TRANSFORMER DATA CHART

	Max. D.C.	Max. Watts	Weight	Core Dia.	Overall Width	Overall Height	Fixing Holes Centres
OP3	30m/A	3	6 oz.	½"	2⅜"	1¾"	2⅛"
P Type	50 ,,	5	12½ oz.	¾"	2⅞"	2"	2½"
GP8	50 ,,	5	12¾ oz.	¾"	2⅞"	2¼"	2½"
W12	80 ,,	10	2 lb.	1 1/16"	4⅜"	3"	3¼"
W15	120 ,,	20	4¼ lb.	2"	4½"	4½"	2¾" x 2"
WMT1	—	15	12½ oz.	¾"	2¾"	2⅞"	2½"
WMT2	—	15	13¾ oz.	¾"	2⅞"	2¼"	2½"
SM1	—	15	2 lb.	1 1/16"	4⅜"	3"	3¼"

Air Cored Inductors

High grade air cored inductors wound with 17 s.w.g. aluminium wire can be supplied to order within the range 0.1 to 8.0 mH.
All inductors are individually checked and adjusted to within 5 per cent. of the specified inductance.
Suitable for use in crossover networks and filter circuits.

'Truqual' Volume Control

The "Truqual" volume control is designed to give constant load impedance and therefore does not cause distortion at low levels. There are six switched positions giving the following approximate steps :

Position	1	2	3	4	5	6
	Full on	-4 dB	-10 dB	-16 dB	-24 dB	Off

N.B. In the "Off" position the supply line is open circuited to prevent break through.
The "Truqual" is available in two types :
Type 32 for speakers 1½—5 ohms impedance.
Complete with knob and plastic recessed escutcheon.
Type 98 for speakers 6—15 ohms impedance.

Potentiometer Volume Control

This continuously variable wire-wound control is useful for adjusting the output of individual speakers in two or three speaker systems.
Resistance : 20 ohms for speakers 1½—5 ohms impedance.
Resistance : 50 ohms for speakers 6—15 ohms impedance.
Complete with push-on polythene knob.
Size : 1¼" x 1¾" deep including knob. Fixing hole ⅜" dia.
Weight : 1¼ oz.

Anodised Aluminium Mesh

The ideal speaker grille, which does not sag with use or cause treble attenuation.
20 s.w.g. ⅛" mesh 1/16" strand.
Anodised gold or bronze.
Slight extra charge for cutting odd shapes.

B.A.F. Wadding

Thickness approx 1" suitable for internal treatment of loudspeaker enclosures

BOOKS

by G. A. BRIGGS'

MUSICAL INSTRUMENTS & AUDIO	1st Edition 240 Pages 102 Illustrations	PRICE 32/6 (34/- Post Free)
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"AUDIO & ACOUSTICS"	First Edition (November 1963) 168 pages 140 illustrations	PRICE 10/6 (11/6 Post Free)

PRICE LIST

OP3 Transformer	9/-
Type P Transformer	11/6
GP8 Transformer	15/-
W12 Transformer	30/-
W12 Transformer (Ratios to order)	35/-
W15 Transformer	90/-
WMT1 Transformer	13/6
WMT2 Transformer	13/6
SM1 Transformer	30/-
Air-cored Chokes :—	
Up to .4 mH	10/-
.5 to 1.5 mH	12/6
1.6 to 2.5 mH	17/6
2.6 to 5.0 mH	22/6
5.1 to 7.5 mH	30/-
Truqual Volume Control	20/-
Potentiometer V.C.	7/6
Anodised aluminium mesh— gold or bronze	6/9 per sq. ft.
Capacitors (reversible electrolytic) :—	
2 mfd	2/6
4 ,,	2/6
8 ,,	3/6
12 ,,	3/6
16 ,,	4/-
25 ,,	5/6
32 ,,	6/6
B.A.F. Wadding	1/6 per sq. ft.

Wharfedale

(REGD TRADE MARK)

TRANSFORMERS

TECHNICAL DATA and WIRING INSTRUCTIONS

RANK WHARFEDALE LTD
IDLE, BRADFORD, YORKS.
Telephone : Bradford 612552/3/4/5.
Telegrams : Wharfdel, Bradford

O P 3

(3 ratios)

Small output Transformer for Battery and Portable Sets, or Mains Sets up to 3 watts output.

Ratios 30, 60 and 90 to 1.
Maximum D.C. Current 30 m/amps.
Fixing holes 2-1/16" centres. Weight 6 ozs.

Inductance at 50 c/s with 4v. A.C.:
26 Henrys zero D.C.
3.8 Henrys 30 m/A.

Type P

(4 ratios)

The ideal replacement Transformer for sets up to 5 watts output.

Ratios 30, 45, 60 and 90 to 1.
(90/1 centre tapped)
Max. D.C. current 50 m/amps.
Fixing Holes 2¼" centres. Weight 12¼ ozs.

Inductance at 50 c/s with 4v. A.C.:
28 Henrys zero D.C.
6.5 Henrys 30 m/A.
4 Henrys 50 m/A.

G P 8

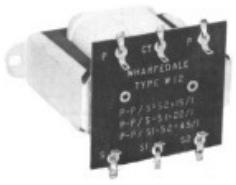
(8 ratios)

General purpose Output Transformer with 2 centre-tapped Primary Windings and 2 Secondaries. Matches practically all output conditions (up to 5 watts) to speakers of 1 to 15 ohms.

