



*Most Complete Transformer
Line in the World*

QUALITY • RELIABILITY

TRANSFORMER COMPONENTS

*for every
purpose*



BULLETIN
PS - 200

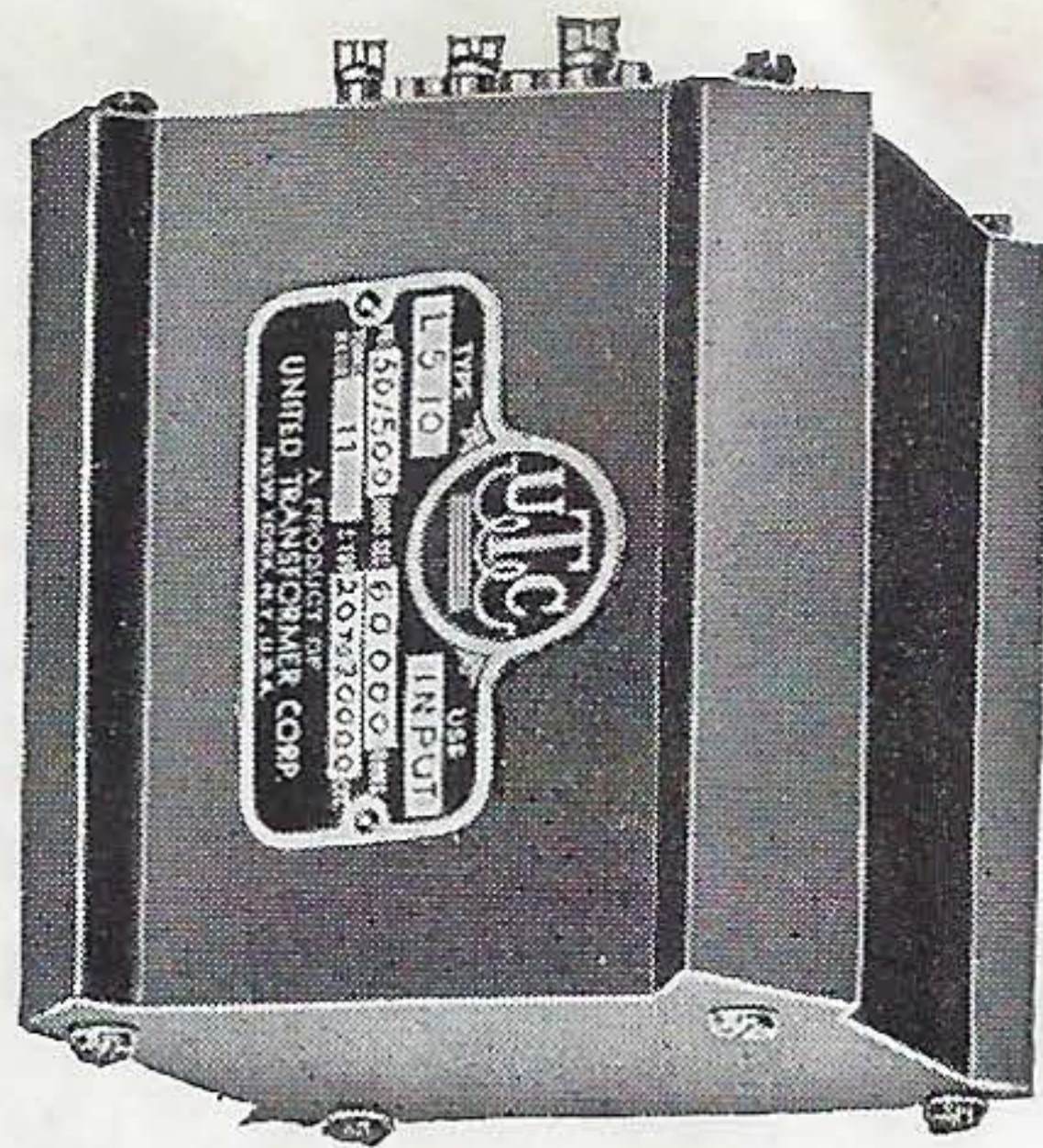
UNITED TRANSFORMER CORP.

72 SPRING STREET

NEW YORK, N. Y.

EXPORT DIVISION: 100 VARICK STREET NEW YORK, N. Y. CABLES: "ARLAB"

LINEAR STANDARD



OVERALL DIMENSIONS

	Mtg. Dim.	L	W	H
LS-1	1-15/16x2-7/16	2-9/16	3-3/16	3-11/16
LS-2	2-11/16x3-11/16	3-1/2	4-3/8	4 5/8
LS-3	4-3/16x5-1/32	5	5-3/4	5-3/16
LS-4	5-3/4x5-3/4	6-7/16	6-7/16	5-3/8
LS-5	7-1/4x7-1/4	8	8	6-1/2

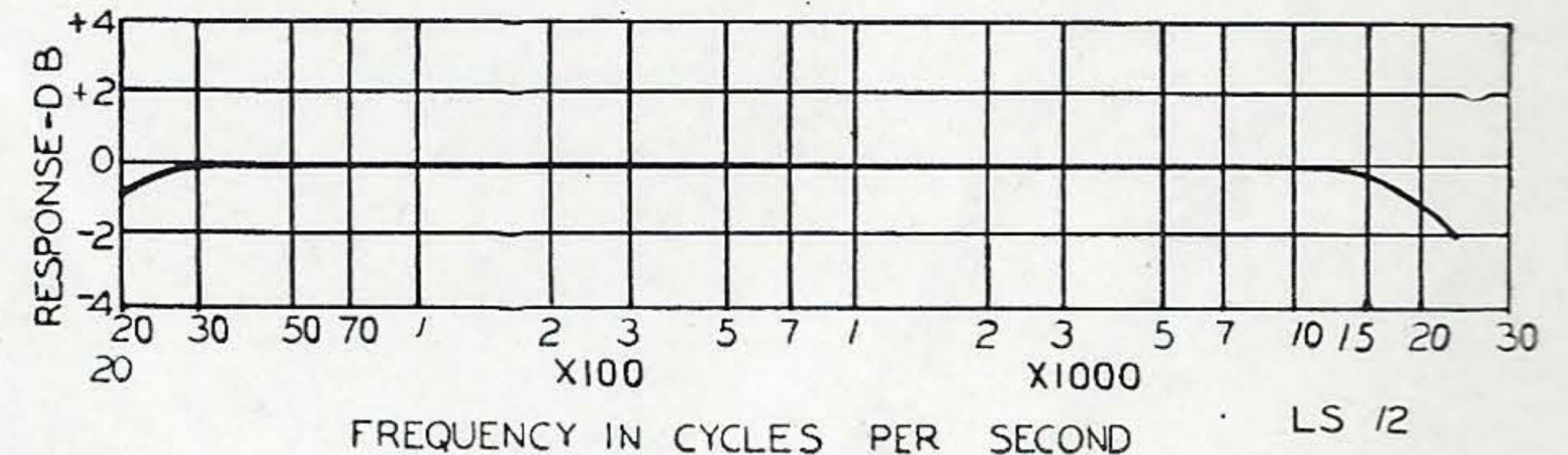
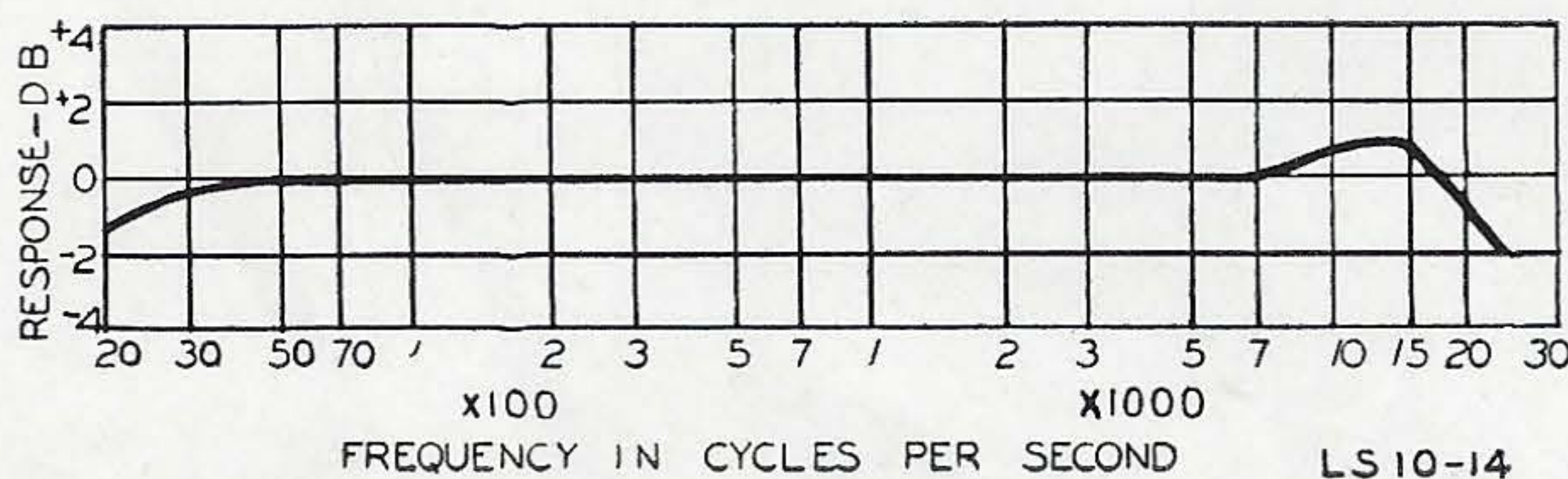
UTC Linear Standard Components represent the closest approach to the ideal transformer from the standpoint of uniform response, low wave form distortion, high efficiency, thorough shielding and dependability.

The multiple tap windings used on input to grid plate to line, mixing and output audio transformers make possible a wide combination of impedance connections without impairing the audio range or efficiency of each unit.

UTC engineers have spent considerable time studying the many annoying hum pickup difficulties which are prevalent in high gain A.C. operated amplifying equipment. As a result, a special grade of high permeability cast iron has been developed to house all UTC Linear Standard units.

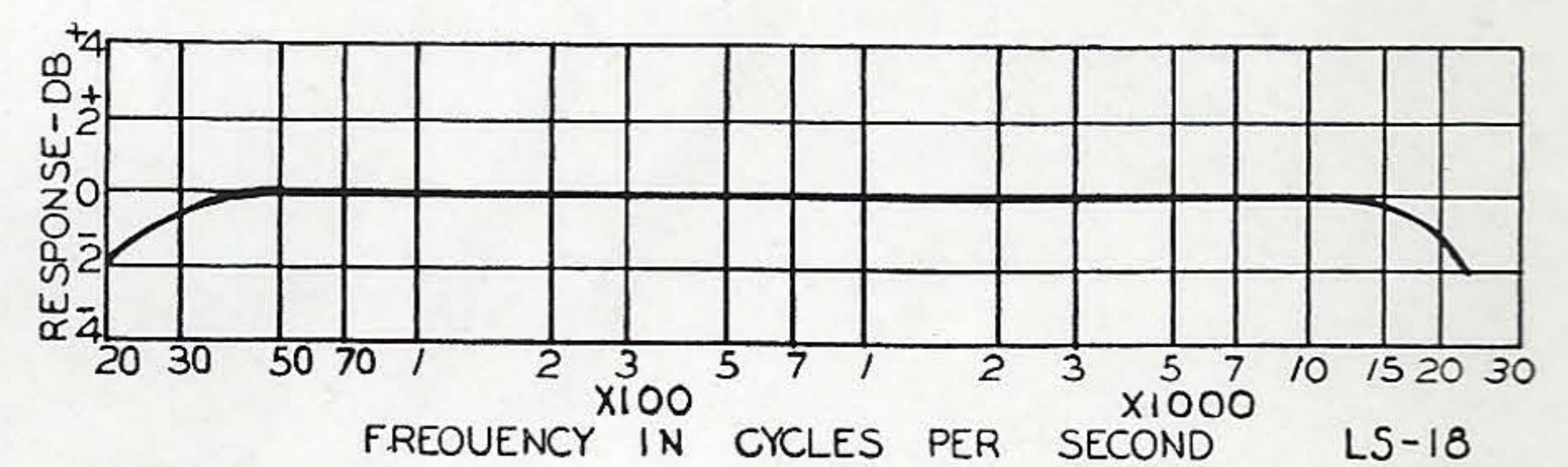
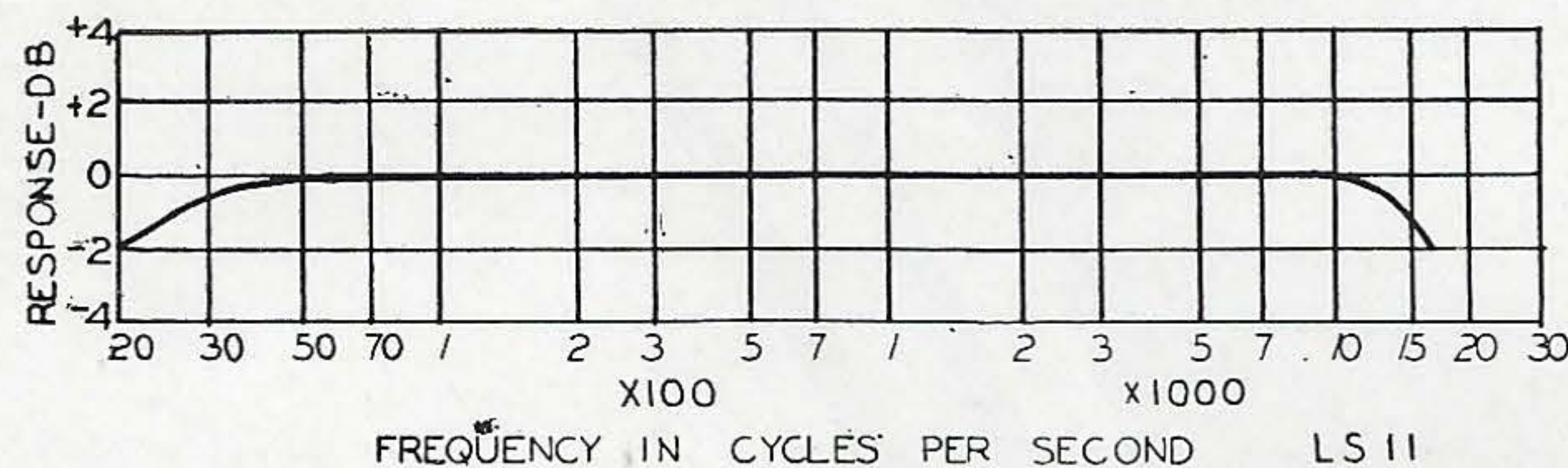
LS-10 Primary will match 500, 333, 250, 200, 125, or 50 ohm line as required for carbon, dynamic, ribbon, or other microphones and for low impedance pickups. Secondary in two sections; overall impedance 60,000 ohms. LS-1 **\$15.00**

LS-11 Primary will match a high impedance photo electric cell to one or two grids. LS-1 **15.00**

