



ROLA

LOUDSPEAKER

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LOUDSPEAKER DATA

TECHNICAL BULLETIN No. 24

(Issued 1/2/65)

In the following pages will be found complete technical information on the current range of Rola loudspeakers, together with information on the coding system used to identify the various models, and recommendations on the specific applications to which each type is best suited.

SPEAKER IDENTIFICATION

For identification purposes, each type of Rola loudspeaker is coded with a numeral and a letter or letters. The numeral denotes the approximate speaker diameter, and the following letter indicates the relative magnetic efficiency of the loudspeaker. The prefix letter C indicates that the loudspeaker is one of the latest models incorporating a Barium Ferrite magnet.

These new Ferrite magnet speakers have a higher acoustic efficiency than the Alnico models they supersede; however, for some applications and for replacement purposes most of the Alnico magnet types will continue to be available.

Elliptical speakers are allotted two numerals, giving the approximate speaker dimensions over the major and minor axes. For example, Model 9-6H measures $9\frac{7}{64}$ " x $6\frac{11}{32}$ " overall.

APPLICATIONS

Small Round Loudspeakers

Smallest speaker in this range is the Model 2-0C, developed specially for use with pocket-size transistor portables. Models 2C, C3D and C3G can be used in the higher-powered transistor sets or for inter-com. or hospital pillow-phone purposes. Where still higher powers and better acoustic efficiency are needed, yet space is at a premium, Model C4D and Model C4G are available.

The C4D is also recommended for use in valve receivers which are dimensionally unsuited to the 5-inch models, while the C4G, because of its higher efficiency and greater power-handling capacity, is particularly suitable for battery portables, outdoor theatre use, and for column loudspeaker enclosures.

For many years the 5-inch and 6-inch group of loudspeakers has met the needs of designers

of A.C., Battery and Vibrator mantel and table models, car radio receivers and inter-communication equipment, and in compact TV receivers. Since they were originally designed, these models have gone through a gradual process of evolution, during which their efficiency and frequency response have been improved to such a degree that today they are the finest speakers of their type.

In the 5-inch group the C5D is recommended for use in A.C. mantel models and the Model C5G in battery receivers and outdoor theatre installations. The 6H is used in TV receivers and mantel model A.C. receivers, while the 6M, because of its extremely high efficiency, is chosen for battery receivers, single-unit car radios, and as the rear seat speaker in two-speaker car installations.

Elliptical Loudspeakers

These types have been designed essentially as space savers and are used principally in compact mantel and table model radios, in car radios and in table and portable model TV receivers. The smallest of them, Model 5-3D, is used in small portable TV sets and medium-size personal portable radios. The two new Ferrite Models, C5-3D and C5-3G, because of their high performance and "Slimline" construction are well suited for portable radios. Model 55-4C finds principal application in A.C. mantels, the higher-efficiency 55-4F being preferred for battery-operated record players. In the intermediate size are the C6-4D, C6-4G, 7-5H and C7-5L, and 8-4H and 8-4L which have similar applications to those already listed, but because of their greater diaphragm area and lower fundamental cone resonance have a better low-frequency response than the midget ellipticals.

Models 8-4H and C8-4L have similar performance to the 7-inch models, but the fact that they measure less than 4½ inches over their minor axis makes them particularly suited to use in modern "Slimline" radio and TV receivers.

The large elliptical models 9-6H and C9-6L offer the advantage of a cone area approximately equal to that of the conventional 8-inch loudspeaker, yet require only 6 inches of vertical space. The high efficiency of Model C9-6L makes it particularly useful for car radio and TV console applications.

Another speaker in the elliptical range is the 10-3G, a design developed to enable the utmost economy in cabinet space. Model 10-3G has special application in table and portable-type TV receivers and can also be a valuable contributor to ultra-compact car radio receiver designs.

Large Round Loudspeakers

These comprise the 8-inch and 12-inch models. Throughout the world the 8-inch loudspeaker is regarded as the standard utility size offering the greatest flexibility and value in standard loudspeakers. In the Rola range of 8-inch models the high-efficiency 8M is probably Australia's biggest selling speaker in its class. Whether used singly or, for radiograms, in pairs, it pro-

vides extremely fine performance and a relatively high power handling capacity.

The new Ferrite Model C8L, although somewhat lower in efficiency than the 8M, has physical characteristics which make it very useful in situations which call for space-saving solutions. For less exacting applications the lower-efficiency Model 8H is available.

Wide Range Loudspeakers

Included in this group are a 5-inch Tweeter for use with standard low-resonance 8 or 12-inch models, one elliptical dual-cone type and three extended range 12-inch models.

The 5FX Tweeter has a response from 4 K.C. to above 16 K.C. and is "flat" ± 3 db over this range. The elliptical Model 9-6LX has been developed for use in good-quality yet compact TV receivers and Stereo radiograms.

The 8MX, an 8-inch model which is the most widely used of all Rola wide-range speakers, has a response extending from 50 c.p.s. to 12 K.C. ± 6 db. Its performance puts it in world class, yet its cost is low.

In the 12-inch group is the medium-priced 12MX, the high-performance 12PX, and the leader of the range, the famous Hi-Fi 12UX.

In this model the latest high-energy type material is used to produce the large scientifically designed magnet which helps to provide first-class Transient Response. This is the much-sought-after feature in any loudspeaker which

is to reproduce vividly and realistically every delicate tonal shading desired by the Hi-Fi connoisseur.

