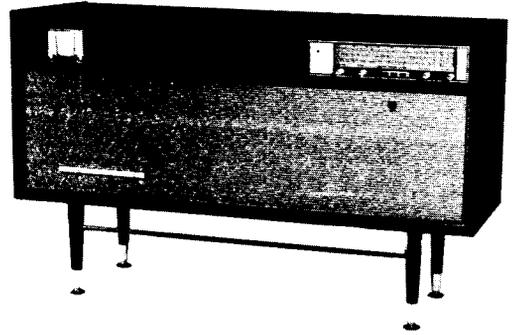


MODEL RF1-/01



SPECIFICATIONS

Power supply	200/230V, 240/250V, 40 - 50 c/s
Power consumption	60 W
Tuning range	530 - 1620 kc/s
Intermediate frequency	455 kc/s
Cabinet	Single unit stereophonic radiogram
Record changer	Philips NG 1020
	RF1 - 01 Garrard Auto Slim
Pickup head	Philips AG 3304
	RF1 - 01 Ronette 105 crystal, with diamond stylus
Tape deck	Philips EL 3514
Microphone	Philips EL 3756
Dial lamps (x2)	Philips 8045D 6.3V, 0.32A

For record changers, tape deck and microphone, see separate Service Data

NOTE: RF1 and RF1-01 vary in type of record changer used and in deletion of C31 in RF1-01 (see "Specifications").

CHASSIS REMOVAL

Remove power plug from wall outlet socket, remove cabinet back. From inside record changer compartment, remove one screw on dividing wall to release radio chassis cover panel and lift panel from cabinet, Remove four control knobs (push fit). Remove P.U. plug from its socket on underside of chassis. Unsolder two leads from tape deck, one at the left hand lug strip and the other at the central lug strip. Disconnect all incoming leads at the connector strip at the rear of the chassis. Remove the four chassis mounting screws and lift the chassis from the cabinet.

Refitting the chassis is a reversal of the above procedure.

RECORD CHANGER REMOVAL

Remove power plug from wall outlet socket, remove radio chassis cover panel, remove cabinet back. Remove changer mains lead from connector block at rear of radio chassis, remove P.U. plug from its socket on underside of chassis. Remove four changer mounting bushes at corners of record changer. Lift changer from cabinet. Refitting the record changer is a reversal of the above procedure.

TAPE DECK REMOVAL

It is possible to remove the tape deck from the cabinet, with leads attached, if it is required to work on it while still connected to the receiver. To do this - remove the power plug from the wall outlet socket, remove the cabinet back, remove the top holding panel for the tape deck (four screws on top and two in the rear in the record storage compartment). Remove the formed panel which constitutes the record storage compartment. Remove the control mounting bracket from the cabinet, remove the wing screw which secures the tape deck on the underside. The tape deck with all attached leads may be withdrawn from the cabinet.

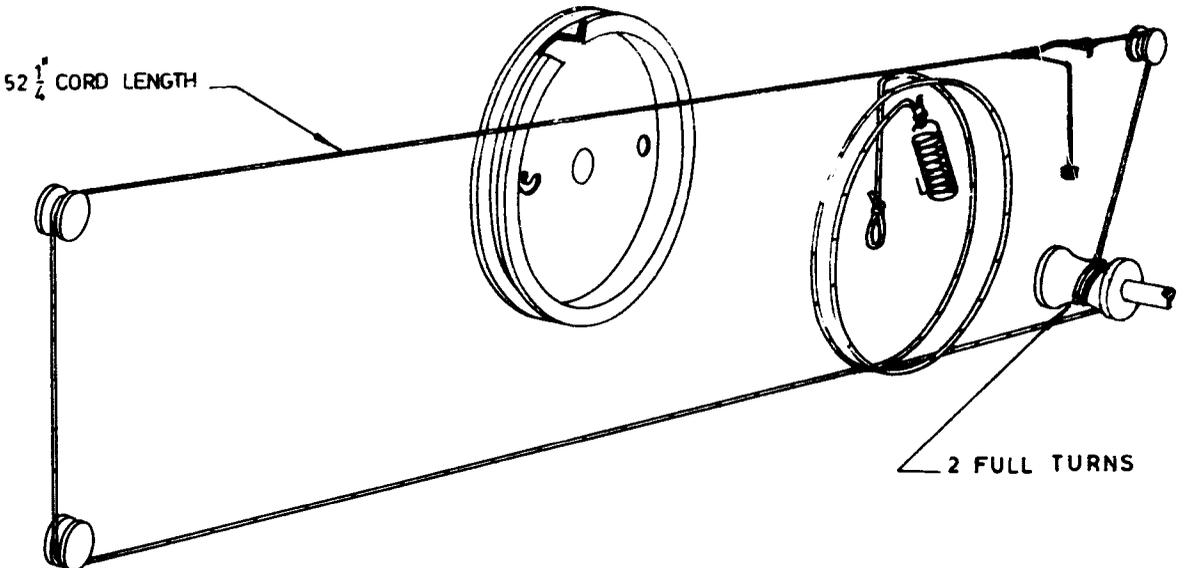
If the tape deck is required without attachments, proceed as above but do not remove the control mounting bracket but unsolder the two leads to the power switch on it. In addition, remove the radio chassis cover panel and remove the tape deck leads from the connector block. From the rear of the tape deck remove the two banana plugs and the microphone input plug. From in front of the tape deck remove the tape recorder volume level plug. Refitting of the tape deck in either case is a reversal of the appropriate procedure.