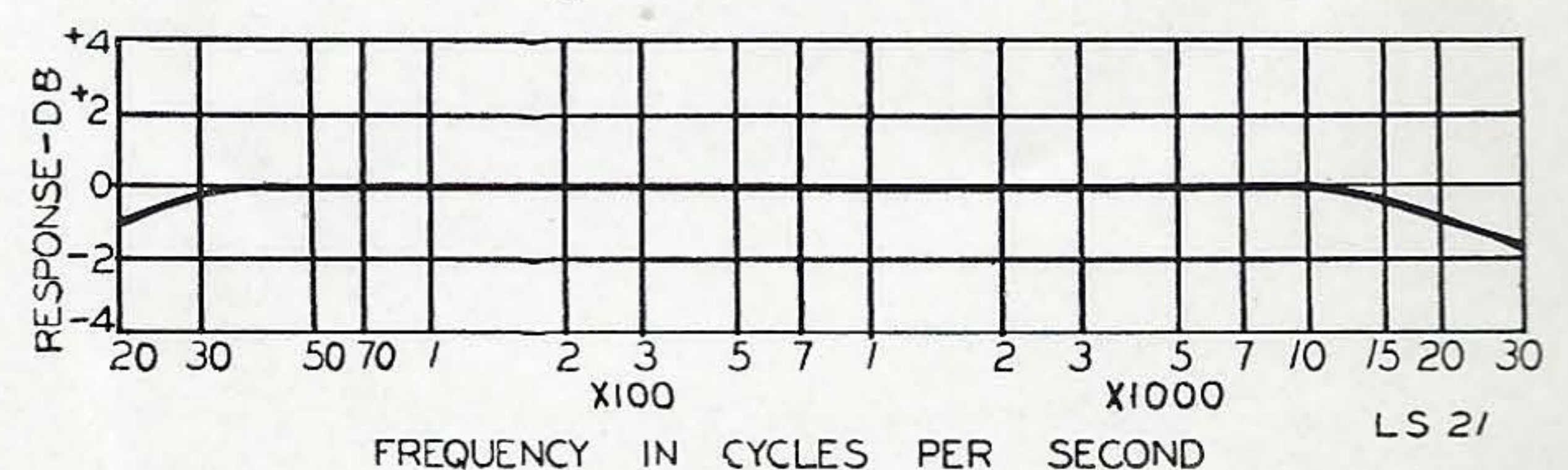
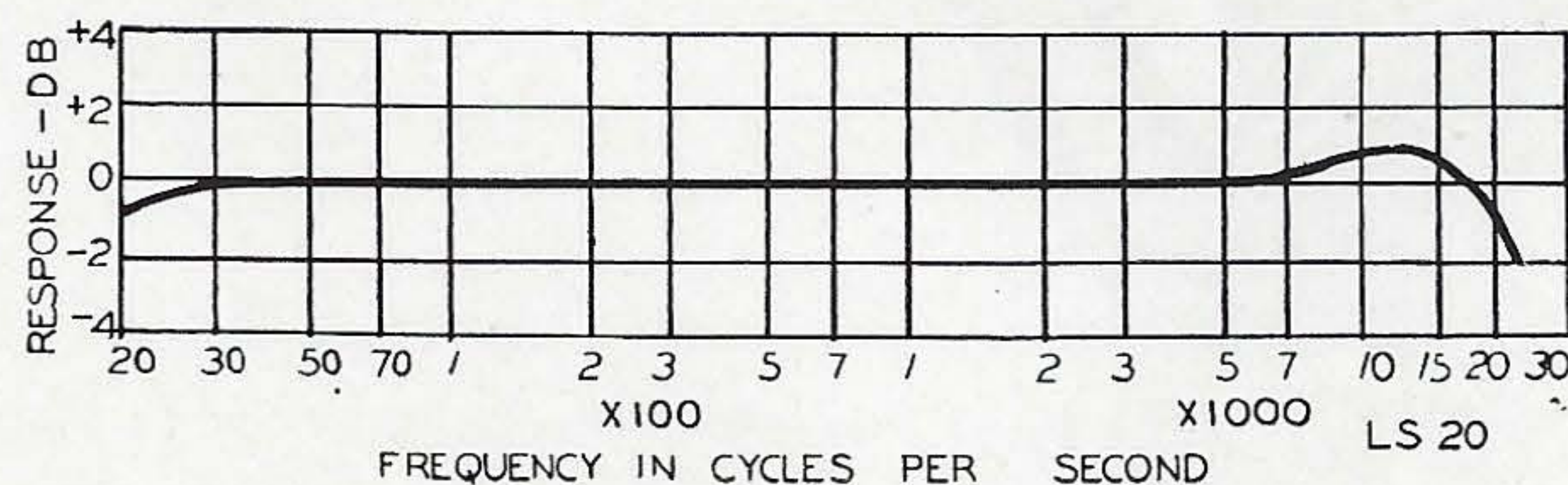


LS-12 Primary will match 500, 333, 250, 200, 125, or 50 ohm line as required for carbon, dynamic, ribbon, or other microphones and for low impedance pickups. Secondary in two sections; overall impedance 120,000 ohms. LS-1 **20.00**

LS-14 Primary will match one or more dynamic microphones, low impedance pickups, or parallel mixers. Primary impedance 60, 38, 30, 22, 15, 10, 5.5, or 2.5 ohms. Secondary in two sections; overall impedance 60,000 ohms. LS-1 **20.00**

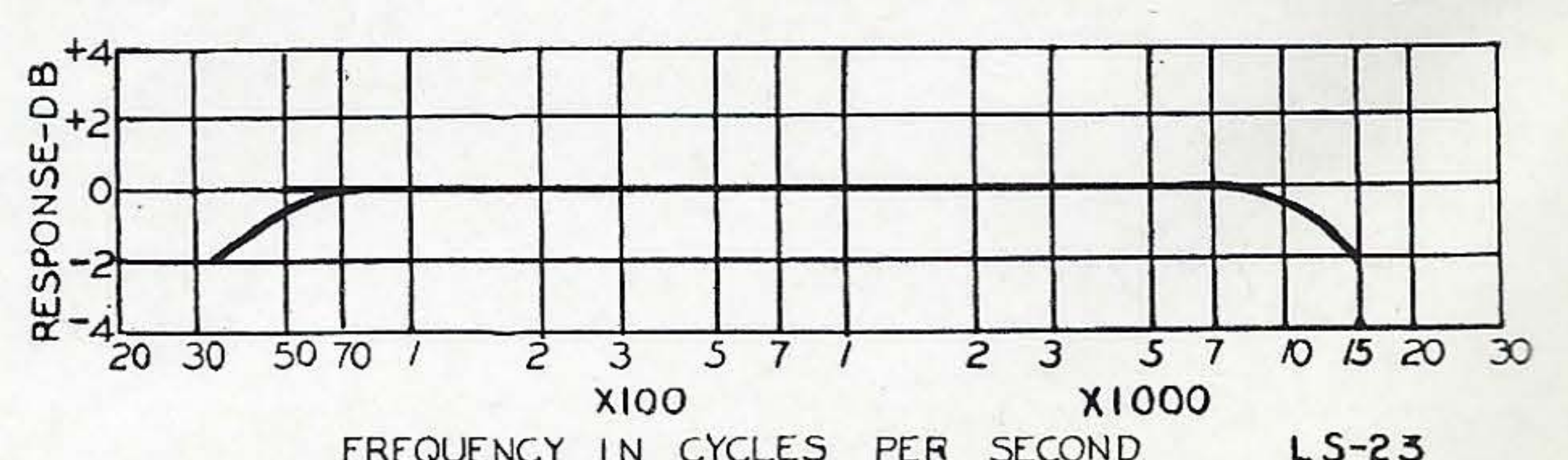
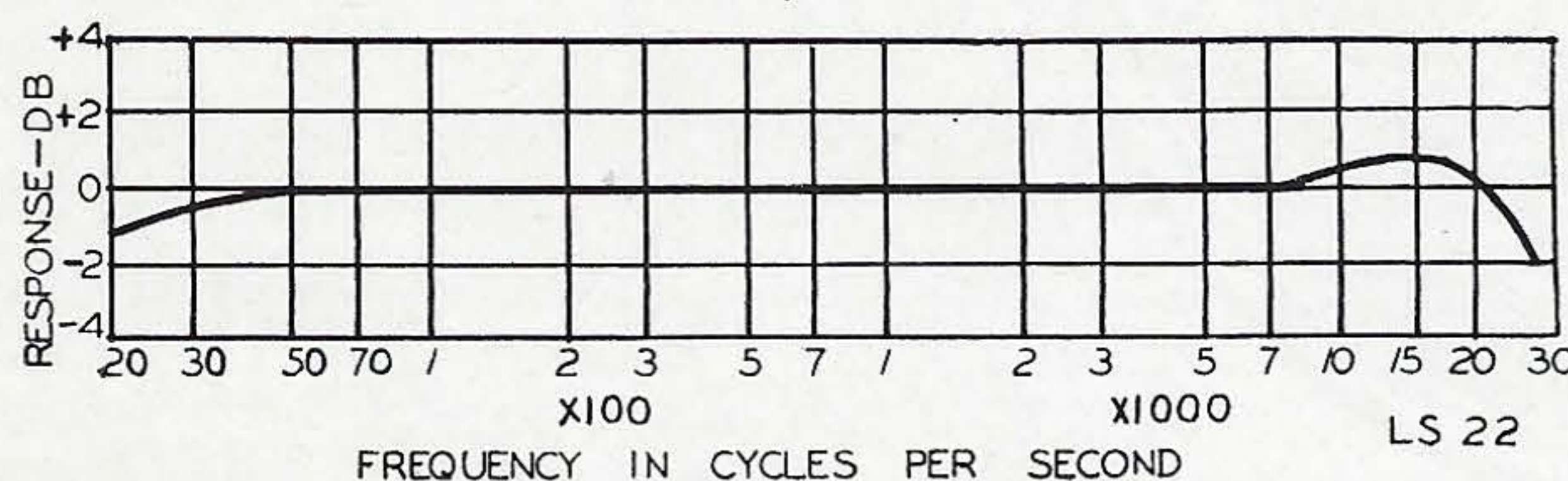


LS-18 Primary designed for 500, 333, 250, 200, 125, or 50 ohms line to 2-50 watt grids. LS-2 **22.00**



COUPLING TRANSFORMERS

LS-20 Cascade, single plate to single grid. Turn ratio 2:1 overall. LS-1 **\$10.00**



LS-21 Input, one plate to two grids. Turn ratio 1 1/2:1 each side of center. Primary and secondary each in two sections. LS-1 **13.00**

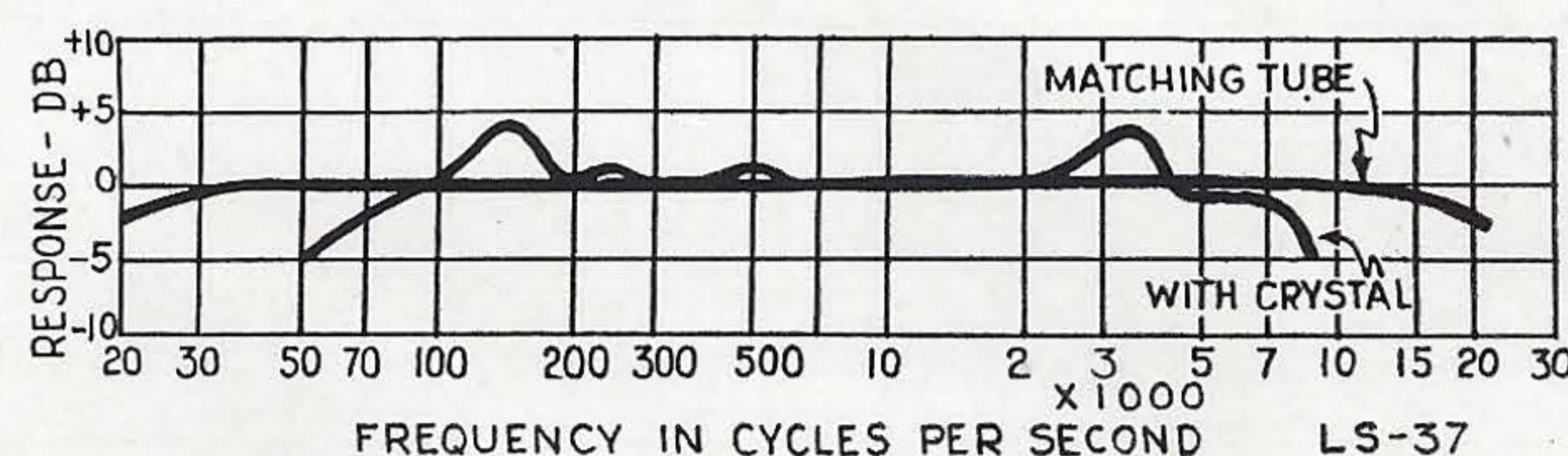
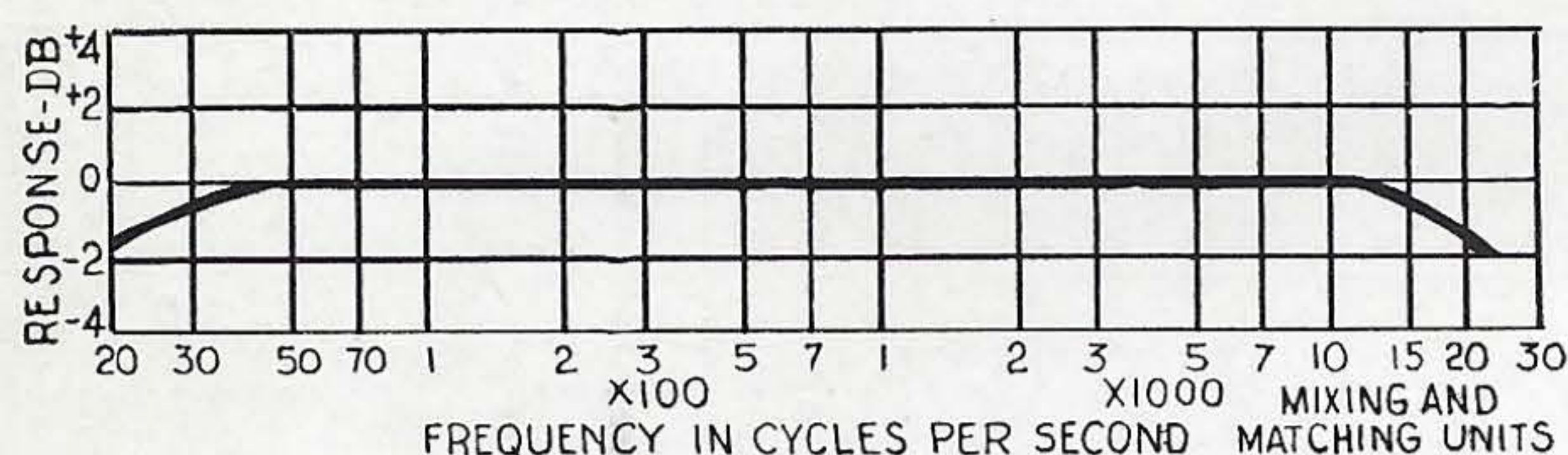
LS-22 Input, two plates to two grids. Turn ratio 1.6:1 each side of center. Primary and secondary each in two sections. Maximum operating level + 25 DB. LS-2 **22.00**

LS-23 Input, two screen grid plates to two grids. Effective ratio 1:1. LS-2 **20.00**

- LS-24** Single plate or line to one or two grids. One primary winding will match single plate of tubes like 01A, 12A, 30, 31, 26, 27, 37, 55, 56, 85, or W.E. 262A. Another primary winding designed for a carbon or voice coil microphone or a low impedance pickup. Secondary in two sections. Total secondary impedance 60,000 ohms. LS-1 20.00

MIXING AND MATCHING TRANSFORMERS

- LS-30** Mixing, carbon or moving coil microphone or low impedance pickup to a variable impedance line. Primary and secondary windings will match 500, 333, 250, 200, 125 or 50 ohm lines. LS-1 \$15.00
- LS-32** Mixing, one or more moving coil microphones or extremely low impedance pickups to a variable impedance line. Primary impedances 60, 38, 30, 22, 15, 10, 5.5, 2.5 ohms. Secondary impedances 500, 333, 250, 200, 125, 50 ohms. LS-1 20.00
- LS-33** 15 watt audio line matching transformer. Input designed for 500, 333, 250, 200, 125, 50 ohms. Output designed for 500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-2 15.00
- LS-34** 30 watt audio line matching transformer. Input designed for 500, 333, 250, 200, 125, 50 ohms. Output designed for 500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-3 20.00
- LS-35** 60 watt audio line matching transformer. Input designed for 500, 333, 250, 200, 125, 50 ohms. Output designed for 500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-4 30.00
- LS-36** 200 watt audio line matching transformer. Input designed for 500, 333, 250, 200, 125, 50 ohms. Output designed for 500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-5 50.00