The frequency response of the Hi-Fi 12UX is within ± 6 db from 40 c.p.s. to 14 K.C. — a range which more than meets modern Hi-Fi requirements. It is contributed to by the Hi-Fi 12UX's triple cone which provides a smooth mechanical cross-over without the phase displacements and consequent distortions encountered in multiple units.

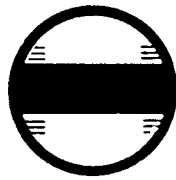
Another very important feature of the Hi-Fi 12UX is its high power handling capacity at an extremely low level of intermodulation distortion. The fact that in normal high-fidelity applications the Hi-Fi 12UX will operate at less than one-quarter of its Peak Rating of 30 watts means that its intermodulation distortion under average operating conditions is too low to rate criticism by even the most fastidious. In short, the Rola Hi-Fi 12UX is Australia's finest high-fidelity loudspeaker, one which more than meets world standards.

ROLA COMPANY (AUSTRALIA) PTY. LTD.

THE BOULEVARD, RICHMOND, VICTORIA. 42 3921

N.S.W. OFFICE: CALTEX HOUSE, KENT STREET, SYDNEY. 27 6147

SMALL ROUND



LOUDSPEAKERS

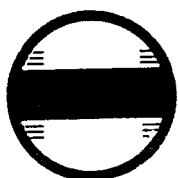
Model	2-oC	2 C	FERRITE C3D
Power handling capacity	100 mWatts Peak	250 mWatts Peak	3 Watts Peak
Diaphragm	F2	F4	F269
Fundamental resonance	400 c.p.s.	350 c.p.s.	235 c.p.s.
Frequency response	350 c.p.s. — 3.5 K.C.	325 c.p.s. — 4.5 K.C.	220 c.p.s. — 7 K.C.
Voice coil impedance	8 or 15 ohms at 1,000 c.p.s.	15 ohms at 1,000 c.p.s.	15 ohms at 400 c.p.s.
Air gap flux density	8,000 Gauss	8,000 Gauss	7,800 Gauss
Gap flux	8,900 Lines	11,800 Lines	13,000 Lines
Recommended transformer	Type J	Type J	Type N or G
Principal dimensions:			
Overall diameter of diaphragm housing	2"	2 3/4"	3 1/16" x 3 1/16"
Diameter of baffle opening	1 13/16"	2 1/2"	3 1/16"
Diameter of voice coil	9/16"	9/16"	5/8"
Depth from pad ring to rear	1 3/16"	1 1/8"	1 1/4"
Mounting	No screw holes provided, housing is intended to be clamped externally in position	No screw holes provided, housing is intended to be clamped externally in position	Four 0.196" holes spaced 90° on a 3 1/16" pitch circle diameter
Finish	Cadmium plated housing and magnet assembly	Cadmium plated housing and magnet assembly	Baked enamel housing.
Weight (without transformer)	1 1/4 ozs.	2 1/4 ozs.	5 3/4 ozs.

Model	FERRITE C3G	3 D*	FERRITE C4D
Power handling capacity	3 Watts Peak	3 Watts Peak	3 1/2 Watts Peak
Diaphragm	F269	F269	F272
Fundamental resonance	235 c.p.s.	235 c.p.s.	140 c.p.s.
Frequency response	220 c.p.s. — 7 K.C.	220 c.p.s. — 7 K.C.	135 c.p.s. — 7 K.C.
Voice coil impedance	15 ohms at 400 c.p.s.	3.5 or 15 ohms at 400 c.p.s.	15 ohms at 400 c.p.s.
Air gap flux density	11,000 Gauss	7,800 Gauss	7,800 Gauss
Gap flux	18,400 Lines	13,000 lines	13,000 Lines
Recommended transformer	Type N or G	Type G	Type E or G
Principal dimensions:			
Overall diameter of diaphragm housing	3 1/16" x 3 1/16"	3 1/16" x 3 1/16"	4 1/8" x 4 1/8"
Diameter of baffle opening	3 3/16"	3 3/16"	3 11/16"
Diameter of voice coil	5/8"	5/8"	5/8"
Depth from pad ring to rear	1 3/8"	1 5/8"	1 13/32"
Mounting	Four 0.196" holes spaced 90° on a 3 1/16" pitch circle diameter	Four 0.196" holes spaced 90° on a 3 1/16" pitch circle diameter	Four 1/4" holes spaced 90° on a 4 1/16" pitch circle diameter
Finish	Baked enamel housing.	Cadmium plated housing, magnet assembly black lacquered	Baked enamel housing.
Weight (without transformer)	8 1/2 ozs.	5 ozs.	6 1/2 ozs.

*Replacement Type.

