



LINEAR STANDARD AUDIO TRANSFORMERS

PLATE, CRYSTAL, PHOTOCCELL, AND BRIDGING TO LINE TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max. Level	Relative* hum	Unbal. DC in primary	Case No.
LS-27	Single pl. to multiple line	15,000 ohms	50, 125/150, 200/250, 333, 500/600	30-15,000	200 mw	-74 db	8 ma	LS-1
LS-50	Single pl. to multiple line	15,000 ohms	50, 125/150, 200/250, 333, 500/600	10-40,000	200 mw	-74 db	0 ma	LS-1
LS-51	Push pull low level pl. to multiple line	30,000 ohms plate to plate	50, 125/150, 200/250, 333, 500/600	10-40,000	250 mw	-74 db	1 ma	LS-1
LS-150	Bridging from 50 to 500 ohm line to line	4,000 ohms, bridging	50, 125/150, 200/250, 333, 500/600	7-50,000	200 mw	-74 db	1 ma	LS-1
LS-151	Bridging from 50 to 500 ohm line to line	16,000 ohms, bridging	50, 125/150, 200/250, 333, 500/600	7-50,000	400 mw	-74 db	1 ma	LS-1

HIGH LEVEL MATCHING TRANSFORMERS

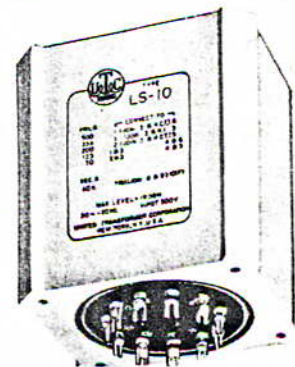
Type No.	Application	Primary Impedance	Secondary Impedance	±1 db from	Max. Level	Case No.
LS-33	High level line matching	50, 125/150, 200/250, 333, 500/600 ohms	1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125/150, 200/250, 333, 500/600	10-40,000	20 watts	LS-2
LS-34	High level line matching	50, 125/150, 200, 250, 333, 500/600 ohms	1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125/150, 200/250, 333, 500/600	10-40,000	40 watts	LS-3

OUTPUT TRANSFORMERS TO LINE AND VOICE COIL

Type No.	Primary will match typical tubes	Primary Impedance	Secondary Impedance	±1 db from	Max. Level	Case No.
LS-52	Push pull 6AQ5, 6V6, 6L6, 5881, 6BQ5, 7189A	8,000 ohms	500, 333, 250/200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	7-50,000	20 watts	LS-2
LS-54	Same as above	8,000 ohms	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	7-50,000	20 watts	LS-2
LS-55	Push pull 300B, 6L6's, 6AS7G, 6080, 7581, 7355	5,000 ohms plate to plate and 3,000 ohms plate to plate	500, 333, 250/200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	7-50,000	20 watts	LS-2
LS-57	Same as above	5,000 ohms plate to plate and 3,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	7-50,000	20 watts	LS-2
LS-58	Push pull parallel as above	2,500 ohms plate to plate and 1,500 ohms plate to plate	500, 333, 250/200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	10-50,000	40 watts	LS-3
LS-61	Push pull triode; 6AS7G, 6080, 6L6, 5881, KT-66, 807, 1614	10,000 ohms pl. to plate and 6,000 ohms plate to plate	500, 333, 250/200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	7-50,000	20 watts	LS-2
LS-63	Same as above	10,000 ohms pl. to plate and 6,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	7-50,000	20 watts	LS-2
LS-6L1	Self bias push pull 6L6's, 5881, KT-66, 6146 triode, 6159 triode	9,000 ohms plate to plate	500, 333, 250/200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	7-50,000	30 watts	LS-3
LS-6L4	Push pull 6146, 6159, 6L6's fixed bias or push pull parallel 6L6's self bias, 7581	4,500 ohms plate to plate and 3,800 ohms plate to plate	500, 333, 250/200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	12-50,000	55 watts	LS-3
LS-35	EL-34 in AB-feedback (see circuit pg. 16)	5,000 ohms CT 43% screen taps	4, 8, 16	7-50,000	35 watts	LS-3
LS-65	6550's in AB ₁ feedback (see circuit pg. 16)	3,300 ohms CT 40% screen taps	4, 8, 16	7-50,000	60 watts	LS-3
LS-666	Push pull transistors class B (2N277 or equiv.) (see circuit pg. 17)	8 ohms split	500 ohms split	7-50,000	50 watts	LS-3
LS-667	Push pull transistors class B (2N277 or equiv.) (see circuit pg. 17)	8 ohms split	4, 8, 16	7-50,000	50 watts	LS-3

MODULATION TRANSFORMERS

Type No.	Primary will match typical tubes	Primary Impedance	Secondary Impedance	±1 db from	Max. Level	Case No.
LS-56	Push pull 6A5G's, 300B's, 6AS7G, 6L6 6080, 7335, 7581	5,000 ohms plate to plate and 3,000 ohms plate to plate	6000, 5000, 4000, 1800, 1500, 1000, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	10-50,000	20 watts	LS-2
LS-691	Class B, 833A, 250TH	10,400 ohms plate to plate	4500, 4000, 3500, 2750, 2000	20-40,000	1000 watts	LS-6
LS-692	Class B push pull parallel 833A's	4,750 ohms plate to plate	2500, 2000, 1750, 1500, 1250	20-40,000	2500 watts	LS-6



LINEAR STANDARD HIGH SHIELDING DIE CAST CASES TOP & BOTTOM MTG.

