PHILIPS RADIOPLAYER

MODELS 1868 AND 2268

A.C./D.C. OPERATED FOR BROADCAST AND SHORT-WAVE RECEPTION.

SPECIFICATIONS.

(Subject to Alteration Without Notice.)

Voltage Rating (Power Supply): 195-260 volts A.C. or D.C.
Tuning Range: 1550 to 540 Kc/s., 8 to 22 Mc/s.
Intermediate Frequency: 472.5 Kc/s.

VALVE EQUIPMENT.

Frequency Converter: EK2G Octode.
I.F. Amplifier: CF2 R.F. Penthode.
Demodulator and Audio Amplifier: CBC1 Duo-diode triode.
Power Amplifier: CL4 Power Penthode.
Rectifier: CY2 Half-wave.
Regulating Lamp: C1 Barretter.
Dial Lamp: 240 volt 15 watt miniature bayonet, specially metal sprayed.

THE BARRETTER. The function of the Iron-hydrogen regulating lamp is to control the current in the filament circuit so that variations in the power supply have no detrimental effect on the useful life of the receiving valves. The use of the Barretter furthermore enables the receiver to be operated on any mains voltage from 195 to 260 volts A.C. or D.C. without circuit alterations.

SAFETY PRECAUTIONS. Every care has been taken to ensure that the Models 1868 or 2268 are safe in operation. Aerial and earth connections are isolated by the provision of series condensers, control shafts are insulated and the sets are enclosed by a protective back. It is necessary, however, to exercise due care in the installation or servicing of the receivers.

IMPORTANT. Do not make any adjustments or in any way tamper with the back of the receiver without first removing the power plug. Adjustments to trimmers, etc., under "live" conditions should only be carried out with insulated tools and care should be taken to avoid personal contact.

REMOVING THE CHASSIS (Model 1868 only). The mechanical arrangement of the dial is such that portion of the unit is mounted on the cabinet proper. This is connected to the chassis by flexible cables. In removing the chassis from the cabinet, it is not essential to detach the dial glass proper or associated mechanism. The following procedure is recommended:

1. Remove power plug from mains socket.
2. Unscrew cabinet back.
3. Unscrew knobs at front of cabinet.
4. Disconnect loudspeaker cord connectors (at the same time note colour scheme to facilitate re-connection).
5. Remove chassis mounting bolts.
6. Swing chassis around so that the front of the dial drive drum (shown as "10" in drawing) is accessible. During this operation, care should be taken that the flexible cable sheath is not kinked.
7. Slacken off brass sheath nipples ("A" in drawing) at either end of dial, so that tension on dial wire is relieved.
8. Lift off loops at end of dial drive wire from the drum at "B" and unwind wire from drum.
9. With the dial wire disconnected it will now be possible to clear the wire cable and sheath from the bracket ("11") and the chassis is free for removal, leaving the dial and associated mechanism in the cabinet.

VOLTAGE ANALYSIS.

Valve Type	Plate Voltage	Screen Voltage	Bias Voltage	Filament Volts
EK2G	200 (osc. p. 200v)	100 (B/C) 60 (S/W)	3 (B/C) 2 (S/W)	6.3
CF2	240	80	1	13.0
CBC1	20	—	0	13.0
CL4	225	240	10	33.0
CY2	—	—	—	30.0

NOTE.—The abovementioned voltage values, with the exception of bias voltages, are measured between the socket points indicated and chassis, with the receiver in the no signal condition and with the volume control at zero. Bias voltages are to be measured at the source of the voltage, as incorrect readings will otherwise be obtained. Voltages are measured with a 1,000 ohm per volt voltmeter and may vary as much as 10 per cent. from the figures quoted.

REPLACING THE CHASSIS (Model 1868 only). This may be accomplished by a reversal of the abovementioned removal process. When the dial wire has been threaded into the drum in accordance with the illustration (care being taken that the disposition of the cables is exactly the same) the brass sheath nipples should be tightened so that there is a small amount of tension on the dial cable.