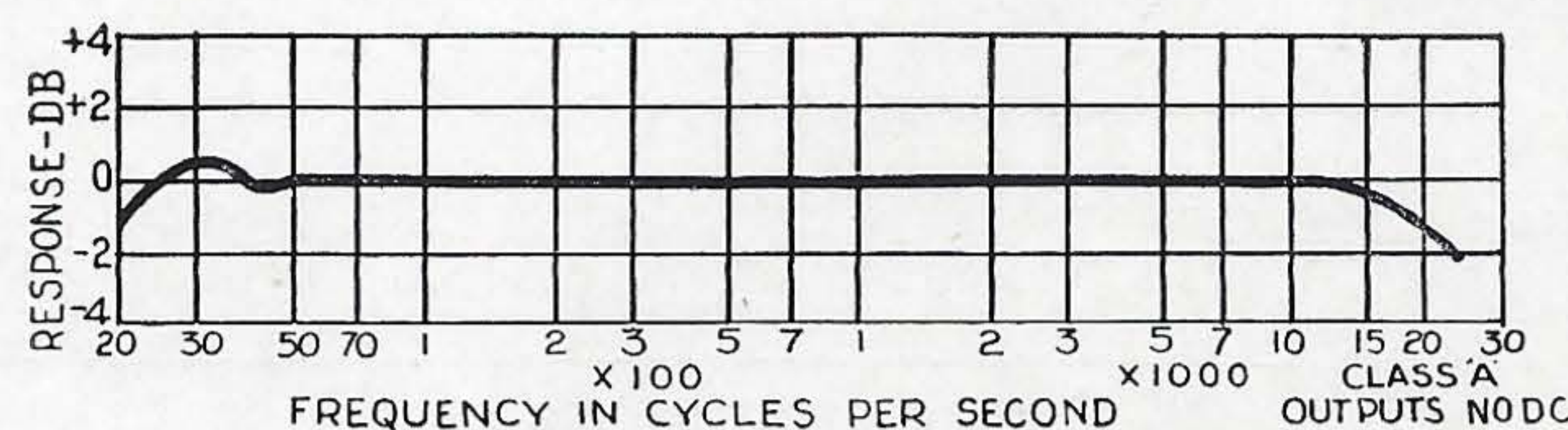
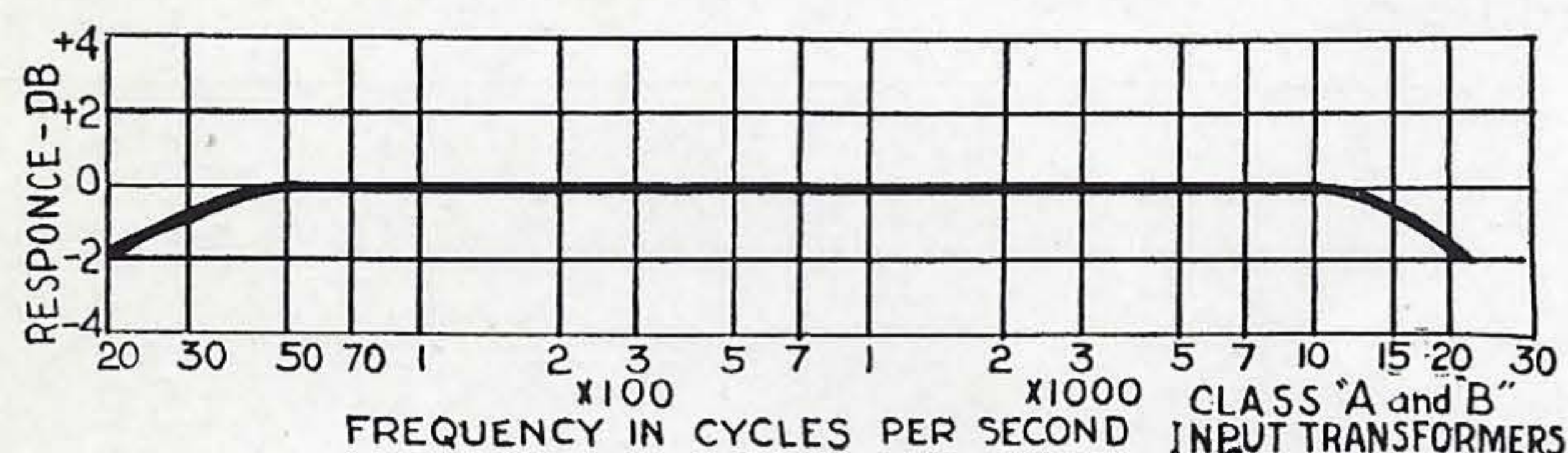
- LS-37** Crystal microphone or pickup or high-mu triode or diode detector to line. Primary in two sections: overall impedance 130,000 ohms. Secondary 500, 333, 250, 200, 125 or 50 ohms. LS-1 15.00

BRIDGING TRANSFORMERS

- LS-150** Primary 4000 ohms bridging a 50 to 500 ohm line of any level up to plus 24dB. Secondary 500, 333, 250, 200, 125, 50 ohms. LS-1 \$15.00
- LS-151** Primary 16,000 ohms bridging a 50 to 500 ohm line of any level up to plus 24dB. Secondary 500, 333, 250, 200, 125, 50 ohms. LS-1 15.00

A PRIME AND CLASS B INPUT TRANSFORMERS

- LS-4** Primary designed for 500, 333, 250, 200, 125 or 50 ohm lines to two class B 46, 59 or 210 grids operating at a maximum level of +32 DB. LS-2 \$25.00
- LS-5** Primary designed for 500, 333, 250, 125 or 50 ohm lines to two 203A, 805, or 838 class B grids. LS-2 30.00
- LS-6** Push pull 45 or 59 triode plates to push pull 845A prime grids. LS-2 22.00
- LS-7** Push pull 56, 6C5, or 6C6 triodes to 45, 42, 6L6, or 6F6 tubes in AB. LS-2 22.00
- LS-46** Push pull 45 or 59 plates to 2-210, 2-830, 2-800, 2-KR 18 grids in class B. LS-2 15.00
- LS-47** Push pull 2A3 plates to 2-203A, 805 or 838 grids in class B. LS-2 20.00
- LS-48** Push pull 845 plates to 2-204 or 849 grids in class B. LS-4 35.00



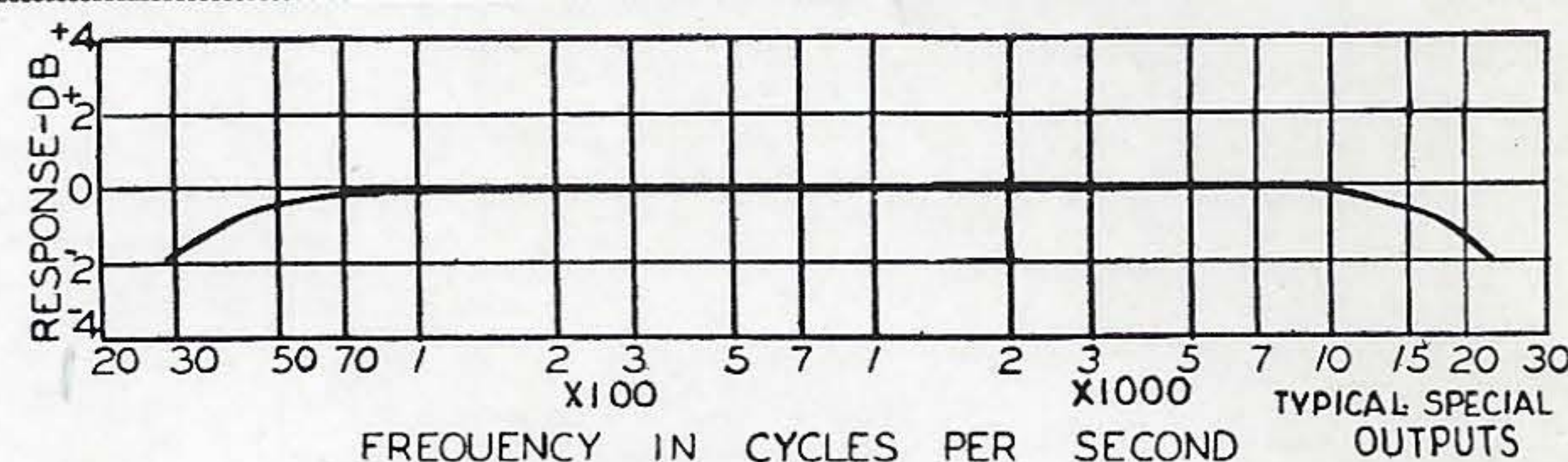
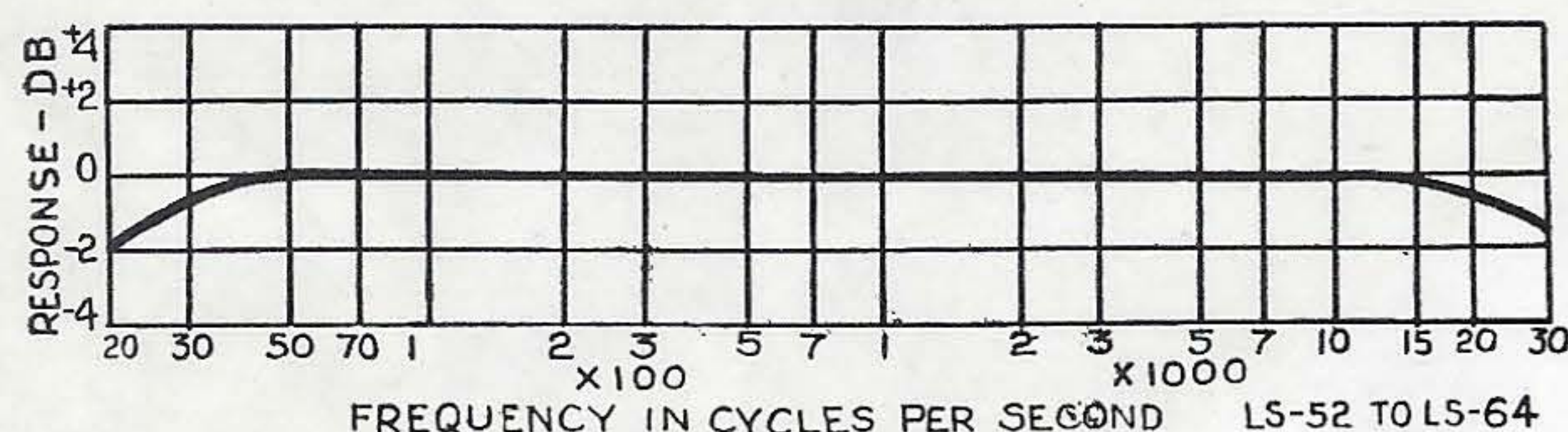
LOW LEVEL CLASS A OUTPUT TRANSFORMERS

- LS-50** From a single plate like the 01A, 12A, 30, 31, 26, 27, 37, 55, 56, 85, W.E. 262A to 500, 333, 250, 200, 125 or 50 ohm line. LS-1 \$15.00
- LS-51** From push pull plates like the 01A, 12A, 30, 31, 26, 27, 37, 55, 56, 85, W.E. 262A to 500, 333, 250, 200, 125 or 50 ohm line. LS-1 15.00

SPECIAL A PRIME AND CLASS B OUTPUT TRANSFORMERS

- LS-65** From two class B 210 or 801 plates to high and low impedance loads. High impedance load 5000, 3500, 2500, 2100, 1250, or 600 ohms. Low impedance load 30, 20, 15, 10, 7.5, 5.5, 2.5, 1.2 ohms. Secondary windings will handle 60 watts audio power. LS-4 \$35.00
- LS-66** Two class B 203A or 838 plates to 5000, 3500, 2500, 2100, 1250, or 600 Ohms. Secondary windings will handle 260 watts audio power. LS-5 70.00
- LS-205** Two class B 805 plates to 6000, 5000, 4000, 1800, 1500 or 1000 ohms. Special casting 100.00
- LS-67** Two class B 203A or two Class B 838 plates to 10,000 ohms or 2500 ohms (split secondary). Secondary will handle 260 watts audio power. LS-5 70.00
- LS-68** Two class B 203 A plates to 500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5.5, 2.5, 1.2 ohms. LS-5... 70.00
- LS-69** Two 849 or 204A plates to 6000, 5000, 4000, 1800, 1500, or 1000 ohms. Secondary will handle up to 1000 watts audio power. Special casting 200.00

- LS-169** Four 849 or six 204A tubes in push pull parallel to 5000, 4200, 3300, 1500, 1250, or 830 ohms. Secondary will handle up to 2500 watts audio power. Special casting **400.00**
- LS-845M** From two A prime 845 plates or Class B 800's to high impedance loads. Secondary impedances 5000, 3500, 2500, 2100, 1250 or 600 ohms. Will handle 125 watts audio power. LS-5 **50.00**
- LS-845** From two A prime 845 plates or Class B 800's to 500, 333, 250, 200, 125, 50, 30, 20, 15, 7.5, 5, 2.5, 1.2 ohms. Will handle 125 watts audio power. LS-5 **50.00**



LINEAR STANDARD CLASS A AND CLASS B OUTPUT TRANSFORMERS

Type	Primary Impedance	Will Match	Secondary Impedance	Case & Price
*LS-6L1	6600 ohms plate to plate.	Push pull 6L6's self bias 30 watts output.	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-3 30.00
*LS-6L2	6600 ohms plate to plate.	Same tubes as LS-6L1.	6000, 5000, 4000, 1800, 1500, 1000, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-3 30.00
*LS-6L3	6600 ohms plate to plate.	Same tubes as LS-6L1.	30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-3 20.00
*LS-6L4	3800 and 3300 ohms plate to plate.	For 3800 ohms Two 6L6's fixed bias, 60 watts output. For 3300 ohms. Four 6L6's self bias, 60 watts output.	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-4 35.00
*LS-6L5	3800 and 3300 ohms plate to plate.	Same tubes as LS-6L4.	6000, 5000, 4000, 1800, 1500, 1000, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-4 35.00
*LS-6L7	3800 and 3300 ohms plate to plate.	Same tubes as LS-6L4.	30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-4 25.00
LS-2451	6000 ohms plate to plate and 3500 ohms plate to plate.	For 6000 ohms Class A prime 45's self bias and Class B 46's, 59's; Class A WE 252A's. For 3500 ohms Class A prime 45's fixed bias.	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5 1.2.	LS-2 20.00
LS-2452	6000 ohms plate to plate and 3500 ohms plate to plate.	Same tubes as LS-2451.	6000, 5000, 4000, 1800, 1500, 1000, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-2 20.00
LS-2453	6000 ohms plate to plate and 3500 ohms plate to plate.	Same tubes as LS-2451.	30, 20, 15, 10, 7.5, 5.5, 2.5 1.2.	LS-2 14.00
LS-4451	3000 ohms plate to plate and 1750 ohms plate to plate.	For 3000 ohms Four 45's in push pull parallel A prime self bias. Four WE 252A's Class A. Four 46's or 59's in Class B. For 1750 ohms Four 45's in push pull parallel A prime fixed bias.	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5.5, 2.5, 1.2.	LS-4 30.00
LS-4452	3000 ohms plate to plate and 1750 ohms plate to plate.	Same tubes as LS-4451.	6000, 5000, 4000, 1800, 1500, 1000, 30, 20, 15, 10, 7.5, 5.5, 2.5, 1.2.	LS-4 30.00
LS-4453	3000 ohms plate to plate and 1750 ohms plate to plate.	Same tubes as LS-4451.	30, 20, 15, 10, 7.5, 5.5, 2.5, 1.2.	LS-4 20.00

* These transformers incorporate the new UTC Feedback (patent applied for) Winding, which reduces harmonic distortion, increases available power and reduces plate resistance tremendously. No resistors or condensers are necessary.