LS-1 CASE

Length	3 1/4"
Width	2 1/2"
Height	3 1/4"
Mounting	1 1/4" x 2 1/4"
Screws	6-32
Cutout	1 3/4" dia.
Unit Weight	3 lbs.

LS-2 CASE

Length	4 1/4"
Width	3 1/2"
Height	4 1/4"
Mounting	2 1/4" x 3 1/4"
Screws	8-32
Cutout	2 3/4" dia.
Unit Weight	7.5 lbs.

LS-3 CASE

Length	5 1/4"
Width	5"
Height	4 1/4"
Mounting	4 3/4" x 5 1/4"
Screws	10-24
Cutout	3 3/4" dia.
Unit Weight	15 lbs.

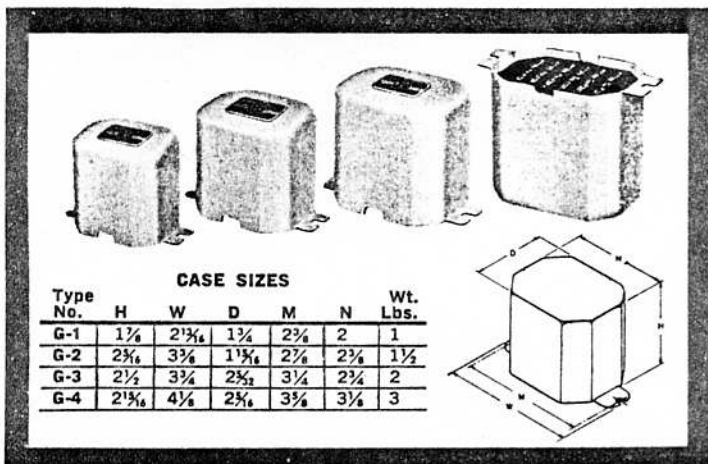


LS-6 CASE

Length	15 1/2"
Width	13"
Height—LS-691	24"
Height—LS-692	28"
Mounting Dimen.	7 1/4" x 14 1/4"
Mounting Hole	3/4" dia.
Unit Weight	350 lbs.
Unit Weight—LS-691	370 lbs.
Unit Weight—LS-692	520 lbs.



SPECIAL SERIES AUDIO TRANSFORMERS



Type No.	H	W	D	M	N	Wt. Lbs.
G-1	1 1/4	2 3/8	1 3/4	2 3/8	2	1
G-2	2 3/8	3 3/8	1 3/4	2 3/8	2 3/8	1 1/2
G-3	2 1/2	3 3/4	2 3/8	3 1/4	2 3/4	2
G-4	2 3/8	4 1/4	2 3/8	3 3/4	3 3/4	3

UTC Special Series audio units are specifically designed for amateur and popular-priced PA service. The Special Series units are finished in a rich, light gray enamel. A recessed terminal strip is provided permitting above chassis or breadboard wiring in addition to standard chassis type wiring. The universal windings provided on driver, matching and output transformers assure a maximum of flexibility. Large components are housed in formed cases with top or bottom mounting. All units are vacuum impregnated—compound filled.

UNIVERSAL MODULATION TRANSFORMERS

(Secondary carries class C current)

Any modulator tubes to any RF load. (See chart with unit)

Maximum efficiency and lowest distortion in a modulator stage are made possible by properly matching of impedances. These units cover every modulator combination. Full class C current can be carried. Primary impedances from 500 to 20,000 ohms...secondary from 200 to 22,000 ohms.

Type No.	Audio Power	Case
S-18	12 watts	G-3
S-19	30 watts	G-4
S-20	55 watts	G-5
S-21	110 watts	G-7
S-22	250 watts	G-9

CLASS A INPUT TRANSFORMERS

Type No.	Application	Ratio	Case
S-1	1 plate* to 1 grid	1:3	G-2
S-2	1 plate* to 2 grids	1:4	G-2
S-3	1 plate* to 1 or 2 grids compact type	1:4	G-1
S-5	Single or double button mike or line to 1 grid hum-bucking type	1:16	G-2
S-6	Single or double button mike or line to 1 grid, compact type	1:16	G-1

*Will match tubes like 6J5, 6C4, 12AU7, etc. Can be used with high mu triodes with loss in low frequencies. Pri. DC to 8 MA.

UNIVERSAL DRIVER TRANSFORMERS

(See Modulator chart with unit for tube types, ratios are Pri. to 1/2 sec.)