April, 1963

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Branches in all States

DESCRIPTION	CODE NO.	DESCRIPTION	CODE NO.
Badge - Philips	S8.160.38	Plug - 4 pin (pick-up)	CZ.365.320
Clip - I.F.T. mounting, 2x	A3.652.58		McMurdo B46P
Cursor assembly	CR.480.684	Plug - 5 pin (T/R vol. level)	CZ.365.318
Decorative bar for front legs	CS.702.143		McMurdo B5CP
Dial cord, 52 $\frac{1}{4}$ " required. bulk	965/JB1	Pulley, dial drive, 3x	CS.359.627
Dial cursor assembly	CR.480.684	Scale - dial	CS.412.464
Dial drive spring	CS.200.030	Schock mould, cabinet, bulk	CD.906.422
Dial drum assembly	CR.382.005		type 10/3007
Clip for above	CH.777.371	Socket - valve, noval, 5x	CZ.369.718
Dial, escutcheon	CS.430.127		C/F733-2-25
Dial lampholder, 2x	CZ.367.951	Socket - 4 pin (microphone)	CZ.370.517
	C/F 733-8-4		McMurdo X4QA5/C
Dial pulley, 3x	CS.359.627	Socket - 4 pin (pick-up)	CZ.370.512
Dial scale	CS.412.464		McMurdo 4QMS/C
Escutcheon - dial	CS.430.127	Socket - 5 pin (T/R Vol. Level)	CZ.370.519
Escutcheon - microphone	CR.520.015		McMurdo 5QMS
Escutcheon - Philips badge	CS.436.471	Socket, dial lamp, 2x	CZ.367.951
Knob - control, plain, 4x	CR.523.562		C/F733-8-4
Knob, control, spotted, 2x	CR.523.556	Spring - dial drive	CS.200.030
Lid stay	CR.285.811	Spring - I.F.T. mounting, 2x	A3.652.58
Leg assembly - front, 2x maple	CR.700.424	Switch assembly - rec./P.A.	CZ.200.108
Leg assembly - front, 2x walnut	CR.700.425	Tuning spindle assembly	CR.371.342
Leg assembly - front, 2x rosewood	CR.700.426	Valve socket, noval, 5x	CZ.369.718
Leg assembly - rear, 2x maple	CR.700.427		C/F733-2-25
Leg assembly - rear, 2x walnut	CR.700.428	Wingscrew (tape deck mounting)	CS.258.887
Leg assembly - rear, 2x rosewood	CR.700.429	Wordmark - "Philips"	CS.436.514
Microphone escutcheon	CR.520.015	Wordmark - "Recordergram"	CS.436.515
Plug - 4 pin (microphone)	CR.249.955	Woodscrew - decorative (diffusion plate mounting) 2x	CH.501.138
	McMurdo B4CP Special		



EXPLODED VIEW, SHOWING PERMEABILITY
TUNER IN CLOSED POSITION.

CAPACITORS

RESISTORS (Contd.)

