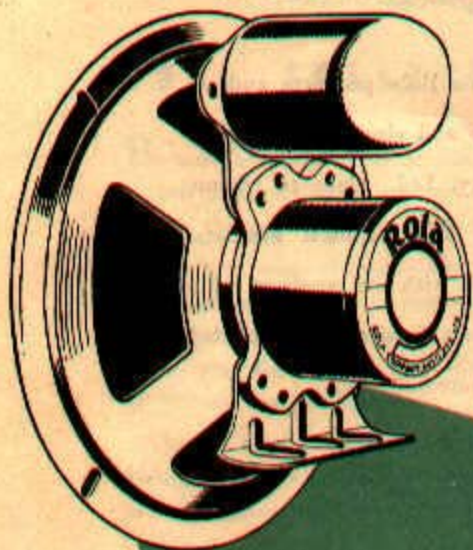


TECHNICAL BULLETIN
ISSUED MAY, 1948

Rola

LOUDSPEAKER REPAIR GUIDE



NEW TECHNICAL SERVICE FOR ROLA USERS

To provide information on Rola products and on their applications in radio and electronic fields the Rola Company (Aust.) Pty. Ltd., plans to resume publication of catalogues and technical booklets. The first of this series deals with the repair of radio loudspeakers. It is convenient in size and is provided with wide margins to facilitate filing.

ROLA COMPANY (AUST.) PTY. LTD.



ROLA SPEAKER REPAIR SERVICE

Because of their superior design and the quality of the materials used in their construction most of the 2,000,000 Rola loudspeakers sold in Australia during the past twenty years are still giving trouble-free service.

However, some of them—due to mishandling, faults which develop in use, or to windings burnouts caused by breakdowns in radio receivers with which they have been associated—may need attention. Rola Service Depots which provide prompt and efficient loudspeaker service are established in Sydney and Melbourne.

Though at these depots repairs to Rola loudspeakers are carried out by highly trained staffs, it is not always economic to attempt the reconditioning of very old model loudspeakers.

To help the radio dealer and the general public to decide on the advisability of having a loudspeaker repaired the tables on Pages 4 and 5 have been prepared.

Where the cost of repairing a loudspeaker will approximate the purchase price of a new model, replacement of the old unit is suggested. The type number of the replacement unit is listed on Page 6.

On repair at a Rola Service Depot each loudspeaker is returned to the customer in perfect working condition and is covered by the Rola Warranty reproduced on page 7. On that page also will be found instructions on the procedure to be followed in forwarding a loudspeaker for repair by a Rola Service Depot.

TABLE OF REPAIRABILITY OF ROLA SPEAKERS

Provided that they are not extensively damaged, Rola Speakers listed below with the word "Yes" are worth repairing. Speakers listed with the word "No" are regarded as so obsolete as to be not worth repairing and should be replaced as shown on Page 6.

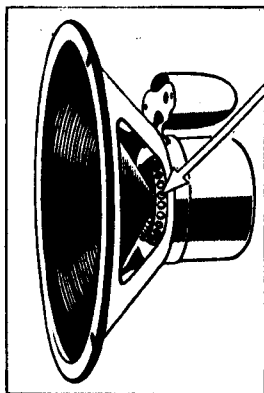
MODEL	WORTH REPAIRING	TECHNICAL DATA	
		VOICE COIL IMPEDANCE AT 400 CYCLES	REPLACEMENT TRANSFORMER TYPE
3½" Permanent Magnet Types			
3C	Yes	3.7	D,E,F,G.
5" Electro Dynamic Types			
F4	No	3.7	—
K5	Yes	3.7	E
5" Permanent Magnet Types			
5-4	Yes	3.7	D & E
5-7	Yes	3.7	D
5-8	No	3.7	—
5-9	Yes	3.7	D & E
5-11	No	3.7	—
5-15	No	3.7	D
5C	Yes	3.7	D,E,&G.
T5 (Bakelite external spider)	No	12*	—
T5 (Permafex spider)	Yes	12*	Special
5-6	No	3.7	—
F4 PM	No	3.7	—
6" Electro Dynamic Types			
F5B (Permafex spider)	Yes	3.7	D
F5B (Internal spider)	No	3.7	—
DP5B (Bakelite external spider with felt)	No	3.7	—
6" Permanent Magnet Types			
F5B PM	No	3.7	—
6-6 (Bakelite external spider with felt)	No	3.7	—
6-6 (Permafex spider)	Yes	3.7	D
6-8	Yes	3.7	D
6-11	Yes	3.7	D
6-12	Yes	3.7	D
6-15	Yes	3.7	D
6H	Yes	3.7	D
DM6 (Special Car Radio)	No	—	—
8" Electro Dynamic Types			
F6 (Internal spider)	Yes	2	C
K8 (Internal spider)	Yes	2	C
K8 (Permafex spider)	Yes	2	C
K8 (Bakelite external spider)	No	2	—
K8 (Bakelite external spider with felt)	No	2	—
F8 (Bakelite external spider with felt)	No	3.7	—
F8 (Permafex spider)	Yes	3.7	D
GM8 (Special Car Radio)	No	1.8	—
8" Permanent Magnet Types			
8-8 (External bakelite spider dustproofed with felt)	No	2	—
8-8 (Permafex spider)	Yes	2	C
FR6 PM	No	2	—
8-11 (Permafex spider)	Yes	3.7	D
8-11 (External bakelite spider with felt)	No	3.7	—
8-14 (External bakelite spider with felt)	No	2	—
8-14 (Permafex spider)	Yes	2	C
8-15 (Permafex spider)	Yes	3.7	D
8-15 (External bakelite spider with felt)	No	3.7	—