Type No.	Application	Max. Watts	Case
S-8	Single driver plate to pushpull grids, 2.66:1, 5:1 ratios. Pri. DC to 45 ma.	5	G-3
S-9	Pushpull driver plates to grids of class B tubes up to 400 watts output, 2.66:1, 3.6:1, 5:1 ratios.	20	G-4
S-10	12AU7 or similar plates to 5881 or 6L6's, self or fixed bias, 2.25:1 ratio	5	G-3

MATCHING TRANSFORMERS

Type No.	Application	Pri. Ohms	Sec. Ohms	Case
S-11	Single 6J5, 6C4, 12AU7 or similar tube to line	15,000 1u ma DC	200/500	G-2
S-12	Line to speaker 15 watts	500, 2000, 4000	2, 4, 8, 15	G-2
S-13	Line to speaker 30 watts	500, 2000, 4000	2, 4, 8, 15	G-4

UNIVERSAL OUTPUT TRANSFORMERS TO LINE AND VOICE COIL

(Secondary Impedances: 500, 15, 8, 2 ohms)

Type No.	Max. Watts	Primary Impedance	Typical Tubes	Case
SINGLE-ENDED TUBES				
S-14	10 W.	2500 ohms 4000 ohms 7000 ohms 10,000 ohms	35 ma DC 35L6GTG, 6V6, 12A6, 6AC5 2A3, 6B4, 6L6, 6Y6, 25L6GT 6F6, 7B5, 6K6GT, 1G5, 3C5 6A4, 6N7, 7189A, 7581, 7355	G-2
PUSH-PULL TUBES				
S-15	12 W.	4000 ohms 5000 ohms 10,000 ohms	6Y6, 25L6GT 2A3, 6AS7G 6080, 6BN8	G-2
S-16	30 W.	3000 ohms 6000 ohms 9000/10000 ohms	6AS7G, 6L6, 6DZ7 7189A, 7355, 7581 807-triode	G-4
S-17	55 W.	3800 ohms 4500/5000 ohms	6L6's 809, 6146, 7355, 7581	G-5

TYPICAL MODULATOR COMBINATIONS

S-18—12 WATTS MAX.

Typical driver tubes: 6C4, 12AU7, 6J5, 6SN7GT.

DRIVER	Transf.	Sec. Term.	P. P. Tubes	Watts Output	P. P. Load	Plate Volts	Bias Volts
S-8	G-G'	G-G'	6AC5G	8	10,000	250	0
S-2	G-G	G-G	6V6, 6AQ5	12	6,000	250	15

S-19—30 WATTS MAX.

DRIVER	Tube or Tubes	Transf.	Sec. Terms.	P. P. Tubes	Watts Output	P. P. Load	Plate Volts	Bias Volts
S-19	6C4	S-10	G-G	6L6 self bias	30	9,000	400	23

S-20—55 WATTS MAX.

DRIVER	P. P. Tubes	Transf.	Sec. Terms.	P. P. Tubes	Watts Output	P. P. Load	Plate Volts	Plate Tr'sf.	Bias Volts	Bias Tr'sf.
S-20	12AU7	S-9	2-2	2E26	54	8000	500	S-41	15	S-51
S-20	12AU7	S-10	G-G	6L6, AB2	60	3800	400	S-39	25	S-51
S-20	12AU7	S-10	G-G	4-6L6	60	4500	400	S-40	23	S-51
S-20	2A3	S-9	3-3	809	60	5000	500	S-41	0	

S-21—115 WATTS MAX.

P. P.-2A3 Driver	S-9 Transf.	P. P. Tubes	Watts Output	P. P. Load	Plate Volts	Plate Transf.	Bias Volts	Bias Tr'sf.
S-21	1-1	807	80	6600	600	S-45	30	S-51
S-21	2-2	6146	95	6000	600	S-46	50	S-51
S-21	3-3	809	100	8400	750	S-45	5	S-51
S-21	2-2	TZ-40	100	6000	750	S-45	0	
S-21	2-2	T-756	100	7000	850	S-46	30	S-51
S-21	1-1	4-6L6	110	2000	400	S-44	25	S-51
S-21	2-2	35-T	115	11000	1000	S-47	30	S-51

S-22—250 WATTS MAX.

P. P.-2A3 Driver	S-9 Transf.	P. P. Tubes	Watts Output	P. P. Load	Plate Volts	Plate Transf.	Bias Volts	Bias Transf.
S-22	1-1	T-55	175	6900	1000	S-47	40	S-51
S-22	2-2	830 B	175	7600	1000	S-47	35	S-51
S-22	2-2	808	190	12700	1250	S-47	15	S-51
S-22	3-3	203 Z	200	6900	1000	S-47	0	
S-22	1-1	HK-354	220	15000	1500	S-49	100	S-51
S-22	*	HK-154	225	11400	1250	S-47	210	S-52
S-22	2-2	100 TH	250	7200	1250	S-47	0	
S-22	2-2	838	250	9000	1250	S-47	0	

* Reverse S-9, using 2-2 for plates and P-P for grids.



TERMINAL ARRANGEMENTS

This terminal arrangement listing is a ready reference for all units in the Linear Standard, Hipermelloy, Ultra Compact, Ouncer, and Plug In lines of UTC transformer components.

To use this reference, look up the type number of the unit in the first column. The number in the corresponding second column, when looked up on the following pages, will indicate the primary terminal connections. The number in the third column, when found in the following pages, will indicate the secondary terminal connections. The letter in the fourth column is indicated on page four above a schematic diagram, showing the actual winding-terminal arrangement.