C.No.	DESCRIPTION	V.W.	ToI.±%	TYPE OR CODE NO.	R.No.	DESCRIPTION	W	ToI.±%	TYPE OR CODE NO.
1	100 pF mica		20	Ducon MS	5	2.2M Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
2	330 pF mica		20	Ducon MS	6	1.5M Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
3	60 pF air trimmer			908/60E	7	120k Ω carbon	1	10	I.R.C. B.T.A.
4	0.01 μF paper	400	20	Ducon TPB	8	47k Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
5	1 nF mica		10	Ducon SS		(2x2M Ω tapped 100k Ω			CZ.029,350
6	270 pF mica		10	Ducon MS	9-10	(carbon potentiometer			I.R.C. Series 45
7	60 pF air trimmer			908/60E		(taper C (volume)			dual ganged
8-9	Part of I.F.T.				11	2.2M Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
10	47 nF paper	100	20	Ducon TPB	12	2.2M Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
11	47 nF paper	400	20	Ducon TPB	13	270 Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
12-13	Part of I.F.T.				14	270 Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
14	100 pF mica		20	Ducon MS	15	33 Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
15	0.01 μF Polyester	125	10	Philips	16	220k Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
				C.296.AA/A10K	17	220k Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
16	0.01 μF Polyester	125	10	Philips	18	(1M Ω carbon potentiometer			CZ.029,349
				C.296.AA/A10K		(taper A (balance)			I.R.C. Series 45
17	47 nF Polyester	400	10	Philips	19	4,700 Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
				C.296.AC/A47K	20	4,700 Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
18	47 nF Polyester	400	10	Philips	21	150 Ω wire wound	1	10	I.R.C. BW1
				C.296.AC/A47K	22	330k Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
19	47 nF paper	100	20	Ducon TPB	23	1,500 Ω wire wound	1	10	I.R.C. BW1
20	24 μF electrolytic	300		Ducon E05C	24	27k Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
21-22	2x50 μF electrolytic	300		Ducon ECD 404	25	27k Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
23	2.7 nF paper	600	20	Ducon TPB	26	180 Ω carbon	1	10	I.R.C. B.T.A.
24	2.7 nF paper	600	20	Ducon TPB	27	180 Ω carbon	1	10	I.R.C. B.T.A.
25	33 nF paper	100	20	Ducon TPB	28	39k Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
26	33 nF paper	100	20	Ducon TPB	29	39k Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
27	47 nF Polyester	125	10	Philips	30-31	(2x0.5M Ω carbon			CZ.034,106
				C.296.AA/A47K		(potentiometer taper C (tone)			I.R.C. Series 45
28	47 nF Polyester	125	10	Philips	32	1,200 Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
				C.296.AA/A47K	33	1,200 Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
29	5.6 nF Polyester	125	10	Philips	34	15k Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
				C.296.AA/A5K6	35	18k Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
30	5.6 nF Polyester	125	10	Philips	36	3.9M Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
				C.296.AA/A5K6	37	3.9M Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
31	4.7 nF paper	600	20	Ducon TPB	38	10,000 Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
	C31 not part of RF1-01				39	10,000 Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
33	27 nF paper	100	20	Ducon TPB	40	100k Ω carbon potentiometer			CZ.032,045
34	27 nF paper	100	20	Ducon TPB		taper C with push-pull switch			I.R.C. type 45
35	18 nF paper	100	20	Ducon TPB		(level control and on/off)			
					41	15,000 Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
					42	15,000 Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
					43	3,300 Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
					44	3,300 Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
					45	15 Ω w/w	1	10	I.R.C. BW1
					46	15 Ω w/w	1	10	I.R.C. BW1
					47	22k Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.

RESISTORS

R.No.	DESCRIPTION	W	ToI.±%	TYPE OR CODE NO.
1	47k Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
2	100k Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
3	22k Ω carbon	$\frac{1}{2}$	10	I.R.C. B.T.S.
4	47K Ω carbon	1	10	I.R.C. B.T.A.

INDUCTORS

L. No.	DESCRIPTION	TYPE OR CODE NO.
1 - 2	Permeability Tuner	CZ.109.003
3 - 4	1st I.F.T.	A3.126.84
5 - 6	2nd I.F.T.	A3.126.84
7-8-9	Power Transformer	CZ.344.126
10 - 11)	Output Transformer	CZ.345.085
) and)	600 Ω/15 Ω	MSP Type 2TU
) and)		CZ.345.074
12 - 13)		or
14)		Rola type E47-1
and)	Loudspeaker 15 Ω voice coil, twin cone	CZ.162.531
15)		MSP type
		9/6TAX15

