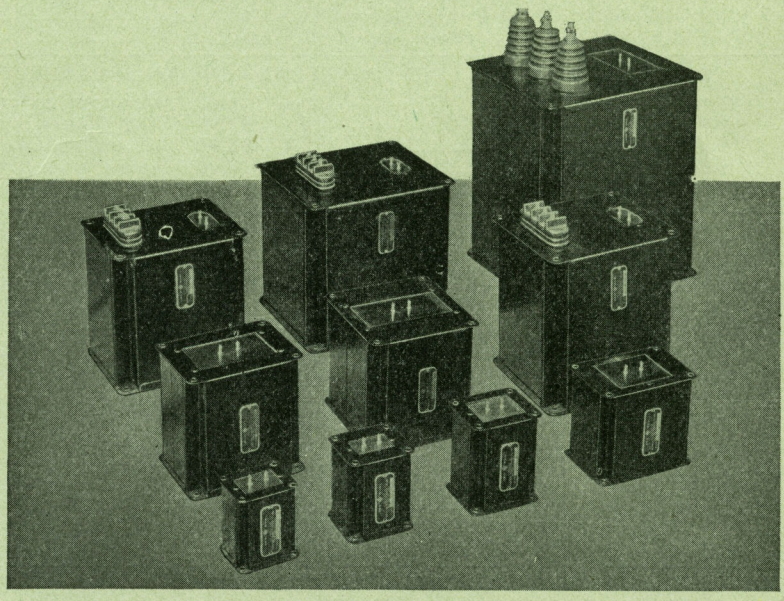
KENYON
"T" LINE
CATALOGUE

REVISED EDITION

A CATALOGUE OF
AUDIO AND POWER COMPONENTS FOR
AMATEUR TRANSMITTER AND
PUBLIC ADDRESS SYSTEMS



GUARANTY

All Kenyon Transformers are guaranteed against defects in materials and workmanship for a period of ninety days from the time of sale. Inoperative transformers should be returned prepaid to our factory, where they will be inspected and, if found defective from the above mentioned causes, will be replaced without charge.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

KENYON TRANSFORMER CO., INC.

840 BARRY STREET, NEW YORK, N. Y.

Export Department:
25 Warren Street
New York, N. Y.

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KENYON AMATEUR TRANSMITTER AND PUBLIC ADDRESS COMPONENTS

Kenyon engineers have designed this complete line of audio and power transformers and reactors to make possible a popular priced line particularly suited for amateur transmitter and public address use.

Refinements in design and controlled production result in units which are unapproachable for quality in material of this price range.

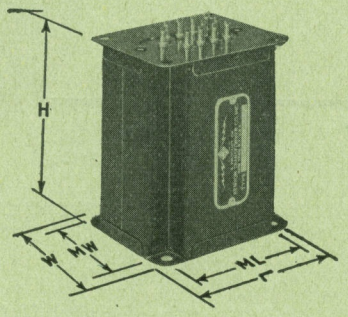
Each unit is housed in a metal case finished in a durable black eggshell enamel presenting a pleasing appearance to suit exacting commercial requirements. This case also acts as an electrostatic and electromagnetic shield.

Universal mounting facilities permit all units to be top or bottom mounted to chassis or panels.

With the exception of the high voltage units which are provided with glazed ceramic insulators all units are furnished with sturdy solder lug terminals.

Case	Mounting Dimensions ML	MW
1A	2 3/32	1 9/16
2A	2 1/8	1 11/16
3A	2 7/16	1 15/16
4A	3 7/8	2 7/16
5A	4 5/16	3 3/16
6A	4 1/2	4 5/16
7A	5 1/2	4 5/16
8A	5 3/4	4 11/16
9A	6 11/16	5 3/4
10A	8 5/8	7 11/32

T LINE DIMENSIONS



Overall Dimensions Length	Width	Height
2 7/16	2	2 7/8
2 3/4	2 3/8	3 3/16
3 1/16	2 9/16	3 5/8
4 1/2	3	3 7/8
5	3 7/8	5
5	5 1/8	5
6 5/16	5 3/16	6 3/8
6 9/16	5 11/16	7 1/8
7 3/4	6 5/8	7 5/16
9 1/2	8 1/4	10 5/8

Type No.	INPUT TRANSFORMERS	Case No.	List Price
T-1	Single or double-button microphone to one grid. Input—400-300-200-100-50 ohms. Hum bucking type	1A	$4.00
T-2	Multiple line to one grid. Input—500-333-250-200-125-50 ohms. Hum bucking type	1A	4.00
T-3	Multiple line to P. P. grids. Input—500-333-250-200-125-50 ohms. Hum bucking type	1A	4.00
T-4	Detector plate, high impedance pickup, or double-botton microphone to single grid	2A	5.00
	LINE TRANSFORMERS		
T-25	500-200-50 ohms to 500-200-50 ohms Max. Level + 24 db	2A	5.00
T-27	500 or 200 ohms to 15-8-4 ohms—Level 15 watts	3A	5.00
T-28	500 or 200 ohms to 15-8-4 ohms—Level 30 watts	4A	6.00
T-29	500 or 200 ohms to 15-8-4 ohms—Level 60 Watts	5A	9.00

KEN-O-LINE UNIVERSAL LINE-TO-SPEAKER TRANSFORMERS

	Audio Level	Case No.	List Price
T-30	10 watts	2A	$5.50
T-31	30 watts	4A	7.00
T-32	60 watts	5A	10.00

Designed to couple one or more speakers from a 500-ohm line. Makes possible the use of from one to six units in parallel on a 500-ohm line. Tapped secondary provides impedances from .16 to 16 ohms. For complete details of these transformers, see page 10.

	CLASS "A" INPUT TRANSFORMERS	Case No.	List Price
T-51	Single Class "A" Plate 56, 76, 6C5, 77 (triode), 6C6 (triode), etc. to single Class "A" Grid. Ratio 1:4	1A	$3.50
T-52	Single Class "A" Plate 56, 76, 6C5, 77 (triode), 6C6 (triode), etc. to P. P. Class "A" Grids. Ratio 1:4 (total primary to total secondary)	1A	3.50
T-53	Detector plate or single button microphone to single grid	1A	3.50
	For portable applications use open type KA114M. List Price $2.25		
T-54	P. P. Class "A" Plates 56,76,6C5,77 (triode), 6C6 (triode), etc. to P. P. Class "A" Grids. Ratio 1:1.8 (total primary to total secondary)	2A	4.50
T-55	Single Class "A" Plate 56, 76, 6C5, 77 (triode), 6C6 (triode), etc. to single Class "A" Grid. Ratio 1:3	2A	4.50
T-56	Single Class "A" Plate 56, 76, 6C5, 77 (triode), 6C6 (triode), etc. to P. P. Class "A" Grids. Ratio 1:2 (total primary to total secondary)	2A	4.00
T-57	Single Class "A" Plate 56, 76, 6C5, 77 (triode), 6C6 (triode), etc. to single Class "A" Grid. (Ratio 1:2.) Hum bucking type	2A	5.00
T-58	Single Class "A" Plate 56, 76, 6C5, 77 (triode), 6C6 (triode), etc. to P. P. Class "A" Grids. Ratio 1:2 (total primary to total secondary). Hum bucking type	2A	5.00
	CLASS "AB" AND "B" INPUT TRANSFORMERS		
T-251	Single 53, 6A6, 56, 6C5, etc. to P. P. 53, 6A6, etc. (Single 53, 6A6, etc. in P. P.)	2A	$4.50
T-252	Single 30, 49, 89 to P. P. 19, 30, or 49's	1A	3.50
	For portable applications use open type KR19. List Price $1.50		
T-253	Single 46 or 59 to P. P. 46's or 59's, 6F6's, etc	2A	4.50
T-254	Single 45, 6F6, 2A5, 42, etc. to P. P. 6F6, 45's, 2A5's, 42's, etc	2A	4.50
T-255	P. P. 56, 76, 6C5, 53, 6A6, 6N7 to P. P. 6L6's	2A	4.50
T-256	P. P. 56, 76, 6C5, to P. P., 45's, 2A3's, 6F6's, etc	2A	4.50
T-257	P. P. 45's to P. P. Parallel 46's	2A	4.50
T-258	P. P. 45's to P. P. 800's	3A	5.00
T-259	P. P. 2A3's to P. P. 203A's, 838's, etc	4A	6.00
T-260	P. P. Parallel 2A3's to P. P. H.D. 203A's, P. P. Parallel 838's, etc	4A	8.00
T-271	P. P. 45's, 2A3's, 6F6's (triode) to P. P. Class "AB_2" 6L6's	3A	5.00
	KEN-O-DRIVE UNIVERSAL DRIVER TRANSFORMERS		
T-261	500-ohm line to P. P. Class "B" grids. Level 7 watts Primary and Secondary tapped to drive any Class "B" grids	3A	$6.50
T-262	500-ohm line to P. P. Class "B" grids. Level 18 watts Primary and Secondary tapped to drive any Class "B" grids	4A	8.00
T-264	Universal Multi-tapped Driver Transformer to match a 500-ohm line or any driver plates to any Class "B" grids whose audio requirements range up to 7 watts	3A	7.00
T-263	Universal Multi-tapped Driver Transformer to match a 500-ohm line or any driver plates to any Class "B" grids whose audio requirements range up to 18 watts	4A	9.00

For complete details of these transformers, see pages 9 and 10.

CLASS "A" OUTPUT TRANSFORMERS

Type No.		Case No.	List Price
T-101	Single Class "A" Plate 56, 76, 6C5, 77 (triode), 6C6 (triode), etc. to 500 or 200 ohms	1A	$3.50
T-102	P. P. Class "A" Plates 56, 76, 6C5, 77 (triode), 6C6 (triode), etc. to 500 or 200 ohms	1A	3.50
T-103	P. P. 45's, or 43's to 500-200 or 15-8-4 ohms	2A	5.00
T-104	Single 2A5, 6F6, 89, 47, etc. to 500-200 or 15-8-4 ohms	2A	4.50
T-105	P. P. 2A5, 6F6, 89, 47, etc. to 500-200 or 15-8-4 ohms	2A	5.00
T-106	P. P. 6B5, 2B6, to 500-200 or 15-8-4 ohms	3A	5.50
T-107	P. P. 25L6's to 500-200 or 15-8-4 ohms	2A	4.50

CLASS "AB" AND "B" OUTPUT TRANSFORMERS

T-306	P. P. 25L6's Class "AB" to 500-200 or 15-8-4 ohms. Primary 2000 ohms	2A	5.00
T-301	P. P. 45's, 2A3's (Class "AB"), 6L6's (Class "A") to 500-200 or 15-8-4 ohms. Prim. 5000 or 3000 ohms	4A	6.00
T-302	P. P. 6N7, 53, RK-34, 49's, 19 to 500-200 or 15-8-4 ohms	3A	5.50
T-303	P. P. 46, 59's, 6F6's (triode or pent.), 2A5's, 42's to 500-200 or 15-8-4 ohms. Prim. 6000 or 10,000 ohms	4A	6.00
T-304	P. P. Parallel 45's, 2A3's, to 500-200 or 15-8-4 ohms. Primary 1500 or 2500 ohms	4A	8.00
T-305	P. P. Parallel 46's, 59's, 6F6's (triode or pentode) 2A5's, 42's to 500-200 or 15-8-4 ohms. Primary 3000 or 5000 ohms	4A	8.00
T-317	P. P. 6L6's Class "AB_1" (6600 or 3800 ohms—34 watts) to 500-200 or 15-8-4 ohms	4A	8.00
T-319	P. P. 6L6's "AB_2" (6000 or 3800 ohms—60 watts) to 500-200 or 15-8-4 ohms	5A	8.50
T-307	P. P. RK39's Class "AB" or P. P. Parallel 6L6's Class "AB^2" to 500-200 or 15-8-4 ohms. Primary 6400 or 1900 ohms	6A	16.00

KEN-O-DYNE UNIVERSAL OUTPUT TRANSFORMERS

Type No.	Level	Case No.	List Price
T-108	15 watts	3A	$5.00
T-109	30 watts	4A	8.00
T-110	60 watts	5A	12.50

Will match any set of Push-Pull or Push-Pull Parallel—or a single plate to 500-200 or speaker voice-coils. Low impedance connections for speaker voice-coils range from .5 to 25 ohms. For complete details of these transformers, see page 9.

MODULATION OUTPUT TRANSFORMERS

T-452	Class "B" 19, to 5000 or 3000 ohms. Max. Sec. D.C. 50 M.A.	1A	$3.50
	For portable applications use open type KR19M. List Price $1.50		
T-451	Class "B" 6N7, 53, 6A6, RK34, to 5000 or 3000 ohms. Max. Sec. D.C. 100 M.A.	2A	4.50
T-490	Single 2A5, 42 or 6F6 grid modulation transformer to grid modulate 203A's, 211's, etc.	2A	4.50
T-491	Single 45 grid modulation transformer to grid modulate 203A's, 211's etc.	2A	4.50
T-492	Grid or suppressor modulation transformer—P. P. 45's to 10,000 ohm load	3A	5.00
T-453	Class "AB" 2A3's, 45's or Class "A," 6L6's to 5000 or 3000 ohms. Max. Sec. D.C. 130 M.A.	4A	8.50
T-454	Class "B" 46's or 59's, 6F6's (triode or pentode), 2A5's, 42's etc. to 4000-6000-8000 ohms. Max. Sec. D.C. 140-100-75 M.A. Primary 6000 or 10,000 ohms	4A	8.50
T-459	P. P. 6L6's Class "AB_2" to 2500-5000-7000 ohms. Max. Sec. D.C. 300-250-200 M.A.	5A	8.50
T-455	Class "B"—210's to 5000-7000-9000 ohms. Max. Sec. D.C. 180-150-130 M.A.	5A	10.00
T-456	P. P. Parallel 45's or 2A3's Class "AB" to 5000-7000-9000 ohms. Max. Sec. D.C. 150-100-75 M.A.	5A	10.00
T-457	P. P. Parallel 46's, 59's, 6F6's (triode or pentode), 2A5's, 42's, etc. to 3000-5000-7000 ohms. Max. Sec. D.C. 220-160-120 M.A. Primary 3000 or 5000 ohms	5A	10.00
T-458	P. P. 801's to 5000-7000-9000 ohms. Max. Sec. D.C. 150-135-110 M.A.	6A	12.50
T-460	P. P. 800's to 6000-8000-10,000 ohms. Max. Sec. D.C. 200-175-150 M.A.	6A	15.00
T-461	P. P. 35T's, RK31's, RK18's, to 5000-7000-10,000 ohms Max. Sec. D.C. 240-200-175 M.A.	6A	16.00
T-462	P. P. RK39's, to 4000-6000-8000 Max. Sec. D.C. 300-250-200 M.A.	6A	16.50
T-465	P. P. 838's, T-55's, 203A's to 4000-6000-8000 ohms. Max. Sec. D.C. 400-320-270 M.A.	7A	25.00
T-470	P. P. H.D. 203A's, 150T's, to 4000-6000-8000 ohms. Max. Sec. D.C. 500-400-350 M.A.	8A	42.00

KEN-O-TAP MODULATION TRANSFORMERS

Type No.	Audio Output Primary	Class "C" Secondary	Case No.	List Price
T-493	40 watts	80 watts	4A	$7.00
T-494	75 watts	150 watts	5A	10.00
T-495	125 watts	250 watts	7A	20.00
T-496	300 watts	600 watts	8A	30.00

These tapped modulation output transformers may be used with any type of tube or tube combination in any amateur transmitter. The multi taps provide impedances which will match any combination of audio and Class "C" R. F. conditions encountered in amateur transmitter practice. For complete details of these transformers, see page 8 and 10.

PLATE AND SCREEN MODULATION OUTPUT TRANSFORMERS

Type No.		Case No.	List Price
T-497	P. P. 46's or 59's to 13500 and 500 ohms for plate and screen modulation of a single RK 20 or 804. Max. Sec. D.C. Plate winding 75 MA. Screen winding 40 MA.	4A	$8.50
T-498	P. P. 801's to 6600 and 250 ohms for plate and screen modulation of 2 RK 20's or 2 804's. Max. Sec. D.C. Plate winding 150 MA. Screen winding 120 M.A.	6A	14.00
T-499	P. P. 800's to 13500 and 2200 ohms for plate and screen modulation of a single RK 28 or 803. Max. Sec. D.C. Plate winding 150 M.A. Screen winding 100 MA.	6A	18.00

FILTER REACTORS

Type No.	Inductance Henries	Max. M.A.	D.C. Resistance	Insulation Test	Case No.	List Price
T-155	290	10	4700	1000 V.	2A	$4.00
T-158	*350	10	10000	1000 V.	3A	4.50
T-156	30	25	800	1000 V.	1A	3.00
T-157	20	50	200	1000 V.	1A	3.00
T-153	30	90	350	1000 V.	3A	3.50
T-154	15	165	210	1000 V.	3A	4.00
T-151	10	250	100	1000 V.	4A	6.50
T-152	10	200	100	1000 V.	3A	4.00
T-164	14	250	135	1500 V.	5A	9.00
T-166	11	300	125	1500 V.	5A	9.00
T-159	12	500	77	1500 V.	6A	12.50
T-165	10	150	275	3000 V.	3A	4.00
T-168	13	250	125	3000 V.	5A	10.00
T-160	11	300	120	3000 V.	5A	10.00
T-167	11	400	80	3000 V.	6A	12.00
T-175	10	200	140	5000 V.	4A	7.00
T-176	10	300	110	5000 V.	5A	11.00
T-178	10	400	90	5000 V.	6A	15.00
T-177	12	500	95	5000 V.	7A	18.00
T-161	10	600	50	5000 V.	7A	20.00

*Center tapped.

SWINGING REACTORS

Type No.	Inductance Henries	Max. M.A.	D.C. Resistance	Insulation Test	Case No.	List Price
T-517	15-45	90-20	350	1000 V.	3A	$3.50
T-515	10-25	165-30	210	1000 V.	3A	4.00
T-506	5-20	200-30	100	1000 V.	3A	4.00
T-501	5-15	250-30	100	1000 V.	4A	6.50
T-507	7-25	250-50	135	1500 V.	5A	9.00
T-510	6-19	300-30	125	1500 V.	5A	9.00
T-502	6-18	500-50	77	1500 V.	6A	12.50
T-511	5-20	170-20	275	3000 V.	3A	4.00
T-508	7-26	250-50	125	3000 V.	5A	10.00
T-514	5-20	300-50	120	3000 V.	5A	10.00
T-516	5-20	400-50	80	3000 V.	6A	12.00
T-509	6-19	200-30	140	5000 V.	4A	7.00
T-512	5-15	300-30	110	5000 V.	5A	11.00
T-513	5-18	400-50	90	5000 V.	6A	15.00
T-521	6-21	500-60	95	5000 V.	7A	18.00
T-505	5-17	600-60	50	5000 V.	7A	20.00

POWER LINE AUTO TRANSFORMERS

Type No.	Cap. V.A.	Case No.	List Price
T-217	150	3A	$6.50
T-218	300	4A	8.50
T-219	500	5A	11.00

For complete details of these transformers see page 10.