Where no type number or no pri. and sec. numbers are shown, the transformer terminal board markings are self explanatory. Transformer terminals marked $\underline{\quad}$ are grounded to case.

UNITED TRANSFORMER COMPANY • 150 VARICK ST., NEW YORK 13, N. Y.

TYPE	PRI.	SEC.	SCHEM.	TYPE	PRI.	SEC.	SCHEM.
A-10	6	31	F	LS-38	25	6	O
A-11	9	32	AA	LS-39	28	6	K
A-12	6	31	F	LS-40	—	—	P
A-14	5	31	J	LS-47	—	—	B
A-16	—	—	I	LS-48	—	—	B
A-18	—	—	H	LS-49	—	—	Q
A-19	—	—	P	LS-50	28	6	K
A-20	6	7	L	LS-51	33	6	K
A-21	10	11	Y	LS-52	—	1, 7	C
A-24	28	6	K	LS-54	—	1	D
A-25	—	6	AB	LS-55	—	1, 7	E
A-26	33	6	K	LS-56	—	22, 1	E
A-27	28	6	K	LS-57	—	1	R
A-30	43	—	—	LS-58	—	1, 7	E
A-32	43	—	—	LS-60A	—	2	D
HA-100	6	31	F	LS-61	—	1, 7	S
HA-100X	6	31	F	LS-62A	—	13	R
HA-101	6	31	F	LS-63	—	1	T
HA-101X	6	31	F	LS-66	—	23	U
HA-103A	3	31	F	LS-67	—	21	—
HA-104	—	—	H	LS-80	35	—	—
HA-105	—	—	I	LS-82	35	—	—
HA-106	—	—	H	LS-83	35	—	—
HA-107	—	—	B	LS-84	35	—	—
HA-108	6	7	L	LS-88	36	—	—
HA-108X	6	7	L	LS-89A	36	—	—
HA-111	28	6	K	LS-90	42	—	—
HA-113	28	6	K	LS-91	42	—	—
HA-114	33	6	K	LS-92	42	—	—
HA-130X	12	31	G	LS-93	42	—	—
HA-133	28	6	K	LS-94	43	—	—
HA-134	24	7	L	LS-96	42	—	—
HA-135	—	1	R	LS-99	42	—	—
HA-137	—	—	B	LS-120	35	—	—
HC-115	43	—	—	LS-121Y	35	—	—
HC-116	43	—	—	LS-140	19	20	V
HC-117	43	—	—	LS-141	8	8	W
HP-122	40	40	—	LS-142	14	—	X
HP-123	41	41	—	LS-143	17	18	Y
LS-5	6	—	A	LS-150	25	6	Z
LS-6	—	—	B	LS-151	25	6	Z
LS-6L1	—	1, 7	C	LS-180	37	37	—
LS-6L3	—	1	D	LS-180H	37	37	—
LS-6L4	—	1, 7	E	LS-181	35	—	—
LS-7	—	—	B	LS-182	35	—	—
LS-10	6	31	F	LS-183	35	—	—
LS-10X	6	31	F	LS-184	35	—	—
LS-12	6	31	F	LS-185	35	—	—
LS-12X	6	31	F	LS-190	38	38	—
LS-14	3	31	F	LS-192	39	39	—
LS-14X	3	31	F	LS-950	42	—	—
LS-15	12	31	G	LS-980	42	—	—
LS-15X	12	31	G	O-1	9	29	AC
LS-18	6	—	A	O-2	9	32	AA
LS-19	—	—	H	O-3	4	29	AD
LS-20	—	—	I	O-4	26	30	AE
LS-21	—	—	H	O-5	26	30	AE
LS-22	—	—	B	O-6	26	32	AF
LS-25	—	—	B	O-7	26	32	AF
LS-26	26	31	J	O-8	27	9	AG
LS-27	28	6	K	O-9	27	9	AG
LS-30	6	7	L	O-10	34	9	AH
LS-30X	6	7	L	O-11	27	9	AG
LS-31	12	7	M	O-12	16	9	AH
LS-31X	12	7	M	O-14	15	30	AH
LS-32	3	7	N	O-15	26	30	AE
LS-33	6	1, 7	N				
LS-34	6	1, 7	N				

P-1 through P-15 same as O-1, etc.