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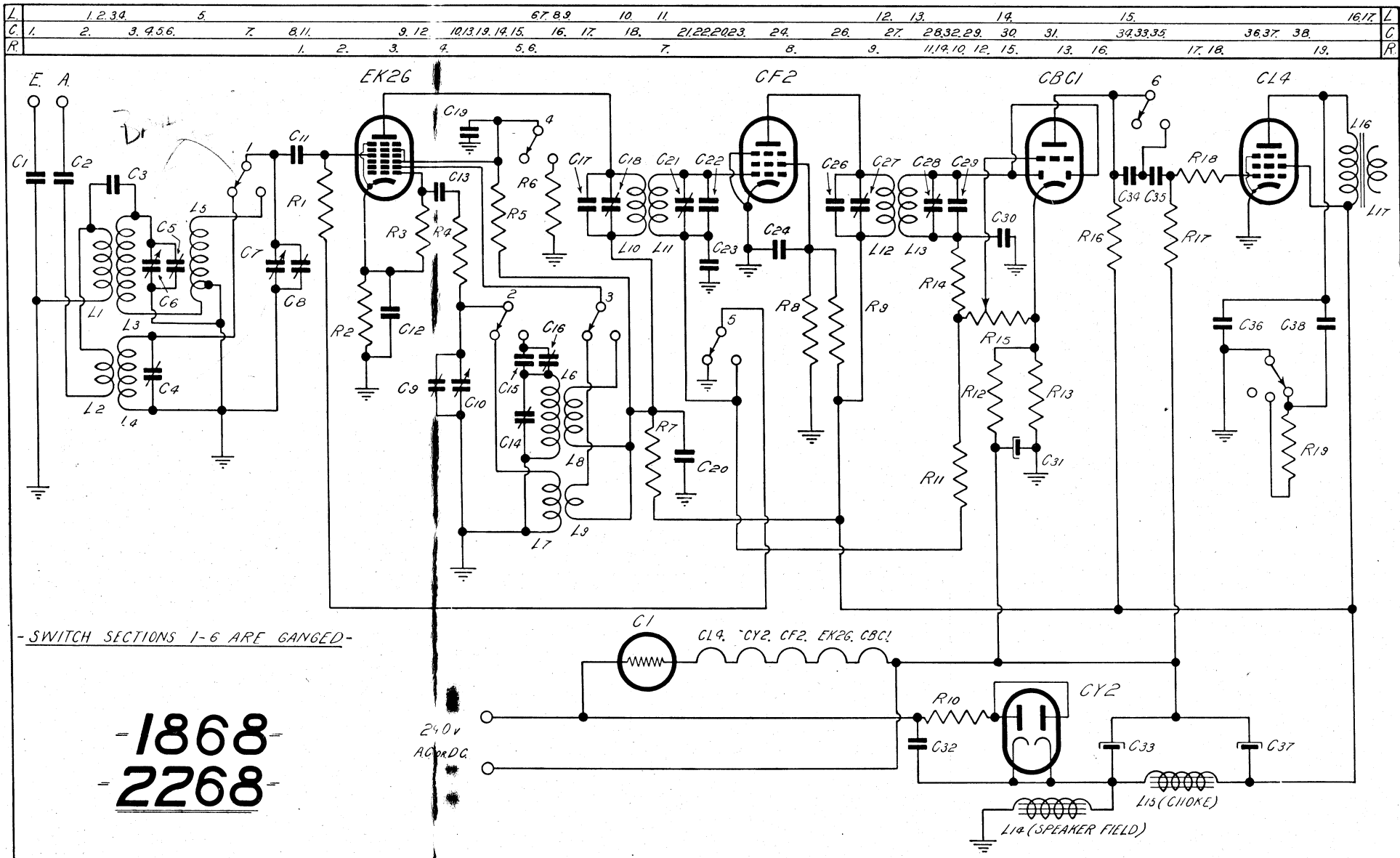
E. A.
EK26
CF2
CBC1
CL4
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11
C12
C13
C14
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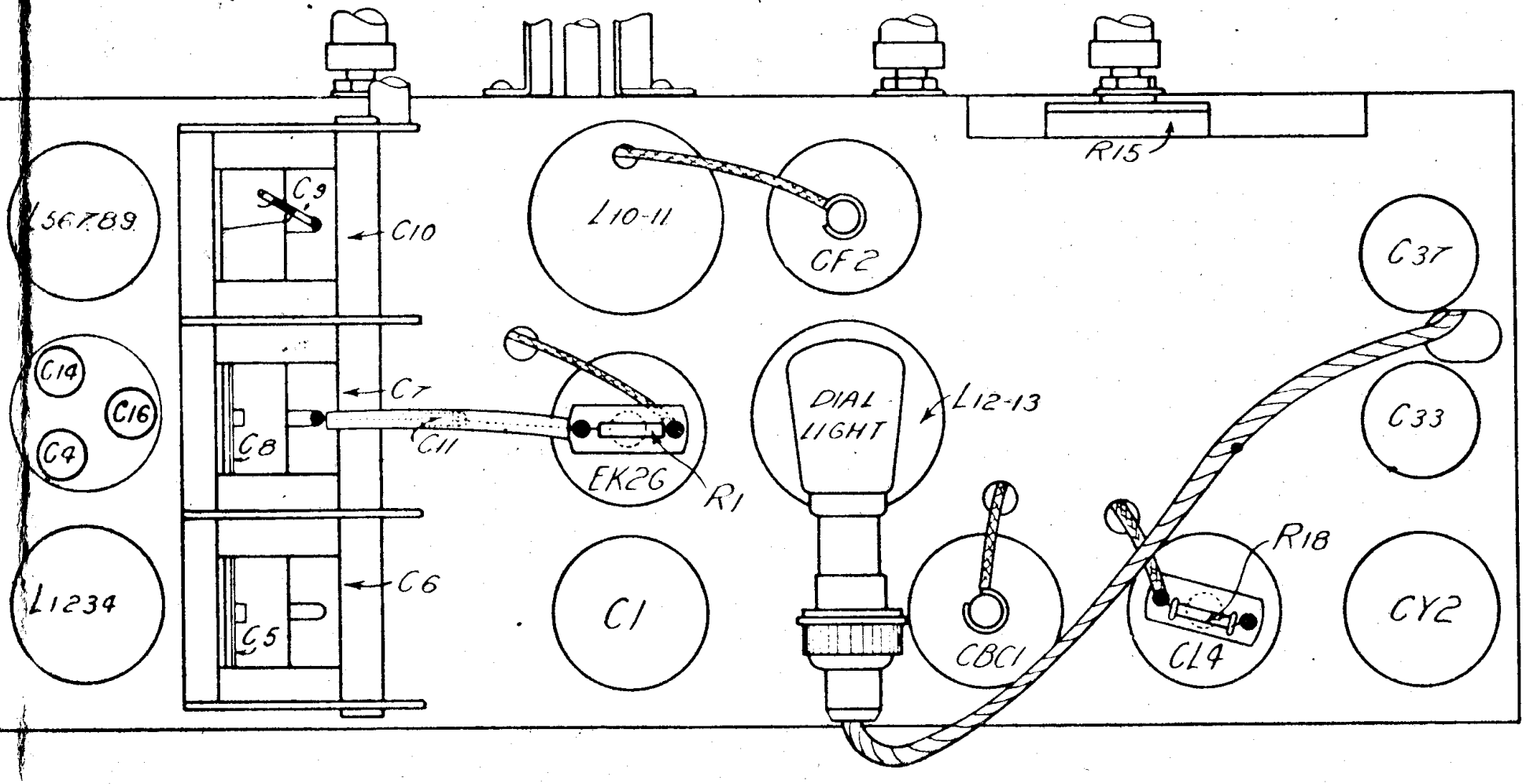
C38
L1
L2
L3
L4
L5
L6
L7
L8
L9
L10
L11
L12
L13
L14 (SPEAKER FIELD)
L15 (CHOKE)
L16
L17
R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
R13
R14
R15
R16
R17
R18
R19
CY2
C1
CL4. CY2. CF2. EK26. CBC1
240 v
AC OR DC
- SWITCH SECTIONS 1-6 ARE GANGED -