PLATE AND FILAMENT TRANSFORMERS

Type No.	Sec. Volts	D.C. M.A.	F1	F2	F3	F4	Case No.	List Price
T-249*	235-0-235	20	6.3 V.-6 A. CT.	6.3 V.-9 A. CT.	.....	.....	2A	$4.50
T-245*	320-0-320	40	5 V.-2 A.	6.3 V.-2 A. CT.	.....	.....	3A	5.00
T-201§	0-75	70	5 V.-2 A.	.....	.....	.....	2A	4.50
T-205*	350-0-350	75	5 V.-2 A.	6.3 V.-3 A. CT.	.....	.....	4A	6.50
T-206*	325-0-325	100	5 V.-3 A.	6.3 V.-3 A. CT.	6.3 V.- 2 A. CT.	.....	5A	8.50
T-212	420-0-420	125	5 V.-3 A.	6.3 V.-3 A. CT.	2.5 V.- 4 A. CT.	.....	5A	9.50
T-214	420-360-125-0-360-420	150	5 V.-3 A.	2.5 V.-3 A. CT.	2.5 V.- 5 A. CT.	6.3 V.-3 A. CT.	5A	10.00
T-244*	425 0-425	165	5 V.-3 A.	6.3 V.-3 A. CT.	6.3 V.- 3 A. CT.	.....	6A	12.00
T-248*	425-0-425	165	5 V.-3 A.	2.5 V.-6 A. CT.	2.5 V.- 6 A. CT.	.....	6A	12.00
T-213	520-110-0-520	180	5 V.-3 A.	2.5 V.-3 A.	6.3 V.- 3 A. CT.	6.3 V.-3 A. CT.	5A	11.50
T-215	360-125-0-360	200	5 V.-3 A.	2.5 V.-3 A. CT.	2.5 V.-10 A. CT.	6.3 V.-2.1 A. CT.	5A	11.50
T-247	590-0-590	200	5 V.-3 A.	2.5 V.-3 A.	6.3 V.- 3 A. CT.	6.3 V.-3 A. CT.	6A	13.00
T-216	520-85-0-520	250	5 V.-3 A.	2.5 V.-3 A.	6.3 V.- 3 A. CT.	6.3 V.-3 A. CT.	6A	13.00
T-207†	0-275-375	10	6.3 V.-6 A.	6.3 V.-1 A.	2.5 V.-1.4 A.	.....	3A	4.00
	0-180	6						
T-202‡	0-150	20	6.3 V.-6 A.	.....	.....	.....	1A	4.00
T-220§	125-0-125	200	5 V.-3 A.	.....	.....	.....	4A	6.00
T-246	625-0-625	250	5 V.-3 A.	6.3 V.-3 A. CT.	6.3 V.-3 A. CT.	.....	6A	13.00
T-221	520-390-105-0-390 520 @		5 V.-6 A. F 4 6.3 V.-4 A. CT.	5 V.-3 A. F 5 6.3 V.-4 A. CT.	2.5 V.-3 A		7A	26.00

@ 160 M. A. drain from the 390 volt tap and 400 M. A. from the 520 volt terminals.
* Indicates unit designed for condenser input to filter. (All other units should be used with choke input).
† For RCA 913 Cathode Ray Tube. ‡ For oscillators, wave meters, etc. § For bias supplies.

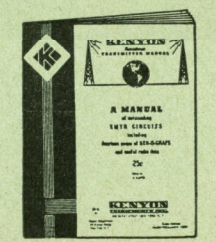
PLATE TRANSFORMERS

Type No.	Primary	A.C. Secondary Volts	D.C. MA	Case No.	List Price
T-664	.....	740-0-740	150	5A	$8.00
T-655	Tapped	460-0-460 575-0-575	250	5A	9.00
T-656	Tapped	740-0-740 925-0-925	300	6A	12.00
T-657	Tapped	900-0- 900 Parallel Connected 1170-0-1170 (2 separate 1800-0-1800 secondaries) 2340-0-2340 Series Connected	400 or 200	7A	26.00
T-658	Tapped	520-0-520 570-0-570 (3 separate 570-0-570 secondaries)	175 175 175	7A	21.00
T-654	Tapped	490-0-490 630-0-630 (3 separate 630-0-630 secondaries)	250 250 250	8A	30.00
T-659	Tapped	520-0-520 570-0-570 (3 separate 570-0-570 secondaries)	350 350 350	9A	30.00
T-665	Tapped	1180-0-1180 1470-0-1470	250	7A	22.00
T-666	.....	1460-0-1460	350	8A	26.00
T-667	.....	1460-0-1460	500	9A	34.00
T-660	....	1460-0-1460 (2 separate 630-0- 630 secondaries)	500 200	9A	38.00
T-661	.....	2080-0-2080	200	7A	22.00
T-651	Tapped	1760-0-1760 2080-0-2080	300	9A	32.00
T-652	Tapped	1760-0-1760 2080-0-2080	450	9A	38.00
T-653	.....	2360-0-2360	300	9A	36.00
T-663	.....	2360-0-2360	600	10A	70.00

All power transformers are designed for 115 volt, 50 to 60 cycle operation. For 230 volt 60 cycle operation add 25% to list prices. For 115 volt 25 cycle operation add 60% to list prices. For 230 volt 25 cycle operation add 100% to list prices. Case sizes for 25 cycle application are different than those specified for standard 115 volt 50 to 60 cycle operation.

AMATEUR TRANSMITTER MANUAL

The most popular amateur transmitter manual published to date. Contains design details for the construction of phone and c. w. transmitters from 20 watts to 1 kilowatt with 13 pages of useful radio data, such as formulas, conversion tables, inductance calculations, coil specifications and antenna tables, etc. Fourteen additional pages are full page Ken-O-Grafs, permitting easy calculation or conversion of various units or terms. An excellent reference book for the licensed or prospective amateur.



YOUR NET PRICE.....25c

FILAMENT TRANSFORMERS

Single Winding

Type No.			Case No.	List Price
T-352	2.5 V.-10 A. CT.	2000 V. Test	2A	$4.00
T-354	5 V.-3 A. CT.	2000 V. Test	2A	4.00
T-351	6.3 V.-3 A. CT.	2000 V. Test	2A	4.00
T-353	7.5 V.-4 A. CT.	2000 V. Test	2A	4.00
T-357	5.25 V.-12 A. CT.	2000 V. Test	4A	6.00
T-359	7.5 V.-8 A. CT.	2000 V. Test	4A	6.50
T-358	5.25 V. 20 A. CT.	2000 V. Test	5A	8.00
T-360	2.5 V.-10 A. CT.	5000 V. Test	3A	6.00
T-365	10 V.-4 A. CT.	5000 V. Test	3A	6.50
T-361	10 V.- 8 A. CT.	5000 V. Test	4A	8.00

Two Windings

T-369	2.5 V.-8 A. CT.	1000 V. Test	6.3 V.-4 A. CT.	1000 V. Test	4A 6.00
T-368	6.3 V.-4 A. CT.	2000 V. Test	6.3 V.-4 A. CT.	2000 V. Test	4A 6.00
T-366	2.5 V.-10 A. CT.	5000 V. Test	2.5 V.-10 A. CT.	5000 V. Test	4A 8.00
T-363	10 V.-6.5 A. CT.	5000 V. Test	10 V.-3.25 A.,	5000 V. Test	5A 9.00
T-362	11-12 V.-8 A. CT.	5000 V. Test	10-11 V.-3.5 A. CT.	5000 V. Test	5A 11.00

Three Windings

T-376	6.3 V.-4 A. CT.	2000 V. Test	6.3 V.-4 A. CT.	2000 V. Test	5 V.-3 A.	2000 V. Test	4A	7.00
T-364	2.5 V.-8 A. CT.	750 V. Test	2.5 V.-10 A. CT.	750 V. Test	5 V.-6 A.	750 V. Test	4A	7.00
T-356	6.3 V.-3 A. CT.	750 V. Test	5 V.-4 A. CT.	3000 V. Test	5 V.-8 A. CT.	3000 V. Test	4A	9.00
T-355	5 V.-3 A. CT.	4000 V. Test	5 V.-3 A. CT.	4000 V. Test	5 V.-6 A. CT.	4000 V. Test	4A	7.50
T-375	2.5 V.-5 A. CT.	6000 V. Test	2.5 V.-5 A. CT.	6000 V. Test	2.5 V.-10 A. CT.	6000 V. Test	4A	9.00

Four Windings

T-373	2.5 V.-5 A. CT. 750 V. Test	5 V.-3 A. 750 V. Test	7.5 V.-3.25 A. CT. 3000 V. Test	7.5 V.-8 A. CT. 3000 V. Test	5A	9.00
T-374	2.5 V.-5 A. CT. 750 V. Test	5 V.-3 A. 750 V. Test	6.3 V.-3 A. CT. 3000 V. Test	7.5 V.-8 A. CT. 3000 V. Test	5A	9.00
T-370	6.3 V.-3 A. CT. 750 V. Test	6.3 V.-3 A. CT. 750 V. Test	2.5 V.-4 A. CT. 750 V. Test	5 V.-3 A. 750 V. Test	4A	7.50
T-371	5 V.-3 A. 750 V. Test	6.3 V.-3 A. CT. 750 V. Test	6.3 V.-3 A. CT. 750 V. Test	7.5 V.-8 A. CT. 2500 V. Test	5A	8.50
T-372	5 V.-3 A. 750 V. Test	6.3 V.-3 A. CT. 750 V. Test	6.3 V.-3 A. CT. 750 V. Test	7.5 V.-4 A. CT. 2000 V. Test	5A	8.50
T-367	6.3 V.-5 A. CT. 2000 V. Test	6.3 V.-5 A. CT. 2000 V. Test	5 V.-6 A. CT. 2000 V. Test	5 V.-3 A. CT. 2000 V. Test	5A	9.00

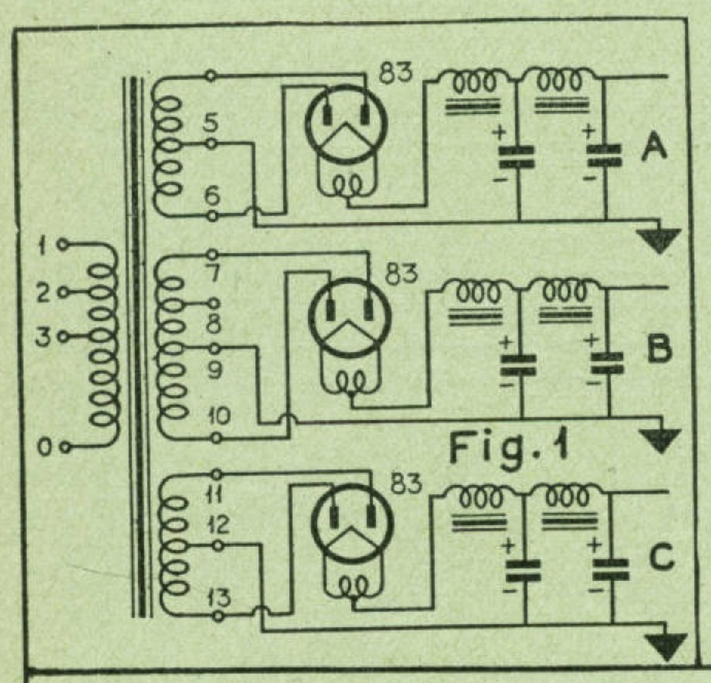
Five Windings

T-377	5 V.-3 A. 2000 V. Test	5 V.-6 A. 2000 V. Test	6.3 V.-1 A. CT. 2000 V. Test	6.3 V.-5 A. CT. 2000 V. Test	6.3 V.-5 A. CT. 2000 V. Test	5A 9.50

KENYON RECOMMENDED POWER SUPPLIES

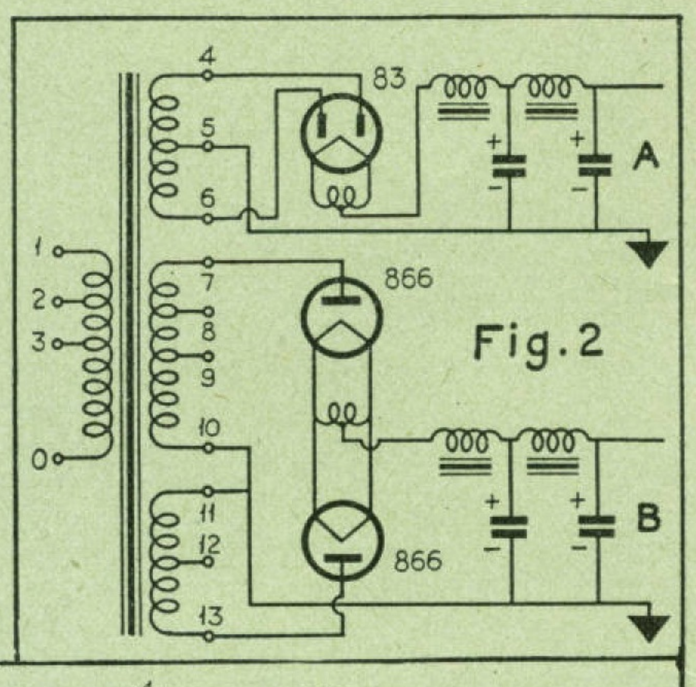
D.C. Volts	D.C. MA	A.C. Sec. Volts	Input Choke	Output Choke	Rectifier Tubes	Plate Transformers	Filament Transformers
350 450	250	460-0-460 575-0-575	T-501	T-151	1-83	T-655	T-354
400	400	520-0-520	T-502		2-83		
300	160	390-0-390	T-505	T-154	1-83	T-221	
Variable Bias	50	105-0	T-153		1-82		
600	150	740-0-740	T-515	T-154	1-83	T-664	T-354
600 750	300	740-0-740 925-0-925	T-510	T-166	2-66	T-656	T-352
750 1000	400	900-0-900 1170-0-1170	T-502	T-159	2-66	T-657	T-360
1500 2000	200	1800-0-1800 2340-0-2340	T-509	T-175			
400 to 3000	175 175 175 250 250 250 350 350 350	520-0-520 570-0-570 570-0-570 490-0-490 630-0-630 630-0-630 520-0-520 570-0-570 570-0-570	See Page 6 for full details on the various applications of these three triple winding plate transformers. These units entirely eliminate plate transformer obsolescence.			T-658 T-654 T-659	
1000 1250	250	1180-0-1180 1470-0-1470	T-508	T-168	2-66	T-665	T-360
1250	350	1460-0-1460	T-516	T-167	2-66	T-666	T-360
1250	500	1460-0-1460	T-521	T-177	2-66	T-667	T-360
1250 500	500 200	1460-0-1460 630-0-630	T-521 T-506	T-177 T-152	2-66 1-83	T-660	T-360 T-354
1750	200	2080-0-2080	T-509	T-175	2-66	T-661	T-360
1500 1750	300	1760-0-1760 2080-0-2080	T-512	T-176	2-66	T-651	T-360
1500 1750	450	1760-0-1760 2080-0-2080	T-521	T-177	2-66	T-652	T-360
2000	300	2360-0-2360	T-512	T-176	2-66	T-653	T-360
2000	600	2360-0-2360	T-505	T-161	2-66	T-663	T-360

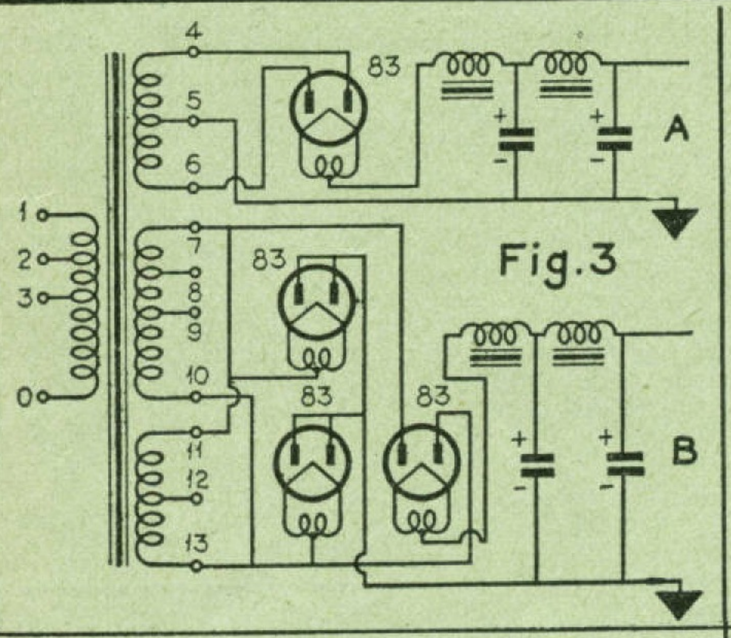
The Practical Solution To The Power Supply Problem

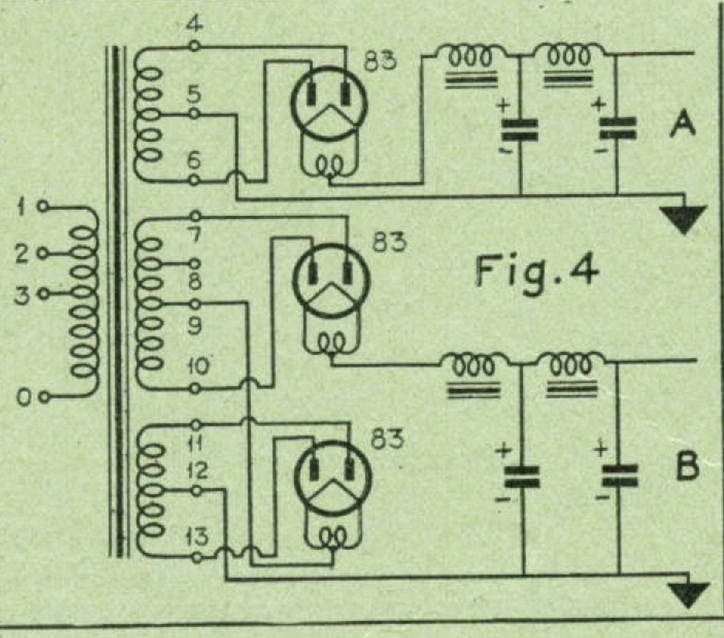


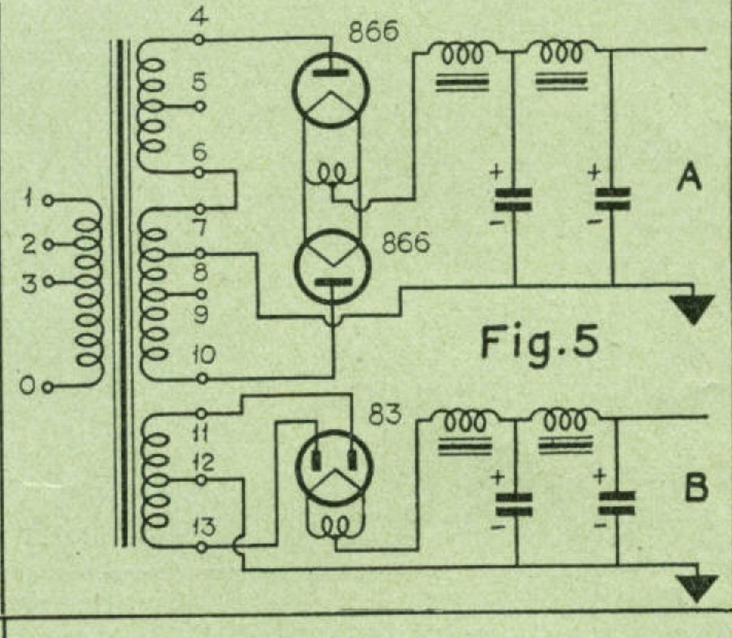
A Universal Amateur Power Supply

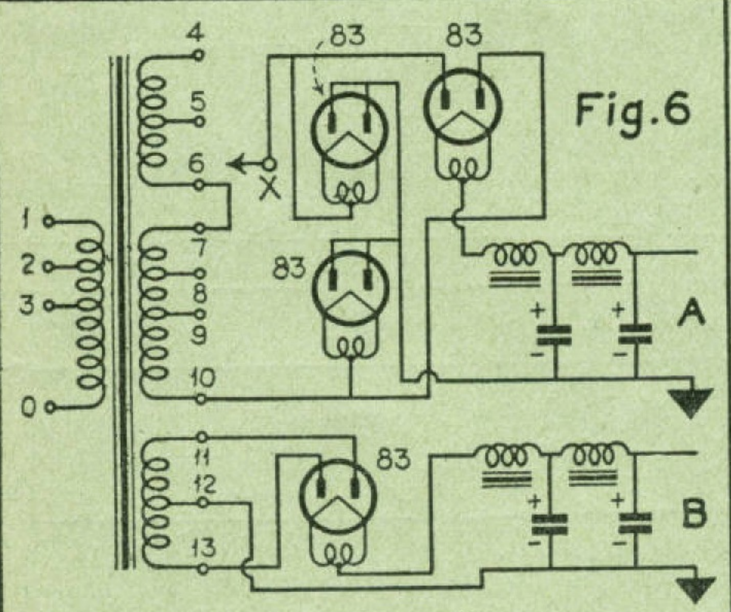
See page 8 for full details of the schematics shown below. Complete rectifier data for each of these circuits utilizing triple winding transformers T654, T658 or T659 are shown on the chart facing this page.