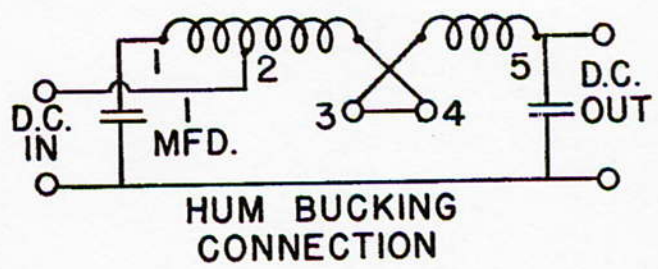


Impedance	Connect To	Join	Impedance	Connect To	Join
	1			11	
1.2 ohms	13 and 18	14 & 18, 13 & 17	50 ohms	5 and 6	
2.5	14 and 17	14 & 15, 16 & 17	200	4 and 5	
5	13 and 18	14 and 17	500	4 and 6	
7.5	13 and 18	16 & 18, 13 & 15		12	
10	14 and 17	15 and 16		Three separate primaries each	
15	13 and 18	16 and 17		marked 1, 2, 3, 4.	
20	14 and 18	15 and 16	30-50 ohms	1 and 4	1 & 2, 3 & 4
30	13 and 18	15 and 16	150-200-250	1 and 4	2 and 3
	2			13	
1.2 ohms	14 and 17	14 & 15, 16 & 17		125 ohms	1 and 3
2.5	13 and 18	14 and 17		500	1 and 4
3.75	13 and 18	16 & 18, 13 & 15			1 & 2, 3 & 4
5	14 and 17	15 and 16			2 and 3
7.5	13 and 18	16 and 17		14	
10	14 and 18	15 and 16		500 ohms	1 and 3
15	13 and 18	15 and 16		500	4 and 6
	3				2-C.T.
2.5 ohms	1 and 2	1 & 5, 2 & 6			5-C.T.
5.5	2 and 4	2 & 3, 4 & 5		15	
10	2 and 5	1 and 6		200 ohms	1 and 2
15	1 and 4	1 & 3, 4 & 6			16
22	2 and 5	3 and 4		50 ohms	6 and 7
30	4 and 5	1 and 6		200	6 and 8
38	2 and 6	3 and 4			7-C.T.
60	1 and 6	3 and 4		17	
	4			500 ohms	1 and 3
7.5 ohms	2 and 4	3 & 4, 1 & 2			2-C.T.
30	1 and 4	2 and 3		18	
	5			500 ohms	4 and 6
30 ohms	1 and 2				5-C.T.
	6			19	
50 ohms	2 and 4	2 & 3, 4 & 5		500/600 ohm	1 and 4
125 (or 150)	1 and 4	1 & 3, 4 & 6			2 and 3
200 (or 250)	2 and 5	3 and 4		20	
333	1 and 5	3 and 4		500/600 ohm	5 and 8
500 (or 600)	1 and 6	3 and 4			6 and 7
	7			21	
50 ohms	8 and 10	8 & 9, 10 & 11		2500 ohms	1 and 4
125 (or 150)	7 and 10	7 & 9, 10 & 12		10,000	1 and 4
200 (or 250)	8 and 11	9 and 10			1 & 3, 2 & 4
333	7 and 11	9 and 10			2 and 3
500 (or 600)	7 and 12	9 and 10		22	
	8			1000 ohms	8 and 11
500 ohms	1 and 3	2-C.T.		1500	7 and 12
500	4 and 6	5-C.T.		1800	7 and 12
500	7 and 9	8-C.T.		4000	8 and 11
	9			5000	8 and 12
50 ohms	3 and 4			6000	7 and 12
200	2 and 4				23
500	1 and 5			600 ohms	2 and 3
	10			1250	1 and 4
50 ohms	2 and 3			2100	2 and 7
500	1 and 2			2500	2 and 7
500	1 and 3			2650	2 and 8
				3300	1 and 8
				3500	2 and 7
				4100	1 and 8
				4200	2 and 8
				5000	1 and 8