-1868-
-2268-

CHASSIS LAYOUT DIAGRAM



The chassis is next placed temporarily in position, the speaker connected and power applied to the Radioplayer. Calibration is now checked by tuning the set (See separate paragraph on calibration) and if O.K., the chassis can be bolted down, the knobs fitted and the set is again ready for use.

REMOVING THE CHASSIS (Model 2268 only). In the case of the 2268, although the mechanical arrangement of the dial is similar to 1840, it is not recommended that the dial should remain in the cabinet when removing the chassis.

Suggested removal procedure is as follows:

1. Remove the power plug.
2. Unscrew cabinet back cover.
3. Remove knobs at front of cabinet (recessed grub screws).
4. Remove dial glass and mechanism by withdrawing the four screws securing the dial brackets on either end of the dial. Care should be taken in this operation to see that, when released, the dial glass is carefully removed and laid aside without risk of breakage. The remaining mechanism of the dial is now laid with care on top of the chassis, with due attention to the fact that the flexible cable must not be kinked.
5. Unscrew four screws located on each end of the baffle and employed to fix the baffle to the Philite cabinet. The screws in question are approximately two inches from the top and bottom in either case.

   It is not necessary to remove the main chassis supporting brackets.
6. Slide chassis, speaker and baffle complete out of the cabinet.

REPLACING THE CHASSIS. (Model 2268 only). A reversal of the withdrawal procedure will suffice to restore the chassis, speaker and baffle, in one unit, to the cabinet.

If the dial mechanism is unaltered, it will not require adjustment when it is finally refitted.

DIAL CALIBRATION (Model 1868 and 2268). If the pointer does not indicate the correct position for tuning a given station, the position of the pointer in relation to the gang condenser can be adjusted by loosening the clamping screw on the pointer slider and moving the slotted wire tension guide in relation to the pointer slider.

After adjustment tighten the clamping screw securely.

COMPONENTS NOT SHOWN ON CIRCUIT DIAGRAM.—MODEL 2268 ONLY.

Diagram No. (See Fig. 1)	Description.	Code No.	Price.
—	Wave-change switch section	73/411	2/–
—	Wave-change clicker plate	72/215	2/–
—	"P" type valve socket	34/516	4d.
—	Octal valve socket	34/546	4d.
—	Trimmer mounting disc	33/416	5d.
—	Control knob	32/229	7d.
5	Cable securing bracket	23/443	1/6
1	Pointer clamp and slider	24/519	2/6
7	Dial mounting brackets	23/441	6d.
9	Dial drum	32/226	2/8
10	Dial spring	25/211	2d.
11	Dial cord	35/313	5d.
8	Pointer counter-weight	24/475	3d.
—	Insulated coupling (long)	24/264	6d.
—	Dial light holder	24/662	1/2
—	Power flex only	26/211	1/9
—	Tone control switch	74/415	1/10
—	Chassis mounting grommet	32/211	2d.

Diagram No. (See Fig. 1)	Description.	Code No.	Price.
—	No. 22 cabinet	32/235	£2/7/6
—	Fibre cabinet back	33/933	5/6
—	Cabinet bracing strip	24/495	6d.
12	Dial wire assembly complete	26/323	3/–
4	Dial glass	33/529	5/6
2	Dial slider rod	24/258	1/6
6	Dial adjusting bracket	24/482	6d.
13	Glass pointer rod	33/531	6d.
—	Tuning control bracket	23/465	6d.
—	Tuning control spindle	24/271	1/–
—	Extension spindle (tuning)	24/273	6d.
—	Extension spindle (tone, volume and wave-change)	24/272	6d.
—	Insulated coupling (short)	24/274	6d.
—	Baffle with silk	33/629	9/3
—	Baffle silk	35/213	2/6
—	Back securing bracket	23/449	3d.
—	Speaker securing strip	24/468	6d.