TAPE DECK PARTS LISTS

RF1

CAPACITORS

C.No.	DESCRIPTION	V.W.	Tol.±%	TYPE OR CODE NO.
101	50 μF electrolytic	300	-) Triple unit
102	32 μF electrolytic	300	-) Phillips
103	32 μF electrolytic	300	-) AC5484/50+32+32
108	10 μF electrolytic	25	-	C425.CF/F10
109	47 nF Polyester	125	10	C.296.AA/A47K
110	25 μF electrolytic	25	-	C.426.CE/F25
111	64 μF electrolytic	40	-	C.426.CE/G64
112	27 nF Polyester	125	10	C.296.AA/A27K
113	680 pF ceramic	500	20	C.322.BC/P680E
114	80 μF electrolytic	6.4	-	C.425.CF/C80
115	3.9 nF ceramic	500	20	C.322.BC/P3K9
116	270 pF ceramic	500	20	C.322.BC/P270E
117	3.9 nF ceramic	500	20	C.322.BC/P3K9
118	47 nF Polyester	400	10	C.296.AC/A47K
119	47 nF Polyester	400	10	C.296.AC/A47K
120	1 nF ceramic	500	20	C.322.BC/P1K
121	390 pF ceramic	500	20	C.322.BC/P390E
124	33 nF Polyester	125	10	C.296.AA/A33K
125	27 nF Polyester	125	10	C.296.AA/A27K
126	50 μF electrolytic	25	-	C.425.CF/F50
127	68 nF Polyester	125	10	C.296.AA/A68K
128	1.5 nF ceramic	500	-20+50	C.301.GA/H1K5

NOTE: nF = nanofarad, i.e. 10^{-9} farad.