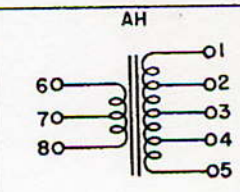
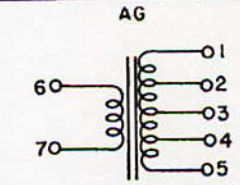
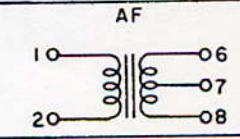
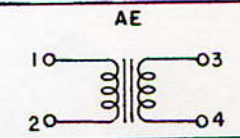
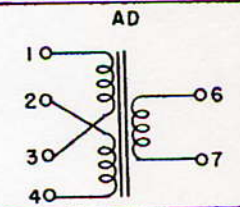
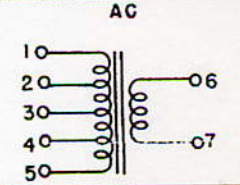
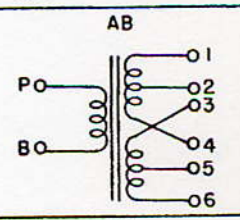
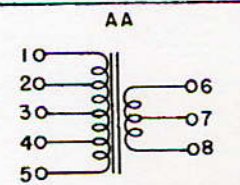
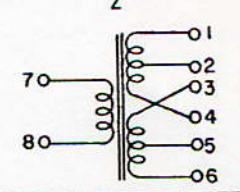
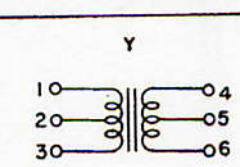
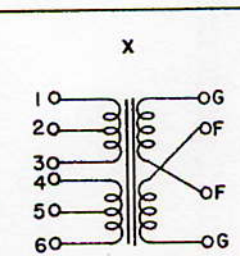
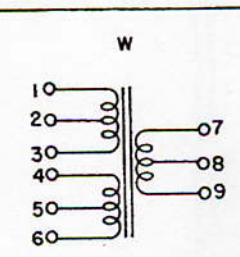
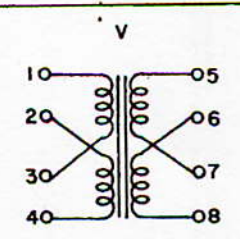
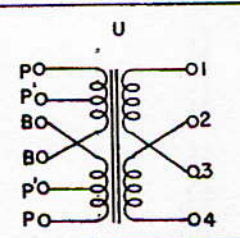
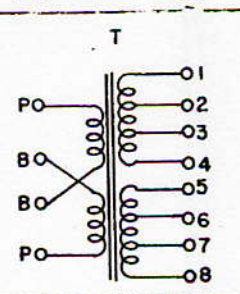
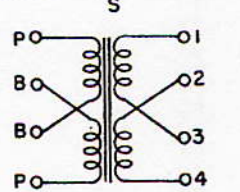
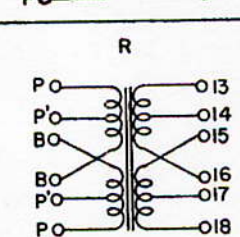
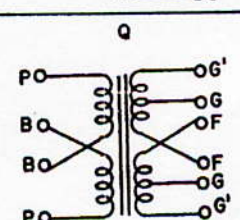
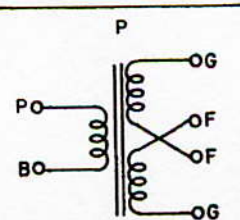
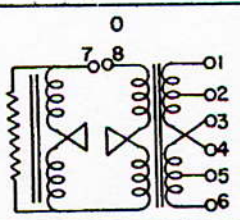
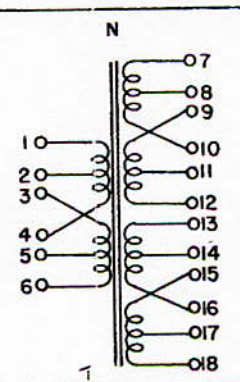
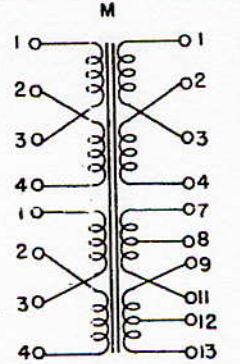
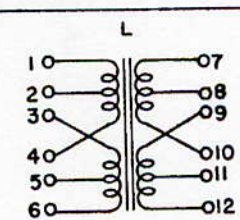
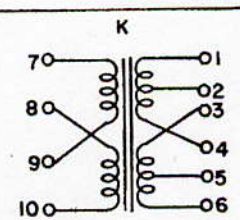
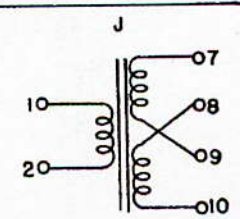
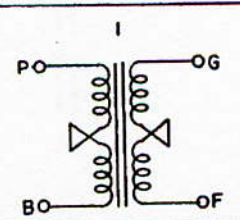
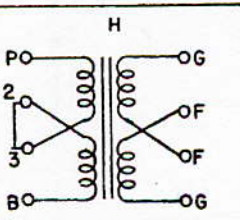
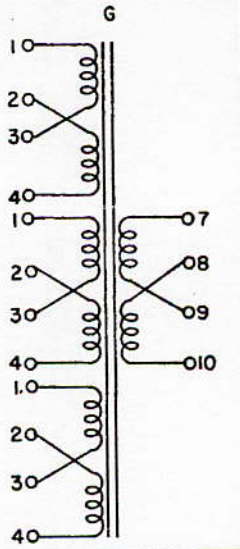
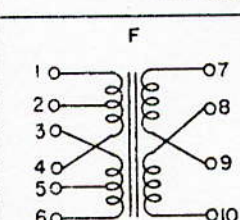
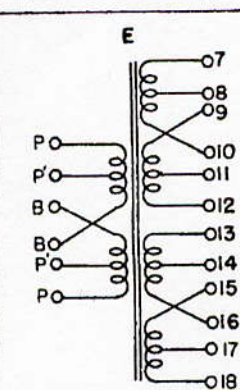
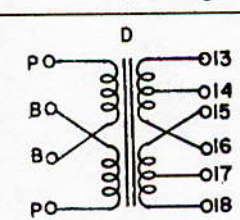
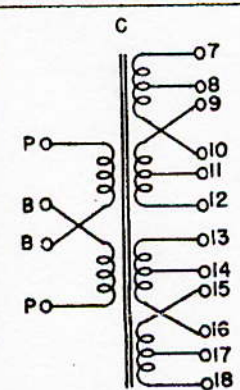
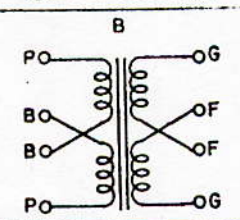
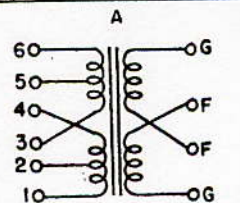
Impedance	Connect To	Join
	24	
5000 ohms 9400	2 and 5 1 and 6	3 and 4 3 and 4
	25	
Primary	7 and 8	
	26	
Primary No. 1 to Plate	1 and 2	
	27	
Primary No. 7 to Plate	7 and 6	
	28	
Primary No. 7 to Plate	7 and 10	8 and 9
	29	
Secondary No. 7 to grid	6 and 7	
	30	
Secondary No. 4 to grid	3 and 4	
	31	
Single grid	7 to grid 10-return	8 and 9
Two grids	7 and 10 to grids	8 & 9-C.T.
	32	
Two grids	6 and 8	7-C.T.
	33	
Two plates	7 and 10	8 & 9-C.T.
	34	
Two plates	6 and 8	7-C.T.
	35	
100 V. 110 120 200 210 220 230 240	1 and 2 1 and 3 1 and 4 1 and 6 1 and 6 1 and 6 1 and 7 1 and 8	1 & 5, 2 & 6 1 & 5, 3 & 7 1 & 5, 4 & 8 2 and 5 3 and 5 4 and 5 4 and 5 4 and 5
	36	
105 V. 115 125	1 and 2 1 and 3 1 and 4	
	37	
Pri. H.V. 6.3V, .6A. 6.3V, 2A.	1 and 2 3 and 5 6 and 8 9 and 11	4-C.T. 7-C.T. 10-C.T.