COMPONENTS NOT SHOWN IN CIRCUIT DIAGRAM—MODEL 1868 ONLY.

Diagram No. (See Fig. 2)	Description.	Code No.	Price.
—	Wave-change switch section	73/411	2/–
—	Wave-change clicker plate	72/215	2/–
—	"P" type valve socket	34/516	4d.
—	Octal valve socket	34/546	4d.
—	Trimmer mounting disc	33/416	5d.
—	Control knob	32/229	7d.
11	Cable securing bracket	23/443	1/6
4	Pointer clamp and slider	24/519	2/6
7	Dial mounting brackets	23/441	6d.
10	Dial drum	32/226	2/8
9	Dial spring	25/211	2d.
8	Dial cord	35/313	5d.
5	Pointer counter-weight	24/475	3d.
—	Insulated coupling (long)	24/264	6d.
—	Dial light holder	24/662	1/2
—	Power flex only	26/211	1/9
—	Tone control switch	74/415	1/10

Diagram No. (See Fig. 2)	Description.	Code No.	Price.
—	Chassis mounting grommets	32/311	2d.
—	No. 18 cabinet	33/623	£4/12/6
—	Cabinet back	33/625	3/6
—	Connector for speaker cable	34/555	6d.
2, A, 15, 14, 12, 13	Dial wire assembly complete	26/318	3/–
—	Dial glass	33/523	5/6
1	Dial slider rod (top)	24/252	1/6
1	Dial slider rod (lower)	24/243	1/6
6	Dial adjusting bracket	23/444	6d.
3	Glass pointer rod	33/524	6d.
—	Tuning control bracket	24/442	6d.
—	Tuning control spindle	24/265	9d.
—	Extension spindle (tuning and volume)	24/267	6d.
—	Extension spindle (wave-change and tone)	24/266	6d.
—	Baffle silk	35/218	4/6

PHILIPS RADIOPLAYER MODELS
1868 & 2268
MODIFICATIONS

Changes in Code Numbers and Specifications of components detailed on this sheet apply to all 1868 and 2268 Radioplayers with Serial Numbers greater than 1150.

In ordering replacement parts it is essential that these changes be observed, preferably the Serial Number of the set concerned should be quoted as well as the Code Number of the part concerned.

The Circuit Diagram remains unaltered.

ALTERATION IN INTERMEDIATE FREQUENCY TRANSFORMERS.

L10, L11	1st IF	Code No. 42/323		Price 7/9
L12, L13	2nd IF	do. 42/424		do. 7/9
R20, R21	Combined, one unit	500 ohm	do. 64/232	do. 1/-
R 4		50 ohm	do. 62/211	6d
C17,22, 26, 29.		80 uuF	do. 52/239	6d
C 9		2.5-30 uuF	do. 54/313	8d
Dial Lamp mounting bracket			do. 23/458	1/6

Please note also the following errata in the original 1868/2268 Service Data Sheet.

The values of C34 and C35 are reversed and should read:

C34	.001 uF	52/218	8d.
C35	.01 uF	52/311	4d.

PHILIPS RADIOPLAYER

MODEL 2268 (MODIFIED).

SERIAL NUMBERS GREATER THAN 1300.

The revised technical data contained in this sheet applies to Model 2268 with Serial Numbers greater than 1300.

For sets of lower Serial Number than 1301, please refer to original 1868/2268 Service Data Sheet or the first Modification Sheet to same, which concerns Serial Numbers from 1150 onwards.

In ordering replacement parts it is essential that the Code Number be derived from the correct data sheet in accordance with the Serial Number of the set. Preferably, the Serial Number of the set as well as the Code Number of the part concerned, should be specified.

COMPONENTS NOT SHOWN ON CIRCUIT DIAGRAM.

Description.	Code No.	Price.
Back, cabinet	33/933A	5/6
Baffle, with silk	33/656	9/3
Bracket, cabinet back securing	23/449	3d.
Bracket, dial slider, adjusted	24/482	6d.
Bracket, dial mounting	23/441	6d.
Bracket, gang cable support	23/443	1/6
Bracket, lamp socket mounting	23/474	1/6
Bracket, power socket	23/486	1/6
Bracket, tuning control spindle	24/494	6d.
Cabinet, No. 22, Philite	32/235	£2/7/6
Clamp and slider, pointer transport	24/519	2/6
Clicker plate, wave change	72/215	2/–
Cord, dial drive	35/316	5d.
Cord, power cable	26/211	1/9
Connector, power, male	34/569	6d.
Connector, power, female	34/577	6d.
Counterweight, dial pointer	24/475	3d.
Coupling, insulated short	24/274	6d.
Coupling, insulated, medium length	24/264	6d.
Drum, dial drive	32/226	2/8
Glass, dial, printed	33/548	5/6
Grommets, rubber, chassis mounting	32/311	2d.
Knob, tuning control	32/229	7d.
Lamp, dial illuminating	92/212	1/6
Locking ring, amphenol socket	24/666	1d.
Pointer, glass	33/531	6d.
Rubber bands, dial glass	33/316	3d.
Silk, for baffle	35/213	2/6
Slide rod, dial	24/258	1/6
Socket, amphenol octal	34/521	6d.
Socket, dial lamp	24/662	1/2
Socket, "P" type	34/516	4d.
Spacers, brass, chassis mounting	24/218	2d.
Spindle, tuning control	24/265	9d.
Spindle, extension, medium	24/272	6d.
Spindle, extension, short	24/273	6d.
Spring, dial cord tension	25/211	2d.
Strip, speaker, securing	24/468	6d.
Switch section, wave change	73/411	2/–
Switch, tone control	74/415	1/10
Transformer, speaker output	44/326	7/6
Wire assembly, dial drive	26/323	3/–

(PRICES QUOTED ARE STRICTLY NETT AND SUBJECT TO CHANGE WITHOUT NOTICE)

COMPONENT PARTS.