G in battery sets only

*At 5,000 Cycles.

TABLE OF REPAIRABILITY OF ROLA SPEAKERS (Cont.)

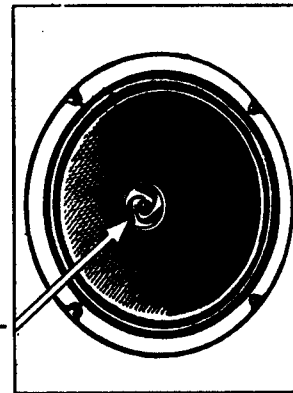
MODEL				TECHNICAL DATA		
				WORTH REPAIRING	VOICE COIL IMPEDANCE AT 400 CYCLES	REPLACEMENT TRANSFORMER TYPE
8" Permanent Magnet Types (continued)						
8-20 (External bakelite spider with felt)	..	..	..	No	2	—
8-21 (External bakelite spider with felt)	..	..	..	No	2	—
8-42 (External bakelite spider with felt)	..	..	..	No	2	—
8-20 (Permafex spider)	..	..	..	Yes	2	C
8-21 (Permafex spider)	..	..	..	Yes	2	C
8-42 (Permafex spider)	..	..	..	Yes	2	C
8-0	..	..	..	Yes	2	C
8-M	..	..	..	Yes	2	C
8K	..	..	..	Yes	2	C
10" Electro Dynamic Types						
K7	..	..	..	No	2	—
F10 (External bakelite spider)	..	..	..	No	2	—
F10 (External bakelite spider with felt)	..	..	..	No	2	—
F10 (Permafex spider)	..	..	..	Yes	2	C
F10 (Internal spider)	..	..	..	Yes	2	C
K10 (Permafex spider)	..	..	..	Yes	2	C
K10 (External bakelite spider with felt)	..	..	..	No	2	—
10" Permanent Magnet Types						
10-20 (Permafex spider)	..	..	..	Yes	2	C
10-21 (Permafex spider)	..	..	..	Yes	2	C
10-42 (Permafex spider)	..	..	..	Yes	2	C
10-20 (External bakelite spider with felt)	..	..	..	No	2	—
10-21 (External bakelite spider with felt)	..	..	..	No	2	—
10-42 (External bakelite spider with felt)	..	..	..	No	2	—
12" Electro Dynamic Types						
K12 (Permafex spider)	..	..	..	Yes	2	C
F12 (Permafex spider)	..	..	..	Yes	2	C
K12 (External bakelite spider)	..	..	..	No	2	—
F12 (External bakelite spider)	..	..	..	No	2	—
K12 (External bakelite spider with felt)	..	..	..	No	2	—
12" Permanent Magnet Types						
12-20 (Permafex spider)	..	..	..	Yes	2	C
12-21 (Permafex spider)	..	..	..	Yes	2	C
12-42 (Permafex spider)	..	..	..	Yes	2	C
12-20 (External bakelite spider with felt)	..	..	..	No	2	—
12-21 (External bakelite spider with felt)	..	..	..	No	2	—
12-42 (External bakelite spider with felt)	..	..	..	No	2	—
12-0 (Permafex Spider)	..	..	..	Yes	2	C
G12 Speakers						
All types	..	..	..	Yes	8.4	B



Explanatory Notes :—

PERMAFLEX SPIDER—is a non-adjustable diaphragm suspension attached externally to the apex of the cone which provides a means of permanently retaining the moving coil concentrically in the magnetic gap. Comprising a concentrically corrugated disc of paper or impregnated fabric, it is cemented at its outer periphery to an annular support. No screws or other means of adjusting the position of the spider or its support are provided. (An early type is illustrated).

INTERNAL SPIDER — is a diaphragm suspension attached inside the cone near the apex.



HOW TO SELECT A NEW ROLA SPEAKER TO REPLACE AN OBSOLETE MODEL

The modern Rola loudspeaker is equipped with an Anistropic Alnico permanent magnet and, in most cases, with an Isocore transformer. These features, plus sound design and precise workmanship, ensure brilliant and trouble-free performance. The table below lists the types of modern Rola loudspeakers which may be used as replacements for obsolete models. It includes those available up till May, 1948.