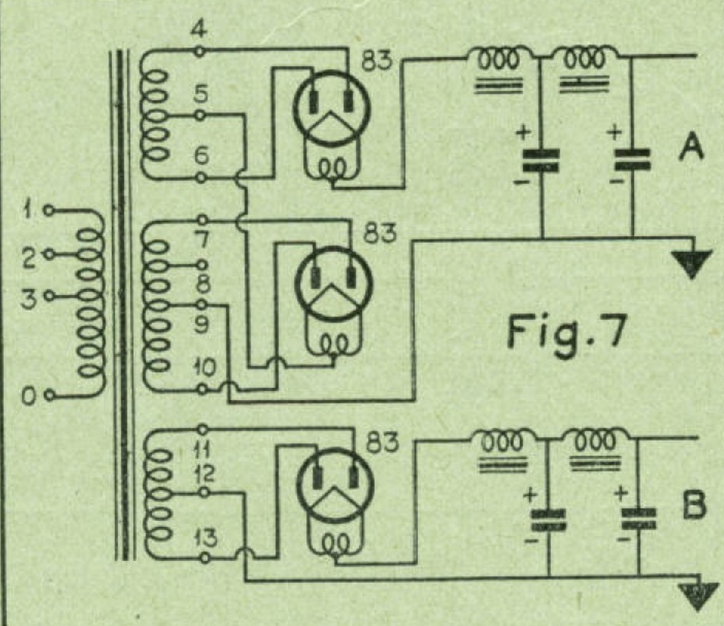


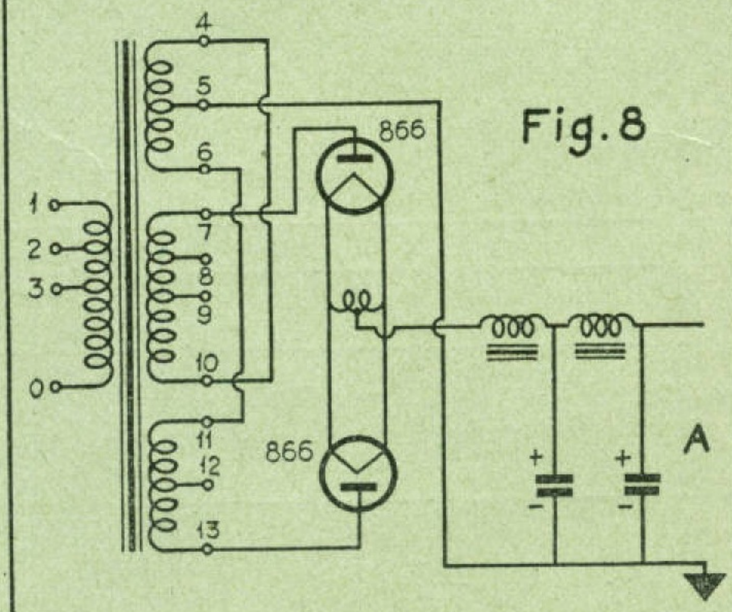


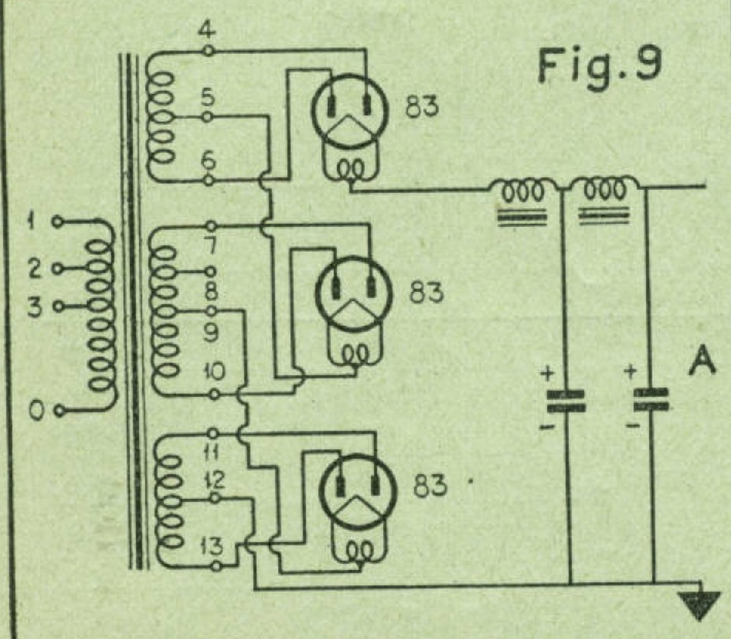


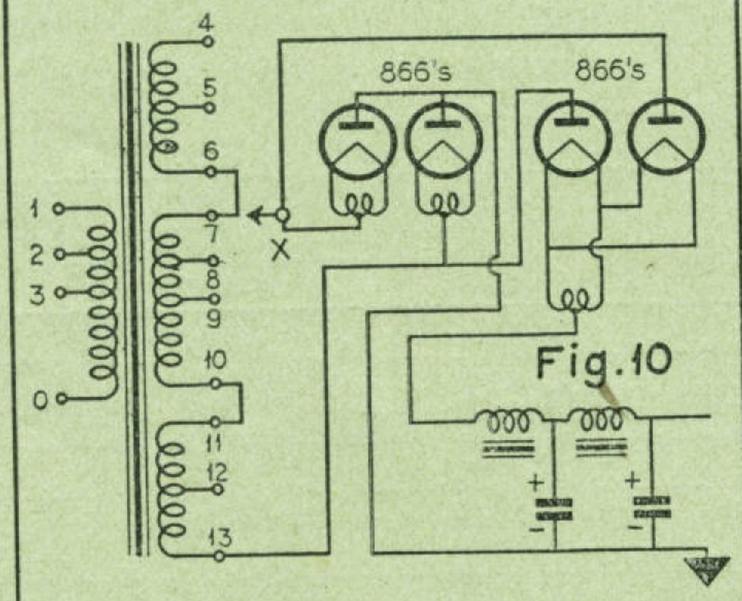


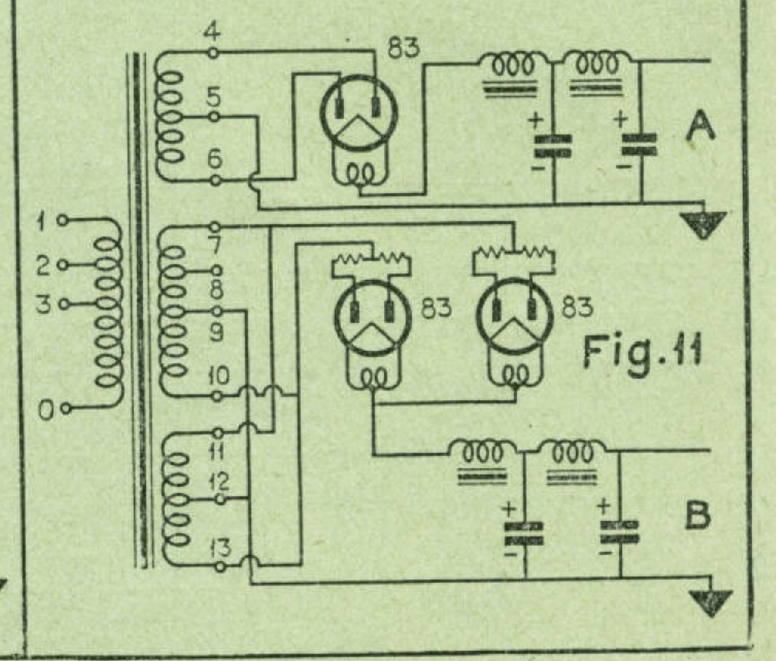




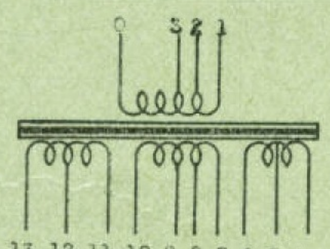








A								B						C					
FIG. NO.	D. C. VOLTS	D. C. AMP.	PLATE TRANS.	PLATE TRANS. PRI.	RECT. FIL. TRANS	1st CHOKE	2nd CHOKE	D. C. VOLTS	D. C. AMP.	PLATE TRANS. PRI.	RECT. FIL. TRANS.	1st CHOKE	2nd CHOKE	D. C. VOLTS	D. C. AMPS	PLATE TRANS PRI	RECT FIL TRANS	1st CHOKE	2nd CHOKE
1	400	.175	T-658	0-1	T-354	T-506	T-152	450	.175	0-1	T-354	T-506	T-152	450	.175	0-1	T-354	T-506	T-152
1	450	.175	T-658	0-2	T-354	T-506	T-152	510	.175	0-2	T-354	T-506	T-152	510	.175	0-2	T-354	T-506	T-152
1	500	.175	T-658	0-3	T-354	T-506	T-152	560	.175	0-3	T-354	T-506	T-152	560	.175	0-3	T-354	T-506	T-152
1	375	.250	T-654	0-1	T-354	T-507	T-164	500	.250	0-1	T-354	T-507	T-164	500	.250	0-1	T-354	T-507	T-164
1	420	.250	T-654	0-2	T-354	T-507	T-164	560	.250	0-2	T-354	T-507	T-164	560	.250	0-2	T-354	T-507	T-164
1	470	.250	T-654	0-3	T-354	T-507	T-164	625	.250	0-3	T-354	T-507	T-164	625	.250	0-3	T-354	T-507	T-164
1	400	.350	T-659	0-1	T-354	T-510	T-166	450	.350	0-1	T-354	T-510	T-166	450	.350	0-1	T-354	T-510	T-166
1	450	.350	T-659	0-2	T-354	T-510	T-166	510	.350	0-2	T-354	T-510	T-166	510	.350	0-2	T-354	T-510	T-166
1	500	.350	T-659	0-3	T-354	T-510	T-166	560	.350	0-3	T-354	T-510	T-166	560	.350	0-3	T-354	T-510	T-166
2	400	.175	T-658	0-1	T-354	T-506	T-152	900	.175	0-1	T-352	T-511	T-165						
2	450	.175	T-658	0-2	T-354	T-506	T-152	1020	.175	0-2	T-352	T-511	T-165						
2	500	.175	T-658	0-3	T-354	T-506	T-152	1120	.175	0-3	T-352	T-511	T-165						
2	375	.250	T-654	0-1	T-354	T-507	T-164	1080	.250	0-1	T-352	T-508	T-168						
2	420	.250	T-654	0-2	T-354	T-507	T-164	1200	.250	0-2	T-352	T-508	T-168						
2	470	.250	T-654	0-3	T-354	T-507	T-164	1320	.250	0-3	T-352	T-508	T-168						
2	400	.350	T-659	0-1	T-354	T-510	T-166	900	.350	0-1	T-352	T-514	T-160						
2	450	.350	T-659	0-2	T-354	T-510	T-166	1020	.350	0-2	T-352	T-514	T-160						
2	500	.350	T-659	0-3	T-354	T-510	T-166	1120	.350	0-3	T-352	T-514	T-160						
3	400	.175	T-658	0-1	T-354	T-506	T-152	900	.250	0-1	T-355	T-508	T-168						
3	450	.175	T-658	0-2	T-354	T-506	T-152	1020	.250	0-2	T-355	T-508	T-168						
3	450	.175	T-658	0-3	T-354	T-506	T-152	1120	.250	0-3	T-355	T-508	T-168						
3	375	.250	T-654	0-1	T-354	T-507	T-164	1080	.350	0-1	T-355	T-514	T-160						
3	420	.250	T-654	0-2	T-354	T-507	T-164	1200	.350	0-2	T-355	T-514	T-160						
3	470	.250	T-654	0-3	T-354	T-507	T-164	1320	.350	0-3	T-355	T-514	T-160						
4	400	.175	T-658	0-1	Only One Needed See B	T-506	T-152	885	.175	0-1	T-355	T-511	T-165						
4	450	.175	T-658	0-2		T-506	T-152	1000	.175	0-2	T-355	T-511	T-165						
4	500	.175	T-658	0-3		T-506	T-152	1100	.175	0-3	T-355	T-511	T-165						
4	375	.250	T-654	0-1		T-507	T-164	1060	.250	0-1	T-355	T-508	T-168						
4	420	.250	T-654	0-2		T-507	T-164	1180	.250	0-2	T-355	T-508	T-168						
4	470	.250	T-654	0-3		T-507	T-164	1300	.250	0-3	T-355	T-508	T-168						
4	400	.350	T-659	0-1		T-510	T-166	885	.350	0-1	T-355	T-514	T-160						
4	450	.350	T-659	0-2		T-510	T-166	1000	.350	0-2	T-355	T-514	T-160						
4	500	.350	T-659	0-3		T-510	T-166	1100	.350	0-3	T-355	T-514	T-160						
5	850	.175	T-658	0-1	T-352	T-511	T-165	450	.175	0-1	T-354	T-506	T-152						
5	960	.175	T-658	0-2	T-352	T-511	T-165	510	.175	0-2	T-354	T-506	T-152						
5	1060	.175	T-658	0-3	T-352	T-511	T-165	560	.175	0-3	T-354	T-506	T-152						
5	880	.250	T-654	0-1	T-352	T-508	T-168	500	.250	0-1	T-354	T-507	T-164						
5	990	.250	T-654	0-2	T-352	T-508	T-168	560	.250	0-2	T-354	T-507	T-164						
5	1090	.250	T-654	0-3	T-352	T-508	T-168	625	.250	0-3	T-354	T-507	T-164						
5	850	.350	T-659	0-1	T-352	T-514	T-160	450	.350	0-1	T-354	T-510	T-166						
5	960	.350	T-659	0-2	T-352	T-514	T-160	510	.350	0-2	T-354	T-510	T-166						
5	1060	.350	T-659	0-3	T-352	T-514	T-160	560	.350	0-3	T-354	T-510	T-166						
7	830	.175	T-658	0-1	T-355	T-511	T-165	450	.175	0-1	Only One Needed See A	T-506	T-152						
7	940	.175	T-658	0-2	T-355	T-511	T-165	510	.175	0-2		T-506	T-152						
7	1040	.175	T-658	0-3	T-355	T-511	T-165	560	.175	0-3		T-506	T-152						
7	860	.250	T-654	0-1	T-355	T-508	T-168	500	.250	0-1		T-507	T-164						
7	970	.250	T-654	0-2	T-355	T-508	T-168	560	.250	0-2		T-507	T-164						
7	1070	.250	T-654	0-3	T-355	T-508	T-168	625	.250	0-3		T-507	T-164						
7	830	.350	T-659	0-1	T-355	T-514	T-160	450	.350	0-1		T-510	T-166						
7	940	.350	T-659	0-2	T-355	T-514	T-160	510	.350	0-2		T-510	T-166						
7	1040	.350	T-659	0-3	T-355	T-514	T-160	560	.350	0-3		T-510	T-166						
8	1300	.175	T-658	0-1	T-360	T-509	T-175												
8	1470	.175	T-658	0-2	T-360	T-509	T-175												
8	1620	.175	T-658	0-3	T-360	T-509	T-175												
8	1370	.250	T-654	0-1	T-360	T-512	T-176												
8	1550	.250	T-654	0-2	T-360	T-512	T-176												
8	1710	.250	T-654	0-3	T-360	T-512	T-176												
8	1300	.350	T-659	0-1	T-360	T-513	T-178												
8	1470	.350	T-659	0-2	T-360	T-513	T-178												
8	1620	.350	T-659	0-3	T-360	T-513	T-178												
9	1280	.175	T-658	0-1	T-355	T-509	T-175												
9	1450	.175	T-658	0-2	T-355	T-509	T-175												
9	1600	.175	T-658	0-3	T-355	T-509	T-175												
9	1350	.250	T-654	0-1	T-355	T-512	T-176												
9	1530	.250	T-654	0-2	T-355	T-512	T-176												
9	1690	.250	T-654	0-3	T-355	T-512	T-176												
9	1280	.350	T-659	0-1	T-355	T-513	T-178												
9	1450	.350	T-659	0-2	T-355	T-513	T-178												
9	1600	.350	T-659	0-3	T-355	T-513	T-178												
11	400	.175	T-658	0-1	T-355	T-506	T-152	450	.350	0-1	Only One Needed See A	T-510	T-166						
11	450	.175	T-658	0-2	T-355	T-506	T-152	510	.350	0-2		T-510	T-166						
11	500	.175	T-658	0-3	T-355	T-506	T-152	560	.350	0-3		T-510	T-166						
11	375	.250	T-654	0-1	T-355	T-507	T-164	500	.500	0-1		T-502	T-159						
11	420	.250	T-654	0-2	T-355	T-507	T-164	560	.500	0-2		T-502	T-159						
11	470	.250	T-654	0-3	T-355	T-507	T-164	625	.500	0-3		T-502	T-159						



13 12 11 10 9 8 7 6 5 4

SECONDARY A. C. VOLTAGES. (115 V- 0-1)

T-658 and T-659	T-654
4-5-6 520-0-520 V	4-5-6 490-0-490 V
7-8-9-10 570-545-0-520 V	7-8-9-10 630-560-0-630 V
11-12-13 570-0-570 V	11-12-13 630-0-630 V

115 V - TO 0-2 INCREASE ABOVE VOLTAGES 12%
115 V - TO 0-3 INCREASE ABOVE VOLTAGES 25%

FIGURE 10

D. C. VOLTS	D. C. AMPS	PLATE TRANS	PLATE TRANS PRI	PLATE TRANS SEC	RECT FIL TRANS	1st CHOKE	2nd CHOKE
450	.125	T-658	0-1	X-12	T-375	T-515	T-154
510	.125	T-658	0-2	X-12	T-375	T-515	T-154
560	.125	T-658	0-3	X-12	T-375	T-515	T-154
980	.125	T-658	0-1	X-11	T-375	T-511	T-165
1100	.125	T-658	0-2	X-11	T-375	T-511	T-165
1120	.125	T-658	0-3	X-11	T-375	T-511	T-165
1350	.125	T-658	0-1	X-9	T-375	T-511	T-165
1530	.125	T-658	0-2	X-9	T-375	T-511	T-165
1680	.125	T-658	0-3	X-9	T-375	T-509	T-175
1450	.125	T-658	0-1	X-8	T-375	T-509	T-175
1630	.125	T-658	0-2	X-8	T-375	T-509	T-175
1810	.125	T-658	0-3	X-8	T-375	T-509	T-175
2000	.125	T-658	0-1	X-7	T-375	T-509	T-175
2240	.125	T-658	0-2	X-7	T-375	T-509	T-175
2480	.125	T-658	0-3	X-7	T-375	T-509	T-175
2400	.125	T-658	0-1	X-5	T-375	T-509	T-175
2800	.125	T-658	0-2	X-5	T-375	T-509	T-175
3100	.125	T-658	0-3	X-5	T-375	T-509	T-175
3000	.125	T-658	0-1	X-4	T-375	T-509	T-175
3350	.125	T-658	0-2	X-4	T-375	T-509	T-175
3700	.125	T-658	0-3	X-4	T-375	T-509	T-175
500	.175	T-654	0-1	X-12	T-375	T-506	T-152
560	.175	T-654	0-2	X-12	T-375	T-506	T-152
625	.175	T-654	0-3	X-12	T-375	T-506	T-152
1070	.175	T-654	0-1	X-11	T-375	T-511	T-165
1200	.175	T-654	0-2	X-11	T-375	T-511	T-165
1350	.175	T-654	0-3	X-11	T-375	T-511	T-165
1650	.175	T-654	0-1	X-9	T-375	T-509	T-175
1850	.175	T-654	0-2	X-9	T-375	T-509	T-175
2070	.175	T-654	0-3	X-9	T-375	T-509	T-175
1670	.175	T-654	0-1	X-8	T-375	T-509	T-175
1880	.175	T-654	0-2	X-8	T-375	T-509	T-175
2100	.175	T-654	0-3	X-8	T-375	T-509	T-175
2200	.175	T-654	0-1	X-7	T-375	T-509	T-175
2470	.175	T-654	0-2	X-7	T-375	T-509	T-175
2750	.175	T-654	0-3	X-7	T-375	T-509	T-175
2675	.175	T-654	0-1	X-5	T-375	T-509	T-175
3000	.175	T-654	0-2	X-5	T-375	T-509	T-175
3300	.175	T-654	0-3	X-5	T-375	T-509	T-175
3150	.175	T-654	0-1	X-4	T-375	T-509	T-175
3520	.175	T-654	0-2	X-4	T-375	T-509	T-175
3940	.175	T-654	0-3	X-4	T-375	T-509	T-175
450	.250	T-659	0-1	X-12	T-375	T-507	T-164
510	.250	T-659	0-2	X-12	T-375	T-507	T-164
560	.250	T-659	0-3	X-12	T-375	T-507	T-164
980	.250	T-659	0-1	X-11	T-375	T-508	T-168
1100	.250	T-659	0-2	X-11	T-375	T-508	T-168
1220	.250	T-659	0-3	X-11	T-375	T-508	T-168
1350	.250	T-659	0-1	X-9	T-375	T-508	T-168
1350	.250	T-659	0-2	X-9	T-375	T-508	T-168
1680	.250	T-659	0-3	X-9	T-375	T-508	T-168
1450	.250	T-659	0-1	X-8	T-375	T-508	T-168
1630	.250	T-659	0-2	X-8	T-375	T-508	T-168
1810	.250	T-659	0-3	X-8	T-375		
2000	.250	T-659	0-1	X-7	T-375	T-512	T-176
2240	.250	T-659	0-2	X-7	T-375	T-512	T-176
2480	.250	T-659	0-3	X-7	T-375	T-512	T-176
2400	.250	T-659	0-1	X-5	T-375	T-512	T-176
2800	.250	T-659	0-2	X-5	T-375	T-512	T-176
3100	.250	T-659	0-3	X-5	T-375	T-512	T-176
3000	.250	T-659	0-1	X-4	T-375	T-512	T-176
3350	.250	T-659	0-2	X-4	T-375	T-512	T-176
3700	.250	T-659	0-3	X-4	T-375	T-512	T-176