CONDENSERS. (PRICES SUBJECT TO ALTERATION WITHOUT NOTICE.)

No. on Diagram.	Value.	Code No.	Price.
C1	0.01 uF.	52/225	1/5
C2	0.01 uF.	52/225	1/5
C3	8 uuF.	52/521	3d.
C4, C5, C6	Tuning Gang	53/215	10/3
C7	0 to 35 uuF.	52/524	3d.
C8	0 to 25 uuF.	52/515	3d.
C9	100 uuF.	52/811	6d.
C10	0 to 10 uuF.	52/516	3d.
C11	0.01 uF.	52/311	4d.
C12	0 to 10 uuF.	52/516	3d.
C13	100 uuF.	52/811	6d.
C14	0.01 uF.	52/311	4d.
C15	2.5 to 30 uuF.	54/313	8d.
C16	80 uuF.	52/239	6d.
C17	2.5 to 30 uuF.	54/313	8d.
C18	420 uuF.	52/236	7d.
C19	2.5 to 30 uuF.	54/313	8d.
C20	80 uuF.	52/239	6d.
C21	2.5 to 30 uuF.	54/313	8d.
C22	0.01 uF.	52/311	4d.
C23	0.01 uF.	52/311	4d.
C24	0.01 uF.	52/311	4d.
C25	2.5 to 30 uuF.	54/313	8d.
C26	80 uuF.	52/239	6d.
C27	0.01 uF.	52/225	1/5
C28	80 uuF.	52/239	6d.
C29	2.5 to 30 uuF.	54/313	8d.
C30	100 uuF.	52/811	6d.
C31	100 uuF.	52/811	6d.
C32	0.25 uF.	52/319	11d.
C33	0.01 uF.	52/225	1/5
C34	0.01 uF.	52/311	4d.
C35	0.01 uF.	52/311	4d.
C36	25 uF.	52/416	1/3
C37	32 uuF.	52/417	3/4
C38	0.02 uF.	52/313	7d.
C39	32 uF.	52/417	3/4
C40	0.004 uF.	52/324	7d.
C41	0.01 uF.	52/311	4d.

RESISTORS.

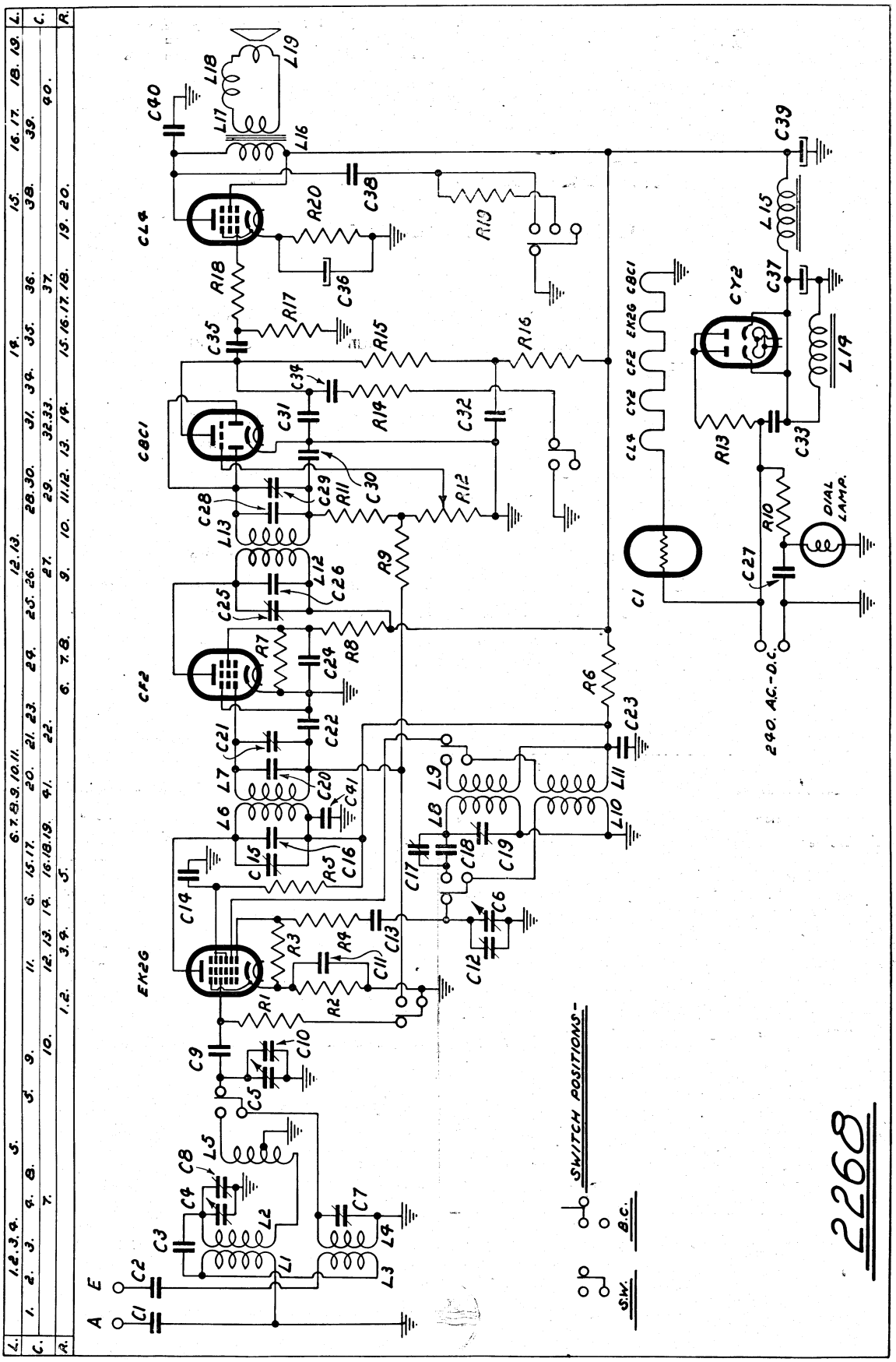
No. on Diagram.	Value.	Code No.	Price.
R1	1 megohm	62/214	4d.
R2	500 ohm	62/224	4d.
R3	50,000 ohm	62/212	4d.
R4	50 ohm	62/211	6d.
R5	0.1 megohm	62/215	4d.
R6	5,000 ohm	62/412	5d.
R7	0.25 megohm	62/232	4d.
R8	0.1 megohm	62/416	5d.
R9	2 megohm	62/222	4d.
R10	500 ohm	64/232	1/–
R11	50,000 ohm	62/212	4d.
R12	0.5 meg. pot.	63/215	3/3
R13	60 ohm	64/224	1/6
R14	25,000 ohm	62/218	4d.
R15	0.25 megohm	62/415	5d.
R16	50,000 ohm	62/212	4d.
R17	0.5 megohm	62/216	4d.
R18	50,000 ohm	62/212	4d.
R19	10,000 ohm	62/213	4d.
R20	200 ohm	64/240	1/–