impedance	Connect To	Join
	38	
100 V. 105 110 115 120 125 700 } 600 } 6.3 5 2.5	1 and 2 1 and 3 1 and 4 1 and 5 1 and 6 1 and 7 8 and 12 9 and 11 13 and 15 19 and 21 16 and 18	10-C.T. 10-C.T. 14-C.T. 20-C.T. 17-C.T.
	39	
105 V. 115 125 670 } 120 } 5 6.3V, .75A. 6.3V, 5.25A.	1 and 2 1 and 3 1 and 4 5 and 9 6 and 8 10 and 11 12 and 14 15 and 17	7-C.T. 7-C.T. 13-C.T. 16-C.T.
	40	
Pri. H.V. 6.3V, 1.2A. 6.3V, .5A.	1 and 2 3 and 5 6 and 8 9 and 11	4-C.T. 7-C.T. 10-C.T.
	41	
Pri. H.V. 6.3V, 2A. 6.3V, .6A.	1 and 2 3 and 5 6 and 8 9 and 11	4-C.T. 7-C.T. 10-C.T.
	42	
Parallel Series Hum-Bucking	1 and 5 1 and 5 Circuit below	1 & 3, 4 & 5 3 and 4
	43	
Parallel Series	1 and 4 1 and 4	1 & 2, 3 & 4 2 and 3



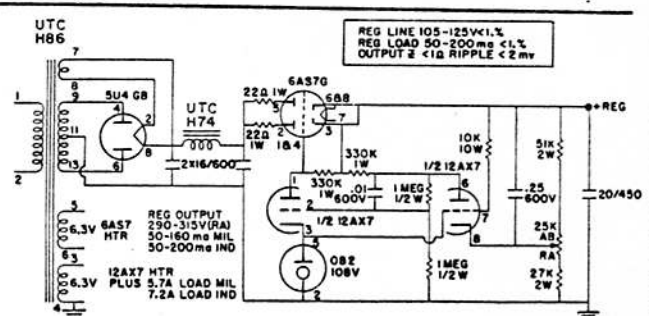
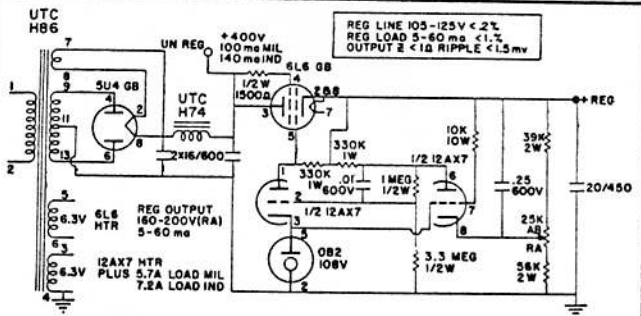
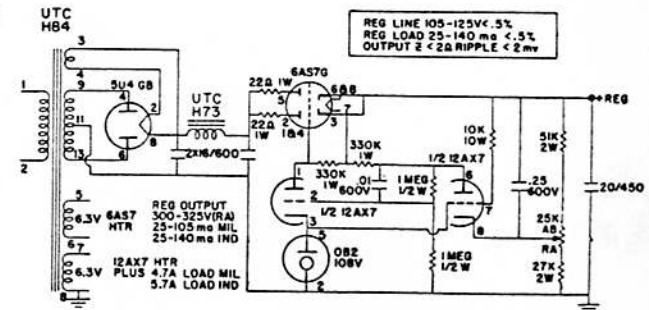
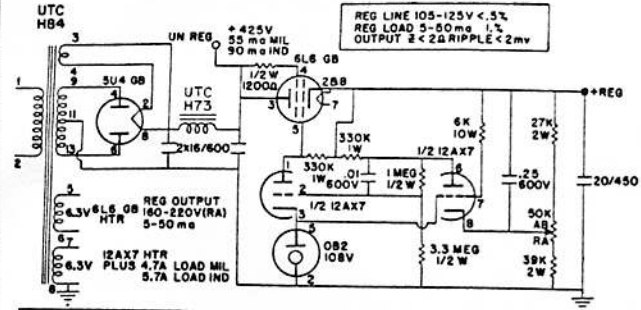
HUM BUCKING CONNECTION