SPECIFICATIONS

SMALL ROUND



LOUDSPEAKERS

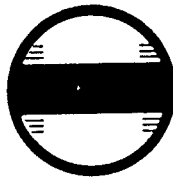
Model	FERRITE C4G	4 D*	4 F*
Power handling capacity	3 1/2 Watts Peak	3 1/2 Watts Peak	4 1/2 Watts Peak
Diaphragm	F272	F272	F97
Fundamental resonance	140 c.p.s.	140 c.p.s.	175 c.p.s.
Frequency response	135 c.p.s. — 7 K.C.	135 c.p.s. — 7 K.C.	170 c.p.s. — 7 K.C.
Voice coil impedance	15 ohms at 400 c.p.s.	3.5 or 15 ohms at 400 c.p.s.	3.5 or 15 ohms at 400 c.p.s.
Air gap flux density	11,000 Gauss	7,800 Gauss	9,300 Gauss
Gap flux	18,400 Lines	13,000 lines	18,600 lines
Recommended transformer	Type E or G	Type E or G	Type E or G
Principal dimensions:			
Overall diameter of diaphragm housing	4 1/8" x 4 1/8"	4 1/8" x 4 1/8"	4 1/8" x 4 1/8"
Diameter of baffle opening	3 11/16"	3 11/16"	3 11/16"
Diameter of voice coil	5/8"	5/8"	3/4"
Depth from pad ring to rear	1 17/32"	1 23/32"	2 3/32"
Mounting	Four 13/64" holes spaced 90° on 4 11/16" pitch circle diameter	Four 13/64" holes spaced 90° on 4 11/16" pitch circle diameter	Four 13/64" holes spaced 90° on 4 11/16" pitch circle diameter
Finish	Baked enamel housing.	Baked enamel housing, and magnet assembly	Baked enamel housing, magnet assembly black lacquered
Weight (without transformer)	9 1/4 ozs.	5 ozs.	10 1/2 ozs.

Model	FERRITE C5D	FERRITE C5G	5 D*
Power handling capacity	3 1/2 Watts Peak	3 1/2 Watts Peak	3 1/2 Watts Peak
Diaphragm	F274	F274	F274
Fundamental resonance	135 c.p.s.	135 c.p.s.	135 c.p.s.
Frequency response	130 c.p.s. — 7 K.C.	130 c.p.s. — 7 K.C.	130 c.p.s. — 7 K.C.
Voice coil impedance	15 ohms at 400 c.p.s.	15 ohms at 400 c.p.s.	3.5 or 15 ohms at 400 c.p.s.
Air gap flux density	7,800 Gauss	11,000 Gauss	7,800 Gauss
Gap flux	13,000 Lines	18,400 Lines	13,000 lines
Recommended transformer	Type E or G	Type E or G	Type E or G
Principal dimensions:			
Overall diameter of diaphragm housing	5"	5"	5"
Diameter of baffle opening	4 5/16"	4 5/16"	4 5/16"
Diameter of voice coil	5/8"	5/8"	5/8"
Depth from pad ring to rear	1 3/16"	1 11/16"	1 23/32"
Mounting	Four 13/64" holes spaced 90° on 4 11/16" pitch circle diameter	Four 13/64" holes spaced 90° on 4 11/16" pitch circle diameter	Four 13/64" holes spaced 90° on 4 11/16" pitch circle diameter
Finish	Baked enamel housing.	Baked enamel housing.	Baked enamel housing, and magnet assembly
Weight (without transformer)	7 1/4 ozs.	10 ozs.	5 1/2 ozs.

* Replacement Type

SPECIFICATIONS

SMALL ROUND



LOUDSPEAKERS

Model	5 F*	6 H	6 M
Power handling capacity	4 1/2 Watts Peak	6 Watts Peak	7 Watts Peak
Diaphragm	F89	F81	F77
Fundamental resonance	165 c.p.s.	115 c.p.s.	115 c.p.s.
Frequency response	160 c.p.s. — 6.5 K.C.	110 c.p.s. — 8 K.C.	110 c.p.s. — 7 K.C.
Voice coil impedance	3.5 or 15 ohms at 400 c.p.s.	3.5 or 15 ohms at 400 c.p.s.	3.5 or 15 ohms at 400 c.p.s.
Air gap flux density	9,300 Gauss	9,200 Gauss	9,350 Gauss
Gap flux	18,600 lines	23,000 Lines	36,200 Lines
Recommended transformer	Type E or G	Type Q or D	Type Q or D
Principal dimensions:			
Overall diameter of diaphragm housing	5"	6 1/16"	6 7/16"
Diameter of baffle opening	4 3/16"	5 13/16"	5 13/16"
Diameter of voice coil	3/4"	3/4"	1"
Depth from pad ring to rear	2 1/4"	2 13/16"	3"
Mounting	Four 1 3/4" holes spaced 90° on 4 1/16" pitch circle diameter	Four 3/32" x 1 3/4" slots spaced 90° on 6 7/16" pitch circle diameter	Four 3/32" x 1 3/4" slots spaced 90° on 6 7/16" pitch circle diameter
Finish	Baked enamel housing, magnet assembly black lacquered	Baked enamel housing, magnet assembly black lacquered	Baked enamel housing, magnet assembly black lacquered
Weight (without transformer)	11 ozs.	13 ozs.	1 lb. 5 1/4 ozs.

*Replacement Type

WARRANTY

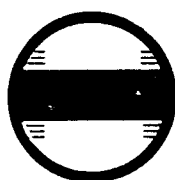
ROLA COMPANY (AUSTRALIA) PTY. LTD. warrants for a period within both three months from the date of sale and twelve months from the date of manufacture that its products shall conform to description and be suitable for the purpose intended.

If the Company is satisfied that its products within these periods have failed to conform to description or have been defective in material or workmanship the Company will issue a credit in respect of the goods or repair or replace the goods at its factory.

Save as aforesaid all conditions and warranties as to description, quality, state, condition or fitness of the Company's goods, express or implied, are negatived, and the Company neither assumes nor authorises any representative or other person to assume for it any other obligation or liability in connection with its products.