FIG. 6 A

D. C. VOLTS	D. C. AMPS	PLATE TRANS	PLATE TRANS PRI	PLATE TRANS SEC	RECT FIL TRANS	1st CHOKE	2nd CHOKE
450	.125	T-658	0-1	X-9	T-355	T-515	T-154
510	.125	T-658	0-2	X-9	T-355	T-515	T-154
560	.125	T-658	0-3	X-9	T-355	T-515	T-154
490	.125	T-658	0-1	X-8	T-355	T-515	T-154
550	.125	T-658	0-2	X-8	T-355	T-515	T-154
610	.125	T-658	0-3	X-8	T-355	T-515	T-154
980	.125	T-658	0-1	X-7	T-355	T-511	T-165
1100	.125	T-658	0-2	X-7	T-355	T-511	T-165
1230	.125	T-658	0-3	X-7	T-355	T-511	T-165
1430	.125	T-658	0-1	X-5	T-355	T-511	T-165
1600	.125	T-658	0-2	X-5	T-355	T-511	T-165
1790	.125	T-658	0-3	X-5	T-355	T-511	T-165

FIG. 6 A

D. C. VOLTS	D. C. AMPS	PLATE TRANS	PLATE TRANS PRI	PLATE TRANS SEC	RECT. FIL. TRANS	1st CHOKE	2nd CHOKE
500	.175	T-654	0-1	X-9	T-355	T-506	T-152
560	.175	T-654	0-2	X-9	T-355	T-506	T-152
625	.175	T-654	0-3	X-9	T-355	T-506	T-152
620	.175	T-654	0-1	X-8	T-355	T-506	T-152
695	.175	T-654	0-2	X-8	T-355	T-506	T-152
775	.175	T-654	0-3	X-8	T-355	T-511	T-165
1070	.175	T-654	0-1	X-7	T-355	T-511	T-165
1200	.175	T-654	0-2	X-7	T-355	T-511	T-165
1350	.175	T-654	0-3	X-7	T-355	T-511	T-165
1460	.175	T-654	0-1	X-5	T-355	T-511	T-165
1630	.175	T-654	0-2	X-5	T-355	T-511	T-165
1800	.175	T-654	0-3	X-5	T-355	T-511	T-165

FIG. 6 A

D. C. VOLTS	D. C. AMPS	PLATE TRANS	PLATE TRANS PRI	PLATE TRANS SEC	RECT FIL. TRANS	1st CHOKE	2nd CHOKE
450	.250	T-659	0-1	X-9	T-355	T-507	T-164
510	.250	T-659	0-2	X-9	T-355	T-507	T-164
560	.250	T-659	0-3	X-9	T-355	T-507	T-164
490	.250	T-659	0-1	X-8	T-355	T-507	T-164
550	.250	T-659	0-2	X-8	T-355	T-507	T-164
610	.250	T-659	0-3	X-8	T-355	T-507	T-164
980	.250	T-659	0-1	X-7	T-355	T-508	T-168
1100	.250	T-659	0-2	X-7	T-355	T-508	T-168
1230	.250	T-659	0-3	X-7	T-355	T-508	T-168
1430	.250	T-659	0-1	X-5	T-355	T-508	T-168
1600	.250	T-659	0-2	X-5	T-355	T-508	T-168
1790	.250	T-659	0-3	X-5	T-355	T-508	T-168

FIG. 6 B

D. C. VOLTS	D. C. AMPS	PLATE TRANS	PLATE TRANS PRI	RECT FIL TRANS	1st CHOKE	2nd CHOKE
450	.175	T-658	0-1	T-354	T-506	T-152
510	.175	T-658	0-2	T-354	T-506	T-152
560	.175	T-658	0-3	T-354	T-506	T-152

FIG. 6 B

D. C. VOLTS	D. C. AMPS	PLATE TRANS	PLATE TRANS PRI	RECT. FIL. TRANS	1st CHOKE	2nd CHOKE
500	.250	T-654	0-1	T-354	T-507	T-164
560	.250	T-654	0-2	T-354	T-507	T-164
525	.250	T-654	0-3	T-354	T-507	T-164

FIG. 6 B

D. C. VOLTS	D. C. AMPS	PLATE TRANS	PLATE TRANS PRI	RECT FIL TRANS	1st CHOKE	2nd CHOKE
460	.350	T-659	0-1	T-354	T-510	T-166
510	.350	T-659	0-2	T-354	T-510	T-166
560	.350	T-659	0-3	T-354	T-510	T-166

The Practical Solution to the Power Supply Problem

PROBABLY the biggest bug-aboo in radio is the ever-existing menace of obsolescence. Of course, in such a modern industry new developments are constantly being born, and the older methods are soon discarded to make room for the later developments.

However, from the experimenter's point of view, obsolescence is quite expensive, especially when it involves the discarding of perfectly good equipment. New tubes are superior to existing types, but due to different voltages and circuit applications, changes in associated equipment are often necessary. In many instances the changes in r.f. and audio circuits are inexpensive. Moreover, a change in these circuits usually necessitates a change in the power supply. This is often the most expensive unit in the entire circuit, regardless of the application.

Universal Power Supply

In transmitters or high-power public-address systems the low-power tubes require exceptionally good filtering to keep hum level as low as is consistent with good practice. If these low-level stages derive their voltage supply from the high-voltage system it is necessary to thoroughly filter the entire power supply, not only to eliminate hum but also to prevent feedback. Of course, this may be eliminated by filtering a small section that supplies only the lower level tubes. This method, however, jeopardizes condensers and resistors should the load be removed from this section.

Another method to eliminate this hazard is to use a separate transformer for the input or low-level stages. The drawback to this procedure is the excessive cost and is therefore not usually practical.

The answer lies in the use of a new type of transformer that permits any existing type of rectification in a practical and economical manner.

The voltages available from this transformer range from 400 volts up to 3000 volts depending upon the type of circuit used. In the schematic (Fig. 1) three separate d.c. supplies ranging from 400 to 560 volts may be obtained. By means of a primary tap these voltages may be varied approximately 12 per cent. This circuit will supply adequate power to three separate audio or r.f. units.

In applications where it is necessary to have a separate low voltage and a high voltage, the circuit shown in Fig. 2, utilizing two 866 tubes and a type 83, is not only economical but very practical for many uses in amateur transmitters and experimental circuits.

Fig. 3 shows a similar application with the exception that the high-voltage supply is obtained from three low cost 83 type tubes in a bridge arrangement. In this application the high voltage supply delivers 140% of full wave rated value. The same voltages are also obtainable in Fig. 4. In this circuit the center tap of one of the high-voltage windings is connected to the filament of a type 83 tube, thereby forming a series connection.

By far the most versatile circuit is shown in Fig. 5. A single 83 is used for low voltage and two 866's connected for full-wave rectification supply the high voltage. Usually when this circuit is used in existing equipment two power transformers are required to accomplish what one will do with this new transformer.

Where higher voltages are desired the circuit of Fig. 6 may be used. This arrangement will supply a d.c. voltage as high as 1020 volts. In a circuit where such high voltages are used it is common practice to supply a lower stage with a lower voltage. This is obtained from a separate winding using a type 83 full-wave rectifier.

For maximum volts per dollar expended the circuit of Fig. 7 is ideal for those whose pocketbooks are limited. A glance shows two of the high voltage windings connected in series. For rectification two type 83 tubes are connected in tandem. Low voltage is obtained from the other winding with another 83 tube. When it is not desired to utilize the low voltage the three windings may be connected in series. When used as shown in Fig. 8, with two 866 tubes, voltages ranging from 1300 to 1620 volts are procurable.

A still cheaper method of obtaining the same voltages is shown in Fig. 9. Here the outputs of three type 83 tubes are connected in series. In this circuit it is essential that the filament transformer supplying the 83 tubes be adequately insulated to withstand the high voltages.

Perhaps surpassing all circuits shown is the application in Fig. 10. In this circuit 21 different voltages are available. In transmitter use there is sufficient power available to supply anything from a five-watter up to a 500-watt rig. In addition to this a separate low-voltage supply may be taken off of the secondary winding marked 4, 5 and 6, when the high-voltage requirements are not over 2240 volts.

T-495 and T-496 KEN-O-TAP Universal Modulation Transformers to couple any modulator to any Class "C" load.

PRIMARY CONNECTIONS:—Connect Plates and B plus to terminals indicated by letters underneath them. (P-CT-P). Join terminals which are underlined. EXAMPLE. A plate to plate load of 3800 ohms is desired:—Looking down the chart we find —"3800 ohms—1-2-7-11-13-5-6"

P CT P

This means that we should connect one plate to terminal #1, the other plate to terminal #6, and B+ to Terminal #11. Terminals #2 and #7 should be joined and terminals #13 and #5 should be joined.

SECONDARY CONNECTIONS:—Connect B plus supply to terminal given first, join terminals underlined, and connect last terminal given to class "C" stage.

EXAMPLE. A secondary load of 4500 ohms is to be modulated:—Looking down the chart we find 4500 ohms—A-B-C-D-E F-G-H. The B plus supply should be connected to terminal "A". Terminal "H" should be connected to the class "C" stage. B and C, D and E, F and G should be joined.

PRIMARY CONNECTIONS AND IMPEDANCES	
500 Ohms	3-4-5-6 No C. T.
1900 Ohms	3-4-7-10-13 P CT P
2500 Ohms	1-2-7- 9-13-3-4 P CT P
3000 Ohms	7-12-13-5-6 P CT P
3800 Ohms	1-2-7-11-13-5-6 P CT P
4200 Ohms	3-4-7-10-13-5-6 P CT P
4900 Ohms	14-15-17 P CT P
5500 Ohms	14-16-17-1-2 P CT P
6600 Ohms	10-12-14-15-17-1-2 P CT P
7100 Ohms	1-2-14-16-17-3-4 P CT P
8000 Ohms	12-13-14-15-16-3-4 P CT P
8900 Ohms	3-4-14-16-17-10-13 P CT P
9900 Ohms	1-2-3-4-14-15-17-10-13 P CT P
10,900 Ohms	10-13-14-16-17-5-6 P CT P
12,000 Ohms	5-6-14-15-17-7-8 P CT P
13,000 Ohms	5-6-14-16-17-7-10 P CT P
14,200 Ohms	1-2-5-6-14-15-17-7-10 P CT P
15,400 Ohms	1-2-3-4-5-6-14-15-17-7-12 P CT P
16,700 Ohms	7-12-14-16-17-1-2-3-4-5-6 P CT P
18,000 Ohms	1-2-3-4-5-6-14-16-17-7-13 P CT P

SECONDARY CONNECTIONS AND IMPEDANCES	
20 Ohms	A-B
80 Ohms	C-D
180 Ohms	A-B-C-D
320 Ohms	E-F
500 Ohms	A-B-E-F
720 Ohms	C-D-E-F
980 Ohms	A-B-C-D-E-F
1280 Ohms	G-H
1620 Ohms	A-B-G-H
2000 Ohms	C-D-G-H
2430 Ohms	A-B-C-D-G-H
2880 Ohms	E-F-G-H
3400 Ohms	A-B-E-F-G-H
3900 Ohms	C-D-E-F-G-H
4500 Ohms	A-B-C-D-E-F-G-H
5100 Ohms	I-J
5800 Ohms	A-B-I-J
6500 Ohms	C-D-I-J
7200 Ohms	A-B-C-D-I-J
8000 Ohms	E-F-I-J
8800 Ohms	A-B-E-F-I-J
9700 Ohms	C-D-E-F-I-J
10,600 Ohms	A-B-C-D-E-F-I-J
11,500 Ohms	G-H-I-J
12,500 Ohms	A-B-G-H-I-J
13,500 Ohms	C-D-G-H-I-J
14,600 Ohms	A-B-C-D-G-H-I-J
15,700 Ohms	E-F-G-H-I-J
16,800 Ohms	A-B-E-F-G-H-I-J
18,000 Ohms	C-D-E-F-G-H-I-J
19,200 Ohms	A-B-C-D-E-F-G-H-I-J

T-263 - T-264 KEN-O-DRIVE TRANSFORMERS TO COUPLE ANY DRIVER PLATE OR PLATES OR 500 OHM LINE TO ANY CLASS "AB" OR CLASS "B" GRIDS

RATIOS AND CONNECTIONS FOR PUSH-PULL OR 500 OHM LINE DRIVER

RATIO PRI. TO 1/2 SEC.	7.00:1	6.00:1	4.50:1	4.00:1	3.00:1	2.80:1	2.60:1	2.50:1	2.40:1	1.70:1	1.60:1	1.50:1	1.40:1	1.30:1	1.00:1	1:1.10	1:1.50	1:1.75
(1) PLATES OR LINES	1 & 1'	2 & 2'	A & A'	3 & 3'	A & A'	1 & 1'	A & A'	B & B'	2 & 2'	B & B'	3 & 3'	1 & 1'	B & B'	2 & 2'	C & C'	3 & 3'	C & C'	C & C'
(2) B OR LINE C. T.	4 & 4'	4 & 4'	D & D'	4 & 4'	D & D'	4 & 4'	D & D'	D & D'	4 & 4'	D & D'	4 & 4'	4 & 4'	D & D'	4 & 4'	D & D'	4 & 4'	D & D'	D & D'
(3) GRIDS	C & C'	C & C'	3 & 3'	C & C'	2 & 2'	B & B'	1 & 1'	3 & 3'	A & A'	2 & 2'	B & B'	A & A'	1 & 1'	A & A'	3 & 3'	A & A'	2 & 2'	1 & 1'
(4) SEC. C. T.	D & D'	D & D'	4 & 4'	D & D'	4 & 4'	D & D'	4 & 4'	4 & 4'	D & D'	4 & 4'	D & D'	D & D'	4 & 4'	D & D'	4 & 4'	D & D'	4 & 4'	4 & 4'

RATIOS AND CONNECTIONS FOR SINGLE PLATE OR 500 OHM LINE DRIVER

RATIO PRI. TO 1/2 SEC.	7.00:1	6.50:1	6.00:1	5.50:1	5.00:1	4.50:1	4.00:1	3.50:1	3.00:1	2.75:1	2.60:1	2.50:1	2.40:1	2.30:1	2.20:1	2.00:1	1.80:1	1.60:1
(1) PLATE OR LINE	1	1	2	1	2	A	3	1	A	A	1	B	2	A	A	2	B	3
(2) B OR LINE	1'	2'	2'	3'	3'	A'	3'	4	A'	C'	2'	B'	2'	B'	D'	3'	C'	3'
(3) GRIDS	C & C'	C & C'	C & C'	C & C'	C & C'	3 & 3'	C & C'	C & C'	2 & 2'	3 & 3'	B & B'	3 & 3'	A & A'	2 & 2'	3 & 3'	B & B'	3 & 3'	B & B'
(4) SEC. C. T.	D & D'	D & D'	D & D'	D & D'	D & D'	4 & 4'	D & D'	D & D'	4 & 4'	4 & 4'	D & D'	4 & 4'	D & D'	4 & 4'	4 & 4'	D & D'	4 & 4'	D & D'
(5) JOIN	4 & 4'	4 & 4'	4 & 4'	4 & 4'	4 & 4'	D & D'	4 & 4'	4 & 4'	D & D'	D & D'	4 & 4'	D & D'	4 & 4'	D & D'	D & D'	4 & 4'	D & D'	4 & 4'

RATIOS AND CONNECTIONS FOR SINGLE PLATE OR 500 OHM LINE DRIVER

RATIO PRI. TO 1/2 SEC.	1.50:1	1.40:1	1.30:1	1.20:1	1.10:1	1.00:1	1:1.10	1:1.20	1:1.30	1:1.40	1:1.50	1:1.70	1:2.00	1:2.20	1:2.40	1:2.50	1:3.00	1:3.50	1:4.50	1:5.00	1:9.00
(1) PLATE OR LINE	1	B	2	2	2	C	3	3	1	B	C	1	B	3	B	2	C	C	2	1	1
(2) B OR LINE	1'	B'	2'	4	3'	C'	3'	4	4	D	C'	3	C	4	C	3	D	D	3	2	2
(3) GRIDS	A & A'	1 & 1'	A & A'	B & B'	A & A'	3 & 3'	A & A'	B & B'	A & A'	1 & 1'	2 & 2'	B & B'	2 & 2'	A & A'	1 & 1'	B & B'	2 & 2'	1 & 1'	A & A'	B & B'	A & A'
(4) SEC. C. T.	D & D'	4 & 4'	D & D'	D & D'	D & D'	4 & 4'	D & D'	D & D'	D & D'	4 & 4'	4 & 4'	D & D'	4 & 4'	D & D'	4 & 4'	D & D'	4 & 4'	4 & 4'	D & D'	D & D'	D & D'
(5) JOIN	4 & 4'	D & D'	4 & 4'	4 & 4'	4 & 4'	D & D'	4 & 4'	4 & 4'	4 & 4'	D & D'	D & D'										

PROPER RATIOS FROM CATHODE DRIVER

DRIVER	OUTPUT TUBES	DRIVER TRANSFORMER RATIO PRI. TO TOTAL SEC.
1 - 6C5, 56, 76, ETC.	P. P. 6L6's, 6V6's, RK39's, 807's	1.0:1 TO 1.5:1
1 - 2A3, 45 6L6, 6V6 807, RK39	P. P. 838's, 203A's 805's, 150T's, 211's 50T's. T-55's, 35T's 801's, ETC	1:1.0 TO 1:2.0
1 - 6C5, 56 76, ETC	P. P. 6F6's, 42's, 2A3's, 45's, ETC.	1:1.0 TO 1:2.0

PROPER RATIOS FROM SINGLE OR PUSH-PULL PLATES

DRIVER	OUTPUT TUBES	DRIVER TRANSFORMER RATIO PRI. TO 1/2 SEC.
P. P. 56's, 6C5's, 76's, ETC.	P. P. 42's, 2A5's, 6F6's, CLASS "AB"	2.5:1 TO 3.5:1
P. P. 56's, 6C5's, 76's, ETC.	P. P. 2A3's, 45's, 6A3's, 6A5's	2.0:1 TO 3.0:1
P. P. 46's, OR 59's	P. P. PARALLEL 46's, 59's, ETC	3.5:1 TO 4.5:1
1 6F6 TRIODE	P. P. 6F6's, CLASS "AB"	1.2:1 TO 2.0:1
P. P. 45's, 2A3's, 6A3's, 6A5's, 6L6's	P. P. 800's, 830B's, RK18's, RK31's, 845's CLASS "AB"	1.25:1 TO 2.0:1
P. P. 45's, 2A3's, 6A3's, 6A5's, 6L6's	P. P. 210's, 801's, 35T's, 50T's, T-55's, ETC.	1.5:1 TO 2.5:1
P. P. 45's, 2A3's, 6A3's, 6A5's, 6L6's	P. P. 203A's, 838's, 805's, 150T's, 211's, 50T's, 801's	1.5:1 TO 2.0:1
P. P. 45's, 2A3's, 6A3's, 6A5's, 6L6's	P. P. T-20's, ETC.	1.5:1 TO 2.5:1

PROPER RATIOS FROM 500 OHM LINE

DRIVER	OUTPUT TUBES	DRIVER TRANSFORMER RATIO PRI. TO 1/2 SEC
500 OHM LINE	CLASS "B" 800's, 830B's RK18's, RK31's, CLASS "AB" 845's	1:1.6 TO 1:2.3
500 OHM LINE	CLASS "B" 46's, 210's ETC.	1:1.5 TO 1:2.5
500 OHM LINE	CLASS "B" P. P. PARALLEL 203A's, 838's, 211's, 805's, ETC.	1:1.0 TO 1:2.0
500 OHM LINE	PUSH-PULL 6L6's, 807's RK39's, 6V6's	1:1.5 TO 1:2.5
500 OHM LINE	P. P. PARALLEL 6L6's, 807's, 6V6's, RK39's	1:1.0 TO 1:2.5
500 OHM LINE	T-55's, 35T's, 50T's ETC.	1:1.0 TO 1:2.0
500 OHM LINE	808's	1.3:1 TO 1:1.0
500 OHM LINE	PUSH-PULL RK38's	1:1.5 TO 1:2.5
500 OHM LINE	PUSH-PULL 203A's, 838's 211's, 805's, ETC.	1.4:1 TO 1.0:1

T-108, T-109, T-110 KEN-O-DYNE UNIVERSAL OUTPUT TRANSFORMERS. To couple any plate or plates to any line or voice coil.