The inductance at 10 v A.C. 50 c/s between 1 and 3 or 4 and 6 is 4.5 H. with 30 m/A D.C., or 22.5 H. in each winding with zero D.C.
Ratios: 12, 18, 24, 30, 36, 48, 60 and 72 to 1. (Ratios 36, 48 and 72 to 1 are centre-tapped).
Maximum D.C. current 50 m/amps.
Fixing holes 2½" centres. Weight 12¼ ozs.

WIRING INSTRUCTIONS.

		Primary	Secondary
Ratio 12/1	..	Join 4 to 2 And 5 to 3 Use 2 and 3	Join 8 to 9 Use 7 and 10
Ratio 18/1	..	Join 4 to 1 And 6 to 3 Use 1 and 3	Join 8 to 9 Use 7 and 10
Ratio 24/1	..	Join 4 to 2 And 5 to 3 Use 2 and 3	Join 7 to 9 And 8 to 10 Use 7 and 8
Ratio 30/1	..	Join 3 to 4 Use 2 and 6	Join 8 to 9 Use 7 and 10
Ratio 36/1 With C.T.	..	Join 3 to 4 Use 1 and 6 (Centre Tap No. 3)	Join 8 to 9 Use 7 and 10
Ratio 48/1 With C.T.	..	Join 3 to 4 Use 2 and 5 (Centre Tap No. 3)	Join 7 to 9 And 8 to 10 Use 7 and 8
Ratio 60/1	..	Join 3 to 4 Use 2 and 6	,, ,, ,, ,,
Ratio 72/1 With C.T.	..	Join 3 to 4 Use 1 and 6 (Centre Tap No. 3)	,, ,, ,, ,,



W 12

3 ratios all centre tapped

For undistorted outputs up to 10 watts with speakers up to 15 ohms impedance. The secondary is wound between the two halves of the primary, reducing leakage inductance to a low figure.

Max D.C. 80 m/a. Weight 2 lbs.
Fixing Holes 3½" centres.
Inductance at 50 c/s with 4 v. A.C.:
61 Henrys no D.C.
16 Henrys 25 m/A.
9 Henrys 50 m/A.
5 Henrys 75 m/A.
Leakage Inductance .2 H.

		Ratio	15 ohm load
Full Primary	Sec. S - S2	15/1	3,500
Full Primary	Sec. S - S1	22/1	7,000
Full Primary	Sec. S1-S2	45/1	30,000

N.B.—By using half the Primary (A-CT) three extra ratios can be had, but with large undistorted output this is not advisable as the loss of inductance is heavy and may result in loss of bass response.

Special ratios to order at 4/- extra.

WMT 1

MATCHING TRANSFORMER

For all load values between 2 and 16 ohms step up or step down ratios.

Weight 12½ ozs. Fixing holes 2½" centres.

Overall size: 2¼" high, 2¾" wide.

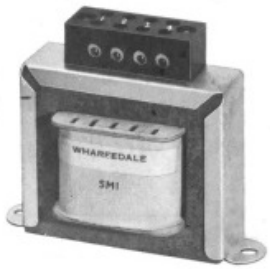
This auto transformer is designed to match any combination of load and output impedances in the range 2-16 ohms. For instance, a 3-ohm loudspeaker can be matched to a 15-ohm amplifier or crossover network, and vice versa.

The WMT 1 will handle 15 watts without overload or distress as it is working only in a low impedance circuit. The response is level within 1 dB from 20 c/s to 15 kc/s, so the transformer is suitable for use with wide range equipment. The windings are so arranged that satisfactory coupling is obtained between any two of the three sections.

The connections are numbered 1, 2, 3 and 4. (No. 1 is common to both input and output.)

For 2-5 ohms connect to 1 and 2
,, 7-9 ,, ,, ,, 1 and 3
,, 10-16 ,, ,, ,, 1 and 4

STEREO MIXER TRANSFORMER SMI



Dimensions 4" x 2 1/16" x 3" high.
Weight 2 lb. Fixing holes 3 3/16" P.C.D.
Maximum input 15 watts.
Frequency response ±1dB 30 to 20,000 c/s.

W 15 Output Transformer DUAL RATIO

D.C. Resistance of Primary 375 ohms (185 and 190 ohms each half)
Inductance at 8 v. A.C. (no D.C.) 100 H.
Leakage Inductance ·085 H.

Ratio	Approx. Load
20-1 C.T.	6000 ohms with 15 ohm speaker
40-1 C.T.	5000 ohms with 3 ohm speaker

Both ratios use the full primary and secondary windings.

Any single ratio can be supplied to order without extra charge.

WIRING INSTRUCTIONS

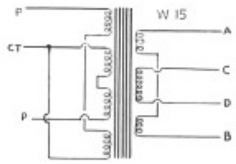
Ratio 20-1 C.T.
Connect B to C. Use A & D

Ratio 40-1 C.T.
Connect A to C; also B to D
Use A and D

Maximum Watts 20

Maximum D.C. current 120 m/A

Weight 4½ lb. Fixing holes 2¾" x 2".



WMT 2

ISOLATING & MATCHING TRANSFORMER

Max. watts - 15
Weight - 13¾ oz.
Overall size - 2¼" high 2⅞" wide
Fixing holes - 2½" centres

A matching transformer similar to the WMT 1 but having separate windings with heavy insulation.

This enables it to be used safely as a matching/isolating transformer for connecting an external loudspeaker to a T.V. set.

In this connection it is essential to mount the WMT 2 inside the set and ensure that the leads are well soldered to the tags provided.