rod Repeat	10 uv.
	A & E via STD Dummy	1700 kc/s	B.C. Osc. Trimmer B.C. Aer. Trimmer Repeat	10 uv.
Shortwave	A & E via STD Dummy	6 mc/s	S.W. Osc. Coil Slug S.W. Aer. Coil Slug Repeat	14 uv.
	A & E via STD Dummy	18 mc/s	S.W. Osc. Trimmer S.W. Aer. Trimmer Repeat	20 uv.
Bandspread	A & E via STD Dummy	9.6 mc/s	9.6 MC B.S. Osc Trimmer Repeat	20 uv.
	A & E via STD Dummy	11.8 mc/s	11.8 MC B.S. Osc. Trimmer 11.8 MC B.S. Aer. Trimmer Repeat	16 uv.

All above figures are measured with Volume Control maximum, and the two tone controls in the maximum boost position, balance control in central position. Sensitivity figures in Microvolts for 50 Milliwatts across 800 ohm load are maximum values. Sensitivity should be better than that given above.

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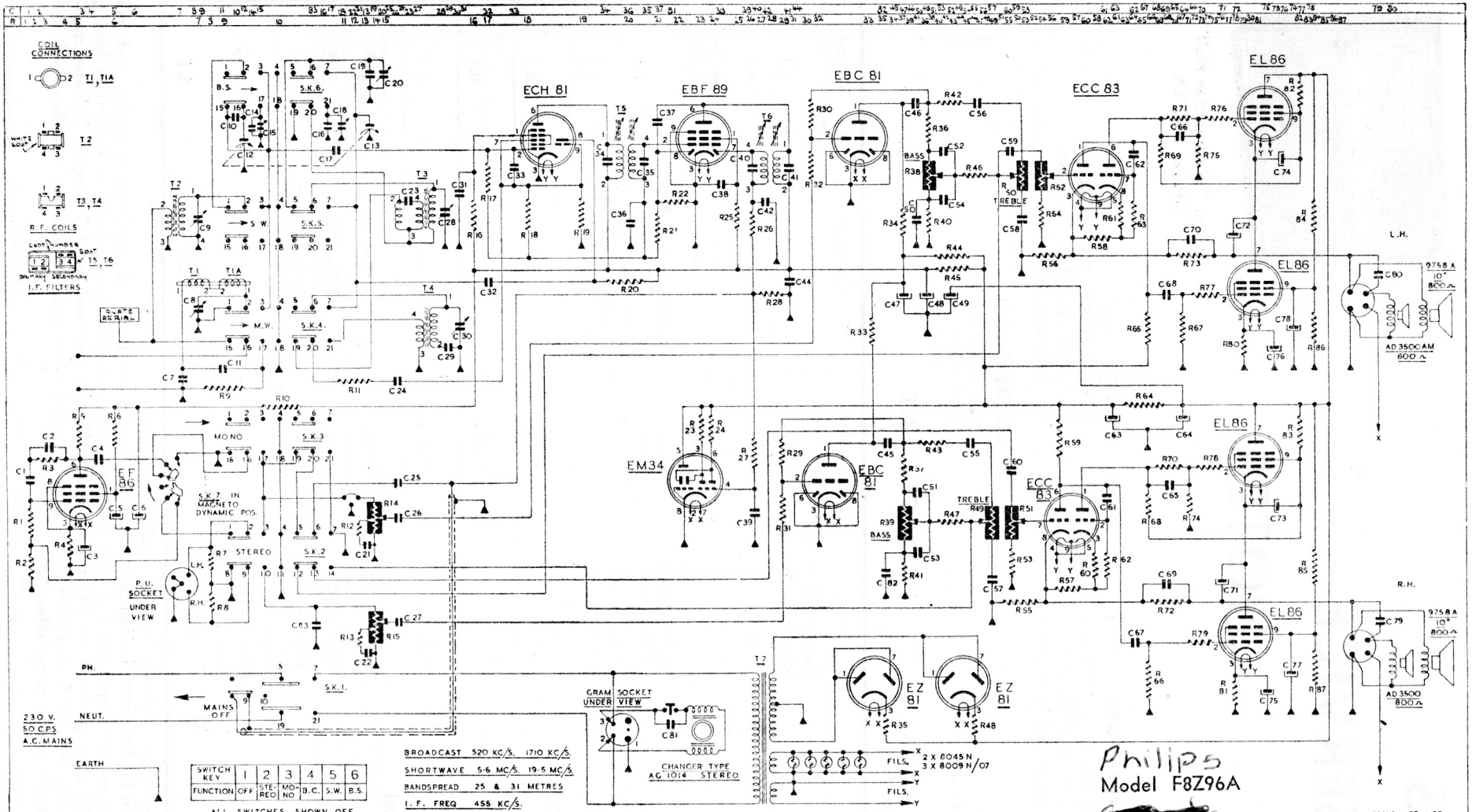