LINEAR STANDARD CLASS A AND CLASS B OUTPUT TRANSFORMERS

Type	Primary Impedance	Will Match	Secondary Impedance	Case & Price
LS-52	8000 ohms plate to plate.	Class A , push pull 50's, 45's 6F6 pentodes or triodes. Single 211, 843, 842, 205D, 48.	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-2 20.00
LS-53	8000 ohms plate to plate.	Same tubes as LS-52.	6000, 5000, 4000, 1800, 1500, 1000, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-2 20.00
LS-54	8000 ohms plate to plate.	Same tubes as LS-52.	30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-2 14.00
LS-55	5000 ohms plate to plate and 3000 ohms plate to plate.	For 5000 ohms Self bias push pull 2A3's, push pull W.E. 275A's, single 71A, 6B5, or single 59 triode. For 3000 ohms Fixed bias push pull 2A3's, single W.E. 52A, 300A.	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-2 20.00
LS-56	5000 ohms plate to plate and 3000 ohms plate to plate.	Same tubes as LS-55.	6000, 5000, 4000, 1800, 1500, 1000, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-2 20.00
LS-57	5000 ohms plate to plate and 3000 ohms plate to plate.	Same tubes as LS-55.	30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-2 14.00
LS-58	2500 ohms plate to plate or 1500 ohms plate to plate.	For 2500 ohms Four 2A3's in push pull parallel self bias circuit. For 1500 ohms Four 2A3's in push pull parallel fixed bias circuit. W.E. 300A's.	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-4 30.00
LS-59	2500 ohms plate to plate or 1500 ohms plate to plate.	Same tubes as LS-58.	6000, 5000, 4000, 1800, 1500, 1000, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-4 30.00
LS-60	2500 ohms plate to plate or 1500 ohms plate to plate.	Same tubes as LS-58.	30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-4 20.00
LS-61	10,000 ohms plate to plate or 6000 ohms plate to plate.	For 10,000 ohms Push pull 59 triodes, push pull 6B5's, push pull 71A's, single 210, 41, 268A, 2A3, Class B 49's, 53's, 79's, 89's. For 6000 ohms In Class A push pull W.E. 52A's, single 31, 46, 59 pentode. In class B push pull 46's, push pull 59's.	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-2 20.00
LS-62	10,000 ohms plate to plate or 6000 ohms plate to plate.	Same tubes as LS-61.	6000, 5000, 4000, 1800, 1500, 1000, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-2 20.00
LS-63	10,000 ohms plate to plate or 6000 ohms plate to plate.	Same tubes as LS-61.	30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-2 14.00
LS-64	18,000 ohms plate to plate.	Class A push pull 845's. 50 Watts Maximum.	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2.	LS-4 35.00

POWER TRANSFORMERS

LS-70	For use with P.P. class A 2A3, 59, 45, 47 tubes or class B 53 tubes. Primary tapped for 100, 105, 110, 115, 120, 125 volts 60 cycles A.C. Secondaries: 425 volts each side of center at 200 MA, also tapped at 375 volts each side of center. 2½ V.C.T. 3A., 2½ V.C.T. 3A., 2½ V.C.T. 5A., 2½ V.C.T. 12A., 5 V.C.T. 3A., 6.3 V.C.T. 1A.; 6.3 V.C.T. 3A. LS-4	\$25.00
LS-72	For use with self or fixed bias 6L5 tubes. Primary tapped for 100, 105, 110, 115, 120, 125 volts. Secondaries: 450 volts each side of center at 250MA, also tapped at 400 volts each side of center. 6.3 V.C.T. 4A, 6.3 V.C.T. 3A tapped at 2½ V.C.T. 3A; 2½ V.C.T. 3A; 5 V.C.T. 3A. LS-4	25.00
LS-73	For use with four fixed bias 6L6 tubes. Primary tapped for 100, 105, 110, 115, 120, 125 volts. Secondaries 450 volts each side of center at 500 MA, also tapped at 400 volts each side of center. 6.3 V.C.T. 6A, 6.3 V.C.T. 4A tapped at 2½ V.C.T. 3A, 2½ V.C.T. 10A, 5 V.C.T. 6 A. LS-5	35.00
LS-180	Plate and filament transformer for a pre-amplifier. Primary 110 volts. Secondaries: 225 volts each side of center at 15 MA. 6.3 V.C.T. at 2 Amps. 6.3 volts 4 Amps for 84 rectifier. LS-1	10.00
LS-106	Primary 100, 110, 120, 220, 230, 240 volts; 50 to 60 cycles. Secondary 3500 volts each side of center, tapped at 2800 each side, 1 amp. D.C. Special casting	180.00
LS-108	Primary 100, 105, 110, 115, 120, 125 volts; 50 to 60 cycles. Secondary 900 volts each side of center, tapped at 750 each side, 200 MA DC. LS-4	25.00
LS-76	For use with push pull 50 watt tubes. Primary tapped for 100, 105, 110, 115, 120, 125 volts, 60 cycles A.C. Secondaries: 1450 V. each side of center at 200 MA.; also tapped at 1200 volts each side of center. Secondary winding may be joined in parallel. LS-5	45.00
LS-77	For use with 50 watt Class B and A Prime tubes. Primary tapped for 100, 110, 120, 220, 230 and 240 volts, 50-60 cycles A.C. Secondary winding 1450 volts each side of center at 350 MA.; also tapped at 1200 volts each side of center. Special casting	60.00
LS-78A	For use with 200 watt tubes, AF and RF. Primary tapped for 100, 110, 120, 220, 230, 240 volts, 50-60 cycles A.C. Secondary winding 1450 volts each side of center at 500 MA.; also tapped at 1200 volts each side of center. Special casting	75.00
LS-79AX	Primary tapped for 100, 110, 120, 220, 230, 240 volts; 50-60 cycles A.C. Secondary tapped to supply fixed C bias for class B 203's, 830B's and class A 845's with 82 rectifiers. LS-3	20.00
LS-107	For use as fixed bias plate transformer. Primary tapped for 100, 110, 120, 220, 230, 240 volts, 50-60 cycles A.C. Secondary designed to supply fixed C bias both for Class B 849's or A prime 845's. LS-4	25.00

FILAMENT TRANSFORMERS

LS-80	Filament transformer for two 866 mercury vapor rectifier tubes. Primary tapped for 100, 110, 120, 220, 230, 240 volts, 50-60 cycles A.C. Secondary: 2½ V.C.T. 10 A. 12,000 volts insulation. LS-3	\$15.00
LS-82	Filament transformer for two 872 mercury vapor rectifier tubes. Primary tapped for 100, 110, 120, 220, 230, 240 volts, 50-60 cycles A.C. Secondary: 5 V.C.T. 20 amps. 12,000 volts insulation. LS-3	20.00
LS-84	Filament transformer for two 203A, 211, 17C, 845, 852, or 860 tubes. Primary tapped for 100, 110, 120, 220, 230, 240 volts, 50-60 cycles A.C. Secondary: 10 V.C.T. 7 A. 10,000 volts insulation. LS-3	15.00
LS-85	Filament transformer for 866 and 50 watt power tubes. Primary tapped for 100, 110, 120, 220, 230, 240 volts, 50-60 cycles A.C. Secondaries: 2½ V.C.T. 10 A. 2-10 V.C.T. 3 A. windings. 10,000 volts insulation. LS-3	25.00
LS-88	Filament transformer for 6.3 volt heater tubes. Primary tapped for 105, 115, 125 volts, 50-60 cycles. Secondary 6.3 V.C.T. 2 amps. 2500 volts insulation. LS-1	7.50
LS-89	Filament transformer for WE 262 A or 271 A tubes. Primary tapped for 105, 115, 125 volts, 50-60 cycles. Secondary 10 V.C.T. 1.5 amps. 2500 volts insulation. LS-1	7.50

FILTER AND AUDIO REACTORS

LS-90	Hum-bucking split tapped filter choke. 50 henrys 50 MA.; 510 ohms D.C. in series. 12.5 henrys 100 MA; 127.5 ohms D.C. in parallel. LS-2	\$8.50
LS-91	Hum-bucking split tapped filter choke. 14 henrys 125 MA; 200 ohms D.C. in series. 3.5 henrys 250 MA; 50 ohms D.C. in parallel. LS-2	8.50
LS-92	Hum-bucking split tapped filter choke. 16 henrys 175 MA; 96 ohms D.C. in series. 4 henrys 350 MA; 24 ohms D.C. in parallel. LS-3	15.00
LS-93	Hum-bucking split tapped filter choke. 26 henrys 200 MA; 112 ohms D.C. in series. 6.25 henrys 400 MA; 28 ohms D.C. in parallel. LS-4	25.00
LS-96	Hum-bucking split tapped filter choke. 20 henrys 500 MA; 90 ohms D.C. in series. 5 henrys 1000 MA; 22.5 ohms D.C. in parallel. LS-5	40.00
LS-94	Split winding parallel feed audio choke. 320 henrys 3 MA; 6400 ohms in series. 80 henrys 6 MA; 1600 ohms D.C. in parallel. LS-1	10.00
LS-95	Split winding parallel feed audio choke. 720 henrys 5 MA; 3600 ohms D.C. in series. 180 henrys 10 MA; 900 ohms D.C. in parallel. LS-2	20.00
LS-97	Swinging class B choke. 8-40 henrys 200 MA; 100 ohms D.C. LS-3	15.00
LS-98	Swinging class B choke. 8-40 henrys 400 MA; 90 ohms D.C. LS-4	25.00
LS-99	Hum-bucking split tapped filter choke. 20 henrys 1 Ampere; 50 ohms D.C. in series. 5 henrys 2 Amperes; 12.5 ohms D.C. in parallel. Special casting	60.00
LS-105	Swinging class B choke 8-40 henrys 1 Ampere; 50 ohms D.C. Special casting	60.00

HIPERM ALLOY

OVERALL DIMENSIONS

- H1 Case 1-7/8 x 2-3/8 x 3
H2 Case 2-3/8 x 3 x 3-3/4

MOUNTING DIMENSIONS

- H1 1-3/8
H2 1-11/16 x 2-3/8



This new group of transformers, specifically designed for portable use, are extremely compact and light in weight. The fidelity of these units measures up to high quality broadcast standards, being uniform in response from 30 to 20,000 cycles. These high fidelity transformers are the smallest quality transformers of their class, and have only been made possible through the development of HIPERM ALLOY, a nickel iron alloy having extremely high initial permeability. This alloy is not only used for the core material, but also for the shielding case, affording a maximum of shielding with a minimum of size and weight. Another unique feature developed to make possible the small size of these units is the elimination of all extended mounting flanges or feet. These are replaced by simple threaded metal inserts in the case allowing mounting with terminals either up or down, so that the units can be mounted either on rack panel or metal chassis with no waste space.

COUPLING TRANSFORMERS

- HA-105 Cascade, single plate like 01A, 12A, 30, 31, 26, 27, 37, 55, 56, 85, WE262A, 864, 57 triode, 77 triode to a single grid. Turn ratio 2:1 overall. H-1 \$9.00
HA-106 Input, single plate like 01A, 12A, 30, 31, 26, 27, 37, 55, 56, 85, WE262A, 864, 57 triode, 77 triode to push pull grids. Turn ratio 1 1/2:1 each side of center. H-1 11.00
HA-107 Input, two push pull plates like 01A, 12A, 30, 31, 26, 27, 37, 55, 56, 85, WE262A, 864, 57 triodes, to push pull grids. Turn ratio 1 1/2:1 overall. Primary and secondary in two sections. H-2 15.00

INPUT TRANSFORMERS (TO ONE OR TWO GRIDS)

- HA-100 Variable impedance line to single grid. Primary will match 500, 333, 250, 200, 125, or 50 ohm line, as required, for carbon or voice coil microphones, electro-magnetic or oil damped pickups. Secondary impedance 60,000 ohms. H-1 \$12.50
HA-101 Variable impedance line to single or push pull grids. Primary will match 500, 333, 250, 200, 125, or 50 ohm line, as required, for carbon or voice coil microphones, electro-magnetic or oil damped pickups. Secondary in two sections for series or parallel connection. Overall impedance of windings in series 120,000 ohms, impedance of each winding 30,000 ohms. H-1 15.00
HA-102 Velocity ribbon microphone to single grid. Secondary impedance 90,000 ohms. H-1 12.50
HA-103 Dynamic voice coil microphone to single grid, secondary impedance 90,000 ohms. H-1 12.50

MIXING, MATCHING AND OUTPUT TRANSFORMERS

- HA-108 Variable impedance line for mixing carbon or voice coil microphones, electro-magnetic or oil damped pickups to a variable impedance line. Primary and secondary windings will match 500, 333, 250, 200, 125, or 50 ohm line. H-1 12.50
HA-109 Matching, velocity ribbon microphone to a 500, 333, 250, 200, 125 or 50 ohm line. H-1 12.50
HA-110 Matching, dynamic voice coil microphone to a 500, 333, 250, 200, 125, or 50 ohm line. H-1 12.50
HA-111 Matching, crystal microphone or pickup to a 500, 333, 250, 200, 125, or 50 ohm line. H-1 12.50
HA-112 Matching, high impedance photo electric cell to a 500, 333, 250, 200, 125 or 50 ohm line. H-1 12.50
HA-113 Output, from a single plate like the 01A, 12A, 30, 31, 26, 27, 37, 55, 56, 85, WE262A, 864, 57 triode, 77 triode, to a 500, 333, 250, 200, 125, or 50 ohm line. H-1 12.50
HA-114 Output, from push pull plates, like 01A, 12A, 30, 31, 26, 27, 37, 55, 56, 85, WE262A, 864, 57 triodes, 77 triodes to a 500, 333, 250, 200, 125 or 50 ohm line. H-1 12.50

FILTER AND AUDIO CHOKES

- HC-115 Split winding parallel feed audio choke. May also be used as a push pull audio choke. 400 henrys 2.5 MA; 7000 ohms in series. 100 henrys 5 MA; 1750 ohms in parallel. Capacity of windings for push pull connection 20 MA each side. Inductance with no unbalanced D.C. 500 henrys. H-1 8.50
HC-116 Split winding parallel feed audio choke. May also be used as a push pull audio choke 600 henrys 8 MA; 4000 ohms D.C. in series. 150 henrys 16MA; 1000 ohms in parallel. Capacity of windings for push pull connection 40 MA each side. Inductance with no unbalanced D.C. 1000 henrys. H-2 15.00
HC-117 Hum-bucking tapped filter and audio choke 60 henrys 15 MA; D.C. resistance 3000 ohms, alloy core. H-1 8.50
HC-127 Hum bucking tapped filter and audio choke, 60 henrys 40 MA. D.C. resistance 1000 ohms, alloy core. H-2 15.00