SPECIFICATIONS

ELLIPTICAL



LOUDSPEAKERS

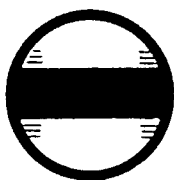
Model	5-3 D*	FERRITE C5-3D	FERRITE C5-3G
Power handling capacity	3 Watts Peak	3 Watts Peak	3 1/2 Watts Peak
Diaphragm	F266	F266	F266
Fundamental resonance	155 c.p.s.	155 c.p.s.	155 c.p.s.
Frequency response	150 c.p.s. — 6 K.C.	150 c.p.s. — 6 K.C.	150 c.p.s. — 6 K.C.
Voice coil impedance	15 ohms at 400 c.p.s.	15 ohms at 400 c.p.s.	15 ohms at 400 c.p.s.
Air gap flux density	7,800 Gauss	7,800 Gauss	11,000 Gauss
Gap flux	13,000 lines	13,000 Lines	18,400 Lines
Recommended transformer	Type N or G	Type N or G	Type N or G
Principal dimensions:			
Overall diameter of diaphragm housing	5 1/16" x 3 1/16"	5 1/16" x 3 1/16"	5 1/16" x 3 1/16"
Diameter of baffle opening	4 3/4" x 2 3/4"	4 3/4" x 2 3/4"	4 3/4" x 2 3/4"
Diameter of voice coil	5/8"	5/8"	5/8"
Depth from pad ring to rear	1 1/32"	1 1/32"	1 13/32"
Mounting	Four 13/64" holes spaced 3 1/16" x 2 1/16"	Four 13/64" holes spaced 3 1/16" x 2 1/16"	Four 13/64" holes spaced 3 1/16" x 2 1/16"
Finish	Baked enamel housing	Baked enamel housing.	Baked enamel housing.
Weight (without transformer)	4 1/2 ozs.	5 3/4 ozs.	8 1/2 ozs.

Model	7-5H	FERRITE C7-5L	8-4H
Power handling capacity	6 Watts Peak	7 Watts Peak	6 Watts Peak
Diaphragm	F48	F48	F55
Fundamental resonance	115 c.p.s.	115 c.p.s.	110 c.p.s.
Frequency response	110 c.p.s. — 7 K.C.	110 c.p.s. — 7 K.C.	105 c.p.s. — 7 K.C.
Voice coil impedance	3.5 or 15 ohms at 400 c.p.s.	3.5 or 15 ohms at 400 c.p.s.	3.5 or 15 ohms at 400 c.p.s.
Air gap flux density	9,200 Gauss	10,600 Gauss	9,200 Gauss
Gap flux	23,000 Lines	31,800 Lines	23,000 Lines
Transformer	Type Q or D	Type Q or D	Type Q or D
Principal dimensions:			
Overall diameter of diaphragm housing	7 1/4" x 5"	7 1/4" x 5"	8 3/4" x 4 3/4"
Diameter of baffle opening	6 13/16" x 4 9/16"	6 13/16" x 4 9/16"	7 9/16" x 3 9/16"
Diameter of voice coil	3/4"	3/4"	3/4"
Depth from pad ring to rear	2 13/16"	2 7/32"	2 1/2"
Mounting	Four 7/32" holes spaced 4 11/32" x 4 11/32"	Four 7/32" holes spaced 4 11/32" x 4 11/32"	Four 7/32" holes spaced 5 1/2" x 3 1/8"
Finish	Baked enamel housing, magnet assembly black lacquered	Baked enamel housing.	Baked enamel housing, magnet assembly black lacquered
Weight (without transformer)	14 1/2 ozs.	15 3/4 ozs.	13 3/4 ozs.

*Replacement Type

SPECIFICATIONS

ELLIPTICAL



LOUDSPEAKERS

55-4C	55-4F	FERRITE C6-4D	FERRITE C6-4G
<p>3 1/2 Watts Peak F90 220 c.p.s. 190 c.p.s. — 6 K.C. 3.5 or 15 ohms at 400 c.p.s. 7,250 Gauss 15,500 Lines Type E or G</p> <p>5 1/2" x 3 15/16" 4 15/16" x 3 3/8" 3/4" 1 15/16" Four 13/64" holes spaced 4 3/32" x 2 1/32" Baked enamel housing, magnet assembly blue lacquered</p> <p>8 3/4 ozs.</p>	<p>4 1/2 Watts Peak F90 220 c.p.s. 190 c.p.s. — 6 K.C. 3.5 or 15 ohms at 400 c.p.s. 9,300 Gauss 18,600 Lines Type E or G</p> <p>5 1/2" x 3 15/16" 4 15/16" x 3 3/8" 3/4" 2 3/16" Four 13/64" holes spaced 4 3/32" x 2 1/32" Baked enamel housing, magnet assembly blue lacquered</p> <p>11 ozs.</p>	<p>3 1/2 Watts Peak F10 125 c.p.s. 120 c.p.s. — 6 K.C. 15 ohms at 400 c.p.s. 7,800 Gauss 13,000 Lines Type E or G</p> <p>6 3/16" x 4 3/16" 5 13/16" x 3 13/16" 5/8" 1 1/16" Four 3/16" holes spaced 4 5/8" x 3 5/8" Baked enamel housing</p> <p>7 1/2 ozs.</p>	<p>3 1/2 Watts Peak F10 125 c.p.s. 120 c.p.s. — 6 K.C. 15 ohms at 400 c.p.s. 11,000 Gauss 18,400 Lines Type E or G</p> <p>6 3/16" x 4 3/16" 5 13/16" x 3 13/16" 5/8" 1 1/16" Four 3/16" holes spaced 4 5/8" x 3 5/8" Baked enamel housing.</p> <p>10 1/4 ozs.</p>
FERRITE C8-4L	9-6H	FERRITE C9-6L	10-3G
<p>7 Watts Peak F127 120 c.p.s. 115 c.p.s. — 7 K.C. 3.5 or 15 ohms at 400 c.p.s. 10,600 Gauss 31,800 Lines Type Q or D</p> <p>8 3/64" x 4 3/64" 7 1/16" x 3 3/16" 3/4" 2 3/32" Four 7/32" holes spaced 5 1/2" x 3 1/8" Baked enamel housing</p> <p>4 3/4 ozs.</p>	<p>6 Watts Peak F69 90 c.p.s. 85 c.p.s. — 6 K.C. 3.5 or 15 ohms at 400 c.p.s. 9,200 Gauss 23,000 Lines Type Q or D</p> <p>9 7/32" x 6 11/32" 8 3/4" x 5 7/8" 3 3/16" 3 5/16" Four 11/32" x 7/32" slots spaced 6 1/16" x 4 5/8" Baked enamel housing, magnet assembly black lacquered</p> <p>1 lb. 1 1/2 ozs.</p>	<p>7 Watts Peak F69 90 c.p.s. 85 c.p.s. — 6 K.C. 3.5 or 15 ohms at 400 c.p.s. 10,600 Gauss 31,800 Lines Type Q or D</p> <p>9 7/32" x 6 11/32" 8 3/4" x 5 7/8" 3/4" 2 7/8" Four 1/4" holes spaced 6 1/16" x 4 5/8" Baked enamel housing</p> <p>1 lb. 2 1/2 ozs.</p>	<p>3 1/2 Watts Peak F14 110 c.p.s. 105 c.p.s. — 6 K.C. 3.5 or 15 ohms at 400 c.p.s. 8,800 Gauss 18,200 Lines Type E or G</p> <p>10" x 2 5/8" 9 7/16" x 2 5/16" 5/8" 2 3/16" Four 13/64" holes spaced 7 5/8" x 2 3/16" Baked enamel housing, magnet assembly black lacquered</p> <p>15 ozs.</p>