COILS.

No. on Diagram.	Description.	Code No.	Price.
L1, L2, L3, L4	Aerial Coil	42/712	4/3
L5, L8, L9, L10, L11	Bandpass & Osc. Coil	42/216	5/–
L6, L7	1st I.F.	42/323	7/9
L12, L13	2nd I.F.	42/424	7/9
L16, L17	Speaker output transformer	44/326	7/6
L14, L16, L17, L18, L19	Speaker complete	45/319	16/6
L15	Choke, 250 ohm	44/415	6/6

IMPORTANT: In ordering spare parts quote CODE NUMBER ONLY. If claiming free replacement under GUARANTEE, return defective parts PROMPTLY and quote TYPE and SERIAL NUMBER of RADIOPLAYER.

COMPONENT LOCATION DIAGRAM.



COMPONENT PARTS (Models 1868 and 2268).

CONDENSERS (PRICES QUOTED ARE STRICTLY NETT AND SUBJECT TO CHANGE WITHOUT NOTICE.)

No.	Value.	Code No.	Price.
C1	.01 uF.	52/225	1/5
C2	.01 uF.	52/225	1/5
C3	8 uuF.	52/521	3d.
C4	2.5—30 uuF.	54/313	8d.
C5, C6, C7, C8, C10	Tuning Gang	53/213	9/6
C9	0—10 uuF.	52/516	3d.
C11	100 uuF.	52/235	3d.
C12	.01 uF.	52/311	4d.
C13	100 uuF.	52/235	3d.
C14	2.5—30 uuF.	54/313	8d.
C15	420 uuF. or 400 uuF.	52/236	7d.
		52/233	7d.
C16	2.5—30 uuF.	54/313	8d.
C17	Part of Coil 42/315	—	—
C18	2.5—30 uuF.	54/313	8d.
C19	.01 uF.	52/311	4d.
C20	.01 uF.	52/311	4d.
C21	2.5—30 uuF.	54/313	8d.
C22	Part of Coil 42/315	—	—
C23	.01 uF.	52/311	4d.
C24	.01 uF.	52/311	4d.
C26	Part of Coil 42/419	—	—
C27	2.5—30 uuF.	54/313	8d.
C28	2.5—30 uuF.	54/313	8d.
C29	Part of Coil 42/419	—	—
C30	100 uuF.	52/235	3d.
C31	25 uF.	52/416	1/3
C32	.01 uF.	52/225	1/5
C33	32 uF.	52/417	3/4
C34	.01 uF.	52/311	4d.
C35	.001 uF.	52/218	8d.
C36	.004 uF.	52/331	8d.
C37	32 uF.	52/417	3/4
C38	.02 uF.	52/313	7d.
C39	.01 uF.	52/225	1/5

NOTE: C39 is part of dial lamp filter system.

RESISTORS.