P to P Load	P-B-P	A-B	C-D	D-E	A-C	B-D	C-E	A-D	B-E	A-E	2-3	2-3-A-B	2-3-C-D	2-3-D-E	2-3-A-C	2-3-B-D	2-3-C-E	2-3-A-D	2-3-B-E	2-3-A-E	1-2	1-2-A-B	1-2-C-D	1-2-D-E	1-2-A-C	1-2-B-D	1-2-C-E	1-2-A-D	1-2-B-E	1-2-A-E	1-3	1-3-A-B	1-3-C-D	1-3-D-E	1-3-A-C	1-3-B-D	1-3-C-E	1-3-A-D	1-3-B-E	1-3-A-E
1000	5-6-7	.5	1.	1.5	2	3	4	6	8	15	50	60	65	70	72	77	85	88	100	112	200	220	230	235	240	250	260	275	288	310	450	480	490	500	510	525	540	560	580	600
1500	5-6-7	.7	1.5	2.2	3	4.5	6	9	12	22	75	90	97	105	108	115	127	132	150	168	300	330	345	355	360	375	390	427	450	465	675	720	735	750	765	790	810	840	870	900
2000	5-6-7	1	2	3	4	6	8	12	16	30	100	120	130	140	144	154	170	176	200	224	400	440	460	470	480	500	520	550	560	620	900	960	980	1000	1020	1050	1080	1120	1160	1200
2500	5-6-7	1.2	2.5	3.8	5	7.5	10	15	20	37	125	150	160	175	180	192	212	220	250	280	500	550	570	590	600	625	650	690	700	775	1120	1200	1230	1250	1270	1310	1350	1400	1450	1500
3000	5-6-7	1.5	3	4.5	6	9	12	18	24	45	150	180	200	210	216	231	255	264	300	340	600	660	690	705	720	750	780	825	860	930	1350	1440	1470	1500	1530	1575	1620	1680	1740	1800
3800	5-6-7	2	4.	6	8	12	16	24	32	60	200	240	260	280	288	308	340	352	400	450	800	880	920	940	960	1000	1040	1100	1150	1240	1800	1920	1960	2000	2040	2100	2160	2240	2320	2400
5000	4-6-8	.5	1	1.5	2	3	4	6	8	15	50	60	65	70	72	77	85	88	100	112	200	220	230	235	240	250	260	275	288	310	450	480	490	500	510	525	540	560	580	600
6000	4-6-8	.6	1.2	1.8	2.4	3.6	4.8	7.2	9.6	18	60	72	78	84	86	92	102	106	120	135	240	265	275	280	290	300	430	330	343	370	540	575	590	600	612	630	650	670	700	720
7000	4-6-8	.7	1.4	2.1	2.8	4.2	5.6	8.4	11	21	70	84	90	98	100	108	120	123	140	157	280	308	320	330	340	350	364	385	405	450	610	650	670	700	710	740	760	780	810	840
8000	4-6-8	.8	1.6	2.4	3.2	4.8	6.4	9.6	12.8	24	80	96	100	110	115	123	135	140	160	180	320	350	370	375	382	400	415	440	460	500	720	770	785	800	815	840	860	900	930	960
9000	4-6-8	.9	1.8	2.7	3.6	5.4	7.2	11	15	27	90	110	117	126	130	140	153	160	180	200	360	400	415	424	432	450	470	500	520	560	810	860	880	900	918	950	970	1000	1036	1100
10,000	4-6-8	1	2	3	4	6	8	12	16	30	100	120	130	140	144	154	170	176	200	224	400	440	460	470	480	500	520	550	575	620	900	960	980	1000	1020	1050	1080	1120	1160	1200
11,000	4-6-8	1.1	2.2	3.3	4.4	6.6	8.8	13	17	33	110	132	143	154	164	170	190	200	220	250	440	480	500	520	530	550	570	600	630	680	990	1060	1080	1100	1120	1150	1190	1230	1280	1320
12,000	4-6-8	1.2	2.4	3.6	4.8	7.2	9.6	15	19	36	120	140	150	170	175	185	200	210	240	270	500	530	550	580	590	600	620	660	690	750	1080	1150	1180	1200	1230	1260	1300	1350	1400	1450
13,000	4-6-8	1.3	2.6	3.9	5.2	7.8	10.5	15.5	21	39	130	155	170	180	190	200	220	230	260	290	510	560	600	610	620	650	680	710	750	800	1200	1250	1280	1300	1330	1360	1400	1450	1500	1550
14,000	4-6-8	1.4	2.8	4.2	5.6	8.4	11	16	22	42	140	170	180	195	200	215	240	247	280	315	530	600	640	660	690	700	730	770	800	860	1260	1320	1380	1400	1430	1470	1500	1570	1620	1680
15,000	4-6-8	1.5	3	4.5	6	9	12	18	24	45	150	180	200	210	216	230	250	263	300	340	600	660	690	700	720	750	780	820	860	930	1350	1440	1480	1500	1530	1580	1620	1680	1740	1800
16,000	4-6-8	1.6	3.2	4.8	6.4	9.6	12.8	19	26	48	160	200	210	220	230	250	270	280	320	360	640	700	750	770	780	800	830	880	920	990	1450	1540	1570	1600	1630	1680	1730	1800	1850	1900
17,000	4-6-8	1.7	3.4	5.1	6.8	10	14	20	27	50	170	200	220	240	245	260	290	300	340	380	680	750	780	800	815	850	880	930	980	1070	1530	1630	1670	1700	1730	1780	1840	1900	1970	2040
18,000	4-6-8	1.8	3.6	5.4	7.2	10.8	14.4	21.6	28.8	54	180	216	234	250	260	276	306	317	360	410	720	790	830	850	870	900	930	990	1040	1120	1620	1730	1770	1800	1840	1900	1950	2020	2090	2160
19,000	4-6-8	1.9	3.8	5.7	7.6	11.4	15	23	30	57	190	230	250	266	274	290	322	335	380	430	766	830	870	890	910	950	990	1050	1100	1180	1710	1820	1870	1900	1940	2000	2060	2130	2200	2280
20,000	4-6-8	2	4	6	8	12	16	24	32	60	200	240	260	280	288	308	340	352	400	450	800	880	920	940	960	1000	1040	1100	1150	1240	1800	1920	1960	2000	2040	2100	2160	2240	2320	2400

HOW TO USE THIS CHART

The first column in this table gives the available primary impedances. The second column gives the connections to P-B-P as shown at the head of the column. The rest of the columns give, at the head, secondary connections and below secondary impedances.

EXAMPLE

Example:- To couple 10,000 ohms (P. P. plates connect to 4-6-8. Single Plate connect Plate to "4" and B plus to 8) to 500 ohms. Looking from left to right we find 500 ohms under the column marked 1-2-B-D. This means that one side of the 500 ohm line is connected to "1", and the other side is connected to "D". Terminals "2" and "B" are joined.

T-493 and T-494 KEN-O-TAP MODULATION TRANSFORMERS

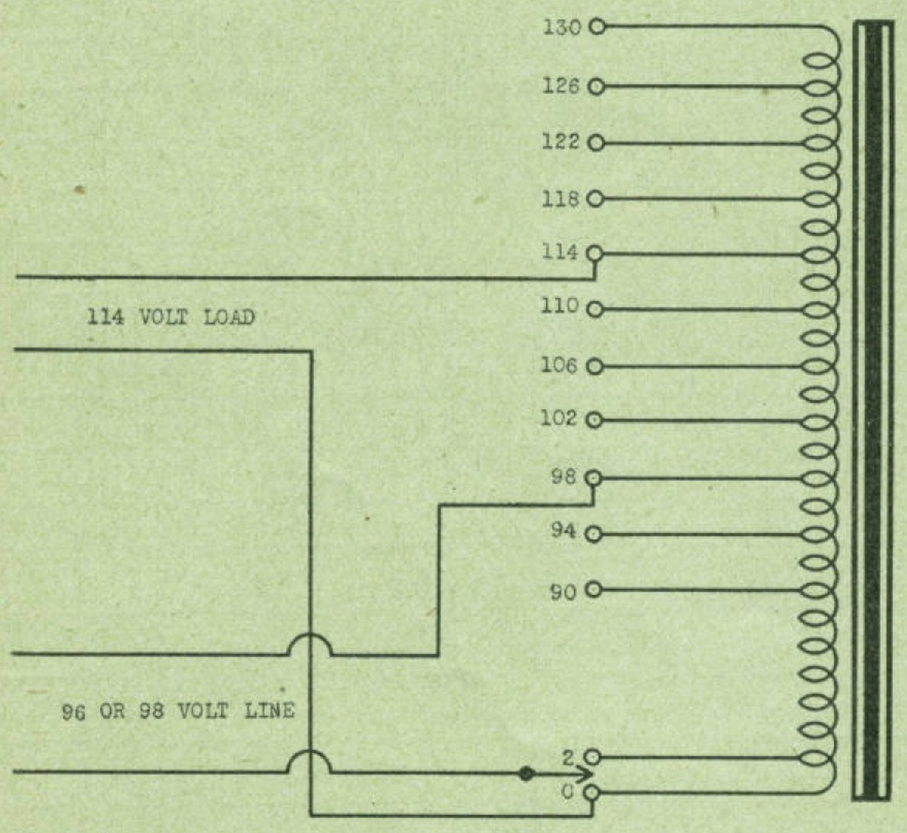
The first column of this table gives the available Plate to Plate load impedances. The second column under P-B-B-P gives the primary terminal connections. The rest of the columns give, at the top, the secondary terminal connections, and below, the secondary impedances available.

EXAMPLE:—To couple 6600 ohms Plate to Plate to an R. F. load. We find 11,000 ohms under column B-E opposite primary impedance 6600, marked 1-2-5-6. This gives the following terminal connection:—

P—Connect to terminal #1
B—Connect to terminal #2
B—Connect to terminal #5
P—Connect to terminal #6
Secondary—Connect to B and E

P to P	P-B-B-P	A-B	B-C	C-D	D-E	A-C	B-D	C-E	A-D	B-E	A-E
2000	2-3-4-5	350	500	680	890	1700	2350	3100	4500	6000	9400
2000	1-2-5-6	200	315	380	500	950	1320	1750	2500	3400	5300
2500	2-3-4-5	440	625	850	1100	2100	2950	3900	5600	7500	11,500
2500	1-2-5-6	250	390	475	625	1200	1650	2200	3100	4300	6600
3000	2-3-4-5	525	750	1000	1380	2500	3500	4650	6750	9000	14,000
3000	1-2-5-6	300	470	570	750	1450	2000	2650	3750	5000	8000
3800	2-3-4-5	670	950	1250	1750	3150	4500	5750	8500	11,300	17,700
3800	1-2-5-6	380	600	720	950	1840	2500	3250	4750	6400	10,000
5000	1-3-4-6	160	230	312	410	785	1100	1450	2100	2800	4,400
5000	1-2-5-6	500	790	950	1250	2400	3300	4300	6200	8400	13,000
6000	1-3-4-6	190	275	375	490	940	1300	1750	2500	3360	5300
6000	1-2-5-6	600	950	1140	1500	2900	4000	5200	7500	10,000	15,600
6600	1-3-4-6	210	300	415	540	1130	1430	1950	2750	3700	5800
6600	1-2-5-6	660	1040	1150	1650	3200	4400	5700	8200	11,000	17,000
7000	1-3-4-6	222	326	440	570	1200	1520	2050	2900	3900	6100
7000	1-2-5-6	700	1100	1220	1750	3400	4700	5900	8700	11,700	18,000
8000	1-3-4-6	250	360	500	650	1370	1750	2360	3340	4500	7000
8000	1-2-5-6	800	1250	1400	2000	3900	5300	6900	10,000	13,000	20,000
9000	1-3-4-6	280	400	560	740	1550	2000	2700	3800	5000	8000
9000	1-2-5-6	900	1400	1580	2250	4400	6000	7700	11,000	14,500	22,500
10,000	1-3-4-6	310	450	620	820	1730	2220	3000	4200	5500	8800
10,000	1-2-5-6	1000	1550	1750	2500	4900	6700	8600	12,000	16,000	25,000
12,000	1-3-4-6	370	540	740	980	2100	2700	3600	5000	6500	10,500
14,000	1-3-4-6	430	630	870	1200	2400	2950	4100	5700	7500	11,000
16,000	1-3-4-6	500	720	980	1340	2750	3500	4800	6700	8800	12,500
18,000	1-3-4-6	560	810	1100	1450	3100	4000	5400	7500	10,000	16,000
20,000	1-3-4-6	620	900	1240	1640	3460	4400	6000	8400	11,000	17,600

T-217 T-218 T-219 POWER LINE AUTO TRANSFORMERS



THESE TRANSFORMERS MAKE IT POSSIBLE TO ADJUST PRIMARY VOLTAGE WITHIN TWO VOLTS OF RATED VALUE WITH LINE FLUCTUATION FROM 90 TO 130 VOLTS. VOLTAGE TAPS ARE FROM 90 TO 130 VOLTS IN STEPS OF 2 VOLTS. ESPECIALLY RECOMMENDED FOR FILAMENT CONTROL ON TRANSMITTING TUBES.

THE ABOVE DIAGRAM SHOWS AN EXAMPLE OF THE USE OF THIS TYPE OF UNIT TO CORRECT A 96 OR 98 VOLT LINE FOR 115 VOLT PRIMARIES.

T-261 AND T-262 TO COUPLE 500 OHM LINE TO ANY CLASS "AB" OR CLASS "B" GRIDS

RATIO PRI. TO SEC.	CONNECT 500 ohm LINE TO	CONNECT GRIDS TO	SECONDARY C. T.	RATIO PRI. to 1/2 SEC.
1:13.5	B and C	4 and 8	1 and 5	1:6.6
1:10.5	B and C	3 and 7	1 and 5	1:5.2
1:10.0	A and B	4 and 8	1 and 5	1:5.0
1:8.6	B and C	2 and 6	1 and 5	1:4.3
1:8.0	B and C	4 and 8	2 and 6	1:4.0
1:7.8	A and B	3 and 7	1 and 5	1:3.9
1:6.4	A and B	2 and 6	1 and 5	1:3.2
1:6.0	A and B	4 and 8	2 and 6	1:3.0
1:5.7	A and C	4 and 8	1 and 5	1:2.8
1:5.0	A and D	4 and 8	1 and 5	1:2.5
1:4.5	A and C	3 and 7	1 and 5	1:2.3
1:3.9	A and D	3 and 7	1 and 5	1:1.9
1:3.7	A and C	2 and 6	1 and 5	1:1.8
1:3.4	A and C	4 and 8	2 and 6	1:1.7
1:3.2	A and D	2 and 6	1 and 5	1:1.6
1:2.8	B and C	4 and 8	3 and 7	1:1.4
1:2.2	A and B	4 and 8	3 and 7	1:1.1
1:1.9	B and C	3 and 7	2 and 6	1:.95
1:1.4	A and B	3 and 7	2 and 6	1:.70
1:1.2	A and C	4 and 8	3 and 7	1:.60
1:1.0	A and D	4 and 8	3 and 7	1:.50
1:.8	A and C	3 and 7	2 and 6	1:.40
1:.7	A and D	3 and 7	2 and 6	1:.35

SEE CHART BELOW FOR CORRECT RATIOS FROM 500 OHM LINE TO GRIDS OF POPULAR CLASS "AB" AND CLASS "B" TUBES

DRIVER	OUTPUT TUBES	DRIVER TRANSFORMER RATIO PRI. TO 1/2 SEC.
500 OHM LINE	CLASS "B" 800's, 830B's RK18's, RK31's, CLASS "AB" 845's	1:1.6 TO 1:2.3
500 OHM LINE	CLASS "B" 46's, 210's ETC.	1:1.5 TO 1:2.5
500 OHM LINE	CLASS "B" P. P. PARALLEL 203A's, 838's, 211's 805's ETC	1:1.0 TO 1:2.0
500 OHM LINE	PUSH-PULL 203A's, 838's 211's, 805's, ETC.	1.4:1 TO 1.0:1
500 OHM LINE	PUSH-PULL 6L6's, 807's RK39's, 6V6's	1:1.5 TO 1:2.5
500 OHM LINE	P. P. PARALLEL 6L6's, 807's, 6V6's, RK39's	1:1.0 TO 1:2.5
500 OHM LINE	T-55's, 35T's, 50T's ETC.	1:1.0 TO 1:2.0
500 OHM LINE	808's	1.3:1 TO 1:1.0
500 OHM LINE	PUSH-PULL RK38's	1:1.5 TO 1:2.5

T-30 T-31 T-32 KEN-O-LINE TRANSFORMERS

Designed to couple one or more speakers from a 500 ohm line. Makes possible the use of from one to six units in parallel on a 500 ohm line. Tapped secondary provides impedances from .16 to 16 ohms.

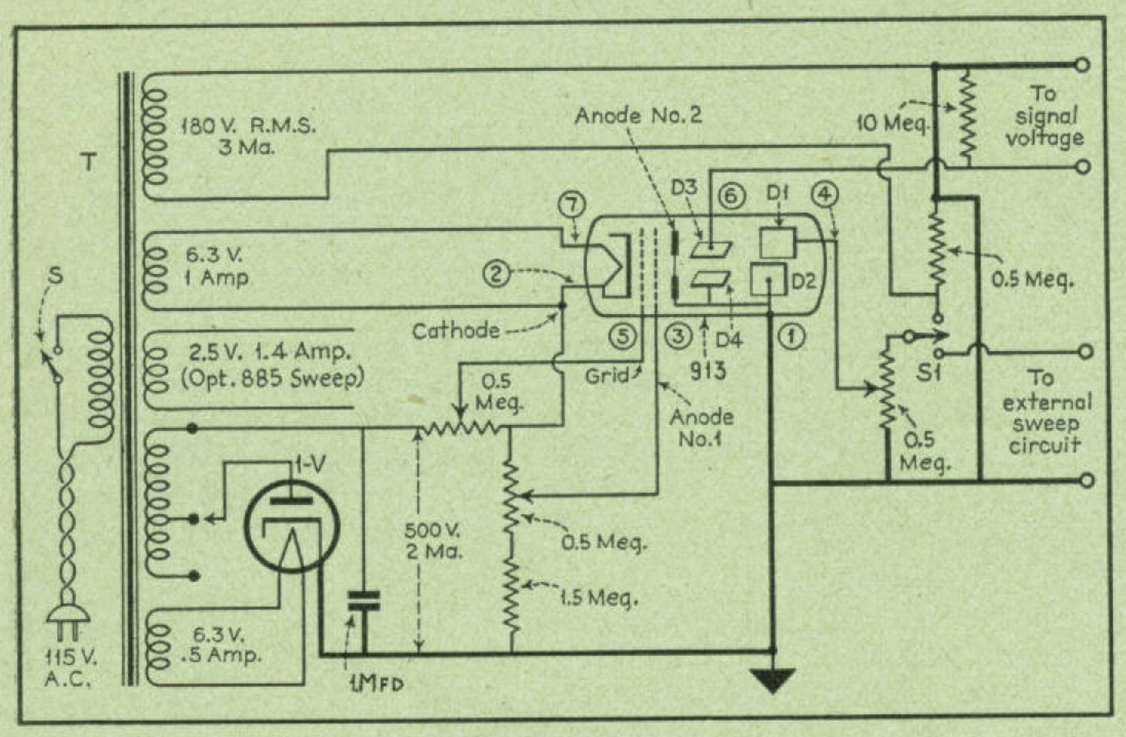
PRIMARY IMPEDANCES (OHMS)

A1	A2	A3	A4	A5	A6
500	1000	1500	2000	2500	3000

SECONDARY IMPEDANCES (OHMS)

BC	CD	DE	AB	EF	AC	BE	AD	CF	AE	BF	AF
.16	.36	.64	1	1.44	2	3.2	4	5	8	10	16

A LOW COST CATHODE RAY OSCILLOSCOPE



UTILIZING THE NEW 913 MINIATURE CATHODE RAY TUBE

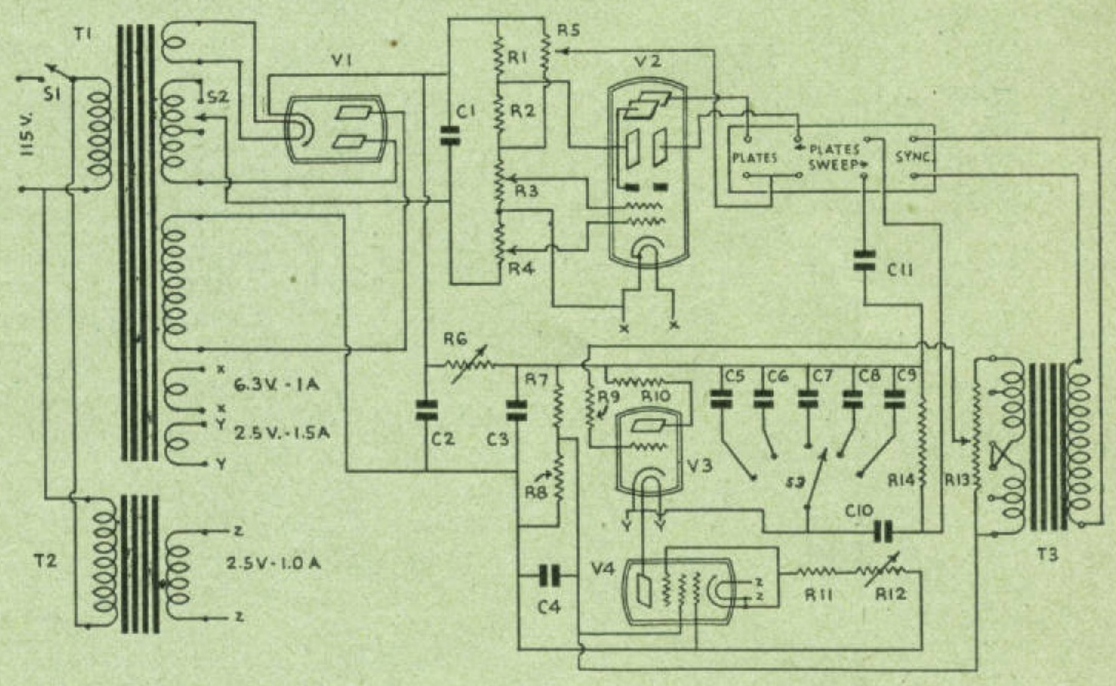
The schematic shown opposite is one of the most popular circuits ever designed. The 60 cycle sweep is obtained from the 180 volt winding of Type T207 Power Transformer.