SWITCH KEY	1	2	3	4	5	6
FUNCTION	OFF	STEREO	MONO	B.C.	S.W.	B.S.

ALL SWITCHES SHOWN OFF

BROADCAST 520 KC/S. 1710 KC/S.
SHORTWAVE 5·6 MC/S. 19·5 MC/S.
BANDSPREAD 25 & 31 METRES
I.F. FREQ 455 KC/S.

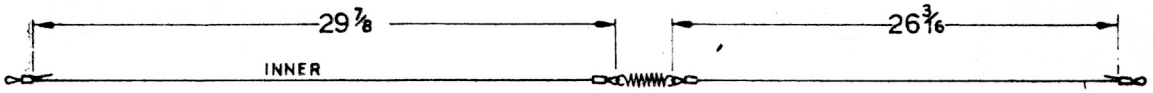
Philips
Model F8Z96A

M.H.A. 28-1-60

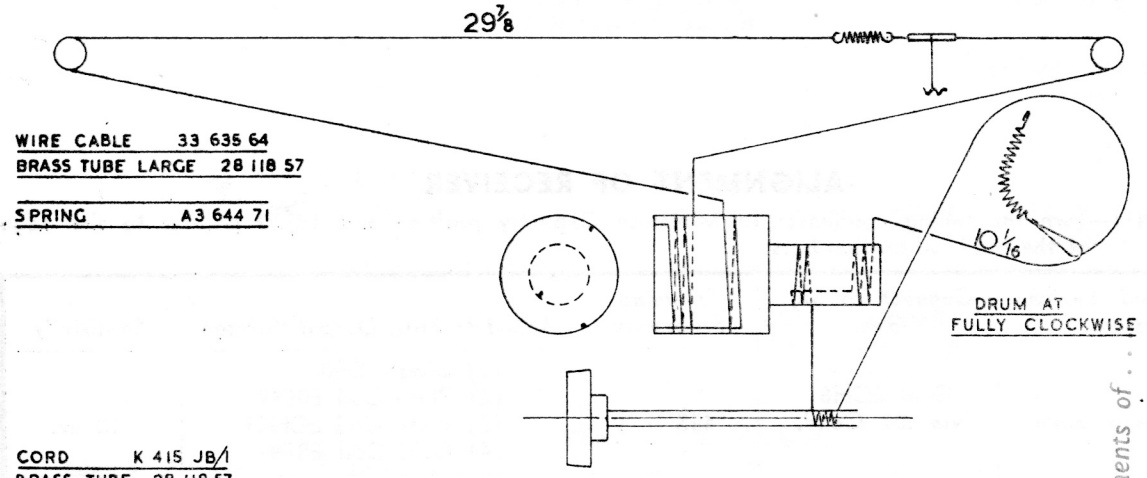
C1	330	MMFD	CERAMIC CONDENSER	C37	10	MMFD	CERAMIC CONDENSER	C73	8	MFD	300 V. ELECTROLYTIC	R26	56 K	¼W.	10%	CARBON	R62	1 MEG	¼W.	10%	CRACKED CARBON
C2	56	MMFD	" "	C38	10K	MMFD	350V. " "	C74	50	MFD	300 V. "	R27	2·2 M	¼W.	10%	CRACKED CARBON	R63	1 MEG	½W.	10%	WIRE WOUND ERIE
C3	50	MMFD	12·5V. ELECTROLYTIC	C39	47K	MMFD	125V. MYLAR "	C75	50	MFD	25 V. "	R28	270 K	¼W.	10%	" "	R64	2500 Δ	5W.	WIRE WOUND ERIE	
C4	10K	MMFD	CERAMIC	C40	100	MMFD	IN I.F. CAN	C76	50	MFD	25 V. "	R29	4·7 M	¼W.	10%	" "	R65	100 K	½W.	10%	CRACKED CARBON
C5	56	MMFD	350V. } DUAL ELCO	C41	195	MMFD	IN I.F. "	C77	50	MFD	300 V. "	R30	4·7 M	¼W.	10%	" "	R66	820 K	½W.	10%	" "
C6	25	MMFD	350V. }	C42	47	MMFD	CERAMIC CONDENSER	C78	8	MFD	300 V. "	R31	56 K	¼W.	10%	CARBON	R67	820 K	½W.	10%	" "
C7	3000	MMFD	STYROFLEX 5%	C				C79	8+8	MFD	125 V. MYLAR	R32	56 K	¼W.	10%	" "	R68	100 K	½W.	10%	" "
C8	3-30	MMFD	AIR TRIMMER	C44	10 K	MMFD	350V. " "	C80	8+8	MFD	125 V. "	R33	220 K	¼W.	10%	CRACKED "	R69	100 K	½W.	10%	" "
C9	3-30	MMFD	" "	C45	47K	MMFD	400V. MYLAR "	C81	10 K	MMFD	750 V. CERAMIC	R34	220 K	¼W.	10%	" "	R70	820 K	½W.	10%	" "
C10	455	MMFD	1% CERAMIC CONDENSER	C46	47	MMFD	" "	C82		MMFD	"	R35	150 Ω	½W.		W. W. RESISTOR	R71	820 K	½W.	10%	" "