No.	Value.	Code No.	Price.
R1	1 megohm	62/214	4d.
R2	500 ohm	62/224	4d.
R3	50,000 ohm	62/212	4d.
R4	25 ohm	62/223	6d.
R5	60,000 ohm	62/413	5d.
R6	50,000 ohm	62/212	4d.
R7	5,000 ohm	62/412	5d.
R8	0.25 megohm	62/415	5d.
R9	0.1 megohm	62/416	5d.
R10	60 ohm	64/224	1/6
R11	1 megohm	62/214	4d.
R12	180 ohm	64/225	7d.
R13	12 ohm		
R14	50,000 ohm	62/212	4d.
R15	0.5 megohm pot.	63/215	3/3
R16	0.25 megohm	62/415	5d.
R17	1 megohm	62/214	4d.
R18	50,000 ohm	62/212	4d.
R19	10,000 ohm	62/213	4d.
R20	500 ohm	64/229	5d.
R21	500 ohm	64/229	5d.

NOTE: R20 and R21 are part of dial lamp filter system.

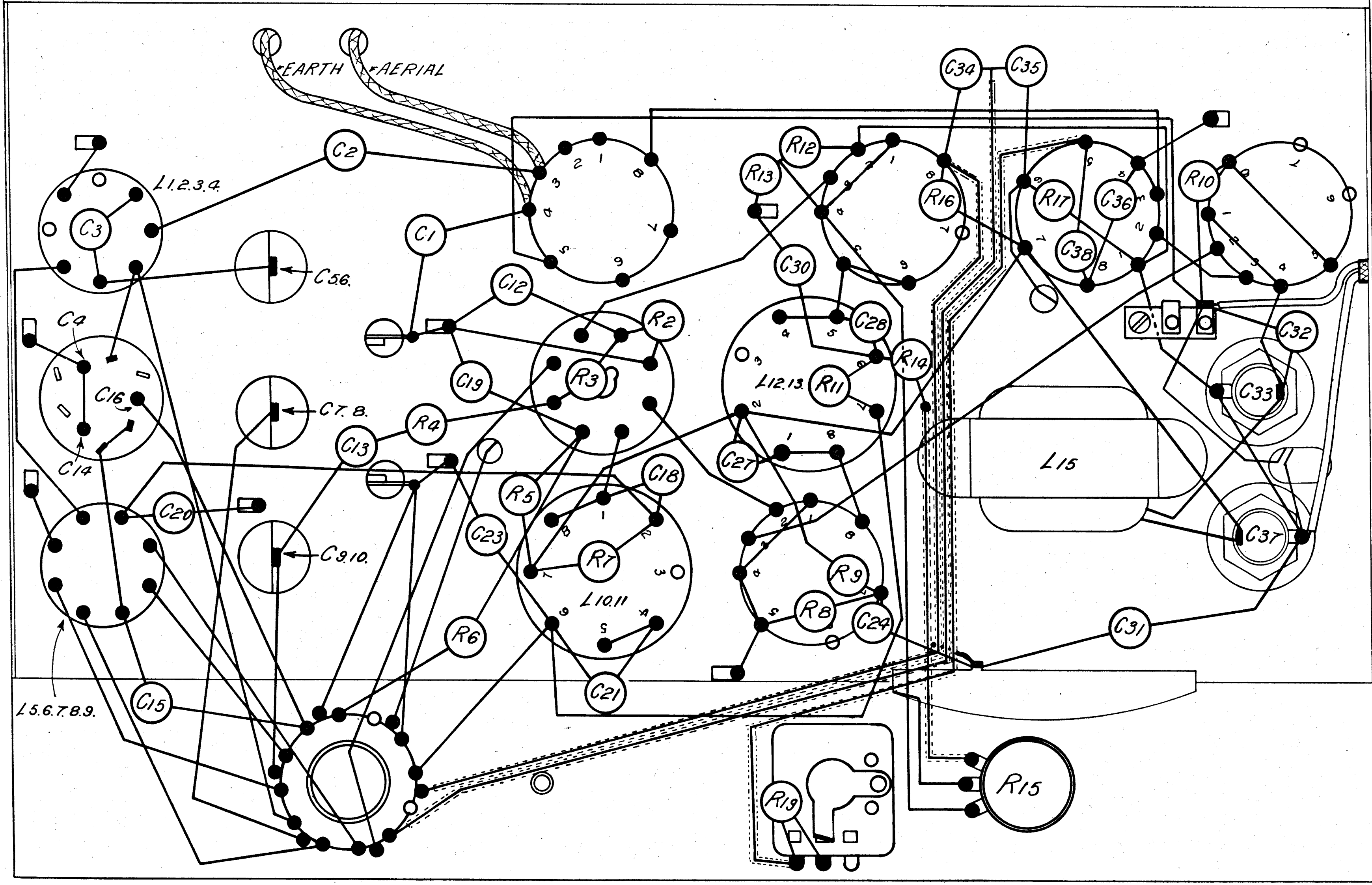
COILS.