A 913 Cathode Ray Oscilloscope With Linear Sweep

Where A Linear Sweep Is Desired This Inexpensive Circuit Is Ideal

LIST OF PARTS

C1	1mfd. 600V. Paper	R9	300,000 ½ Watt
C2,C3,C4	8mfd. 400V. Elec.	R10	1,000 - 1 Watt
C5	0.1mfd. 400V. Paper	R11	1,500 - ½ Watt
C6	0.025mfd. 400V. Paper	R12	50,000 Potentiometer Frequency Control
C7	0.005mfd. Mica	R13	10,000 Potentiometer Locking Control
C8	0.001mfd. Mica	R14	10 meg. ½ Watt
C9	100mmfd. Mica	T1	Rectifier Supply Transformer T207
C10,C11	0.1mfd. 400V. Pap.	T2	Filament Transf. K10
R1	1 meg. 1 Watt	T3	Synchronizing voltage input Transformer T1
R2	1 meg. 1 watt	S1	SPST toggle switch
R3	500,000 Volume Control Focusing Control	S2	SPDT toggle switch
R4	200,000 Volume Control Brilliancy Control	S3	Single-gang 6-pt. switch
R5	2 meg. Volume Control Position Control	V1	6X5
R6	50,000 Potent Amplitude Control	V2	913
R7	30,000 - 2 Watt	V3	885
R8	5,000 - 1 Watt	V4	58

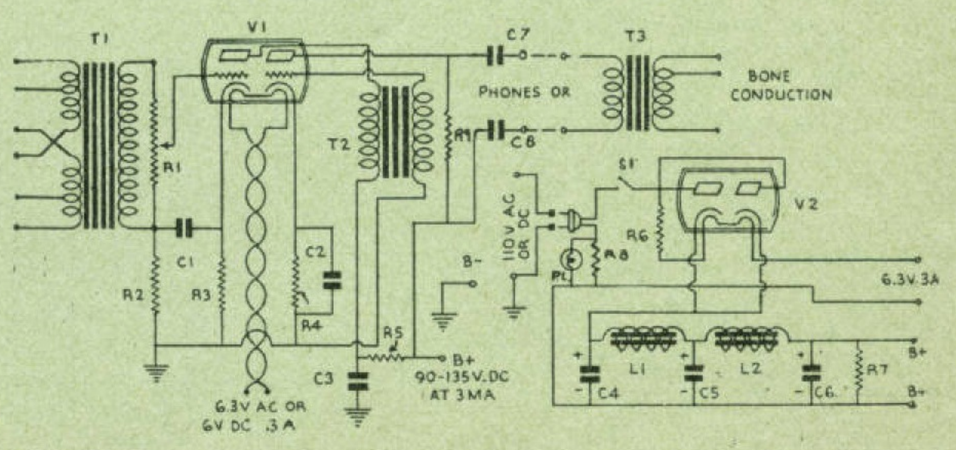


Deaf Aid For AC-DC Or Battery Operation To Work From High Level Microphone — Gain 50 DB.

The pilot light and R8 function so that when the device is grounded as shown, and the line is plugged in, if the plug polarity is incorrect the pilot will light, but R8 will restrict the short circuit current to a safe value. When the line is properly connected the pilot light will be out.

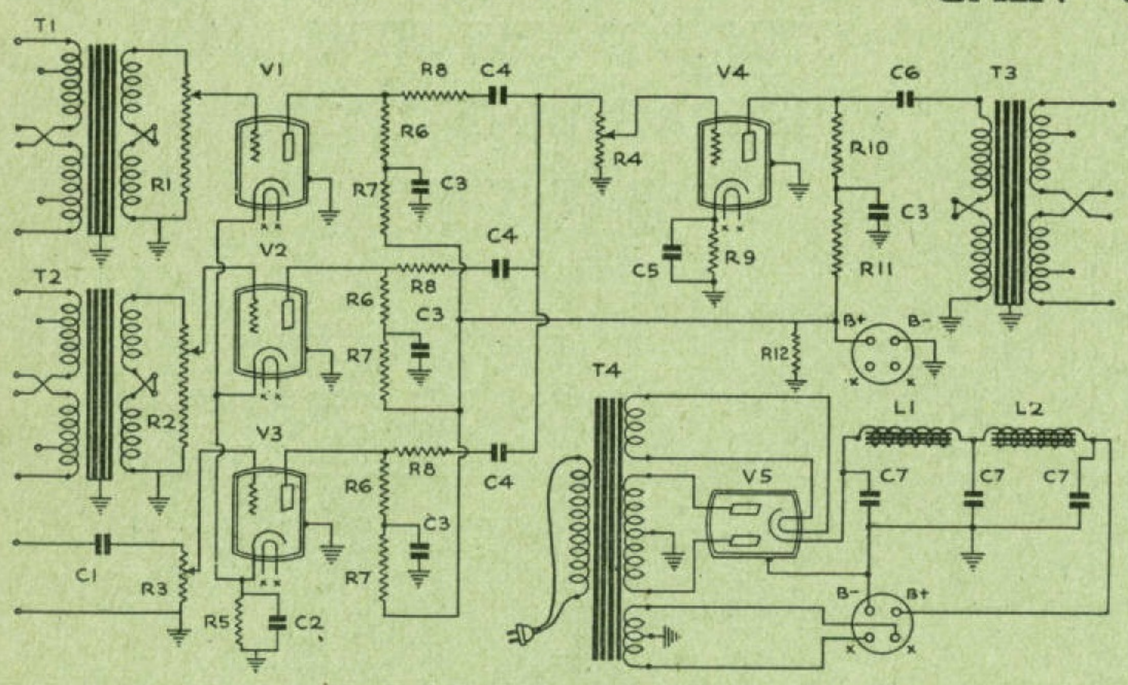
LIST OF PARTS

R1	500,000 Volume Control	C5	8 mfd. 200 V. Elect.
R2	50,000 - ½ W.	C6	8 mfd. 200 V. Elect.
R3	1,500 - 1 W.	C7	.5 mfd. 200 V. Paper
R4	2,000 - 1 W.	C8	.5 mfd. 200 V. Paper
R5	10,000 - 1 W.	T1	Kenyon T1
R6	275 Ohms - 50 W.	T2	Kenyon T57
R7	100,000 - 1 W.	T3	Kenyon T101
R8	20 Ohms - 50 W.	L1	Kenyon T156
R9	10,000 - 1 W.	L2	Kenyon T156
C1	.25 mfd. 400 V. Paper	S1	SPST Toggle
C2	10 mfd. 35 V. Elect.	P.L.	110 V. Pilot Light
C3	8 mfd. 200 V. Elect.	V1	6C8G
C4	8 mfd. 200 V. Elect.	V2	25Z5



PRE-AMPLIFIER AND ELECTRONIC MIXER

GAIN—80 DB



LIST OF PARTS

R1	150,000 ohm pot.	C4	.05 Mfd. 400 V. Paper
R2	150,000 ohm pot.	C5	50 Mfd. 50 V. Electro
R3	500,000 ohm pot.	C6	.25 Mfd. 400 V. Paper
R4	250,000 ohm pot.	C7	8 Mfd. 450 V. Electro
R5	1,500 ohm 1 watt res.	T1	Kenyon T2
R6	150,000 ohm 1 watt res.	T2	Kenyon T2
R7	50,000 ohm 1 watt res.	T3	Kenyon T101
R8	50,000 ohm ½ watt res.	T4	Kenyon T249
R9	2,500 ohm 1 watt res.	L1	Kenyon T156
R10	100,000 ohm 1 watt res.	L2	Kenyon T156
R11	20,000 ohm 1 watt res.		
R12	100,000 ohm 2 watt res.		
C1	.05 Mfd. 200 V. Paper		
C2	50 Mfd. 25 V. Electro		
C3	4 Mfd. 450 V. Electro		

Tubes

V1 — 6F5 V3—6F5
V2 — 6F5 V4 — 6C5
V5 — 6X5

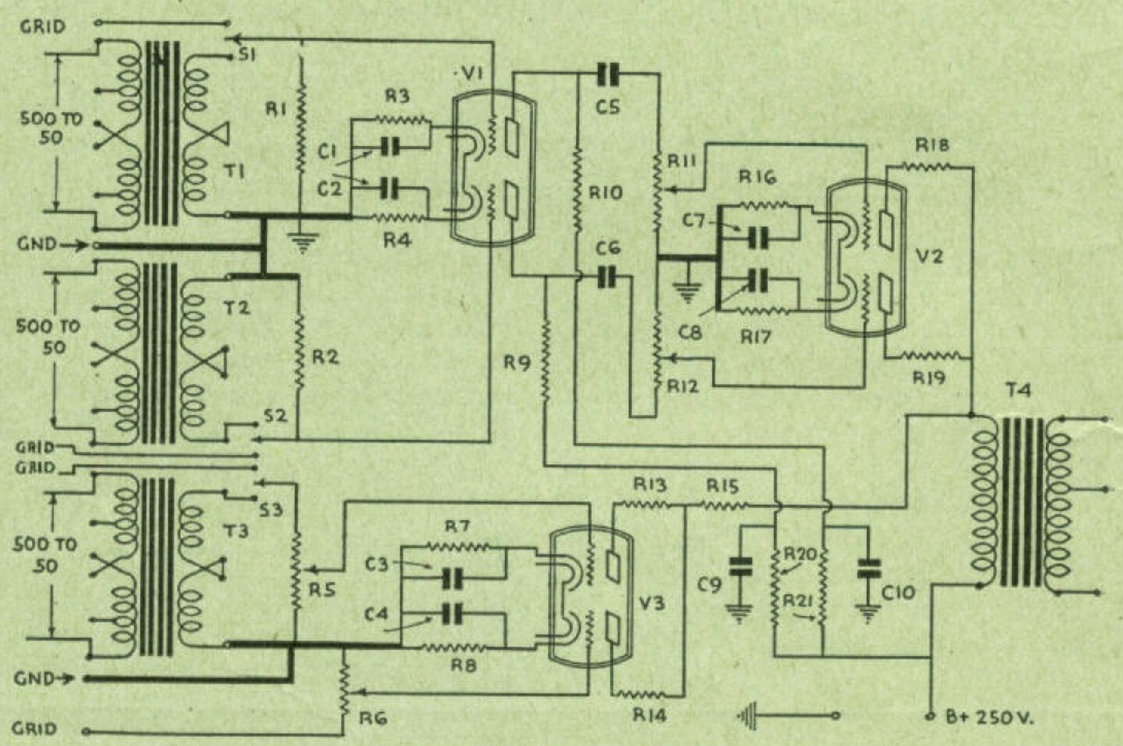
FOUR POSITION MIXER AND PRE-AMPLIFIER

GAIN—INPUT TO V1
500 Ohm Input—50 DB
150,000 Ohm Input—55 DB

INPUT TO V3
500 Ohm Input—20 DB
150,000 Ohm Input—25 DB

LIST OF PARTS

R1	500,000 ½ W.	C1	10 Mfd. 35 V. Elect.
R2	500,000 ½ W.	C2	10 Mfd. 35 V. Elect.
R3	2,000 1 W.	C3	10 Mfd. 35 V. Elect.
R4	3,000 1 W.	C4	10 Mfd. 35 V. Elect.
R5	500,000 Vol. Cont.	C5	.1 Mfd. 400 V. Paper
R6	500,000 Vol. Cont.	C6	.1 Mfd. 400 V. Paper
R7	2,000 1 W.	C7	10 Mfd. 35 V. Elect.
R8	2,000 1 W.	C8	10 Mfd. 35 V. Elect.
R9	100,000 1 W.	C9	4 Mfd. 450 V. Elect.
R10	100,000 1 W.	C10	4 Mfd. 450 V. Elect.
R11	500,000 Vol. Cont.	T1	Kenyon T2
R12	500,000 Vol. Cont.	T2	Kenyon T2
R13	20,000 1 W.	T3	Kenyon T2
R14	20,000 1 W.	T4	Kenyon T101
R15	5,000 1 W.	V1	6C8G
R16	2,000 1 W.	V2	6C8G
R17	2,000 1 W.	V3	6C8G
R18	20,000 1 W.	S1	SPDT Toggle
R19	20,000 1 W.	S2	SPDT Toggle
R20	25,000 1 W.	S3	SPDT Toggle
R21	25,000 1 W.		



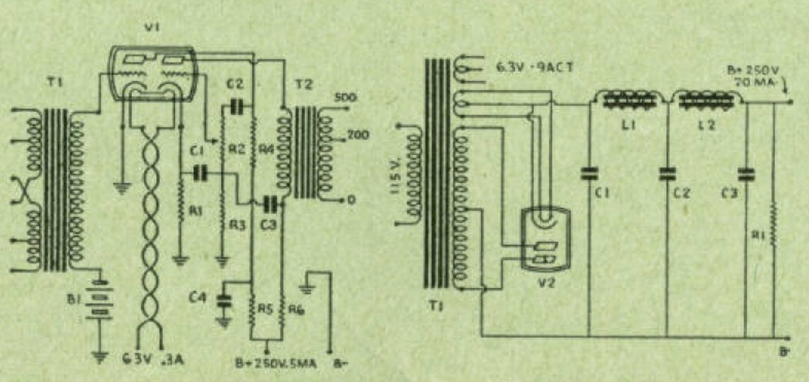
A suitable power supply is shown below

PRE-AMPLIFIER WITH SEPARATE POWER SUPPLY

GAIN—50 DB

PRE-AMPLIFIER LIST OF PARTS

R1	1,500 1 W.
R2	500,000 Volume Control
R3	50,000 ½ W.
R4	100,000 1 W.
R5	25,000 1 W.
R6	10,000 1 W.
C1	.25 Mfd. 400 V. Paper
C2	.1 Mfd. 400 V. Paper
C3	.25 Mfd. 400 V. Paper
C4	4 Mfd. 450 V. Elect.
B1	3 V. Bias Cells
T1	Type T1 or T2
T2	Type T101
V1	6C8G

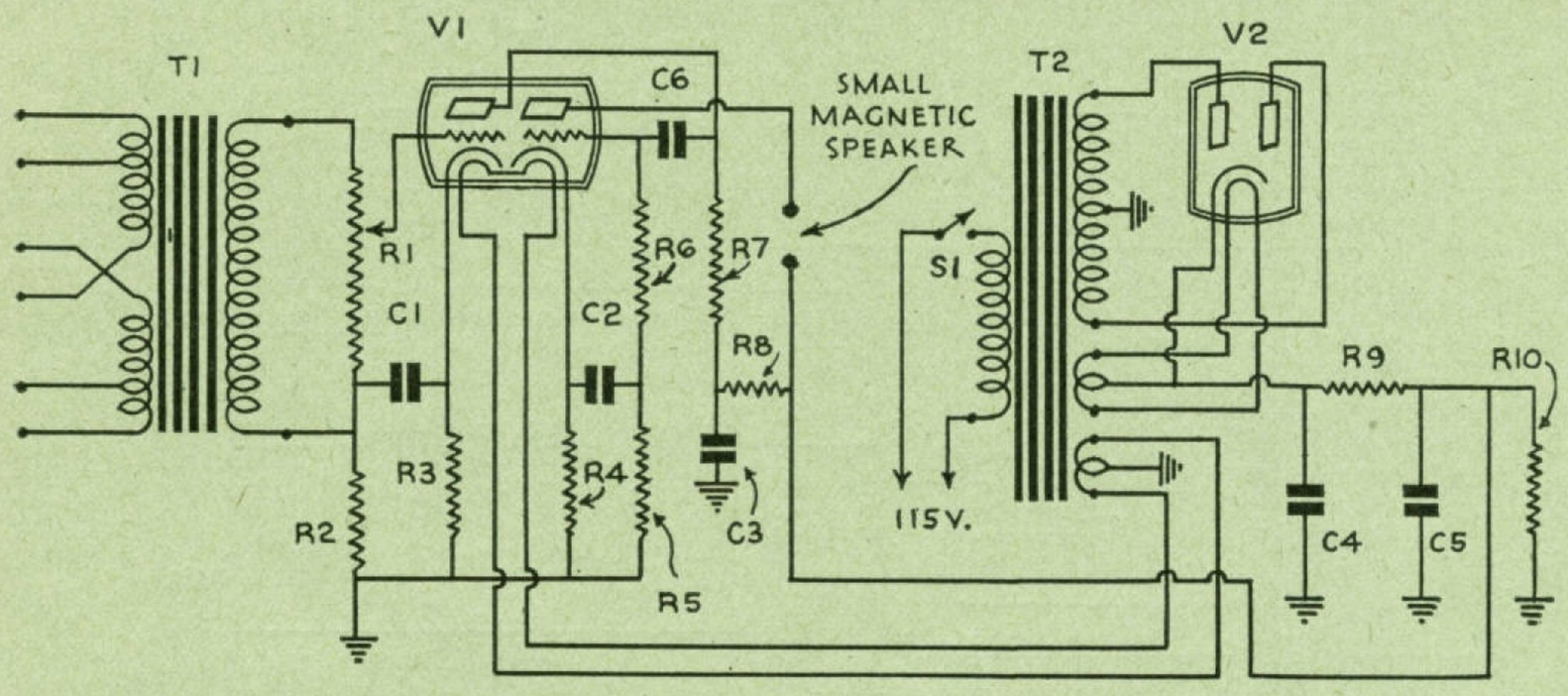


PRE-AMPLIFIER POWER SUPPLY

LIST OF PARTS

T1	Type T249
L1	Type T156
L2	Type T156
R1	100,000 2 W.
C1	8 Mfd. 450 V. Elect.
C2	8 Mfd. 450 V. Elect.
C3	8 Mfd. 450 V. Elect.
V2	6X5

DESK CALL SYSTEM TO OPERATE FROM SINGLE BUTTON MIKE OR PHONO.