PRE-AMPLIFIER POWER AND FILAMENT TRANSFORMERS

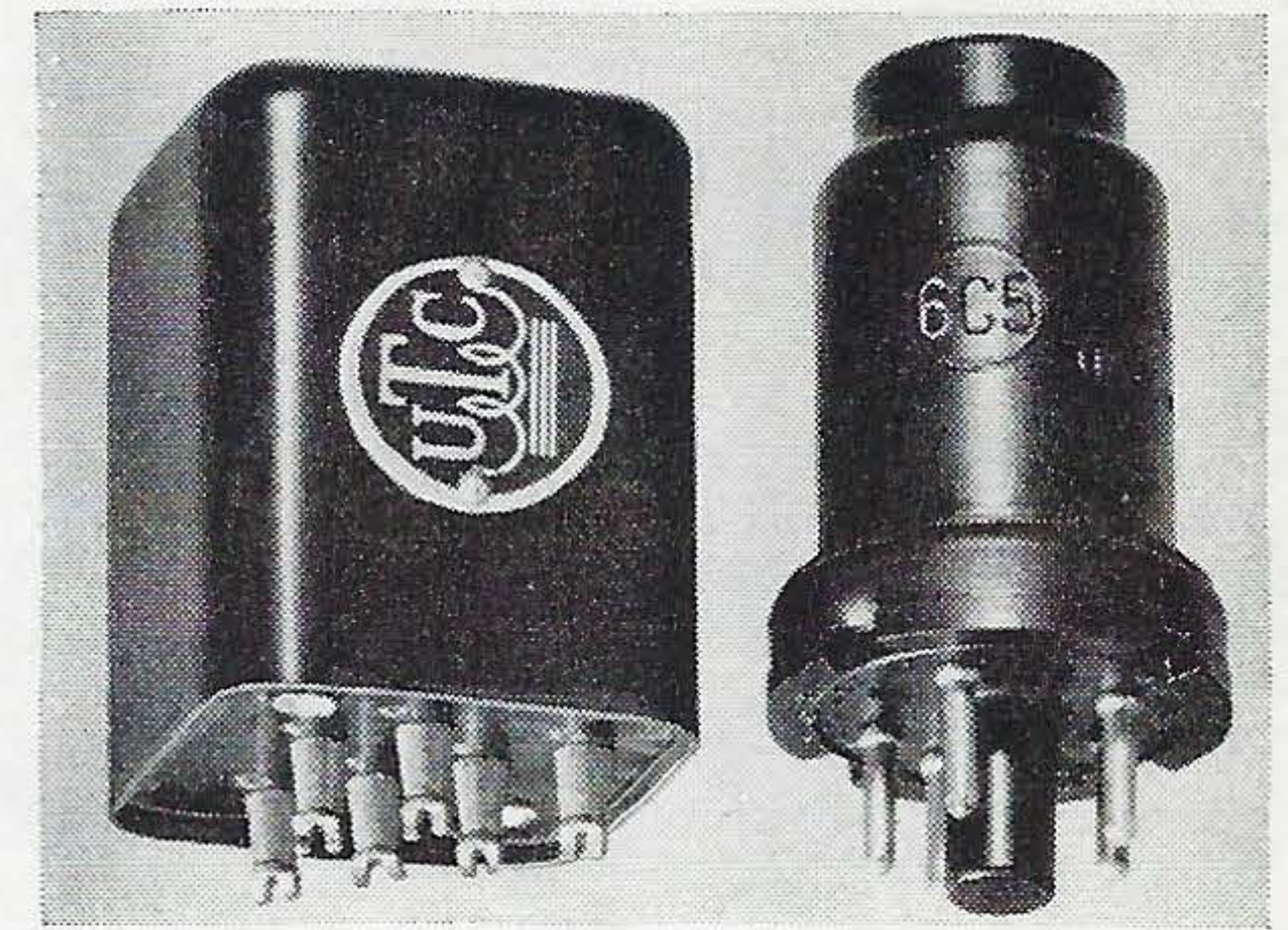
- HP-122 Plate and filament supply for a portable pre-amplifier using 6 volt heater tubes. Primary 115—60 cycles A.C. Secondaries 220 each side of center at 15 MA. 6.3 V.C.T. at 1.2 amps. 6.3 Volt. .4 amps for 84 rectifier. H-2 10.00
HP-123 Plate and filament supply for a portable pre-amplifier or tuner using 6 volt heater tubes. Primary 115—60 cycles Secondaries 275 each side of center at 35 MA. 6.3 V.C.T. at 2 amps. 6.3 volt .4 amps for 84 rectifier. H-3 15.00
HF-124 Filament transformer. Primary 115—60 cycles. Secondary 6.3 V.C.T. 1.2 amps. H-1 7.50
HF-125 Filament transformer—primary 115—60 cycles. Secondary 2 1/2 V.C.T. 5 amps. H-1 7.50
HF-126 Filament transformer. Primary 115—60 cycles. Secondary 10 V.C.T. 1.2 amps. For use with WE 262A tubes. H-1 7.50

ULTRA COMPACT HIGH FIDELITY AUDIO UNITS

The UTC ULTRA COMPACT audio units, designed as companion units for acorn and small metal type amplifier tubes, measure up to high quality broadcast standards. These units are the smallest wide range audios in their class and their development was made possible through the use of the most permeable of the new UTC core materials HIPERM ALLOY No. 4. Frequency response + or - 2 db from 30 cycles to 20,000 cycles. Weight: approximately 5 1/2 ozs.

Overall dimensions: height 1-15/16" (including clearance for lugs 2 1/4"); width 1-7/16"; depth 1-7/16". Mounting dimensions 1 1/8" between center.

Shielding: The UTC ULTRA COMPACT series of audio units employ a true hum balancing coil structure which combined with a special magnetic structure afford a maximum of inductive shielding. Separate electro-static shields grounded to the core are brought out to a separate lug on the bakelite terminal strip.



Type	Application	Primary Impedance	Secondary Impedance	List Price
A-10	Multiple line or microphone to single grid	500, 333, 250, 200, 125 or 50 ohms	50,000 ohms	\$10.00
A-12	Multiple line or microphone to 2 grids	500, 333, 250, 200, 125 or 50 ohms	80,000 or 20,000 ohms	10.00
A-14	Dynamic microphone to 1 or 2 grids	30 ohms	50,000 or 12,500 ohms	9.00
A-16	Single plate (6C6, 955, 262A etc.) to single grid	15,000 ohms	60,000 ohms	8.00
A-18	Single plate (6C6, 955, 262A etc.) to 2 grids	15,000 ohms	80,000 or 20,000 ohms	9.00
A-20	Multiple line or microphone to multiple line	500, 333, 250, 200, 125 or 50 ohms	500, 333, 250, 200, 125 or 50 ohms	10.00
A-22	Dynamic microphone to Multiple line	30 ohms	500, 333, 250, 200, 125 or 50 ohms	9.00
A-24	Single plate 6C6, 955, 262A etc. to multiple line	15,000 or 3,750 ohms	500, 333, 250, 200, 125 or 50 ohms	10.00
A-26	Push pull plates (6C6, 955, 262A etc.) to multiple line	30,000 or 7,500 ohms	500, 333, 250, 200, 125 or 50 ohms	10.00
A-28	Bridging transformer	4000 ohms	500, 333, 250, 200, 125 or 50 ohms	10.00
A-30	Audio choke. 300 Henrys @ 2 MA 6000 ohms D.C.; 75 Henrys @ 4 MA 1500 ohms D.C.; Inductance with no D.C. 450 Henrys.			7.00



VT-1

UTC VARITONE

The UTC Varitone is a revolutionary audio device which permits full control of the frequency response of any audio amplifier or receiver. Using this device, tone correction can be effected for defects in acoustic conditions or overall audio response. It is also possible to produce new tonal effects from phonograph recordings or radio reception and to bring back notes which would otherwise be lost completely. Due to the high equalization obtainable with the Varitone, some loss in gain is effected. If the amplifier or receiver does not have gain to spare, it may be necessary to add an additional stage of audio frequency amplification. The Varitone is made in five types, as follows:

VT-1 This Varitone is incorporated with a universal audio transformer. Two primaries are provided. One is suitable for working from a single or double button microphone a low impedance pickup, or a line; the other primary is designed to work out of the plate of a tube or from a high impedance pickup. The secondary winding is centertapped and is equally suitable for working into one or two grids.

List Price\$8.50

VT-2 The VT-2 is a varitone control unit, incorporated with an impedance matching device so that it can be connected directly across a 200 or 500 ohm line, or low impedance pickup or mike, or in shunt with the plate circuit of any triode or a high impedance pickup. The circuit is not changed in any other way. The VT-2 is solely an addition for tone correction. The original audio circuits are not disturbed.

List Price\$6.00

VT-3 The VT-3 is a complete self-contained unit which does not use external control. The components are adjusted so that 10 db. equalization is effected at 80 and 7000 cycles. This unit is connected directly from plate to B plus of first audio triode. No other alteration is made.

List Price\$5.00

VT-4 The VT-4 is a complete self contained wired unit including a variable control so arranged that with the control at one end high fidelity performance is effected by the increase of low and high frequencies, and with the control at the other end the high response is reduced to diminish static, line noises, and heterodyne whistles. The unit is connected directly from plate to B plus of first audio triode. This unit is designed to work in the plate circuit of low impedance tubes such as 01A, 12A, 30, 31, 26, 27, 37, 55, 56, 85, 262A, 864, 57 triode, 6C6 triode, 77 triode, etc.

List Price\$6.00

VT-5 The VT-5 is similar to the VT-4 except that it is designed to work out of high impedance tubes such as all screen grid tubes, all pentodes, 2A6, 40, 75, other hi mu triodes, etc.

List Price\$6.00

PUBLIC ADDRESS COMPONENTS

The Public Address series of audio, filter and power units described below are designed to satisfy the demand for a popular priced quality line having the many exclusive and Universal features associated with UTC products. All cases are finished in a black eggshell enamel to suit exacting commercial requirements as to appearance. Each transformer may be fastened to chassis or rack panel with lugs either at top or bottom. The housings are physically symmetrical and similar in construction and when grouped in finished equipment present a thoroughly professional appearance. Transformers PA-134, 135 and 136, are now manufactured in the hum-bucking type of construction. In consequence they have an extremely low hum pickup and are excellent for low level work.



MOUNTING DIMENSIONS (With Flange)

PA-1	1-15/16 x 2-7/16
PA-2	2-7/16 x 3-7/8
PA-3	3-1/16 x 4-5/16

(Without Flange)

PA-1	1-13/16
PA-2	1-5/8 x 3-1/16
PA-3	1-13/16 x 3-7/8

OVERALL DIMENSIONS

	L	W	H
PA-1	2 1/2	3	3
PA-2	3-1/6	4 1/2	3 1/2
PA-3	3 5/8	4 7/8	4 1/4

INPUT TRANSFORMERS, CLASS A

PA-131	Transformer from 1 plate to 1 grid. 3:1 ratio. PA-1	\$4.50
PA-132	From 1 plate to 2 grids. 2:1 ratio each side. Split sec. PA-1	5.00
PA-133	From 2 plates to 2 grids. 1.75 ratio each side. Primary and secondary each in two sections. PA-1	6.00
PA-233	From two 56, 6C6 triode, 6C5, or similar tubes to push pull 45's, 2A3's or 6L6's self or fixed bias. PA-1	6.00
PA-134	500, 200, or 50 ohm line to single grid. PA-1	6.50
PA-135	500, 200, or 50 ohm line to push pull grids. PA-1	7.50
PA-136	Single plate or pickup and carbon mike or low impedance pickup to one or two grids. PA-1	7.50

MIXING, MATCHING TRANSFORMERS

PA-137	Mixing 500, 200, or 50 ohm line to 500, 200 or 50 ohm line. PA-1	\$5.50
PA-138	Audio line matching. Will handle 20 watts audio power. Input 500 or 200 ohm line, Output 16, 8, 5, 3 and 1.5 ohms. PA-2	7.50
PA-139	Audio line matching. Will handle 30 watts audio power. Input 500 or 200 ohm line. Output 16, 8, 5, 3, 1.5 ohms. PA-3	12.50

CLASS A OUTPUT TRANSFORMERS

PA-140	From a triode plate like 864, 27, 112A, 55, 30 to 500, 200 or 50 ohms.	\$6.50
PA-141	From push pull triode plates like 864's, 27's, 112A's 30's to 500, 200 or 50 ohms.	7.50

REACTORS

PA-40	Filter choke. 12 henrys. Max. D.C. 200 MA. Resistance 110 ohms. PA-2	\$4.50
PA-41	Class B input filter choke for 46, 53, and 59 tubes. Max. D.C. 200 MA. Resistance 100 ohms. PA-2	4.50
PA-43	Filter choke. 15 henrys. Max. D.C. 165 MA. Resistance 375 ohms. PA-2	4.50
PA-44	Filter choke. 30 henrys. Max. D.C. 100 MA. Resistance 375 ohms. PA-2	4.00
PA-45	Parallel feed audio choke, 250 henrys. Max. D.C. 15MA. Resistance 4500 ohms. PA-1	4.50
PA-46	Center tapped audio choke for P.P. 245, 59, 2A3 and 250 tubes. Over all inductance 50 henrys. Max. D.C. 125 MA. Resistance 725 ohms. PA-2	5.50
PA-47	Center tapped audio choke for P.P. connection. Overall inductance 300 henrys. Max. D.C. 10 MA. Resistance 4750 ohms. PA-1	5.50
PA-48C	High inductance filter choke 100 hys, maximum DC 50 MA, resistance 2500 ohms. PA-1	4.50

POWER AND FILAMENT TRANSFORMERS

PA-21	Plate transformer for single 45, 47, 59 or class B 79 tubes. Primary 115 V. A.C. 60 cycles. Secondaries: 300-0-300 at 75 MA; 2 1/2 V.C.T. 3 A., 6.3 V.C.T. 2.5 A., 2 1/2 V.C.T. 6 A. PA-3	\$ 8.00
PA-22	Plate transformer for push pull 45, 59, 47, 2A3 tubes, or class B 53's. Pri. 115 V. A.C. 60 cycles. Secondaries: 400-0-400 at 125 MA; 2 1/2 V.C.T. 5 A., 2 1/2 V.C.T. 10 A., 5 V.C.T. 3 A. PA-3	10.00
PA-23	Plate transformer for class B 46 or 59 tubes. Primary 115 V. A. C. 60 cycles. Secondaries: 570-0-570 at 150 MA; 2 1/2 V.C.T. 5 A., 2 1/2 V.C.T. 10 A., 5 V. 3 A. PA-3	12.00
PA-24	Plate transformer for push pull 250 tubes and tuner. Primary 115 V. A.C. 60 cycles. Secondaries: 600-0-600 150 MA; 2 1/2 V.C.T. 10 A., 7 1/2 V.C.T. 2.5 A., 7 1/2 tapped at 5 V. 3 A., 5 V.C.T. 3 A. PA-3	13.50
PA-425	Plate transformer for parallel push pull 45 A prime tubes. Pri. 115 V. A.C. 60 cycles. Secondaries 400-0-400 at 200 MA; 2 1/2 V.C.T. 6 A.; 2 1/2 V.C.T: 10 A., 5 V.C.T. 3 A., 6.3 V.C.T. 3 A., PA-3	12.50
PA-426	Plate transformer for class B 6A6 and A prime 42 tubes. Pri. 115 V.A.C. 60 cycles. Secondaries 400-0-400 at 125MA; 2 1/2 V.C.T. 6 A. 6.3 V.C.T. 4 A. 5 V.C.T. 3 A. PA-3	10.00
PA-428	Power transformer for push pull 6L6 tubes self or fixed bias primary 115 V. AC, 60 cycles. Secondaries 450-0-450 at 250 ma; 6.3 VCT-4 A, 6.3 VCT-3A also tapped for 2 1/2 V-3A; 2 1/2 VCT-3A; 5 VCT-3A. Taps on high voltage winding for bias supply rectifier. PA-4	14.00
PA-25	Secondary. 2 1/2 V.C.T. 10 amps. PA-1	4.50
PA-26	Secondary. 5 V.C.T. 3 amps. PA-1	4.50
PA-27	Secondary. 6.3 V.C.T. 2.5 amps. PA-1	4.50
PA-28	Secondary. 7 1/2 V.C.T. 3 amps. PA-1	4.50

PA SERIES OF CLASS A AND CLASS B OUTPUT TRANSFORMERS

Type	Primary Impedance	Will Match	Secondary Impedance	Case & Price
PA-15	8000 ohms plate to plate.	Class A, in push pull: 250's, 245's, 43's. Single: 211, 843, 842, 205D, 48.	500, 200, 16, 8, 5, 3, 1.5 ohms.	PA-2 7.00
PA-16	5000 ohms plate to plate or 3000 ohms plate to plate.	For 5000 ohms In push pull: self bias 2A3's, W.E. 275A's. Single: 59 triode or 71A. For 3000 ohms In push pull: Fixed bias 2A3's, single W.E. 52A.	500, 200, 16, 8, 5, 3, 1.5 ohms.	PA-2 7.00
PA-17	2500 ohms plate to plate or 1500 ohms plate to plate.	For 2500 ohms Four 2A3's in push pull parallel self bias. For 1500 ohms Four 2A3's in push pull parallel fixed bias.	500, 200, 16, 8, 5, 3, 1.5 ohms.	PA-3 10.00
PA-18	4000 ohms plate to plate.	Four 250's in push pull parallel.	500, 200, 16, 8, 5, 3, 1.5 ohms.	PA-3 10.00
PA-19	10,000 ohms plate to plate or 6000 ohms plate to plate.	For 10000 ohms Class A push pull 59 triodes, 71A's, 6B5's, single 210, 41, 268A, 2A3. Class B push pull 49's, 53's, 79's, 89's. For 6000 ohms Class A push pull 52A's, single 31, 46, 59 pentode. Class B push pull 46's, 59's.	500, 200, 16, 8, 5, 3, 1.5 ohms.	PA-2 7.00
PA-710	20,000 ohms plate to plate or 14,000 ohms plate to plate.	For 20,000 ohms Push pull 210's. For 14,000 ohms Push pull 47's, 2A5's, 42's used as pentodes.	500, 200, 16, 8, 5, 3, 1.5 ohms.	PA-2 7.00
PA-245	6000 ohms plate to plate and 3500 ohms plate to plate.	For 6000 ohms Class A prime 45's self bias. Class B 46's and 59's. Class A WE 252 A's. For 3500 ohms Class A prime 45's fixed bias.	500, 200, 16, 8, 5, 3, 1.5 ohms	PA-2 7.00
PA-445	3000 ohms plate to plate and 1750 ohms plate to plate.	For 3000 ohms Four 45's in push pull parallel A prime self bias. Four WE 252A's in push pull parallel class A. Four 46's or 59's in push pull parallel class B. For 1750 ohms Four 45's in push pull parallel A prime fixed bias.	500, 200, 16, 8, 5, 3, 1.5 ohms	PA-3 12.50
*PA-2L6	6600 ohms plate to plate.	Push pull 6L6's self bias. 35-40 watts output.	500, 200, 16, 8, 5, 3, 1.5 ohms	PA-3 10.00
*PA-4L6	3800 and 3300 ohms plate to plate.	For 3800 ohms. Two 6L6's fixed bias, 60 watts output. For 3300 ohms. Four 6L6's self bias, 60-80 watts output.	500, 200, 16, 8, 5, 3, 1.5 ohms	PA-4 15.00

* These transformers incorporate the new UTC Feedback (patent applied for) Winding, which reduces harmonic distortion, increases available power and reduces plate resistance tremendously. No resistors or condensers are necessary.

