Telephone **16-164** (3 lines)

46 Brown Street,
PONSONBY, W.1

BEACON RADIO LIMITED

TRANSFORMER MANUFACTURERS

POWER TRANSFORMERS

Cat. No. R 52 150 m.a. 425 volt aside, 5 volt at 3 amp, 6.3 volt at 4 amp C.T.

Cat. No. R 53 250 m.a. choke input, 565 volt aside, 5 volt at 2 amp, 6.3 volt at 2.5 amp.

FILTER CHOKES

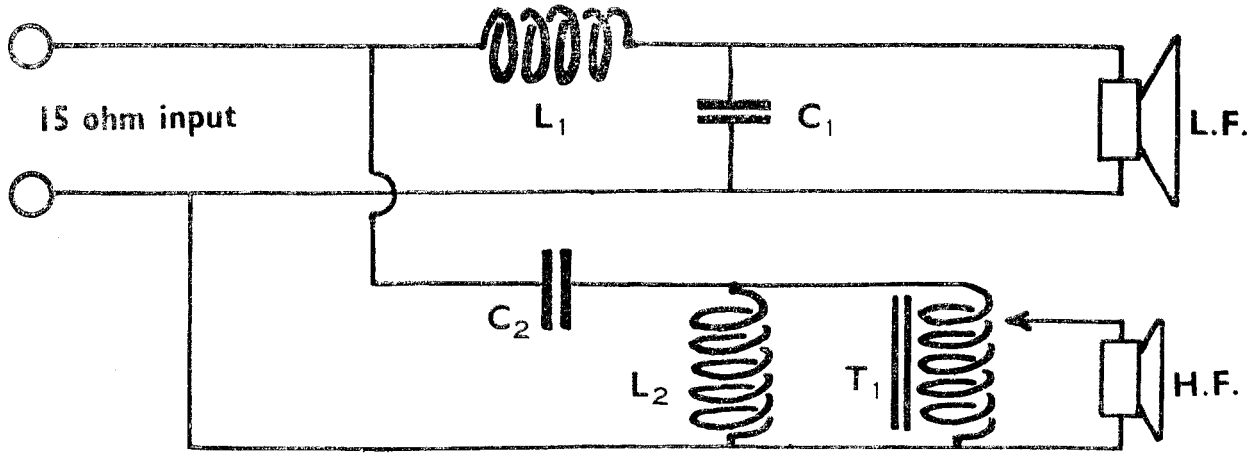
Cat. No.	C 22	20 m.a.	30 henry	855 ohms
Cat. No.	C 07	150 m.a.	12 henry	210 ohms
Cat. No.	C 09	250 m.a.	12 henry	70 ohms

CROSS-OVER NETWORK (for 15 ohm low frequency speaker)

Cat. No. J 01 2.25 mH choke for 1500 c/s cross-over filter. Two chokes and two 5 mfd condensers are required.

Cat. No. J 04 4 mH choke for 833 c/s cross-over filter. Two chokes and two 9 mfd condensers are required.

Cat. No. S 31 0 - 2 - 4 - 8 - 15 ohm auto transformer for tweeter unit where the tweeter voice coil is less than 15 ohms, Radiometal core.



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BEACON HIGH FIDELITY TRANSFORMERS

ELECTRICAL DATA (approximate values)

Cat. No.	Rating	Impedance	Initial Primary Inductance at 5 volts. 20 c/s.	Leakage Inductance	Primary Resistance
S 01	10 watts	3000 ohms C.T. to 1-4-9-16 ohms	65 Henries	10 mh	145 ohms
S 11			33 ,,		
S 21			14 ,,		
S 02	10 wats	5000 ohms C.T. to 1-4-9-16 ohms	110 Henries	10 mh	230 ohms
S 12			55 ,,		
S 22			23 ,,		
S 03	15 watts	3000 ohms C.T. to 1-4-9-16 ohms	55 Henries	10 mh	80 ohms
S 13			28 ,,		
S 23			14 ,,		
S 04	15 watts	4000 ohms C.T. to 1-4-9-16 ohms	70 Henries	10 mh	110 ohms
S 14			35 ,,		
S 24			18 ,,		
S 05	15 watts	5000 ohms C.T. to 1-4-9-16 ohms	100 Henries	10 mh	160 ohms
S 15			50 ,,		
S 25			25 ,,		
S 06	15 watts	10,000 ohms C.T. to 1-4-9-16 ohms	180 Henries	15 mh	250 ohms
S 16			85 ,,		
S 26			50 ,,		
S 07	20 watts	4000 ohms C.T. to 1-4-9-16 ohms	65 Henries	16 mh	115 ohms
S 17			45 ,,		
S 27			20 ,,		
S 08	20 watts	9000 ohms C.T. to 1-4-9-16 ohms	160 Henries	16 mh	240 ohms
S 18			100 ,,		
S 28			45 ,,		
S 09	20 watts	10,000 ohms C.T. to 1-4-9-16 ohms	190 Henries	16 mh	270 ohms
S 19			90 ,,		
S 29			50 ,,		
S 10	15 watts	10,000 ohms C.T. to 31 or 500 ohms	180 Henries	15 mh	250 ohms
S 20			85 ,,		
S 30			50 ,,		
S 53	20 watts	6600 ohms C.T. to 1-4-9-16 ohms	130 Henries	15 mh	175 ohms
S 58			65 ,,		
S 56	5 watts	5000 ohms C.T. to 3.7 or 15 ohms	135 Henries	60 mh	350 ohms
S 57	5 watts	5000 ohms C.T. to 2 or 8 ohms	135 Henries	60 mh	350 ohms
S 66	30 watts Ultra Linear	6600 ohms C.T. to 1-4-9-16 ohms	90 Henries	15 mh	87 ohms
S 71	10 watts	6000/8000 ohms C.T. to 3.7 or 15 ohms	50 Henries	24 mh	415 ohms
S 72	10 watts	6000/8000 ohms C.T. to 2 or 8 ohms	50 Henries	24 mh	415 ohms
S 80	20 watts	8000 ohms C.T. to 1-4-9-16 ohms	150 Henries	16 mh	195 ohms
S 90			85 ,,		
S 81	12 watts Ultra Linear	7000 ohms C.T. to 3.7 or 15 ohms	55 Henries	17 mh	257 ohms
S 83	10 watts	10,000 ohms C.T. to 1-4-9-16 ohms	220 Henries	12 mh	405 ohms
S 88			110 ,,		
S 89			46 ,,		