SPECIFICATIONS

LARGE ROUND

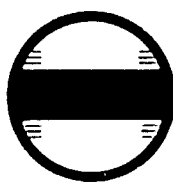


LOUDSPEAKERS

Model	8 H	FERRITE C8L	8 M
Power handling capacity	6 Watts Peak	6 Watts Peak	10 Watts Peak
Diaphragm	F74	F74	F59
Fundamental resonance	110 c.p.s.	110 c.p.s.	75 c.p.s.
Frequency response	105 c.p.s. — 7 K.C.	105 c.p.s. — 7 K.C.	70 c.p.s. — 8 K.C.
Voice coil impedance	3.5 or 15 ohms at 400 c.p.s.	15 ohms at 400 c.p.s.	2 or 15 ohms at 400 c.p.s.
Air gap flux density	9,200 Gauss	10,600 Gauss	9,350 Gauss
Gap flux	23,000 Lines	31,800 Lines	36,200 Lines
Transformer	Type Q or D	Type Q or D	Type K or C
Principal dimensions:			
Overall diameter of diaphragm housing	8 $\frac{1}{16}$ "	8 $\frac{1}{16}$ "	8 $\frac{1}{16}$ "
Diameter of baffle opening	7 $\frac{1}{16}$ "	7 $\frac{1}{16}$ "	7 $\frac{1}{16}$ "
Diameter of voice coil	3 $\frac{1}{4}$ "	3 $\frac{1}{4}$ "	1"
Depth from pad ring to rear	3 $\frac{1}{16}$ "	2 $\frac{11}{16}$ "	3 $\frac{1}{16}$ "
Mounting	Four $\frac{5}{16}$ " x $\frac{7}{32}$ " slots spaced 90° on 7 $\frac{1}{32}$ " pitch circle diameter	Four $\frac{5}{16}$ " x $\frac{7}{32}$ " slots spaced 90° on 7 $\frac{1}{32}$ " pitch circle diameter	Four $\frac{5}{16}$ " x $\frac{7}{32}$ " slots spaced 90° on 7 $\frac{1}{32}$ " pitch circle diameter
Finish	Baked enamel housing, magnet assembly black lacquered	Baked enamel housing	Baked enamel housing, magnet assembly black lacquered
Weight (without transformer)	1 lb. 1/4 oz.	1 lb. 1 1/2 ozs.	1 lb. 7 3/4 ozs.

SPECIAL ELECTRIC GUITAR MODELS

Model	12 M	12 PEG	12 UEG
Power handling capacity	10 Watts Peak	20 Watts Peak	30 Watts Peak
Diaphragm	F27	F36	F20
Fundamental resonance	85 c.p.s.	40 c.p.s.	40 c.p.s.
Frequency response	80 c.p.s. — 6.5 K.C.	35 c.p.s. — 5.5 K.C.	35 c.p.s. — 5.5 K.C.
Voice coil impedance	2 or 15 ohms at 400 c.p.s.	15 ohms at 400 c.p.s.	8 or 15 ohms at 400 c.p.s.
Air gap flux density	9,350 Gauss	12,800 Gauss	14,000 Gauss
Gap flux	36,200 Lines	87,000 Lines	150,000 Lines
Transformer	Type K or C	Not supplied	Not supplied
Principal dimensions:			
Overall diameter of diaphragm housing	12 $\frac{3}{32}$ "	12 $\frac{3}{32}$ "	12 $\frac{3}{32}$ "
Diameter of baffle opening	10 $\frac{29}{32}$ "	10 $\frac{29}{32}$ "	10 $\frac{29}{32}$ "
Diameter of voice coil	1"	1 $\frac{3}{4}$ "	1 $\frac{3}{4}$ "
Depth from pad ring to rear	4 $\frac{11}{16}$ "	4 $\frac{3}{4}$ "	7"
Mounting	Four 1/4" holes spaced 90° on 11 $\frac{5}{8}$ " pitch circle diameter	Four 1/4" holes spaced 90° on 11 $\frac{5}{8}$ " pitch circle diameter	Four 3/8" x 1/4" slots spaced 90° on 11 $\frac{5}{8}$ " pitch circle diameter
Finish	Baked enamel housing, magnet assembly black lacquered	Baked enamel housing, magnet assembly black lacquered	Baked enamel housing, magnet assembly black lacquered
Weight (without transformer)	2 lb. 5 ozs.	3 lb. 7 1/2 ozs.	7 lb. 10 3/4 ozs.