BALANCE COILS

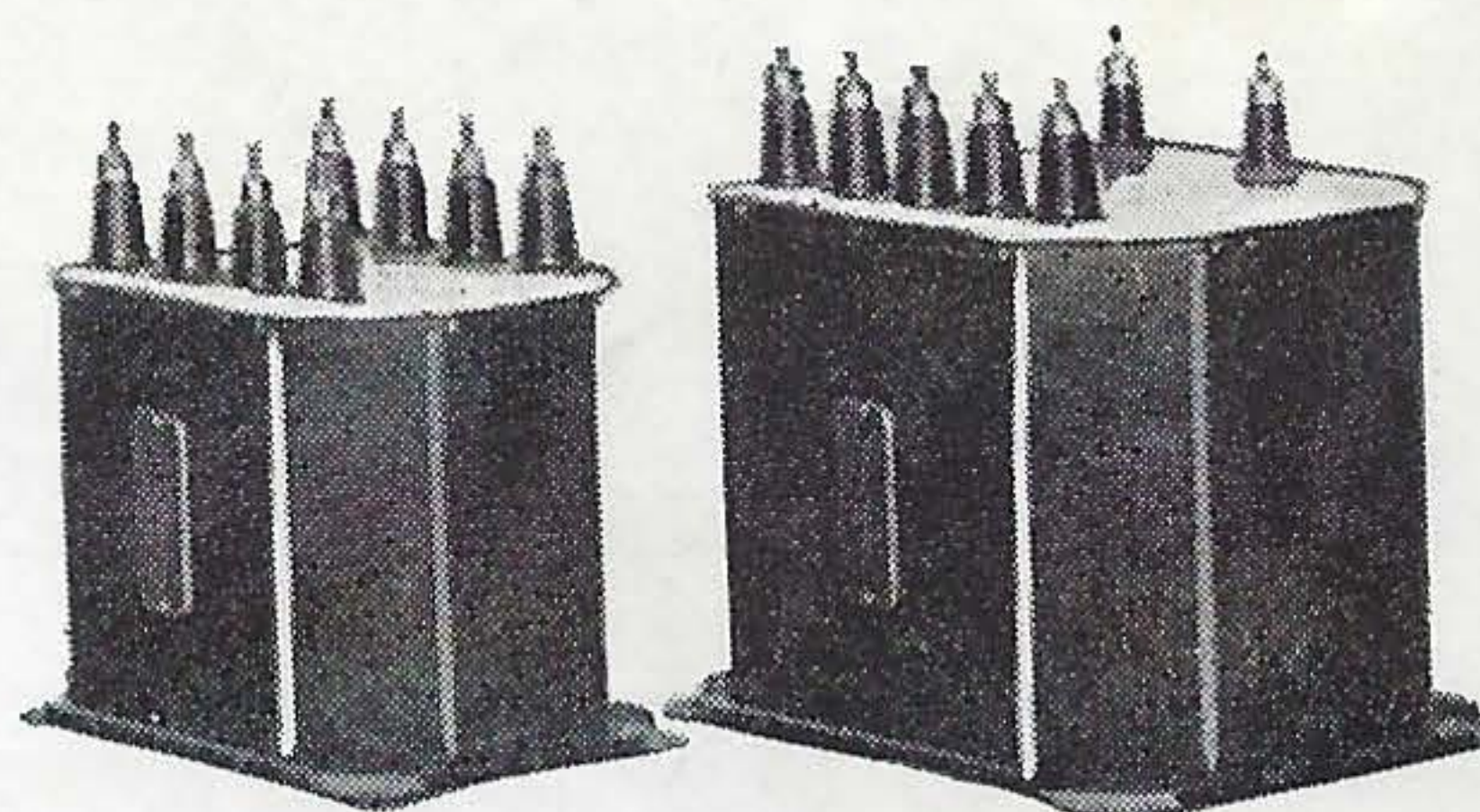
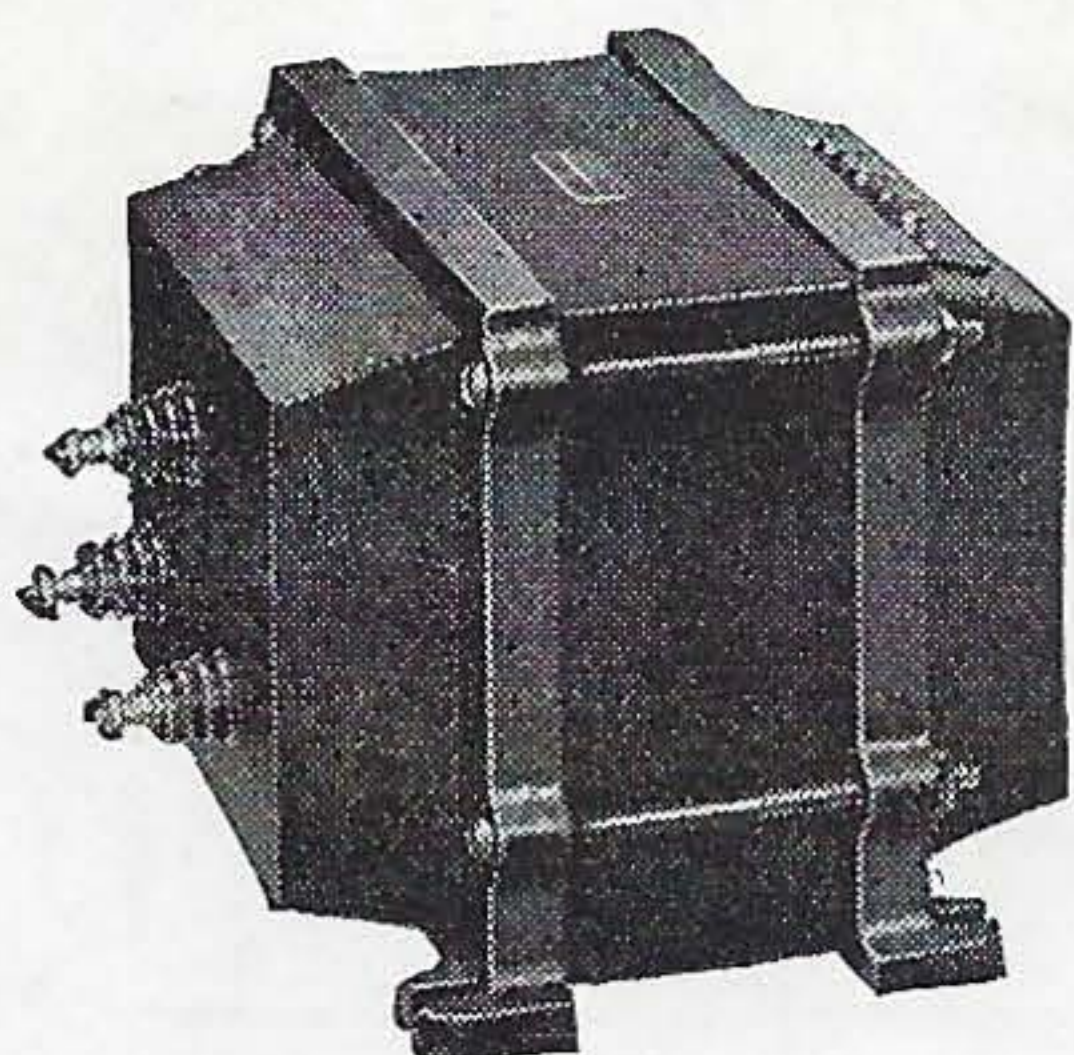
The new UTC development which permits paralleling mercury vapor rectifier tubes with equal current distribution.

PA-10B	Center tapped choke to equalize the load between two 80's, 81's, 82's, 5Z3's, 83's, etc.	PA-2 case	\$5.00
PA-11B	Center tapped choke to equalize the load between two 866's, 866A's.	PA-3 case	10.00
PA-12B	Center tapped choke to equalize the load between two 872's, 872A's.	PA-5 case	25.00

UTC TRANSMITTING COMPONENTS

Mounting Dimensions

PA-1	1-15/16 x 2-7/16
PA-2	2-7/16 x 3-7/8
PA-3	3-1/16 x 4-5/16
PA-4	3-3/4 x 5-7/32
PA-5	4-3/4 x 6-3/8
PA-6	7 x 7



OVERALL DIMENSIONS

	L	W	H
PA-1	2 1/2	3	3
PA-2	3-1/16	4 1/2	3
PA-3	3 5/8	4 7/8	4 1/4
PA-4	6	4 1/2	4 3/4
PA-5	7	5 3/8	5 1/2
PA-6	7 3/4	7 3/4	7 1/2

The transmitting type of UTC Class B audio filter and power components have been developed for and are now widely used by Commercial Telephone, Telegraph, Communication and Broadcast systems. They are particularly well adapted for use in AMATEUR TRANSMITTER applications.

All audio, filter and power units are fully shielded in symmetrically housed cases and present a thoroughly professional appearance when grouped in finished equipment. PA type cases may be mounted with terminals on top or below the chassis. All units are fully impregnated and then sealed in their cases with a special heat dissipating compound.

INPUT TRANSFORMERS CLASS B, A PRIME

PA-49	Push pull 45, 59 or 6L6 plates to push pull 845A prime grids. PA-2	\$7.50
PA-50AX	Single 53, 56, 6C5, 6C6 triode, 6A6 to Class B 53, 6A6 or 6E6 grids or single 89 to Class B 89 grids. PA-1	5.50
PA-51AX	Single 46 or 6L6 to Class B 46 or 59 grids. Single 45, 59, 2A3 or 6L6 to Class B 46 or 59 grids. Single 49 to Class B 49 grids. Single 37, 76, 6C6 or 6C5 triode to Class B 19 or 79 grids. Single 30 to Class B 19 or 79 grids. Single 89 to Class B 19 or 79 grids. Single 2A5, 42, 45 triode plate to A prime 45's 2A5's or 42's, PA-1	5.50
PA-52AX	Push pull, 45, 59, 2A3 or 6L6 plates to 2-46 Class B grids. Push pull 45, 59, 2A3 or 6L6 plates to 4-46 or 59 Class B grids. Push pull 2A3's to 2-841 Class B grids. PA-2	6.50
PA-53AX	Push pull 42, 45, 50, 59, 2A3 or 6L6 plates to two 210, 801, RK-18, 35T or 800 Class B grids. Push pull 2A3 plates to two 838, 203A, 50T, 35T, 211A, 242A, 830B, 800, RK-18, 801 or 210 Class B grids. PA-2	7.50
PA-59AX	500, 200 or 50 ohm line to two 805, 838, 203A, 830B, 800, RK-18, 801 or 210 Class B grids.	7.50
PA-238AX	Push pull parallel 2A3, 45, 50, 59 or 6L6 to four 805, 838, or 203A Class B grids. Push pull parallel 2A3, 45, 50, 59, 6L6 or two 211A, 845 plates to Class B 204A, HF-300 or 849 grids. Push pull parallel 2A3, 45, 50 or two 50T, 211A, 845 plates to Class B 150T or HF-200 Class B grids. PA-3	17.50
PA-512	500, 200 or 50 ohm line to two 150T, HF-300, HF-200, 204A or 849 Class B grids. PA-3	20.00

FILAMENT TRANSFORMERS

Types PA-34 to PA-127 tapped at 105-115, 220, 230 Volts A.C., 50/60 cycles

PA-34	2 1/2 V.C.T. 10 amps for 2-866's—5000 V. insulation—PA2	\$7.50
PA-120	2 1/2 V.C.T. 10 amps for 2-866's—10,000 V. insulation—PA-3	9.00
PA-121	5 V.C.T. 20 amps for 2-872's—10,000 V. insulation—PA-3	14.00
PA-122	7 1/2 V.C.T. at 6.5 amps for 2-800's, RK-18's, 825's, 210's. 5000 Volt insulation—PA-3	11.00
PA-123	2-7 1/2 V.C.T. 6.5 amp windings for 800's, RK-18's, 825's, 210's—5000 V. insulation—PA-3	14.50
PA-124	10 V.C.T. 7 amps for 2-203 A's, 242 A's, 211's, 845's, 852's, 860's, 217 C's. 10,000 V. insulation—PA-3	12.00
PA-126	2-14 V.C.T. 12.5 amp windings tapped at 11 or 10 volts. 5000 V. insulation—for 04 A's, 49's, HF-200's, HF-300's or F100 A's—PA-4	20.00
PA-127	2 1/2 V.C.T. at 10 amps 10,000 volt insulation, 2-10 V.C.T. 3.5 amp windings. 5000 V. insulation—PA-3	15.00
PA-128	5 V.C.T. 12 amps for 3-35T's, 2-50T's or 1-150 T. 7000 V. insulation. PA-3	10.00
PA-129	7 1/2 V.C.T. 23 amps for 2-300T's or other 7 1/2 volt tubes. PA-3	12.50
PA-29	Secondaries. 2 1/2 V.C.T. 5 A., 2 1/2 V.C.T. 5 A., 5 V.C.T. 3 A. PA-2	6.25
PA-30	Secondaries. 2 1/2 V.C.T. 5 A., 7 1/2 V.C.T. 2.5 A., 7 1/2 V.C.T. 2.5 A. PA-2	6.75
PA-31	Secondaries. 2 1/2 V.C.T. 5 A., 5 V.C.T. 3 A., 7 1/2 V.C.T. 2 1/2 A. PA-2	6.75
PA-32	Secondaries. 5 V.C.T. 3 A., 5 V.C.T. 3 A., 5 V.C.T. 3 A. PA-2	6.75
PA-33	Secondaries. 5 V.C.T. 3 A., 7 1/2 V.C.T. 2 1/2 A., 7 1/2 V.C.T. 2 1/2 A. PA-2	6.75

NOTE: Types PA-29, 30, 31, 32, 33 are insulated for 2000 volts. Primaries designed only for 115 volts A.C., 50/60 cycles.

VARIMATCH MODULATION TRANSFORMERS

The UTC Varimatch transformer is a new type of modulation transformer so designed that a very wide range of impedance matching combinations is obtainable (See chart). In addition to taking care of practically every modulator problem, the value of these units cannot be overemphasized from the angle of universal applications when tube types or operating conditions are changed. Secondaries are designed to carry class C plate current.

The Varimatch Transformer Never Becomes Obsolete

Pri. Ohms P to P	SECONDARY RF LOAD IMPEDANCES AVAILABLE											AUDIO LOAD IMPEDANCE	
2000	1070	1950	2150	3620	3920	4300	6350	6550	7900	8600	11400	200	350
3000	1620	2950	3240	5500	5900	6500	9400	10000	11800	13000	17000	300	520
4000	1380	1850	2160	2850	3450	4300	5500	7300	8650	12500	17400	250	400
5000	1730	2300	2700	3500	4300	5400	7000	9150	10800	15700	21600	300	500
6000	1070	2140	2180	2750	3620	4250	4300	5150	6350	8300	8600	200	370
7000	1250	2400	2500	3200	4280	5000	5050	6000	7300	9700	10000	230	430
8000	1440	2760	2900	3700	4900	5650	5800	6900	8400	10000	12000	270	500
9000	1620	2050	3100	3240	3900	4150	6200	6500	7750	9400	12500	300	550
10000	1800	2300	3500	4300	4600	6100	6900	7100	8600	10500	14000	330	600
12000	2070	2150	2750	4250	4320	5150	7250	8300	8700	12500	17400	370	400
14000	2440	3200	4900	6000	9700							430	
16000	2780	3700	5600	6900	11000							500	
18000	3140	4150	6300	7750	12500							550	
500*	1070	1950	2150	3620	3920	4300	6350	6550	7900	8600	11400		

* In some cases it is desired to match an RF load to the 500 Ohm output of a PA amplifier. The terminal arrangement noted will take care of this application.