C11	470	MMFD	" "	C47	50	MFD	} 350V. TRIPLE ELECTROLYTIC	C83	200	MMFD	"	R36	150 K	¼W.	10%	CARBON	R72	100 K	½W.	10%	" "
C12	9-498	MMFD	} TWIN GANG	C48	50	MFD						R37	1·5 M	¼W.	10%	" "	R73	100 K	½W.	10%	" "
C13	10-521	MMFD	} TRIM CONDENSER	C49	50	MFD						R38	2 M	}		DUAL CARBON POTENTIOMETER	R74	1·2 MEG	½W.	10%	" "
C14	82	MMFD	CERAMIC CONDENSER	C50	1 K	MMFD	CERAMIC CONDENSER					R39	2 M	}		BASS TONE CONTROL L.H.	R75	1·2 MEG	½W.	10%	" "
C15	4-60	MMFD	AIR TRIMMER	C51	2K	MMFD	" "	R 4	1 K	¼W.	10% CRACKED CARBON	R40	330 K	¼W.	10%	CARBON	R76	1 K	½W.	10%	" "
C16	220	MMFD	CERAMIC CONDENSER	C52	4·7K	MMFD	" "	R 5	100 K	¼W.	10% " "	R41	330 K	¼W.	10%	" "	R77	1 K	½W.	10%	" "
C17	220	MMFD	" "	C53	10K	MMFD	" "	R 6	390 K	¼W.	10% CARBON	R42	56 K	¼W.	10%	" "	R78	1 K	½W.	10%	" "
C18	4-60	MMFD	AIR TRIMMER	C54	10	MMFD	" "	R 7	1 MEG	¼W.	10% CRACKED "	R43	5 K	¼W.	10%	" "	R79	1 K	½W.	10%	" "
C19	237	MMFD	1% SILVER MICA	C55	470	MMFD	" "	R 8	1 MEG	¼W.	10% " "	R44	33 K	¼W.	10%	" "	R80	150 Δ	1W.	10%	" "
C20	4-60	MMFD	AIR TRIMMER	C56	470	MMFD	" "	R 9	10 K	¼W.	10% CARBON	R45	1500 Δ	5W.		W. W. ERIE	R81	150 Δ	1W.	10%	" "
C21	8N2	MMFD	CERAMIC CONDENSER	C57	3N3	MMFD	" "	R10	100 K	¼W.	10% CRACKED "	R46	39 K	¼W.	10%	CARBON	R82	6N8	1W.	10%	CARBON RESISTOR
C22	8N2	MMFD	" "	C58	3N3	MMFD	" "	R11	100 K	¼W.	10% CARBON	R47	39 K	¼W.	10%	" "	R83	6N8	1W.	10%	" "
C23	100	MMFD	1% " "	C59	50	MFD	12V. MYLAR	R12	1 MEG	¼W.	10% " "	R48	50 K	5 W.		W. W. RESISTOR	R84	4·7 K	2W.	10%	CRACKED CARBON