WIDE RANGE

LOUDSPEAKERS

Model	5 FX TWIN CONE	8 MX TWIN CONE	FERRITE C9-6LX TWIN CONE
Power handling capacity	15 Watts R.M.S.* F128	10 Watts Peak F65	7 Watts Peak F69
Diaphragm			
Fundamental resonance	Designed to operate from 4,000 c.p.s. to 16 K.C.	50 c.p.s.	90 c.p.s.
Frequency response		45 c.p.s. — 12 K.C.	85 c.p.s. — 10 K.C.
Voice coil impedance	15 ohms at 4 K.C.	15 ohms at 400 c.p.s.	15 ohms at 400 c.p.s.
Air gap flux density	9,300 Gauss	9,350 Gauss	10,600 Gauss
Gap flux	18,600 Lines	36,800 Lines	31,800 Lines
Transformer	See application note, P.11	Type K or C	Type K or C
Principal dimensions:			
Overall diameter of diaphragm housing	5"	8 $\frac{1}{16}$ "	9 $\frac{7}{32}$ " x 6 $\frac{11}{32}$ "
Diameter of baffle opening	4 $\frac{5}{16}$ "	7 $\frac{1}{16}$ "	8 $\frac{3}{4}$ " x 5 $\frac{7}{8}$ "
Diameter of voice coil	$\frac{3}{4}$ "	1"	$\frac{3}{4}$ "
Depth from pad ring to rear	2 $\frac{1}{4}$ "	3 $\frac{3}{16}$ "	2 $\frac{7}{8}$ "
Mounting	Four $\frac{13}{64}$ " holes spaced 90° on 4 $\frac{11}{16}$ " pitch circle diameter	Four $\frac{5}{16}$ " x $\frac{7}{32}$ " slots spaced 90° on 7 $\frac{7}{32}$ " pitch circle diameter	Four $\frac{1}{4}$ " holes spaced 6 $\frac{1}{16}$ " x 4 $\frac{5}{8}$ "
Finish	Baked enamel housing, magnet assembly black lacquered	Baked enamel housing, magnet assembly black lacquered	Baked enamel housing
Weight (without transformer)	12 ozs.	1 lb. 7 $\frac{1}{4}$ ozs.	1 lb. 2 $\frac{1}{2}$ ozs.

Model	12 MX TWIN CONE	12 PX TWIN CONE	HI-FI 12 UX TWIN CONE
Power handling capacity	10 Watts Peak F25	20 Watts Peak F30	30 Watts Peak F31
Diaphragm			
Fundamental resonance	50 c.p.s.	50 c.p.s.	50 c.p.s.
Frequency response	45 c.p.s. — 10 K.C.	45 c.p.s. — 12 K.C.	40 c.p.s. — 14 K.C. ± 6 db (usable response to 30 c.p.s. in Rola recommended vented enclosure)
Voice coil impedance	15 ohms at 400 c.p.s.	15 ohms at 400 c.p.s.	15 ohms at 400 c.p.s.
Air gap flux density	9,350 Gauss	12,800 Gauss	14,000 Gauss
Gap flux	36,200 Lines	87,000 Lines	150,000 Lines
Transformer	Type K or C	Not supplied	Not supplied
Principal dimensions:			
Overall diameter of diaphragm housing	12 $\frac{3}{32}$ "	12 $\frac{3}{32}$ "	12 $\frac{3}{32}$ "
Diameter of baffle opening	10 $\frac{29}{32}$ "	10 $\frac{29}{32}$ "	10 $\frac{29}{32}$ "
Diameter of voice coil	1"	1 $\frac{3}{4}$ "	1 $\frac{3}{4}$ "
Depth from pad ring to rear	4 $\frac{11}{16}$ "	4 $\frac{3}{4}$ "	7"
Mounting	Four $\frac{3}{8}$ " x $\frac{1}{4}$ " slots spaced 90° on 11 $\frac{5}{8}$ " pitch circle diameter	Four $\frac{1}{4}$ " holes spaced 90° on 11 $\frac{5}{8}$ " pitch circle diameter	Four $\frac{3}{8}$ " x $\frac{1}{4}$ " slots spaced 90° on 11 $\frac{5}{8}$ " pitch circle diameter
Finish	Baked enamel housing, magnet assembly black lacquered	Baked enamel housing, magnet assembly copper lacquered	Baked enamel housing and magnet housing
Weight (without transformer)	2 lb. 3 $\frac{3}{4}$ ozs.	3 lb. 7 $\frac{1}{2}$ ozs.	7 lb. 10 $\frac{3}{4}$ ozs.

*When used with a simple capacitance filter cutting off at 2 kc. the 5FX will handle comfortably the output of an amplifier rated at 15 Watts r.m.s. on speech/music.