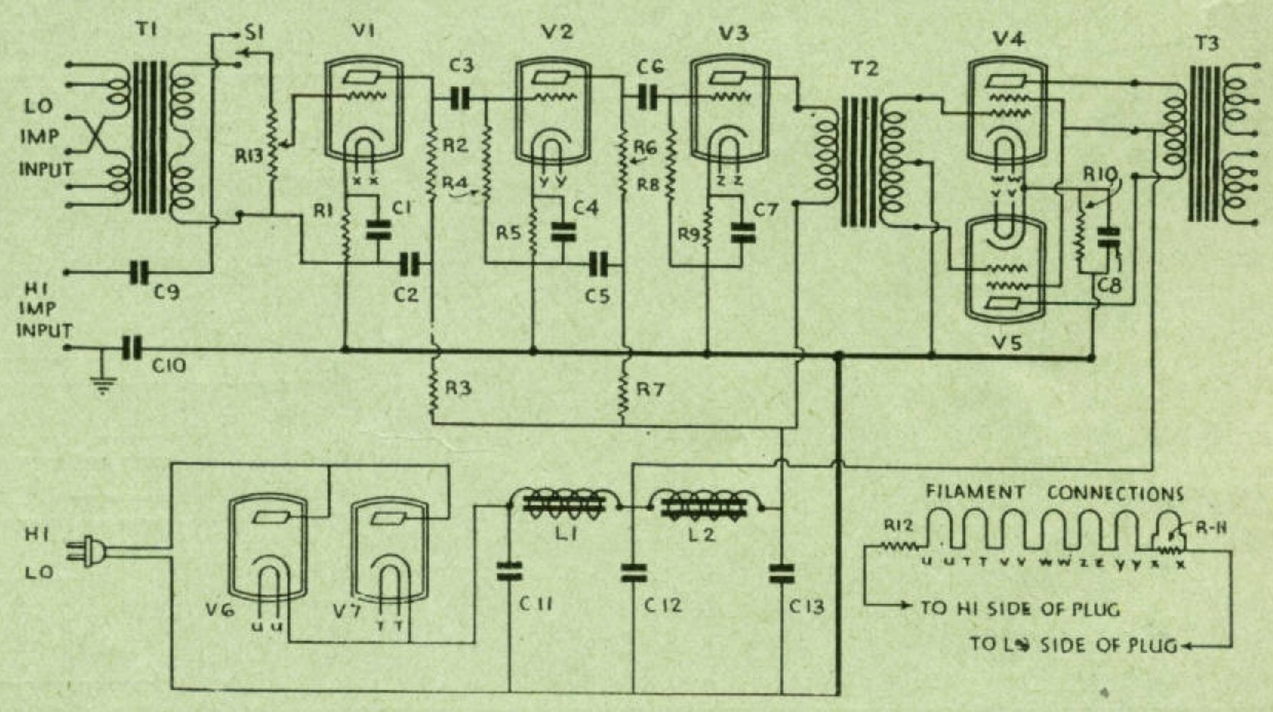
LIST OF PARTS

V1	6C8G
V2	6X5
R1	500,000 Volume Control
R2, R5	50,000 - ½ W.
R3	3,000 - 1 W.
R4	1,500 - 1 W.
R6	500,000 - ½ W.
R7	**100,000 - 1 W.**
R8	25,000 - 1 W.
R9	5,000 - 5 W.
R10	100,000 - 2 W.
C1, C2	.25 Mfd. 200 V. Paper
C3	4 Mfd. 450 V. Elect.
C4, C5	8 Mfd. 450 V. Elect.
C6	.1 Mfd. 400 V. Paper
T1	Kenyon T1
T2	Kenyon T249

AC-DC 4 WATT 25L6 AMPLIFIER

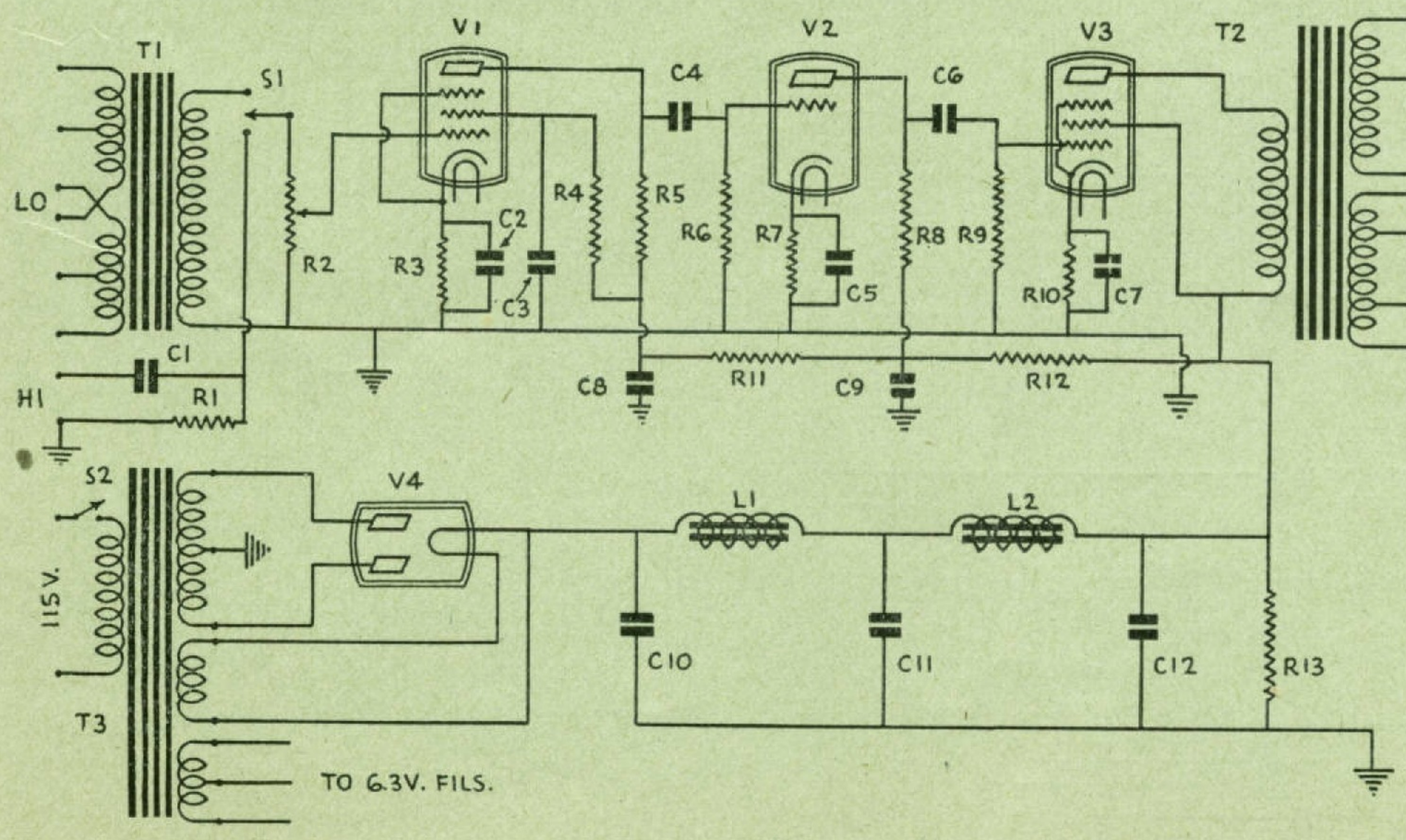
GAIN—500 Ohm Input 105 DB—150,000 Ohm Input 110 DB

R1	2,500 ohm 1 W.	C7	8mfd. 50V. Elec.
R2	250,000 ohm ½ W.	C8	25mfd. 50V. Elec.
R3	100,000 ohm ½ W.	C9	.02mfd. 200V. Pap.
R4	500,000 ohm ¼ W.	C10	.02mfd. 200V. Pap.
R5	2,500 ohm 1 W.	C11	16mfd. 200V. Elec.
R6	250,000 ohm ½ W.	C12	32mfd. 200V. Elec.
R7	50,000 ohm ½ W.	C13	32mfd. 200V. Elec.
R8	500,000 ohm ¼ W.	V1	6F5
R9	750 ohm 1 W.	V2	6F5
R10	75 ohm 5 W.	V3	6C5
R11	20 ohm 5 W.	V4	25L6
R12	200 ohm 50 W.	V5	25L6
R13	500,000 ohm pot.	V6	12Z3
C1	10mfd 25V. Elec.	V7	12Z3
C2	8mfd. 200V. Elec.	T1	Kenyon T2
C3	.02mfd. 200V. Pap.	T2	Kenyon T58
C4	10mfd. 25V. Elec.	T3	Kenyon T107
C5	8mfd. 200V. Elec.	L1	Kenyon T152
C6	.02mfd. 200V. Pap.	L2	Kenyon T156



6F6 5 WATT AMPLIFIER

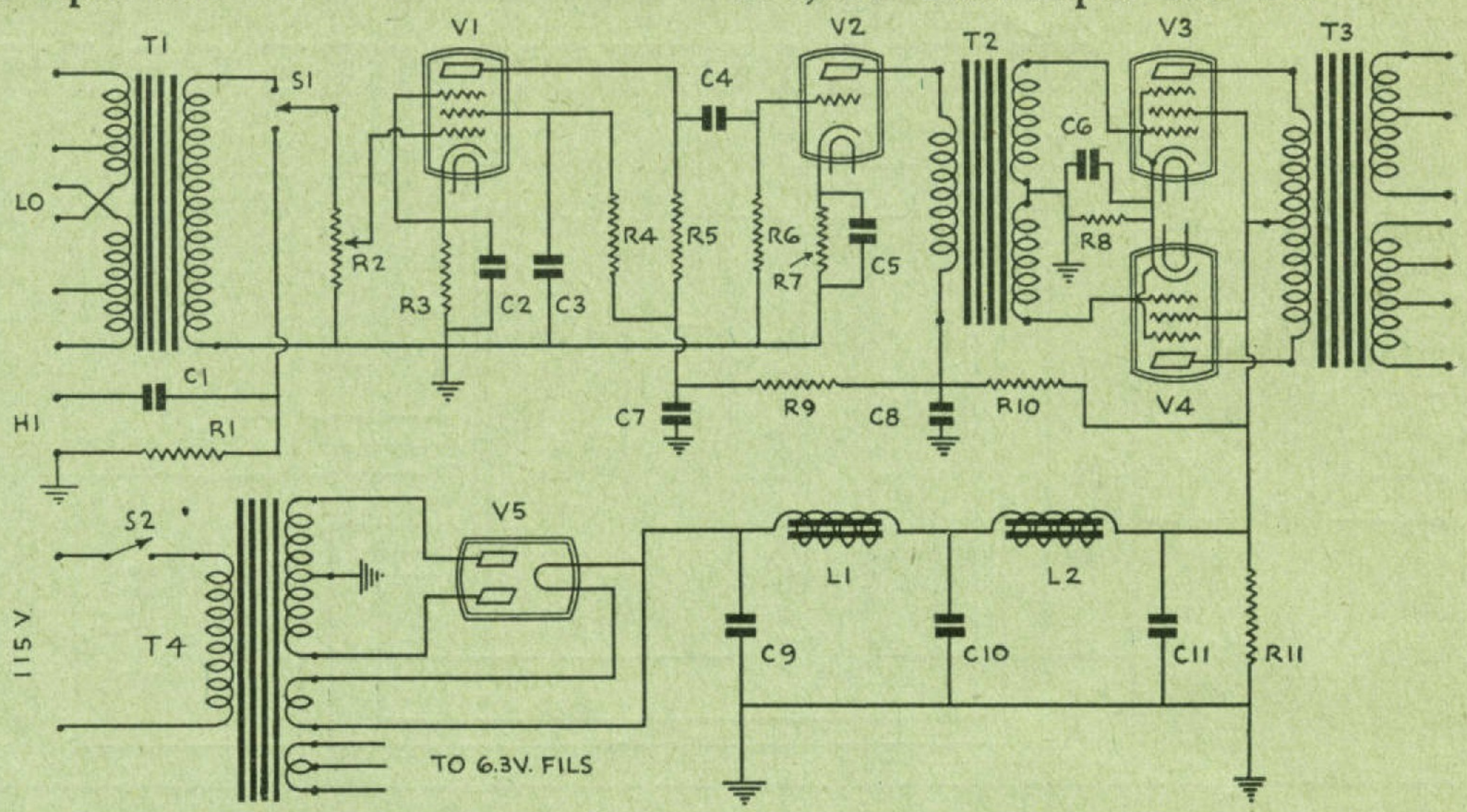
GAIN—500 Ohm Input 95 DB 150,000 Ohm Input 100 DB



R1	5 Meg. - ½ W.
R2	500,000 - Volume Control
R3	5,000 - 1 W.
R4	1 Meg. - 1 W.
R5, R6	500,000 - 1 W.
R7	3,500 - 1 W.
R8, R9	500,000 - 1 W.
R10	440 - 5 W.
R11, R12	50,000 - 1 W.
R13	100,000 - 5 W.
C1	.1 mfd. 200 V. Paper
C2	10 mfd. 35 V. Elect.
C3	2 mfd. 450 V. Elect.
C4, C6	.1 mfd 400 V. Paper
C5	10 mfd. 35 V. Elect.
C7	25 mfd. 35 V. Elect.
C8, C9	4 mfd. 450 V. Elect.
C10, C11, C12	8 mfd. 450 V. Elect.
T1	Kenyon T2
T2	Kenyon T104
T3	Kenyon T205
L1	Kenyon T153
L2	Kenyon T153
V1	6J7
V2	6F5
V3	6F6
V4	80

P.P. 6F6 10 WATT AMPLIFIER

GAIN—500 Ohm Input 100 DB 150,000 Ohm Input 105 DB

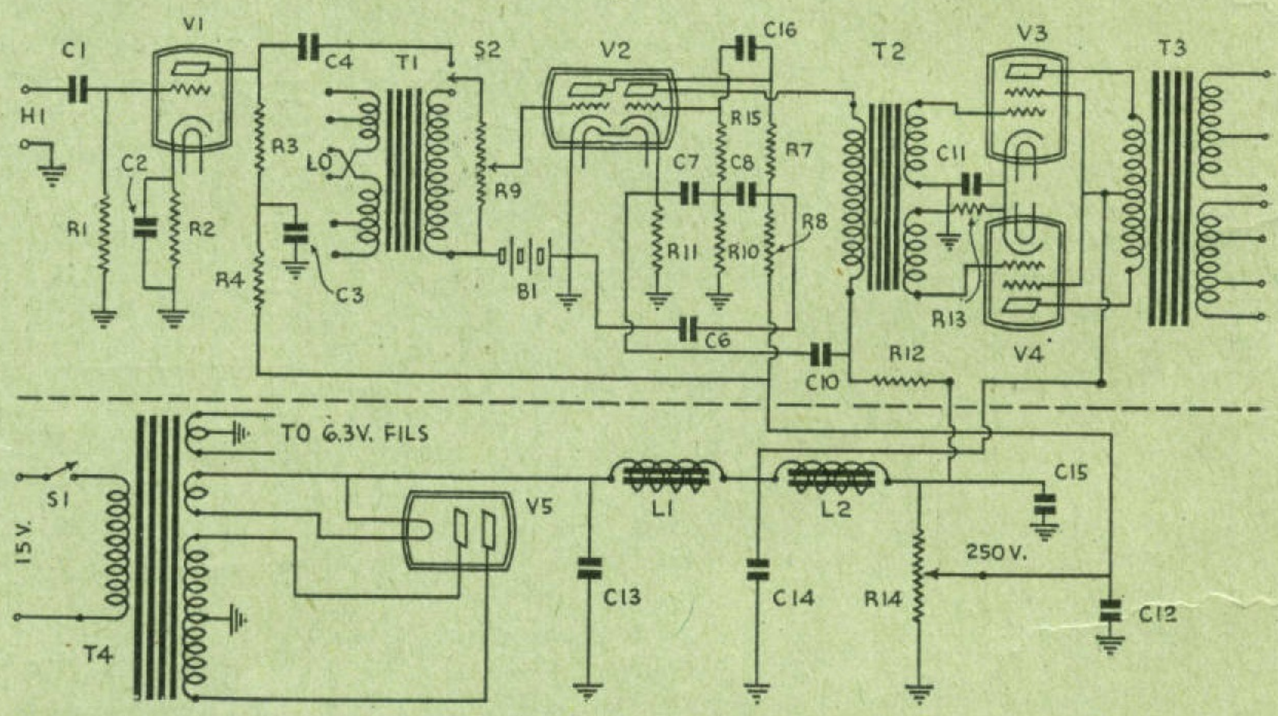


LIST OF PARTS

R1	5 Meg. - ½ W.
R2	500,000 Volume Control
R3	5,000 - 1 W.
R4	1 Meg. - 1 W.
R5, R6	500,000 - 1 W.
R7	1,000 - 1 W.
R8	220 - 10 W.
R9	50,000 - 1 W.
R10	10,000 - 1 W.
R11	100,000 - 5 W.
C1	.1 mfd. 200 V. Paper
C2	10 mfd. 35 V. Elect.
C3	2 mfd. 450 V. Elect.
C4	.1 mfd. 400 V. Paper
C5, C6	25 mfd. 35 V. Elect.
C7	4 mfd. 450 V. Elect.
C8, C9	8 mfd. 450 V. Elect.
C10, C11	8 mfd. 450 V. Elect.
T1	Kenyon T2
T2	Kenyon T58
T3	Kenyon T105
T4	Kenyon T206
L1	Kenyon T154
L2	Kenyon T154
V1	6J7
V2	6C5
V3, V4	6F6
V5	5Z3

14 WATT 6V6 AMPLIFIER

GAIN—500 Ohm Input 71 DB—150,000 Ohm Input 105 DB



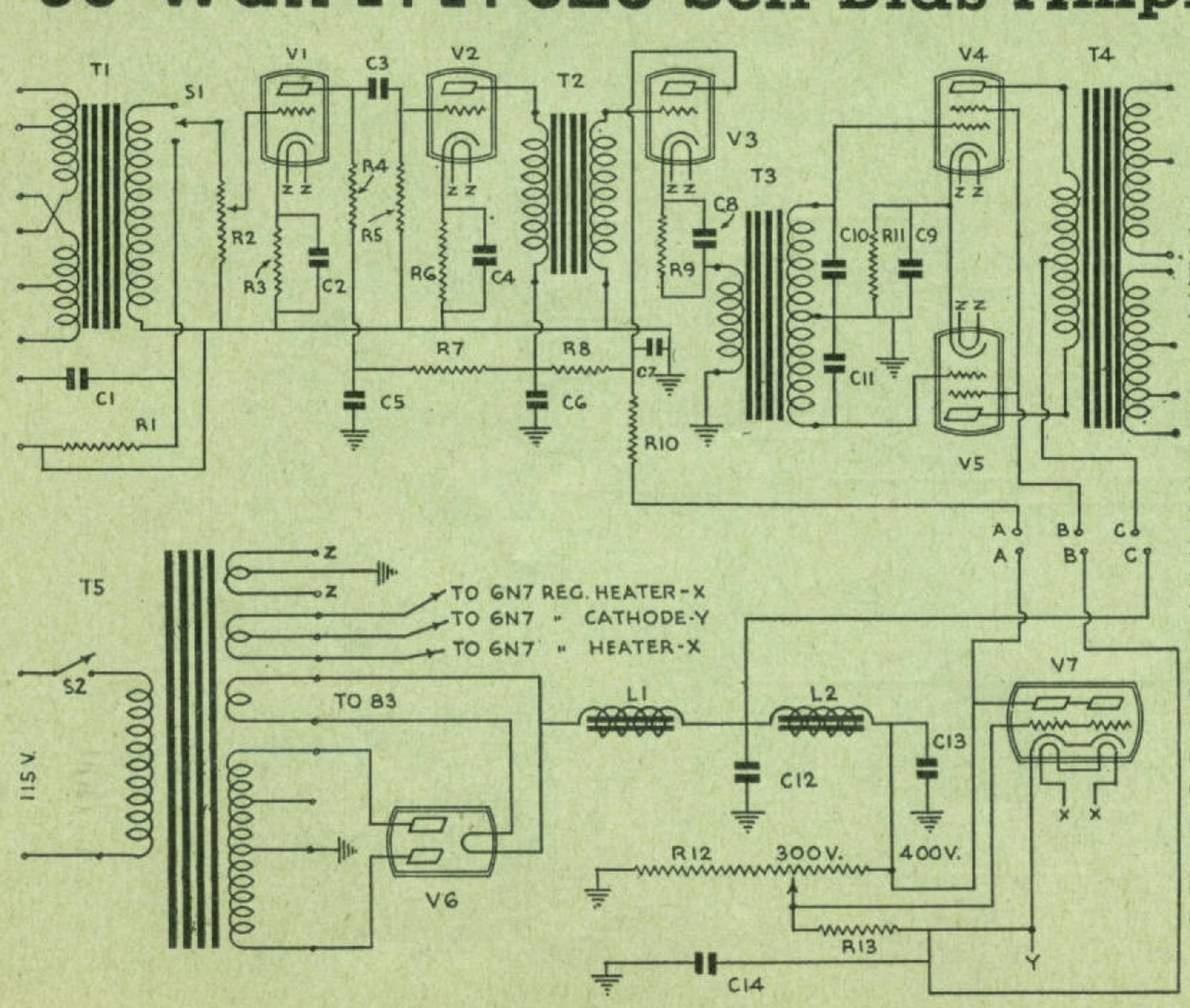
LIST OF PARTS

R1	500,000 - ½ W.	C10	2mfd. 450V. Elec.
R2	3,500 - 1 W.	C11	25mfd. 35V. Elec.
R3	500,000 - 1 W.	C12	8mfd. 450V. Elec.
R4	100,000 - 1 W.	C13	8mfd. 450V. Elec.
R7	100,000 - 1 W.	C14	8mfd. 450V. Elec.
R8	25,000 - 1 W.	C15	8mfd. 450V. Elec.
R9	500,000 Vol. Cont.	C16	.1mfd. 400V. Pap.
R10	50,000 - ½ W.	T1	Kenyon T2
R11	1,500 - 1 W.	T2	Kenyon T58
R12	25,000 - 1 W.	T3	Kenyon T302
R13	190 - 5 W.	T4	Kenyon T206
R14	30,000 - 25 W. Adj.	L1	Kenyon T152
C1	.1 mfd. 200V. Pap.	L2	Kenyon T153
C2	10mfd. 35V. Elec.	V1	6F5
C3	2mfd. 450V. Elec.	V2	6C8G
C4	.1 mfd. 400V. Pap.	V3, V4	6V6
C6	.25mfd. 400V. Pap.	V5	83-V
C7	.25mfd. 200V. Pap.	B1	3 V. - Bias Cells
C8	.25mfd. 400V. Pap.		