AUDIO TRANSFORMER SCHEMATICS

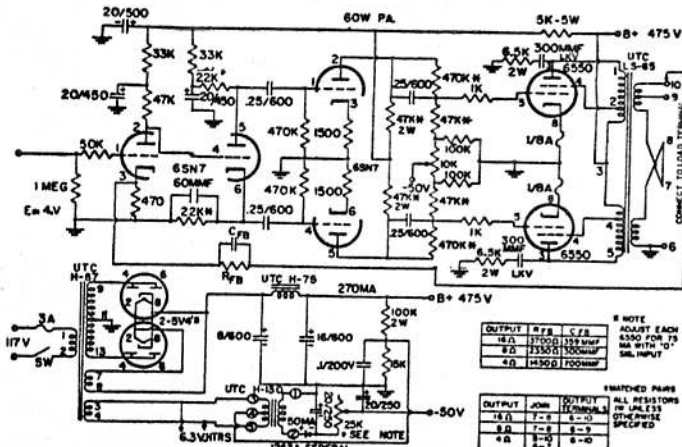


UTC

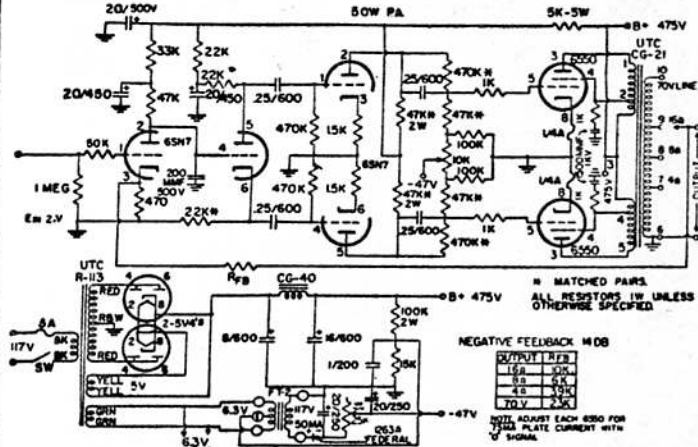
REGULATED VACUUM TUBE POWER SUPPLY CIRCUITS



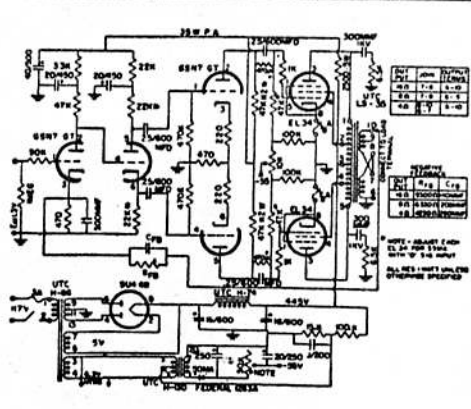
RECOMMENDED VACUUM TUBE AMPLIFIER CIRCUITS



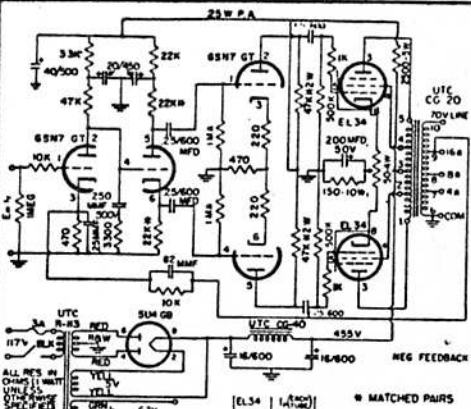
CIRCUIT PROVIDING 60 WATTS, ± 1 db from 15 cycles to 30 KC...
At 1 watt, ± 1 db 3 cycles to 80 KC.



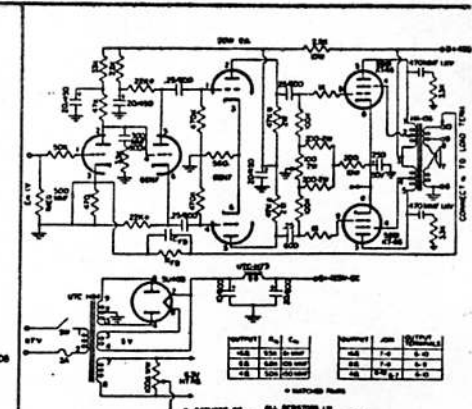
CIRCUIT PROVIDING 50 WATTS, ± 1 db 40 cycles to 10 KC...
At 1 watt, ± 1 db 20 cycles to 20 KC.



CIRCUIT PROVIDING 35 WATTS, ± 1 db from 15 cycles to 30 KC...
At 1 watt, ± 1 db 7 cycles to 100 KC.



CIRCUIT PROVIDING 25 WATTS, ± 1 db 40 cycles to 10 KC...
At 1 watt, ± 1 db 20 cycles to 20 KC.



CIRCUIT PROVIDING 20 WATTS, ± 1 db 20 cycles to 30 KC...
At 1 watt, ± 1 db 7 cycles to 100 KC.