ROLA VALVE OUTPUT TRANSFORMERS

(PREFERRED RANGE)

TRANSFORMER TYPE	ISOCORE (POTTED) TYPES					OPEN LAMINATION TYPES							
	C 10 Watts	D 7 Watts	G 3 Watts	B 14 Watts		K 10 Watts	Q 7 Watts	E 5 Watts	L 3 Watts				
V.C. IMPEDANCE	2	15	3.5	3.5	15	2	3.5	15	3.5	15	3.5	15	3.5
PRIMARY IMPEDANCE													
5000	C1	C18	D7	G9	B23	K1	K6	K35	Q11		E1	E40	L3
7000	C11	C50	D1	G1	B45	K9	K5	K60	Q2	Q22	E2	E41	L2
10,000			D18								E12		
14,000									Q18	Q25	E21		
10,000 CT (PUSH-PULL)	C7	C52			B29	K4		K36					

ROLA LINE TRANSFORMERS

(PREFERRED RANGE)

LINE IMPEDANCE (OHMS)	TRANSFORMER TYPE				
	POTTED TYPE				OPEN
	C 10 Watts	D 7 Watts	G 3 Watts	E 5 Watts	
	2	15	3.5	3.5	3.5
250					E36
500	C10	C58	D11		E19
600	C16	C60	D2		E25
1000	C9	C61	D19		
1500	C35				
2000	C14		D28		E18
2500	C2	C63			E45
5000	C13	C66	D6		
10,000				G8	
15,000			D15		
20,000					E43

COLOR CODES:

TRANSFORMER PRIMARY

START — Red if primary untapped. Brown if primary tapped.

FINISH — Blue.

CENTRE TAP (if used) — Red.

NOTE: In Isocore transformers the Red lead is connected internally to the laminations. Always connect the Red lead to the high voltage source (B+).

TRANSFORMER SECONDARY

START — Black. FINISH — Green.

TRANSFORMER POWER RATINGS AND PHYSICAL DIMENSIONS

TYPE	PEAK POWER (WATTS)	HEIGHT	WIDTH	OVERALL LENGTH*	MOUNTING CENTRES
B	14	2 1/4"	2"	2 3/4"	3 1/8"
C	10	2 1/4"	1 13/16"	2 1/16"	3 1/16"
D	7	2"	1 3/4"	2 1/8"	2 1/2"
E	5	1 1/2"	1 5/16"	1 25/32"	2 1/16"
G	3	1 3/4"	1 1/4"	1 3/4"	2 1/16"
J	0.35	1 1/16"	1 1/16"	1 1/16"	2 5/32"
K	10	1 3/4"	1 5/8"	2 3/32"	2 1/2"
L	3	1 11/32"	1 1/16"	1 13/32"	2 1/16"
N	3	1 1/16"	1 1/16"	1 1/16"	2 5/32"
Q	7	1 7/16"	1 3/8"	1 25/32"	2 1/16"
**S	1	1 3/8"	63/64"	1 1/16"	1 1/16"
**T	1	1 3/8"	63/64"	1 1/16"	1 1/16"

*Not including mounting lugs.

**Spade Mounting.

ROLA TRANSISTOR TRANSFORMERS

(PREFERRED RANGE)

DRIVER	IMPEDANCE	OUTPUT	IMPEDANCE
JDR22	4,500/1,100 CT	JTR22	320 CT/15
JDR23	3,000/1,100 CT		
JDR27	4,000/2,000 CT	JTR27	450 CT/15
JDR72	2.5 : 1 + 1 T.R.		
LDR4	3,000/1,330 CT	LTR8	300 CT/3.5
LDR43	4,300/600 CT	LTR18	375 CT/3.5
NDR17	3,000/2,000 CT		
ADR73	4.14 : 1 + 1 T.R.	ATR71	320/15

TRANSISTOR TRANSFORMER COLOUR CODES

Colour Code

Red: Single primary start or P.P. primary centre tap.

Brown: P.P. primary start.

Blue: Primary finish.

Yellow: P.P. secondary start.

Black: P.P. secondary centre tap or single secondary start.

Green: Secondary finish.

Colour Code for Auto Transformers

Black: Primary and secondary start.

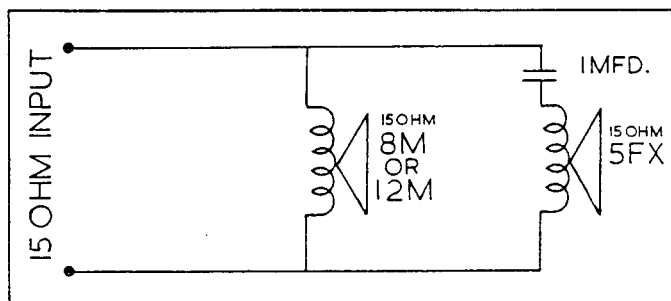
Green: Primary finish.

Yellow: Secondary finish.

APPLICATIONS OF 5FX TWEETER

The circuit diagram below shows the connection of a 5FX and an 8-inch or 12-inch low-frequency loudspeaker. The coupling condenser for the 5FX is a paper type. Remember, it is important that the speakers be correctly phased, i.e., so that the diaphragms all move in the same direction with the same impulse. A simple way in which this may be checked is by connecting a 1½-volt dry cell across the voice coil terminals and determining the direction in which the cone moves.