C24	47	MMFD	" "	C60	50	MFD	12V. "	R13	68 K	¼W.	10% " "	R49	100 K	LOG		DUAL CARBON POTENTIOMETER R.H.	R85	4·7 K	2W.	10%	" "
C25	0N	MMFD	350V. " "	C61	2·2 K	MMFD	CERAMIC "	R14	M+I MG	}	DUAL CARBON VOL CONTROL	R50	100 K	LOG		TREBLE TONE CONTROL	R86	4·7 K	2W.	10%	CARBON RESISTOR
C26	0N	MMFD	350V. " "	C62	2·2 K	MMFD	" "	R15	M+I MG	}		R51	1 M	SPECIAL			R87	4·7 K	2W.	10%	" "
C27	0N	MMFD	350V. " "	C63	50	MFD	} DUAL ELECTROLYTIC	R16	27 K	¼W.	10% CRACKED CARBON	R52	1 M	"		} DUAL CARBON POTENTIOMETER					
C28	3-30	MMFD	AIR TRIMMER	C64	50	MFD	350V. }	R17	1 MEG	¼W.	10% CARBON	R53	220 K	¼W.	10%	CARBON	T1	FERROCUBE ROD AERIAL COIL			VK 469-90
C29	25	MMFD	1% SILVER MICA	C65	10 K	MMFD	500V CERAMIC CONDENSER	R18	1·8 MEG	¼W.	10% " "	R54	330 K	¼W.	10%	" "	T1A	" " "			VK 469-90
C30	3-30	MMFD	AIR TRIMMER	C66	10 K	MMFD	500V. " "	R19	33 K	¼W.	10% " "	R55	560 K	¼W.	10%	CRACKED CARBON	T2	OSCN. COIL	S.W.		VK 470-80
C31	10K	MMFD	350V. CERAMIC CONDENSER	C67	10 K	MMFD	500V. " "	R20	27 K	¼W.	10% CRACKED CARBON	R56	680 Δ	½W.	5%	" "	T3	OSC. "	M.W.		VK 471-67
C32	470	MMFD	" "	C68	10 K	MMFD	500V. " "	R21	1 M	¼W.	10% CARBON	R57	33 K	¼W.	10%	" "	T4	OSC. "	L.W.		VK 471-66
C33	0·8	MMFD	" "	C69	50	MFD	" "	R22	1 M	¼W.	10% "	R58	33 Ω	½W.	10%	" "	T5	1ST I.F. TRANSFORMER			AS 147-47
C34	110	MMFD	IN I.F. CAN	C70	50	MFD	" "	R23	1 M	¼W.	10% "	R59	100 K	¼W.	10%	" "	T6	2ND I.F. "			AS 146-24
C35	110	MMFD	IN I.F. CAN	C71	8	MFD	300V. ELECTROLYTIC	R24	1 M	¼W.	10% "	R60	5 K	¼W.	10%	" "	T7	POWER			VK 691-16
C36	24N	MMFD	12V. MYLAR	C72	8	MFD	300V. "	R25	100 K	¼W.	10% CRACKED CARBON	R61	8 K	¼W.	10%	" "					