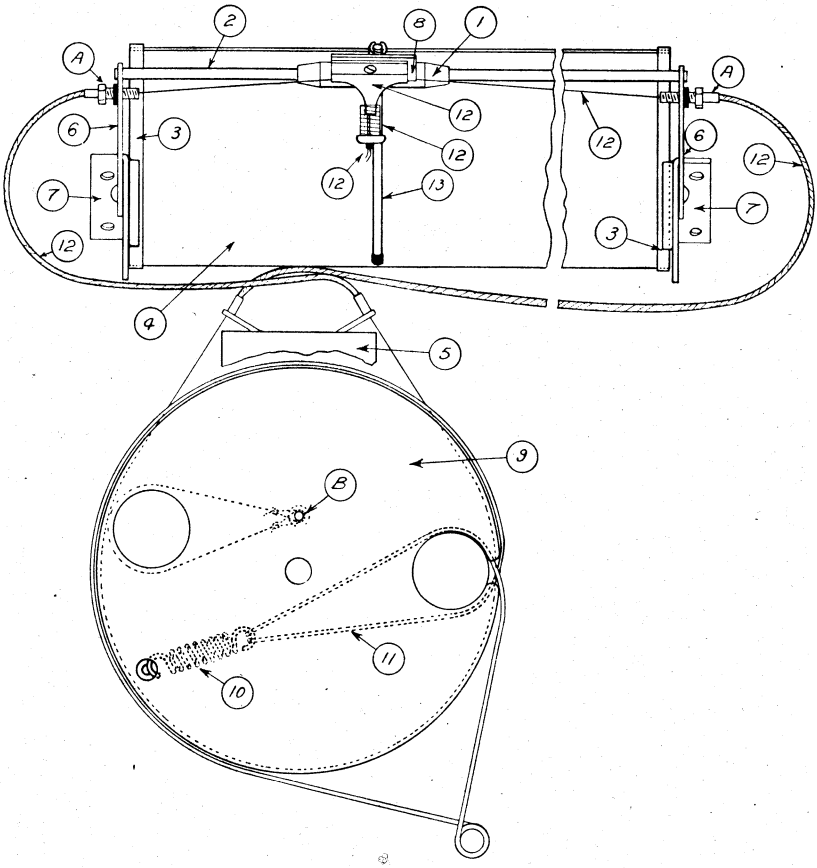
No.	Resistance.		Code No.	Price.
L1, L2, L3, L4	30 ohms / 4.0 ohms	Aerial Coil	42/712	4/3
L5, L6, L7, L8, L9	3.5 ohms / 2.5 ohms	Oscillator and Band-pass Coils	42/216	5/-
L10, L11	7.5 ohms	1st I.F.	42/315	7/9
L12, L13	7.5 ohms	2nd I.F.	42/419	7/9
L14, L16, L17	7500 ohms	Speaker comp. with Transf.	45/317 (1868 only)	16/6
			45/319 (2268 only)	16/6
L15	250 ohm (Filter choke)		44/415	6/6

IMPORTANT: In ordering spare parts quote CODE NUMBER ONLY. If claiming free replacement under GUARANTEE, return defective parts PROMPTLY and quote TYPE and SERIAL NUMBER of RADIOPLAYER.

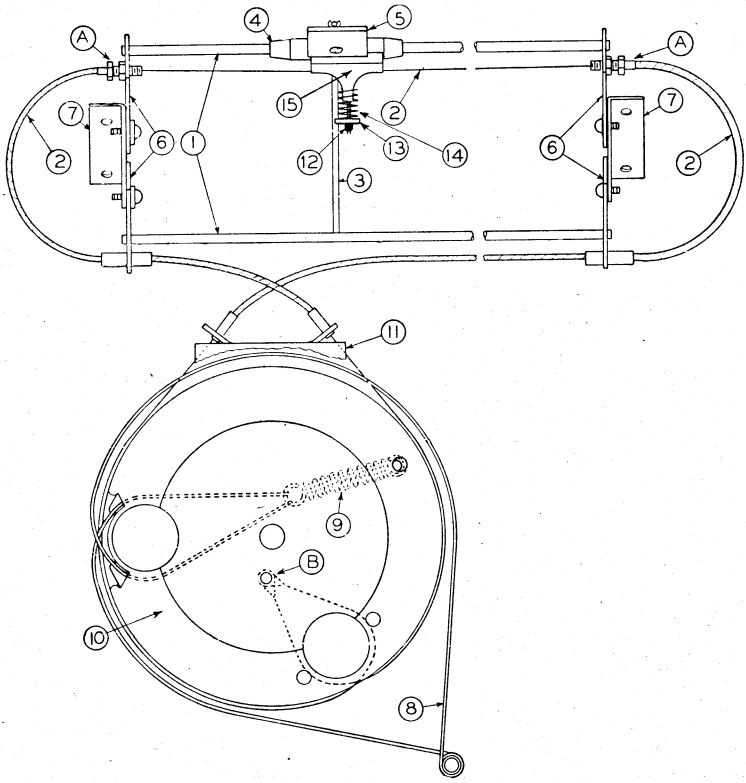
COMPONENT LOCATION DIAGRAM.

L.	5.6.7.8.9. 1.2.3.4. 10.11. 12.13. 15.	L.
C.	14. 4. 3. 16. 15. 20. 5.6.7.8.2.9.10.13. 1. 19.23. 12. 21. 18. 27. 30. 24.28. 34. 35. 38. 31.36. 33.37.32.	C.
R.	4. 6. 5. 37. 2. 19.13. 8.12.11.9. 14. 16. 15. 17. 10.	R.





MODEL 2268 DIAL (FIG. 1).



MODEL 1868 DIAL (FIG. 2).