Mounting. Where space is a limitation the following placements are recommended. In any case the 5FX should be mounted in such a manner that the pad-ring is flush with cabinet front. Where the low-frequency speaker is mounted in a cabinet or other type of enclosure it is recommended that the tweeter unit be mounted on the same vertical axis as the larger speaker and as close to the latter as possible. If two loudspeakers are used for the lower range, mount the high-frequency 5FX above and between the larger speakers to form a clover-leaf pattern.



ROLA FILTER CHOKES

TYPE

- CH16** Inductance 14 Henries at 60 mA D.C. with 10 Volts. A.C. 100 c.p.s. superimposed. D.C. Resistance 500 ohms (cold).
- CH18** Inductance 6 Henries at 100 mA D.C. with 10 Volts. A.C. 100 c.p.s. superimposed. D.C. Resistance 275 ohms (cold).
- CH22** Inductance 10.8 Henries (min.) at 50 mA D.C. with 10 Volts. A.C. 100 c.p.s. superimposed. D.C. Resistance 500 ohms (cold).

DIMENSIONS

	Height	Width	Overall Length*	Mounting Centres
CH16	1¾"	1⅝"	2⅝"	2½"
CH18				
CH22	1⅞"	1⅜"	1⅝"	2⅞"

*Not including mounting lugs.

LOUDSPEAKER CONE DATA

Model	Cone No.	Voice/Coil Imped.	Nom. Res.	Useful Range	Application
20C	F2	15	400	350-4,000	K
2C	F4	15	350	325-4,500	K
3D, C3D†, C3G†	F269	3.5-15	235	220-7,000	A
	F268		170	165-7,000	A
	F271		325	300-5,000	D
4D, C4D†, C4G†	F272	3.5-15	140	135-7,000	A
	F273		200	190-5,000	A
	F279		325	300-5,000	D
5D, C5D†, C5G†	F274	3.5-15	135	130-7,000	A, K
	F275		175	170-7,000	A
5F	F89	3.5-15	165	160-6,500	A
	F87		135	130-7,000	A
5FX*	F128	15	—	4,000-16,000	G
5-3D, C5-3D†, C5-3G†	F266	15	155	150-6,000	K
	F267		220	210-6,000	K
55-4C	F90	3.5-15	200	190-6,000	D
	F83		130	125-7,000	A
C6-4D†, C6-4G†	F10	15	125	210-6,000	A, D
55-4F	F90	3.5-15	200	190-6,000	D
	F83		130	125-7,000	A
6H	F81	3.5-15	115	110-8,000	A, C
	F79		90	85-7,000	B
6M	F77	3.5-15	115	110-7,000	A, C
	F80		90	85-7,000	A, B
	F78		130	125-7,000	F, H
7-5C, 7-5H, 7-5L, C7-5L†	F48	3.5-15	115	110-7,000	A, H
	F45		90	85-6,500	B, C
	F46		90	85-7,000	B
8H, C8L†	F74	3.5-15	110	105-7,000	A
	F76		80	75-7,000	B, C

APPLICATION

- | | | |
|---|---|--|
| A. General Application.
B. Requires Adequate Baffling.
C. Television.
D. Mobile Comm. Equip. | F. Public Address.
G. Extended Range.
H. Car Radio. | J. Radiogram.
K. Miniature Receivers.
M. Electric Guitars. |
|---|---|--|

Standard Resale Cones shown in Bold Type.

* With H.F. Cone. † Ferrite Magnet.

LOUDSPEAKER CONE DATA

Model	Cone No.	Voice/Coil Imped.	Nom. Res.	Useful Range	Application
8M	F59	2-15	75	70-8,000	A
	F63		125	120-6,000	F
	F62		75	70-8,000	C
	F53		90	85-6,000	C
	F60		75	70-5,000	
8MX	F65*	15	50	50-12,000	G, J
	F59*		65	60-10,000	C, G, J
8-4C, 8-4H, 8-4L, C8-4L†	F127	3.5-15	120	115-7,000	A
9-6H	F69	3.5-15	90	85-7,000	A, C
	F70		115	110-7,000	H
	F72		80	75-7,000	B
9-6L C9-6L†	F69	3.5-15	90	85-7,000	A, C
	F70		115	110-7,000	H
	F72		80	75-7,000	B
9-6HX	F69*	3.5-15	90	85-10,000	C, G, J
9-6LX C9-6LX†	F69*	3.5-15	90	85-10,000	C, G, J
10-3G	F13	3.5-15	160	150-6,000	H
	F14	3.5-15	110	105-6,000	C
12M	F27	2-15	85	80-6,500	A, J
	F25		65	60-6,500	A, J
	F26		50	45-6,500	J
	F35		75	70-8,000	A, C
12MX	F26*	2-15	50	45-10,000	C, G, J
12P	F33	15	55	50-9,000	J
	F29		75	70-9,000	J
12PEG	F36		40	35-5,500	M
	F30		50	45-5,500	M
12PX	F30*	15	50	45-12,000	G, J
12U	F21	15	60	55-6,000	F, J
12UEG	F20	15	40	35-5,500	M
	F31		50	45-14,000	G, J
12UX	F31		50	45-5,500	M

APPLICATION

- | | | |
|--------------------------------|--------------------|-------------------------|
| A. General Application. | F. Public Address. | J. Radiogram. |
| B. Requires Adequate Baffling. | G. Extended Range. | K. Miniature Receivers. |
| C. Television. | H. Car Radio. | M. Electric Guitars. |
| D. Mobile Comm. Equip. | | |

Standard Resale Cones shown in Bold Type.

* With H.F. Cone. † Ferrite Magnet.