OBSOLETE SPEAKERS		NEW REPLACEMENT SPEAKERS		
MODEL	SIZE	MODEL	SIZE	CHOKE
F4 PM, 5/4, 5/6, 5/7, 5/8, 5/9, 5/11, 5/15	5"	5C	5"	None
F4, K5	5"	5C	5"	6/60
F5B PM, DM6,* 6/6, 6/8, 6/11, 6/12	6"	6H	6"	None
DP5B, F5B	6"	6H	6"	6/60
6/15	6"	6K	6"	None
8" Permanent Magnet Models	8"	8K or 8M	8"	None
F6, F8, K8	8"	8K or 8M	8"	14/60
10" Electro-Dynamic Models	10"	10/42	10"	14/60
12" Electro-Dynamic Models	12"	12/42	12"	14/60
10" Permanent Magnet Models	10"	10/42	10"	None
12" Permanent Magnet Models	12"	12/42	12"	None

*For Auto Radio Replacement. Speaker to be fitted under the dash baffle. Field supply no longer needed.

TECHNICAL DATA

The trend in radio set design today is the replacement of the electro magnet type loudspeaker with the permanent magnet type. The field winding usually employed as a filter choke when the electro-magnet type speaker is used, is replaced with a separate filter choke. Details of standard Rola filter chokes are listed below.

Standard Specifications of Chokes.

Model 14/60. Inductance 14 henries with 60 m.a. D.C., 10 volts 100 cycles A.C. superimposed, D.C. resistance 520 ohms.

Voltage drop with 60 m.a. 31.2 volts (cold).

Model 6/60. Inductance 6 henries with 60 m.a. D.C., 10 volts 100 cycles A.C. superimposed, D.C. resistance 350 ohms.

Voltage drop with 60 m.a. 21 volts (cold).

It is recommended that the use of these chokes be confined to receivers or amplifiers in which the total current drain does not exceed 70 m.a. At this drain the inductance of the chokes will be approximately 6% lower than that at their recommended 60 m.a. When the chokes are used to replace field windings the difference between the resistance of the field winding and that of the choke or chokes must be made up with a wire wound resistance the wattage rating of which can be determined by the formula I^2R .

In some applications, particularly where the receiver does not use inverse feedback, hum may be present at a higher than acceptable level, if only one choke is used in substitution of the field coil. In such cases, a second choke and 8 mfd condenser may be necessary.

HOW TO HAVE A ROLA SPEAKER REPAIRED BY A ROLA SERVICE DEPOT

When you require repairs to a Rola Speaker please take action as follows :—

- (1) Tag each speaker with your name and address and particulars of the work required.
- (2) Remove all extraneous equipment such as baffles, radio components, non standard leads, etc. No responsibility can be accepted for such equipment if left attached to speakers.
- (3) If you are a member of the radio trade, send the speaker to the Rola distributor for your State and not direct to a Rola Service Depot. If you are a member of the public, send the speaker to a Radio retailer, or a Rola distributor.

After repairs, the speaker will be returned in perfect working condition and will carry the full warranty which is reproduced below.

Warranty

ROLA COMPANY (AUST.) PTY. LTD. will make good or replace at the factory any Rola products which, by examination at the factory made within both ninety days from the date of sale and twelve months from the date of manufacture, are proved to the satisfaction of a representative of the Company to have failed to correspond with the description or to have been defective in material or workmanship. Save as aforesaid all conditions and warranties as to description, quality, state, condition or fitness of the Company's goods are expressly negated and the Company neither assumes nor authorises any representative or other person to assume for it any other obligation or liability in connection with the sale of any goods manufactured by it.

*Rola loudspeakers for assemblers
and the general trade are distrib-
uted by the following:—*

NEW SOUTH WALES

George Brown & Company Pty.
Ltd., 267 Clarence Street, Sydney,

John Martin Pty. Ltd.,
116 Clarence Street,
Sydney.

VICTORIA

Homecrafts Pty. Ltd.,
290 Lonsdale Street, Melbourne.

Vealls Agencies Pty. Ltd.,
490 Elizabeth Street, Melbourne.

SOUTH AUSTRALIA

A. G. Healing Ltd.,
151 Pirie Street, Adelaide.

WESTERN AUSTRALIA

Atkins (W.A.) Limited,
894 Hay Street, Perth.

QUEENSLAND

Mr. A. E. Harrold,
123 Charlotte Street, Brisbane

TASMANIA

W. & G. Genders Pty. Ltd.,
Launceston, Hobart, Burnie.

NORTHERN TERRITORY

Radiolectrix Sales and Service,
Kauckey Street, Darwin.

Rola

THE WORLD'S FINEST SPEAKERS