30 Watt P. P. 6L6 Self Bias Amplifier - Cathode Drive

GAIN—500 Ohm Input 100 DB

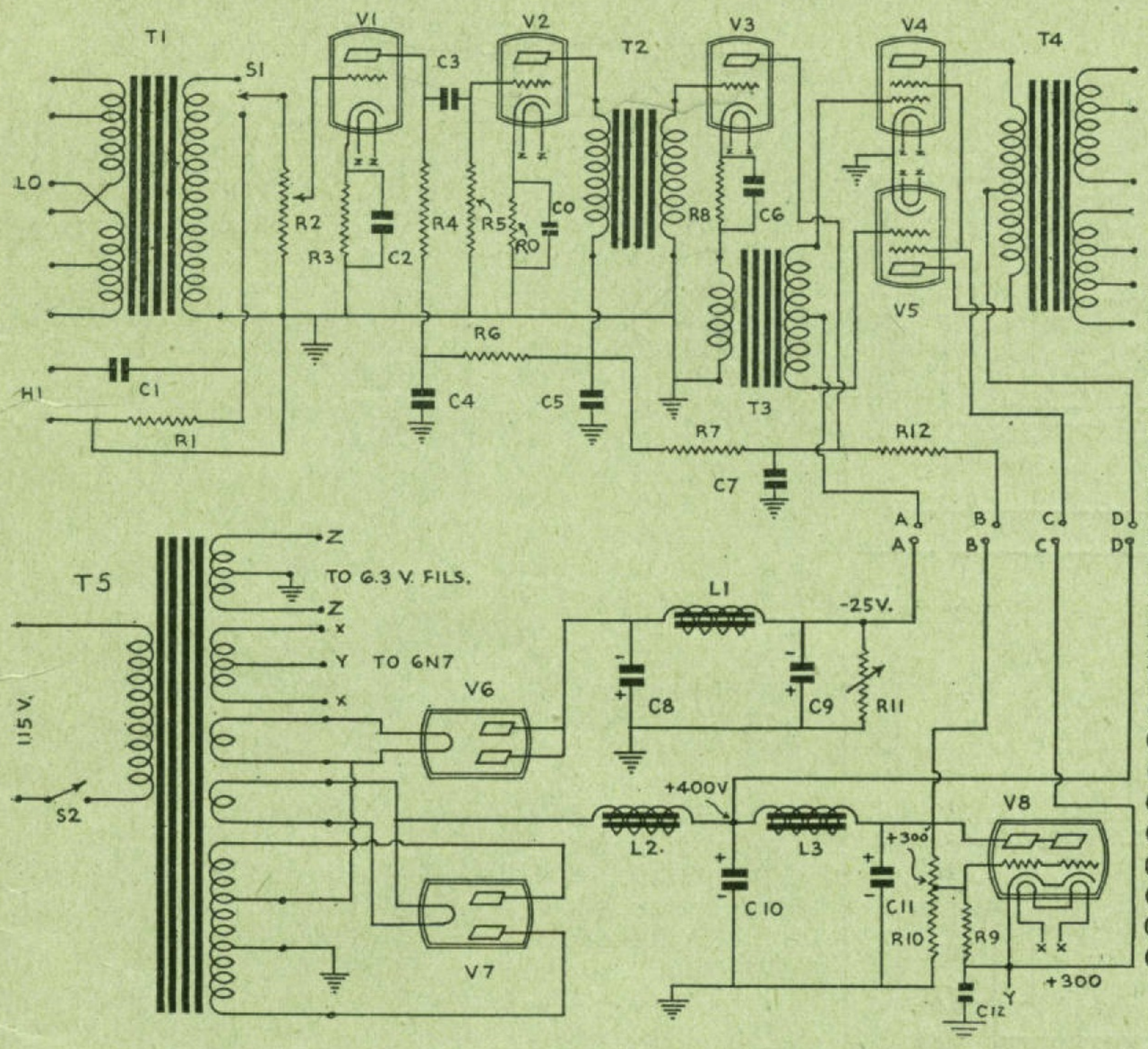
150,000 Ohm Input 105 DB



LIST OF PARTS

R1	5 Megs	C10	.01mfd. 400V. Pap.
R2	500,000 Vol. Cont.	C11	.01mfd. 400V. Pap.
R3	3,500 - 1 W.	C12	4mfd. 600V. Elec.
R4	500,000 - 1 W.	C13	8mfd. 600V. Elec.
R5	500,000 - 1 W.	C14	8mfd. 450V. Elec.
R6	1,000 - 1 W.	T1	Kenyon T2
R7	50,000 - 1 W.	T2	Kenyon T57
R8	10,000 - 1 W.	T3	Kenyon T253
R9	600 - 1 W.	T4	Kenyon T317
R10	5,000 - 1 W.	T5	Kenyon T216
R11	200 - 25 W.	L1	Kenyon T507
R12	20,000 - 50 W.	L2	Kenyon T152
R13	1,000 - 2 W.	S1	SPDT Toggle
C1	.1 mfd. 200V. Pap.	S2	SPST Line Switch
C2	10mfd. 35V. Elec.	V1	6F5
C3	.1 mfd. 400V. Pap.	V2	6C5
C4	10mfd. 35V. Elec.	V3	6C5
C5	4mfd. 450V. Elec.	V4	6L6
C6	4mfd. 450V. Elec.	V5	6L6
C7	4mfd. 450V. Elec.	V6	83
C8	25mfd. 35V. Elec.	V7	6N7
C9	25mfd. 35V. Elec.		

P.P. 60 WATT FIXED BIAS 6L6 AMPLIFIER — CATHODE DRIVE



GAIN—500 Ohm Input 100 DB

150,000 Ohm Input 105 DB

LIST OF PARTS

R0	1,000 - 1 W.	C9	8mfd. 200V. Elect.		
R1	5 Meg. - ½ W.	C10	4mfd. 600V. Elect.		
R2	500,000 Vol. Cont.	C11	8mfd. 600V. Elect.		
R3	3,500 - 1 W.	C12	8mfd. 450V. Elect.		
R4	500,000 1 W.	S1	SPDT Toggle		
R5	500,000 - ½ W.	S2	SPST Line Switch		
R6	50,000 - 1 W.	V1	6F5		
R7	10,000 - 1 W.	V2	6C5		
R8	600 - 1 W.	V3	6C5		
R9	1,000 - 2 W.	V4	6L6		
R10	20,000 - A. T. 50W.	V5	6L6		
R11	1,000 - 25 W. Adj.	V6	82		
R12	10,000 - 2 W.	V7	83		
C0	10mfd. 35V. Elect.	V8	6N7		
C1	.1 mfd. 200V. Paper	T1	Kenyon	T2	
C2	10mfd. 35V. Elect.	T2	Kenyon	T57	
C3	.1 mfd. 400V. Paper	T3	Kenyon	T253	
C4	4mfd. 450V. Elect.	T4	Kenyon	T319	
C5	4mfd. 450V. Elect.	T5	Kenyon	T216	
C6	25mfd. 35V. Elect.	L1	Kenyon	T153	
C7	8mfd. 450V. Elect.	L2	Kenyon	T507	
C8	8mfd. 200V. Elect.	L3	Kenyon	T152	

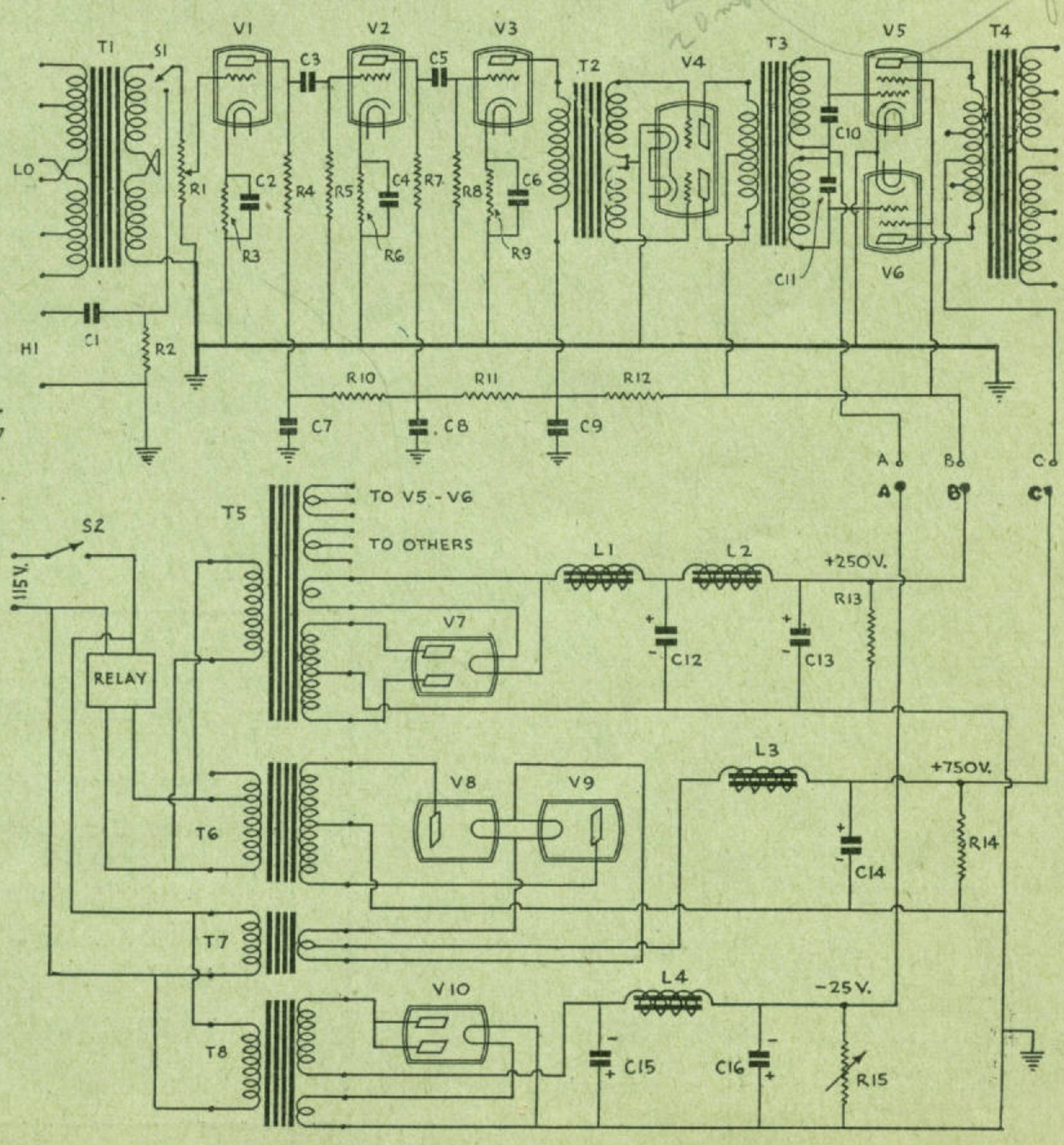
90 WATT RK 39 AMPLIFIER

GAIN—500 Ohm Input 100 DB

150,000 Ohm Input 105 DB

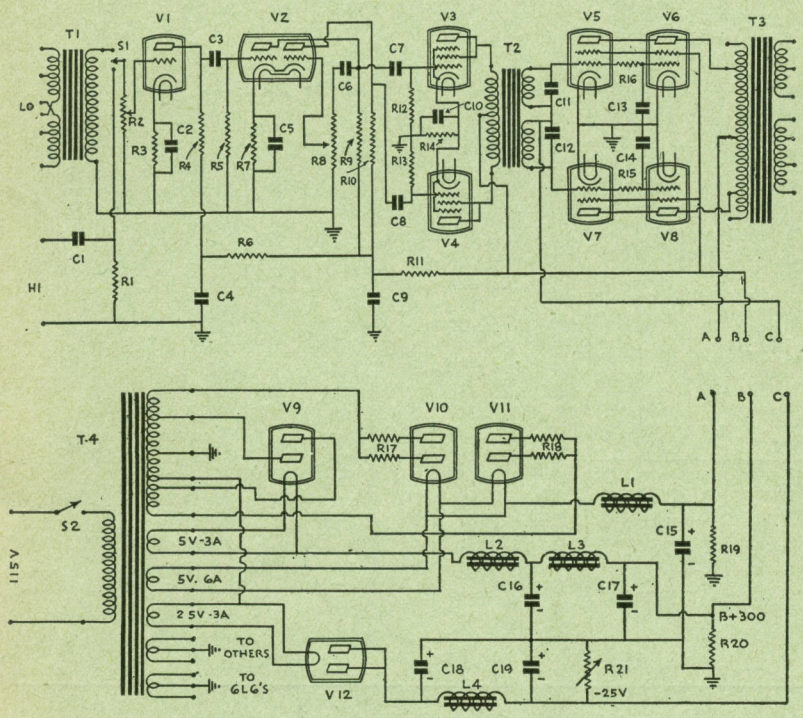
LIST OF PARTS

R1	500,000 Vol. Cont.	C14	4mfd. 1000V. Pap.		
R2	5 Meg. - ½ W.	C15	8mfd. 200V. Elec.		
R3	5,000 - 1 W.	C16	8mfd. 200V. Elec.		
R4	100,000 - 1 W.	S1	SPDT Toggle		
R5	500,000 - ½ W.	S2	SPST 125V. Line Sw.		
R6	4,000 - 1 W.	Relay - 20 Sec. Time D'lay			
R7	100,000 - 1 W.	T1	Kenyon	T2	
R8	500,000 - ½ W.	T2	Kenyon	T251	
R9	1,000 - 1 W.	T3	Kenyon	T271	
R10	25,000 - 1 W.	T4	Kenyon	T307	
R11	10,000 - 1 W.	T5	Kenyon	T206	
R12	1,000 - 1 W.	T6	Kenyon	T656	
R13	30,000 - 10 W.	T7	Kenyon	T360	
R14	50,000 - 50 W.	T8	Kenyon	T201	
R15	1,000 - 25 W. Var.	L1	Kenyon	T515	
C1	.1 mfd. 200V. Pap.	L2	Kenyon	T154	
C2	10mfd. 35V. Elec.	L3	Kenyon	T508	
C3	.1 mfd. 400V. Pap.	L4	Kenyon	T153	
C4	10mfd. 35V. Elec.	V1	6C5		
C5	.1 mfd. 400V. Pap.	V2	6C5		
C6	25mfd. 35V. Elec.	V3	6C5		
C7	8mfd. 450V. Elec.	V4	6N7		
C8	8mfd. 450V. Elec.	V5	RK39		
C9	8mfd. 450V. Elec.	V6	RK39		
C10	.01mfd. 400V. Pap.	V7	83		
C11	.01mfd. 400V. Pap.	V8	866		
C12	8mfd. 450V. Elec.	V9	866		
C13	8mfd. 450V. Elec.	V10	80		



P. P. Parallel 6L6 Fixed Bias 120 Watt Amplifier

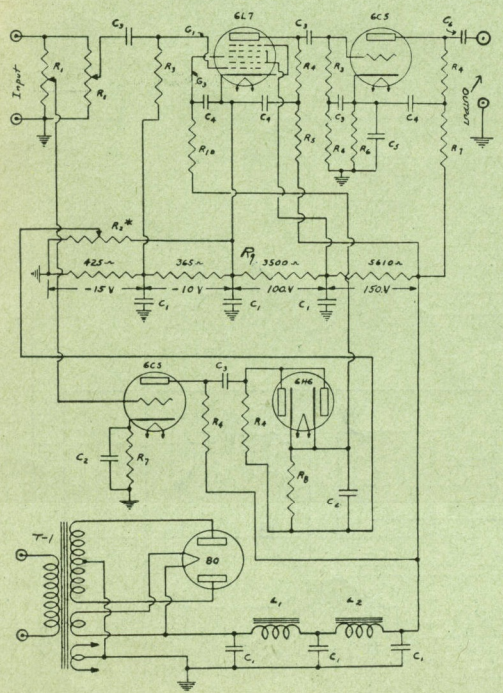
GAIN—500 Ohm Input 100 DB 150,000 Ohm Input 105 DB



LIST OF PARTS

R1	5 Meg. - ½ W.	C11	.01mfd. 400V. Pap.
R2	500,000 - Vol.Cont.	C12	.01mfd. 400V. Pap.
R3	3,500 - 1 W.	C13	.01mfd. 400V. Pap.
R4	500,000 - 1 W.	C14	.01mfd. 400V. Pap.
R5	500,000 - 1 W.	C15	4mfd. 600V. Elec.
R6	50,000 - 1 W.	C16	8mfd. 450V. Elec.
R7	3,000 - 1 W.	C17	8mfd. 450V. Elec.
R8	500,000 - Phas. Pote	C18	8mfd. 200V. Elec.
R9	250,000 - 1 W.	C19	8mfd. 200V. Elec.
R10	250,000 - 1 W.	T1	Kenyon T2
R11	25,000 - 1 W.	T2	Kenyon T271
R12	100,000 - 1 W.	T3	Kenyon T307
R13	100,000 - 1 W.	T4	Kenyon T221
R14	300 - 5 W.	L1	Kenyon T502
R15	200 - ½ W.	L2	Kenyon T515
R16	200 - ½ W.	L3	Kenyon T154
R17	100 ohms C.T.-25W.	L4	Kenyon T153
R18	100 ohms C.T.-25W.	V1	6F5
R19	30,000 - 25 W.	V2	6N7
R20	30,000 - 10 W.	V3	6F6
R21	1,000 - 25W.-Var.	V4	6F6
C1	.1 mfd. 200V. Pap.	V5	6L6
C2	10mfd. 35V. Elec.	V6	6L6
C3	.1 mfd. 400V. Pap.	V7	6L6
C4	2mfd. 450V. Elec.	V8	6L6
C5	10mfd. 35V. Elec.	V9	83
C6	.1 mfd. 400V. Pap.	V10	83
C7	.1 mfd. 400V. Pap.	V11	83
C8	.1 mfd. 400V. Pap.	V12	82
C9	2mfd. 450V. Elec.	S1	SPDT Toggle
C10	25mfd. 35V. Elec.	S2	SPST Line Switch

Audio Volume Expander with Power Supply



LIST OF PARTS

R1	15,000 Ohm Potentiometer	C2	.5 mfd. 400 V. Paper
R2	5,000 Ohm Variable 5 W.	C3	.1 mfd. 400 V. Paper
R3	.5 Meg. Ohm. 1 W.	C4	1. mfd. 400 V. Paper
R4	.1 Meg. Ohm 1 W.	C5	10. mfd. 25 V. Electro
R5	15,000 Ohm 1 W.	C6	.05 mfd. 400 V. Paper
R6	2,500 Ohm 1 W.	*	Adjust R2 until Ip of 6L7 is 150 microamperes.
R7	10,000 Ohm 1 W.	T1	Kenyon T205
R-8	.25 Meg. Ohm 1 W.	L1	Kenyon T153
R9	10,000 Ohm Bleeder	L2	Kenyon T153
R10	1. Megohm		
C1	8 mfd. 450 V. Electro		

MODULATORS FOR TRANSMITTERS

Any of the audio circuits shown in these pages may be used for modulators in amateur transmitters.

The only change necessary in these circuits will be to substitute a suitable modulation output transformer or a KEN-O-TAP in place of the specified speaker output transformers.