† These impedances are suitable for PA applications. If a monitor speaker is desired, proper distribution of power is obtained by operating this low impedance into the high impedance primary of the speaker transformer.

Intermediate P.P. primary impedance values available in addition to those shown.

- VM-1 Will handle any power tubes to modulate a 20 to 60 watt Class C input stage..... \$ 8.00
- VM-2 Will handle any power tubes to modulate a 40 to 120 watt Class C input stage..... 12.50
- VM-3 Will handle any power tubes to modulate a 100 to 250 watt Class C input stage..... 20.00
- VM-4 Will handle any power tubes to modulate a 200 to 600 watt Class C input stage..... 32.50
- VM-5 Will handle any power tubes to modulate a 450 watt to 1 KW plus, Class C input stage..... 70.00

UNIVERSAL CLASS A, CLASS B OUTPUT CHOKES

- HUC-20 Will handle 20 watts audio power. It can be used with Class B 46's, 59's, 53, 6A6, 79 etc.; or class A 2A3's, 250's, 210's, Class A prime 42's, 45's etc. PA-2 \$ 7.00
- HUC-50 Will handle 50 watts audio power. Suitable for use with class B 210's, 801's, 830's, 841's, push pull parallel 46's, 59's, 6A6's, push pull parallel 45's A prime, push pull parallel 250's, 2A3's etc. PA-3 12.50
- HUC-100 Will handle 100 watts audio power. Suitable for use with class B 800's, 211E's, A prime 845's, 284A's, etc. PA-4 20.00
- HUC-200 Will handle 200 watts audio power. Suitable for use with class B 203's, 830B's, HK354's, single Eimac 150T, push pull parallel A prime 845's, 284A's, push pull parallel 800's etc. PA-5 32.50
- HUC-500 Will handle 500 watts audio power. Suitable for class B 204's, A prime 849's, Eimac 150T's, push pull 212D's in A prime, etc. UTS Case 80.00

CLASS B OUTPUT TRANSFORMERS FOR R.F. SERVICE

- PA-801 Primary tapped 10,000 ohms or 8,000 ohms for 801's, 210's, 1602's, RK-18's. Secondary 7500, 6250, 4500, 3250 ohms. PA-3 \$12.50
- PA-800 Primary 12,500 ohms for 800's, RK-18's, 35T's. Secondary 10,000, 7500, 5000, 3500 ohms. PA-4 18.00
- PA-830 Primary 7600 ohms for 838's or 830B's with plate voltage of 1000 V. Secondary 10,000, 2500 ohms. PA-5 22.50
- PA-838 Primary tapped 11,200 ohms or 9000 ohms for 838's, 203A's, 242A's, 211's, 845's A.B. Impedance based on 1250 V. Plate Voltage. Secondary 10,000, 2,500 ohms. PA-5. 25.00
- PA-805 Primary 8200 ohms for 204A's or HF-300's with 1750 V. plate voltage or 805's with plate voltage 1500 V. Secondary 6250, 4000, 3000. PA-6 50.00
- PA-850 Primary 11,000 ohms for 150 T's or HF-200's operating with 2000 V. plate voltage. Secondary 9000 6000, 4500 ohms. PA-6 50.00
- PA-438 Primary tapped 5600 ohms or 4500 ohms for push pull parallel tubes with 1250 V. plate voltage. 838's, 203A's, 242A's, 211A's, 845's AB., Secondary 6000, 4000, 3000 ohms. PA-6 50.00

OUTPUT TRANSFORMERS FOR SEPARATE PLATE AND SCREEN MODULATION OF PENTODES

These new modulation transformers are designed for maximum efficiency with the new RF pentodes. Separate secondary windings are provided thus allowing full audio output and obviating the wasteful losses of a screen dropping resistor.

- PA-503 Class B 6A6 or 53 plates to a single RK-23 or 25 for separate plate and screen modulation. PA-2 \$7.00
- PA-504 Class B 801's or 210's to a single 804 or RK-20 for separate plate and screen modulation. PA-3 12.50
- PA-505 Class B 800's or 35T's to a single 803 or RK-28 for separate plate and screen modulation. PA-4 18.00

UTC TRANSMITTING POWER SUPPLY COMPONENTS

PLATE TRANSFORMERS

Primary 105, 115, 220, 230 volts A.C. 50/60 cycles

PA-110	515 or 625 each side of center at 200 MA 400 VDC or 500 VDC.	PA-3	\$10.00
PA-111	750 or 950 each side of center at 350 MA; DC. voltage 600 or 750.	PA-4	18.00
PA-112	1250 or 1500 each side of center at 500 MA; DC. voltage 1050 or 1250.	PA-6	35.00
PA-113	1750 or 2100 each side of center at 500 MA; DC. voltage 1500 or 1750.	PA-6	47.50
PA-114	1750, 2350, 3000 or 3500 each side of center at 500 MA; DC. voltage 1500, 2000, 2500 or 3000, UTS mtg.		76.00
PA-154	3500, 4000 each side of center at 500 MA 3050 VDC or 3500 VDC. UTS case		100.00
PA-115	C bias plate transformer for class B 203A's, 830B's, 800's, or 210's using one or two 82 rectifiers.	PA-3	10.00
PA-116	1250 or 1500 each side of center at 300 MA; DC. voltage 1050 or 1250.	PA-5	25.00
PA-117	3500 or 3000 each side of center at 1 ampere. 2620 VDC or 3050 VDC. UTS case		115.00
PA-118	1750 or 2400 each side of center at 325 MA; DC. voltage 1500 or 2000.	PA-6 mtg.	39.00
PA-119	1500 or 1750 each side of center at 1 amp. DC voltage 1250 or 1500. UTS case		76.00

NOTE: Operating the above transformers on 115 volt line the DC output voltage can be reduced to half of normal value, for reduced power operation, by switching to the 220 volt tap.

CLASS B INPUT SWINGING CHOKES*

Type	Swinging Action	Current Range	Maximum DC Oper. Voltage	Ohmic Resistance	List Price	Case
PA-101	5 to 25 henrys.	15 to 150 MA	450	115	\$5.00	PA-2
PA-103	5 to 25 henrys.	20 to 200 MA	600	110	8.00	PA-3
PA-105	6 to 30 henrys	25 to 250 MA	1300	90	12.00	PA-4
PA-107	20 to 100 henrys	25 MA to 250 MA	2600	240	20.00	PA-5
PA-109	5 to 25 henrys	75 to 500 MA	1300	60	20.00	PA-5
PA-1C	5 to 25 henrys	100 to 1000 MA	4000	50	35.00	UTS

TRAP RESONANT SMOOTHING CHOKES*

Smoothing Chokes have an off center tap for hum bucking arrangements.

Type	Inductance	DC Output	Ohmic Resistance	List Price	Case
PA-100	8 henrys	150 MA	115	\$5.00	PA-2
PA-102	10 henrys	200 MA	110	8.00	PA-3
PA-104	12 henrys	250 MA	90	12.00	PA-4
PA-106	35 henrys	250 MA	240	20.00	PA-5
PA-108	10 henrys	500 MA	60	20.00	PA-5
PA-1S	10 henrys	1000 MA	50	35.00	UTS

* Test voltage is twice maximum peak voltage plus 1000 volts.

MODULATION CHOKES

Type	Inductance	D.C. Output	Ohmic Resistance	List Price	Case
150	30 Henrys	125 MA	550	12.50	PA-3
151	30 Henrys	200 MA	425	20.00	PA-5
152	30 Henrys	400 MA	300	32.50	PA-5

UTC CONTROLLED CARRIER COMPONENTS

The UTC Variactor controlled carrier modulation system:

- Increases blanket DX coverage many times.
- Almost doubles Class C tube ratings and will double to quadruple Class B linear tube ratings.
- Allows power consumption saving of 50% or over.
- Reduces interference between stations tremendously.
- Increases Fidelity.

UTC bulletin 11CC gives full details on this new system of transmission.

The Essential Variactor Unit Required for Controlled Carrier Modulation Is Now Available in Six Types to Take Care of Transmitters From 25 to 800 Watts Input.

CV VARIATORS FOR CONTROLLED CARRIER CLASS C

	List Price
CV-1 25 to 50 watts maximum input controlled class C	\$ 7.50
CV-2 50 to 100 watts maximum input controlled class C	10.00
CV-3 100 to 170 watts maximum input controlled class C	15.00
CV-4 170 to 300 watts maximum input controlled class C	20.00
CV-5 300 to 500 watts maximum input controlled class C	25.00
CV-6 500 to 800 watts maximum input controlled class C	33.00

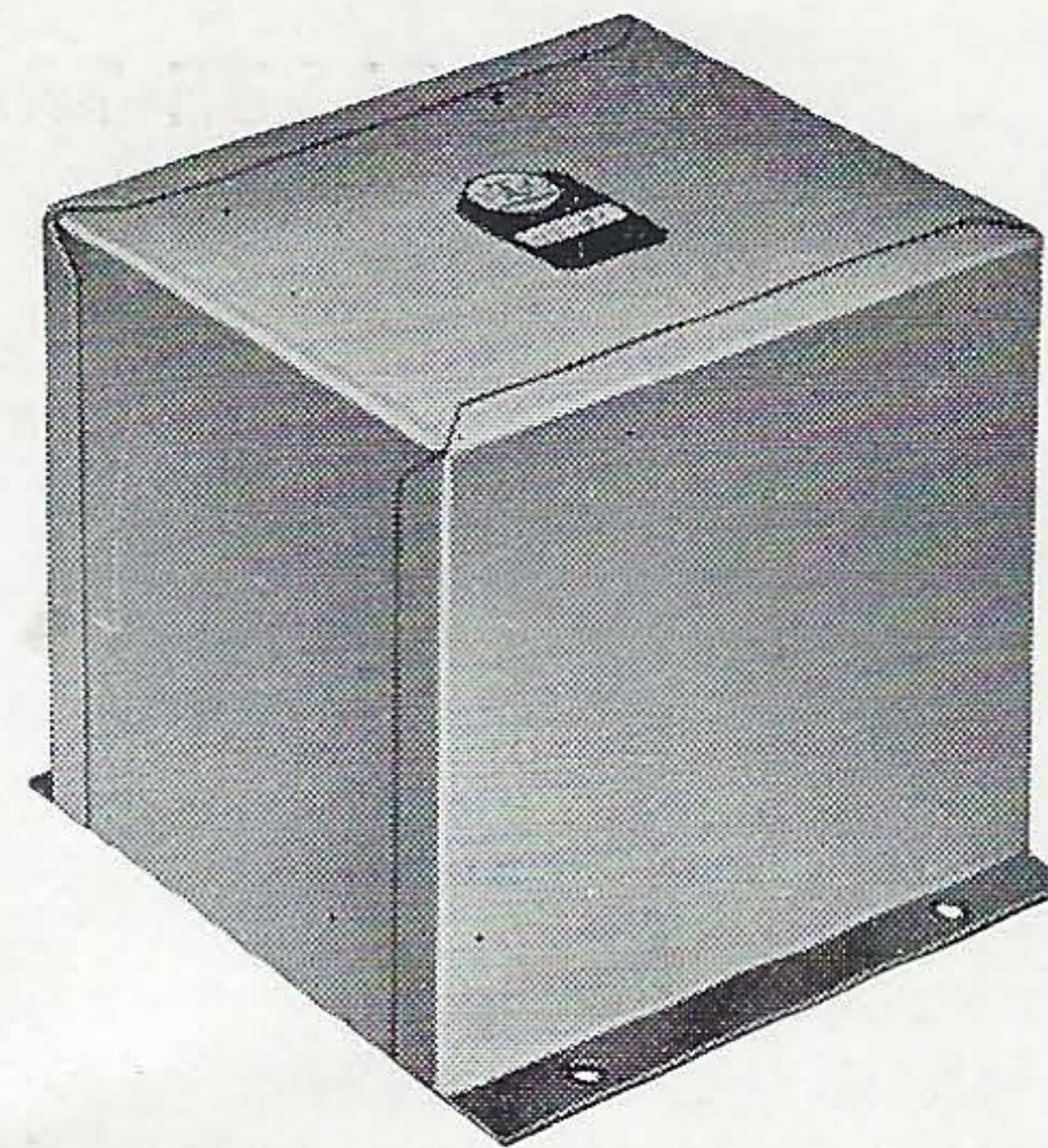
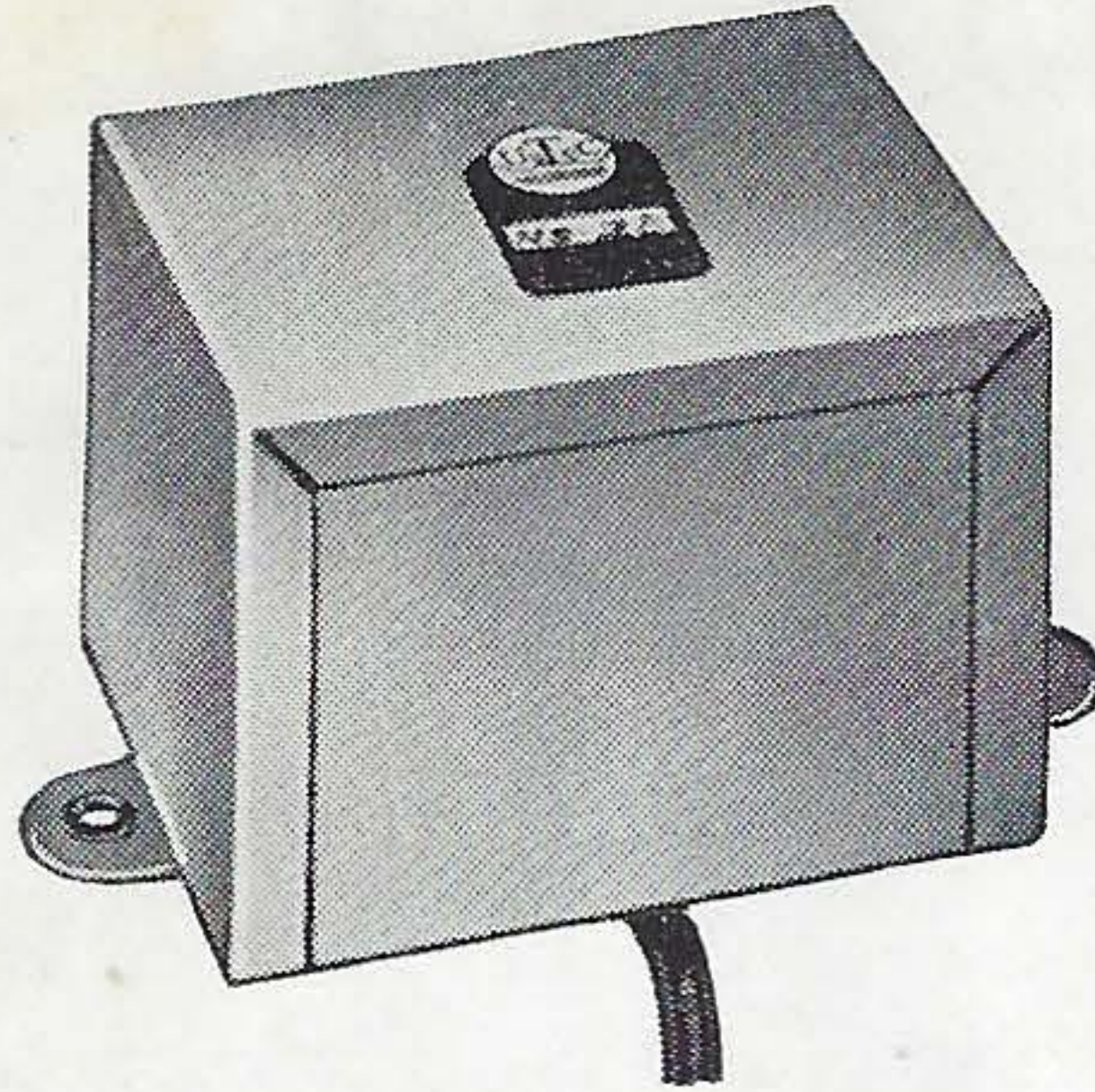
AV AUTOTRANSFORMERS FOR CV VARIATORS—115/170 VOLTS AC