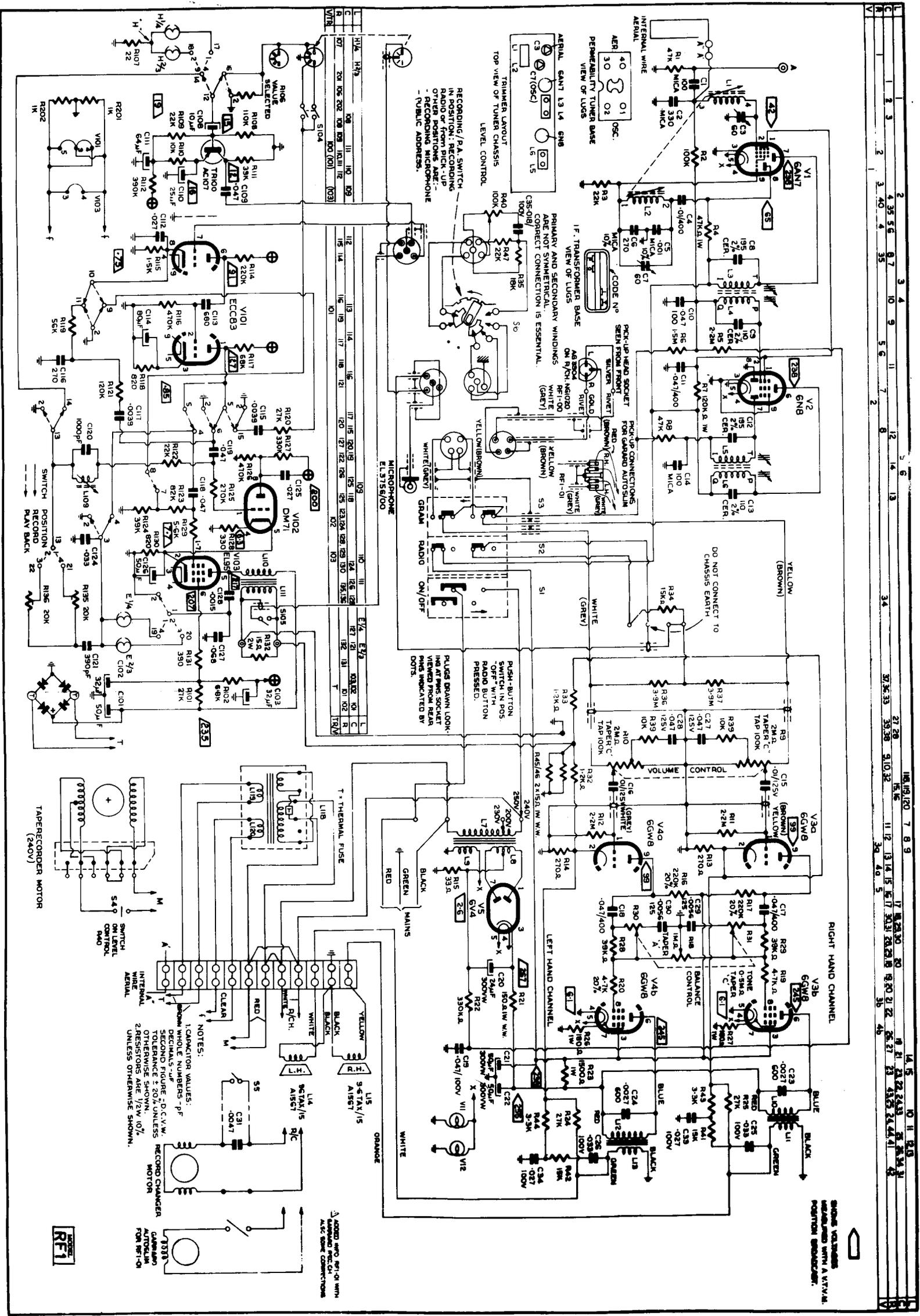
RESISTORS

R.No.	DESCRIPTION	W	Tol.±%	TYPE OR CODE NO.
101	2.7k Ω carbon	1	10	E.001.AG/A2K7
102	6.8k Ω carbon	½	10	E.001.AD/A6K8
106	selected value	½	10	BB.305.06A/
107	22 Ω cracked carbon	½	5	BB.305.05B/22E
108	110k Ω cracked carb.	½	5	E.003.AC/B110K
109	22k Ω cracked carbon	½	5	E.003.AC/B22K
110	10k Ω cracked carbon	½	5	BB.305.06B/10K
111	39k Ω cracked carbon	½	5	BB.305.05B/39K
112	390k Ω cracked carb.	½	5	BB.305.05B/390K
114	220k Ω cracked carb.	½	10	BB.305.06A/220K
115	1.5k Ω cracked carb.	½	10	BB.305.05A/1K5
116	470k Ω cracked carb.	½	10	BB.305.06A/470K
117	68k Ω cracked carbon	½	10	BB.305.05A/68K
118	820 Ω cracked carbon	½	10	BB.305.05A/820E
119	56k Ω cracked carbon	½	10	BB.305.05A/56K
120	27k Ω cracked carbon	½	10	BB.305.05A/27K
121	120k Ω cracked carb.	½	10	BB.305.05A/120K
122	22k Ω cracked carbon	½	10	BB.305.05A/22K
123	82k Ω cracked carbon	½	10	BB.305.05A/82K
124	39k Ω cracked carbon	½	10	BB.305.05A/39K
125	270k Ω cracked carb.	½	10	BB.305.05A/270K
126	470k Ω cracked carb.	½	10	BB.305.05A/470K
127	330k Ω cracked carb.	½	10	BB.305.05A/330K
128	330 Ω cracked carb.	½	5	BB.305.06B/330E
129	5.6k Ω cracked carb.	½	10	BB.305.05A/5K6
130	820 Ω cracked carbon	½	10	BB.305.05A/820E
131	390 Ω cracked carbon	½	10	BB.305.06A/390E
132	15 Ω cracked carbon	1	10	BB.305.07A/15E
135	20k Ω carbon potentiometer			E.097.AC/20K
136	20k Ω carbon potentiometer			E.097.AD/20K
201	1,000 Ω cracked carb.	½	10	BB.305.05A/1K
202	1,000 Ω cracked carb.	½	10	BB.305.05A/1K

NOTE: Wattage ratings quoted for "cracked carbon" resistors are at a temperature maximum of 70°C.

MISCELLANEOUS ELECTRICAL PARTS

DESCRIPTION	CODE NO.
Power transformer	A3.145.36
Output transformer	A3.157.98
Oscillator coil	A3.910.37
Record - Playback head	AE.571.63
Erase head	AE.571.67
Rectifier	B.250.B.75
Motor	JW.412.12
Input sockets	979/5x180
Thermal fuse (T)	A3.425.53



ALIGNMENT: Trimmer location is given in an inset drawing on the main circuit diagram drawing. Put volume control in maximum position, tone control to treble and balance control to central position.

I.F. ALIGNMENT
 Set permeability tuner fully out, screw out iron core of primary (L6) of 2nd I.F.T. as far as practicable. Apply a modulated 455kc/s signal via a 0.01 μf capacitor to the signal grid of V1 and peak I.F.T. cores in the following order -
 Secondary 2nd I.F.T. (L5) Secondary 1st I.F.T. (L4) Primary 1st I.F.T. (L3) Primary 2nd I.F.T. (L6) Do not repeat any adjustments.

R.F. ALIGNMENT
 Set permeability tuner to maximum inductance and adjust dial cursor to the stop mark on the dial scale.
 Tune receiver to 600kc/s (7ZL) and peak oscillator trimmer (C7).
 Tune receiver to 1500kc/s (3AK) and peak aerial trimmer (C3).