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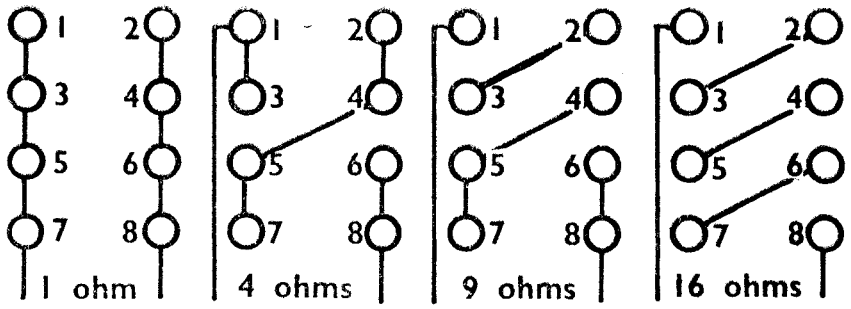
TRANSFORMER MANUFACTURERS

HIGH FIDELITY OUTPUT TRANSFORMERS

These are designed for use in equipment where wide frequency range and low distortion are essential. In properly designed inverse feedback circuits such as the Radiotronics A 515 and the Williamson Amplifier, the very low leakage inductance of these transformers avoids instability when employing large amounts of feedback.



For finest results the Radiometal type is recommended, although results much better than with normal multi-match transformers can be obtained from the other types.

Connections to match various secondary loads are shown above. All primaries are split to enable currents to be balanced.

P.P. Tubes as Triodes	Load Res. Ohms.	Trans. Rating Watts	Radio Metal	Super Silcor	Silicon Steel
PX4	3000	10	48 S 01	48 S 11	48 S 21
2A3	5000	10	48 S 02	48 S 12	48 S 22
2A3	3000	15	48 S 03	48 S 13	48 S 23
PX4 and EL37	4000	15	48 S 04	48 S 14	48 S 24
PX25	5000	15	48 S 05	48 S 15	48 S 25
KT66 and 807	10,000	15	48 S 06	48 S 16	48 S 26
EL37	4000	20	48 S 07	48 S 17	48 S 27
DA30	9000	20	48 S 08	48 S 18	48 S 28
PX25	10,000	20	48 S 09	48 S 19	48 S 29
	6600	20	50 S 53	50 S 58	
KT66 pentode	6600	30		53 S 66	

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TRANSFORMER MANUFACTURERS

BEACON TRANSFORMERS FOR THE WILLIAMSON AMPLIFIER

OUTPUT TRANSFORMER

A range of output transformers is carried in stock. Transformers in this range are made with three grades of core material. The low frequency response differs with each grade of material, but the high frequency response remains unchanged.

The frequency response of the transformers having a nickel iron alloy core is rated at ± 1 db from 20 c/s to 20 kc/s. The next two grades of core material, namely supersilcor and silicon steel, restrict the low frequency response by approximately 1 octave and 2 octaves respectively above 20 c/s. At full output the frequency response of the transformers is virtually the same for all three grades.

The better grade transformers can be wired directly into the Williamson circuit. With the other two grades of transformer some reduction of feedback voltage may be necessary to avoid instability of the amplifier.

This range of transformers performs excellently in circuits employing push-pull pentode output stages working class A or class AB. Some modification of the overall frequency response is to be expected when pentodes are used in the place of triodes. A rising characteristic at 20 kc/s and above is found in the output voltage response curve. The low frequency response is not quite as good as when the same transformer is used with triodes.

Output transformers for special purposes such as the Acros ultra linear version of the Williamson amplifier, can be wound to order.

PHYSICAL DIMENSIONS OF BEACON HIGH FIDELITY OUTPUT TRANSFORMERS

Power	Width	Length	Height	Mtg. Centres	Weight
5 watt	2.1/4"	3.1/2"	2.1/4"	3.1/8"	1.3/4 lb
10 watt	2.1/2"	3.7/8"	3.1/4"	2.1/8" x 2.1/4"	3.1/2 lb
15 watt	3.1/4"	4.1/2"	3.7/8"	2.5/8" x 2.1/2"	6.1/2 lb
20 watt	3.1/4"	4.3/4"	3.7/8"	2.5/8" x 2.3/4"	7 lb
30 watt	3.3/4"	7"	4.5/8"	6.3/8" x 3"	12 lb