PHILIPS "WESTMINSTER HALL" MODEL F8Z96A

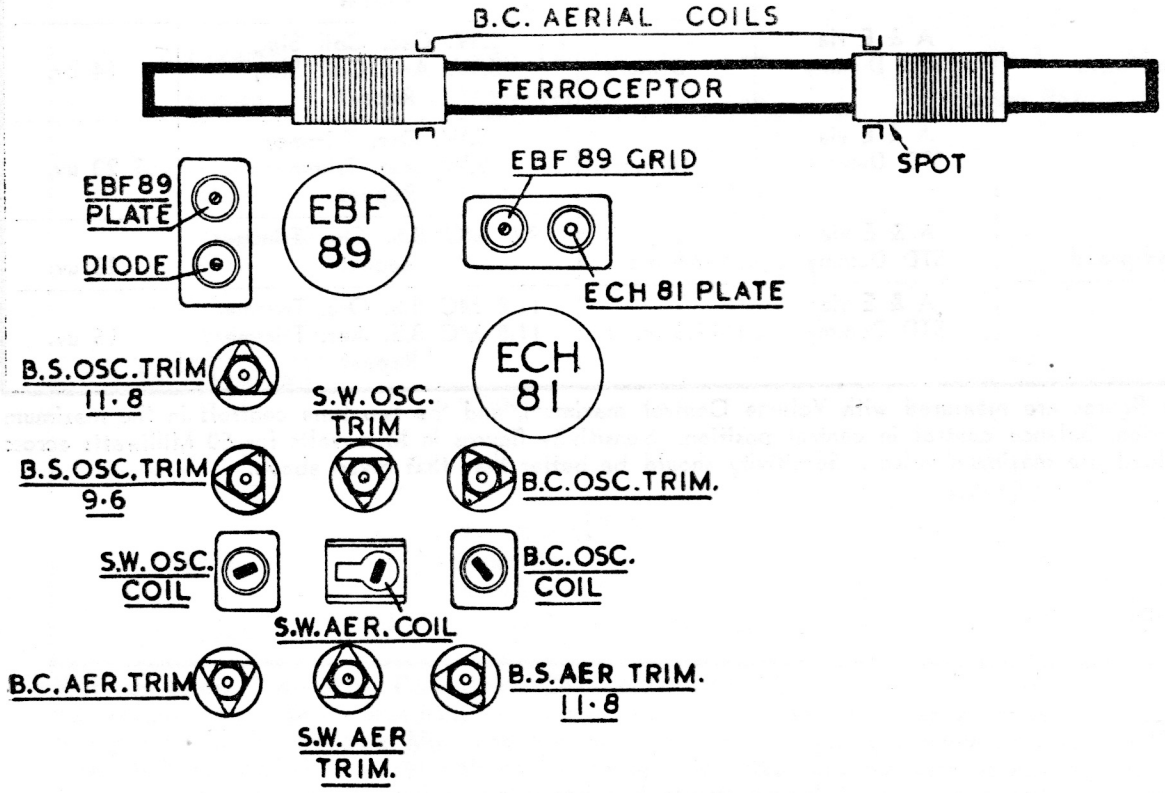
DIAL CORD DIAGRAM



POINTER CABLE ASSEMBLY VK 448-28



GANG DRIVE CORD ASSEMBLY VK 448-27



TRIMMER LOCATION DIAGRAM