	List
AV-1 for use with CV-1	\$ 5.00
AV-2 for use with CV-2	6.00
AV-3 for use with CV-3	7.00
AV-4 for use with CV-4	9.00
AV-5 for use with CV-5	12.00
AV-6 for use with CV-6	15.00

UTC CHROMSHIELD Audio Filter and Power Components

OVERALL DIMENSIONS

L	W	H
3	1 1/2	1-11/16
3 3/8	1 3/4	2-1/16
3 3/4	2	2 1/4
4 1/8	2 1/8	2 3/4
5	2 3/4	3 3/8
6	3 3/4	4 1/4
4 3/4	4 5/8	4 1/2



Mounting Dimensions

C-1	2-7/16
C-2	2-7/8
C-3	3-1/4
C-4	3-5/8
C-5	1-15/16 x 4-1/2
C-6	1 1/2 x 5 3/4
C-7	3-7/16 x 4-3/16

CLASS A INPUT TRANSFORMERS

CS-1	1 plate to 1 grid. 3 1/2:1 ratio. C-2 mtg.	\$2.35
CS-2	1 plate to 2 grids, split secondary. 2:1 ratio. C-2 mtg.	2.50
CS-3	Push pull plates to push pull grids. 1.8:1 ratio. C-3 mtg.	2.75
CS-4	Low or high impedance pickup to grid. Pri. 500, 1000, 2000, 4000 ohms. C-2 mtg.	3.00
CS-5	Single or double button mike to 1 grid. C-2 mtg.	2.50
CS-6	Single or double button mike to 2 grids. C-2 mtg.	3.00
CS-7	Ribbon velocity mike to grid. C-2 mtg.	3.50
CS-10	Single plate and carbon mike to one or two grids. C-2 mtg.	3.50
CS-1P	Single power detector plate to single grid. 3:1 ratio. C-4 mtg.	3.50
CS-2P	Single power detector plate to push pull grids. 1 1/2:1 ratio. C-4 mtg.	3.75
CS-2W	Single plate to push pull grids. Wide range response, 1:1 ratio. C-3 mtg.	3.50

MATCHING TRANSFORMERS

CS-8	Ribbon velocity mike to 500 or 200 ohms. C-2 mtg.	3.50
CS-9	Mixing carbon mike, 500 or 200 ohm line to 500 or 200 ohm line. C-3 mtg.	3.50
CS-26	Single 26, 56, 27, 55, 77, 6C5 triode or 864 plate to 500 or 200 ohms. C-2 mtg.	3.00
CS-27	Push pull 26, 56, 27, 55, 77, 6C5 triodes or 864 plates to 500 or 200 ohms. C-3 mtg.	3.50
CS-28	Line to speaker audio matching transformer. Input 4000 ohms and 500 ohms. Output 15, 8, 4, and 2 ohms. Will handle up to 15 watts. C-4 mtg.	4.50
CS-282	Line to speaker audio matching transformer. Input 2000, 500 or 200 ohms; output 15, 8, 4, 2 ohms. Will handle 30 watts. C-5 mtg.	7.00

A PRIME AND CLASS B INPUT TRANSFORMERS

CS-29	Driver plate to 53, 6A6, 49, 79 or 89 grids C-4 mtg.	\$2.75
CS-30	Driver 46 or 59 plate to 46 or 59 grids. C-4 mtg.	2.75
CS-291	Single 2A3, 45, 42, 2A5, 6F6, 6D5 triode plate to push pull A prime 2A3, 45, 42, 2A5, 6F6, 6D5 grids. C-3 mtg.	3.75
CS-292	Push pull 53 or 6A6 triode plates to two or four class B 53 or 6A6 grids. C-3 mtg.	3.25
CS-293	Push pull triode 56, 37, 57, 77, 6C6, 6C5 plates to two or four A prime 45, 2A3, 42, 2A5, 6F6, 6D5 6L6 grids. C-3 mtg.	3.50
CS-294	Push pull 2A3 or 45 plates to two class B 210 or 801 grids. C-4 mtg.	5.00
CS-295	Push pull 2A3 or 59 plates to four 46 or 59 class B grids. C-4 mtg.	5.00

OUTPUT TO VOICE COIL

CS-11	Single 250, 245, 59, 6F6 triode, 71A to 15, 8, 4, or 2 ohm voice coil. C-3 mtg.	\$2.50
CS-12	Single 18, 20, 33, 41, 42, 47, 2A5, 59, or 6F6 metal pentode, and 89 or 6D5 triode plate to 15, 8, 4, or 2 ohm voice coil. C-3 mtg.	2.50
CS-13	Push pull 250, 245, 59, 6F6 triode or 71A plates to 15, 8, 4, or 2 ohm voice coil. C-4 mtg.	3.00
CS-14	Push pull 18, 20, 33, 41, 42, 47, 2A5, 59, 6F6 metal pentode, 89, or 6D5 triode plates, to 15, 8, 4, or 2 ohm voice coil. C-4 mtg.	3.00
CS-15	Push pull 2A3 or 6D5 plates to 15, 8, 4, or 2 ohm voice coil. C-4 mtg.	3.00
CS-16	Push pull 48 plates to 15, 8, 4, or 2 ohm voice coil. C-4 mtg.	3.00
CS-31	Push pull 6B5, 6A6, 53, 49, 79, 89 plates or 6F6 metal pentodes or triodes self bias to 15, 8, 4, or 2 ohms. C-4 mtg.	3.25
CS-32	Push pull 46, 59, 6F6 triode fixed bias plates to 15, 8, 4, or 2 ohms. C-4 mtg.	3.25

OUTPUT TO LINE AND VOICE COIL

CS-17	Single 250, 245, 59, 6F6 triode, 71A to 500, 15, 8, 4, or 2 ohms. C-3 mtg.	3.00
CS-18	Single 18, 20, 41, 47, 2A5, 59, 6F6 pentode, or 89 6D5 triode plate to 500, 15, 8, 4, or 2 ohms. C-3 mtg.	3.00
CS-19	Push pull 250, 245, 59, 6F6 triode or 71A plates to 500, 15, 8, 4, or 2 ohms. C-4 mtg.	3.50
CS-20	Push pull 18, 20, 33, 41, 42, 2A5, 59, 6F6 pentode, 89 triode plates to 500, 15, 8, 4, or 2 ohms. C-4 mtg.	3.50
CS-21	Push pull 2A3, 6D5 plates to 500, 15, 8, 4, or 2 ohms. C-4 mtg.	3.50
CS-36	Push pull 46, 59, 6F6 triode fixed bias plates to 500, 15, 8, 4, or 2 ohms. C-4 mtg.	3.75

CS-35	Push pull 6A6, 6B5, 53, 49, 79, 89 plates or 6F6 metal pentodes or triodes self bias to 500, 15, 8, 4, or 2 ohms. C-4 mtg.	3.75
CS-341A	Push pull parallel class B 53, 6A6, 6B5, 6F6 metal pentodes or triodes self bias to 500, 15, 8, 4, 2 ohms. C-5 mtg.	7.50
CS-452	Push pull parallel 2A3 or 45 A prime plates to 500, 15, 8, 4, 2 ohms. C-5 mtg.	7.50
CS-456	Push pull self bias 6L6's AB to 500, 15, 8, 4, 2, ohms. C-5 mtg.	7.50
CS-457	Push pull fixed bias or four self biased 6L6's, AB to 500, 15, 8, 4, 2 ohms.	10.00

OUTPUT TO RF LOADS

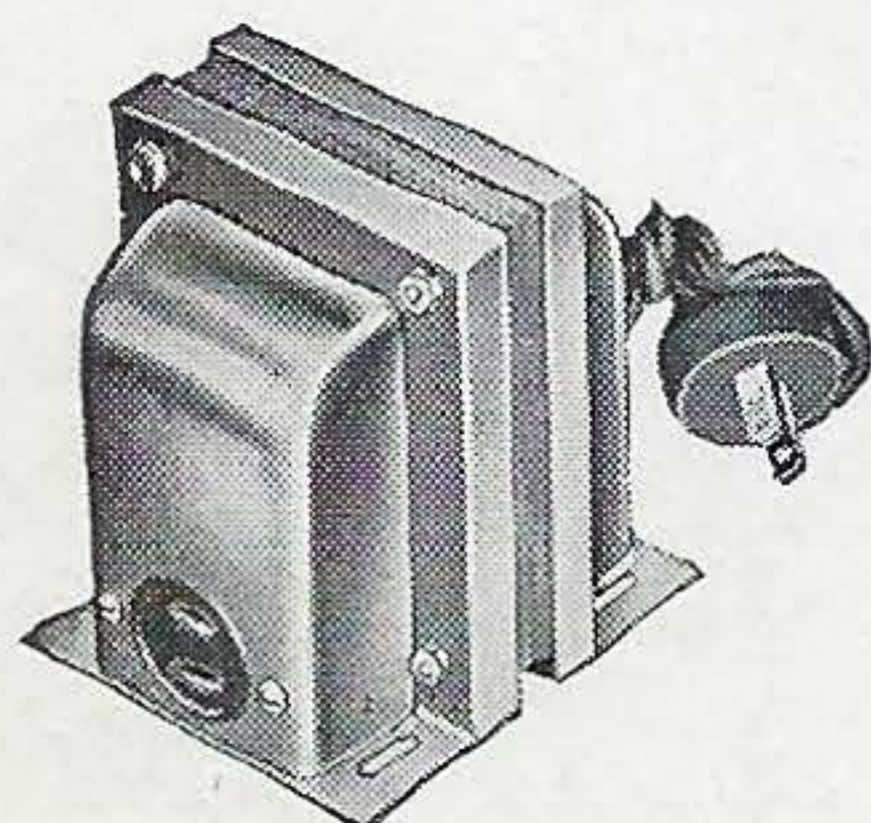
CS-22	Single 250, 245, 59, 6F6 triode, 71A to 4000 or 2000 ohms. C-4 mtg.	2.75
CS-23	Single 18, 20, 33, 41, 42, 2A5, 59, 6F6 pentode or 89 triode plate to 4000 or 2000 ohms. C-3 mtg.	2.75
CS-24	Push pull 250, 245, 59, 6F6 triode, 71A to 4000 or 2000 ohms. C-4 mtg.	3.25
CS-25	Push pull 18, 20, 33, 41, 42, 47, 2A5, 59, 6F6 pentode or 89 triode plates to 4000 or 2000 ohms. C-4 mtg.	3.25
CS-33	Push pull 6A6, 6B5, 53, 49, 79, 89 plates or 6F6 metal pentodes or triodes self bias to 5000 or 3500 ohms. C-4 mtg.	3.50
CS-34	Push pull 46, 59, 6F6 triode fixed bias plates to 5000 or 3500 ohms. C-4 mtg.	3.50
CS-453	Push pull 2A3 or 45 A prime plates to 5000, 7500, 10000 ohms. C-5 mtg.	5.00
CS-454	Class B 210 plates to 5000, 7500, 10,000 ohms. C-6 mtg.	8.50
CS-455	Push pull parallel 2A3 or 45 A prime plates to 5000, 7500, 10,000 ohms. C-5 mtg.	7.50

Humidity proof Chromshield Transceiver audio transformers. All Chromshield transceiver units fit in the C1 case.

CS-101	Interstage audio 4:1 ratio	\$1.95
CS-102	Single plate to 2 grids, 2 1/2:1 ratio	2.00
CS-103	Single or double button mike to 1 grid.	2.00
CS-104	Single plate and carbon mike to 1 grid.	2.25
CS-105	Velocity mike to 500 or 200 ohms	2.25
CS-106	Single 56, 6C6, 6C5, 864 plate to 500 or 200 ohms	2.25
CS-107	Driver plate to 19, 49, 79, 89 grids	2.25
CS-108	Class B 19, 49, 79, 89 plates to 5000 or 3500 ohms.	2.75

FILTER AND AUDIO CHOKES, FILAMENT TRANSFORMERS

CS-37	Filter choke. 25 henrys 30 MA; resistance 900 ohms. C-2 mtg.	\$2.00
CS-38	Filter choke. 15 henrys 60 MA; resistance 240 ohms. C-2 mtg.	2.00
CS-39	Filter choke. 20 henrys 90 MA; resistance 400 ohms. C-4 mtg.	2.50
CS-40	Filter choke. 30 henrys 75 MA; resistance 350 ohms. C-4 mtg.	3.00
CS-41	Filter choke. 10 henrys 150 MA; 95 ohms. C-4 mtg.	3.00
CS-42	Class B input choke. Max. D.C. 175 MA. C-4 mtg.	3.00
CS-43	Center tapped audio for push pull triode plates. Resistance 12,000 ohms. C-3 mtg.	3.50
CS-44	Detector plate shunt choke. Max. D.C. 3 MA. C-2 mtg.	2.25
CS-45	Pri. 115 A.C. Sec. 2 1/2 V.C.T. 6 A. C-2 mtg.	1.75
CS-46	Pri. 115 A.C. Sec. 6.3 V.C.T. 3 A. C-2 mtg.	2.25
CS-47	Pri. 115 A.C. Sec. 2 1/2 V.C.T. 12A. C-3 mtg.	2.25
CS-48	Pri. 115 A.C. Sec. 5 V. 4 A. C-3 mtg.	2.25
CS-49	Pri. 115 A.C. Sec. 7 1/2 V.C.T. 3A. C-3 mtg.	2.25
CS-50	Plate Transformer for small power tubes, Class A and B. Pri. 115 V.A.C. 60 cycles. Secondaries: 300-0-300 at 75 MA; 5 V.C.T. 3 A., 6.3 V.C.T. 2 1/2 A., 2 1/2 V.C.T. 6 A. C-7 mtg.	7.00
CS-51	Plate transformer for push pull power tubes Class A and B. Pri. 115 V.A.C. 60 cycles. Secondaries: 400-0-400 at 125 MA; 2 1/2 V.C.T. 5 A., 2 1/2 V.C.T. 10 A., 5 V.C.T. 3 A. C-7 mtg.	9.00
CS-52	Plate transformer for push pull 6 volt power tubes class A and B. Pri. 115 V.A.C. 50/60 cycles. Secondaries: 400-0-400 at 125 MA; 6.3 V.C.T. 5A. 2 1/2 V.C.T. 6A. 5 V.C.T. 3A. C-7 mtg.	8.50
UH-3	For eight to ten tube sets. Overall dimensions 3 3/4 x 3 1/8. Mounting dimensions 3 1/8 x 2 1/2. Secondaries: 750 V.C.T. 100 MA, 6.3 V.C.T. 4 amps, 2 1/2 V.C.T. 4 amps, 5 volts 3 amps.	5.00
UM-7	For receivers and power amplifiers using 2A3, 46, or 6L6 power tubes. Overall dimensions 4 5/8 x 3 3/4. Mounting dimensions 3 3/4 x 3. Secondaries: 850 V.C.T. 175 MA, 5 volts 3 amps. 2 1/2 V.C.T. 5 amps, 2 1/2 V.C.T. 14 amps.	7.50
UM-8	For high power receivers and amplifiers using class B 46 and 59 power tubes. Overall dimensions 4 5/8 x 3 3/4. Mounting dimensions 3 3/4 x 3. Secondaries: 1100 V.C.T. 175 MA, 5 volts 3 amps, 2 1/2 V.C.T. 5 amps, 2 1/2 V.C.T. 10 amps.	8.75



CHROMSHIELD STEP DOWN TRANSFORMERS 220-240 TO 110-120 VOLTS, 50/60 CYCLES

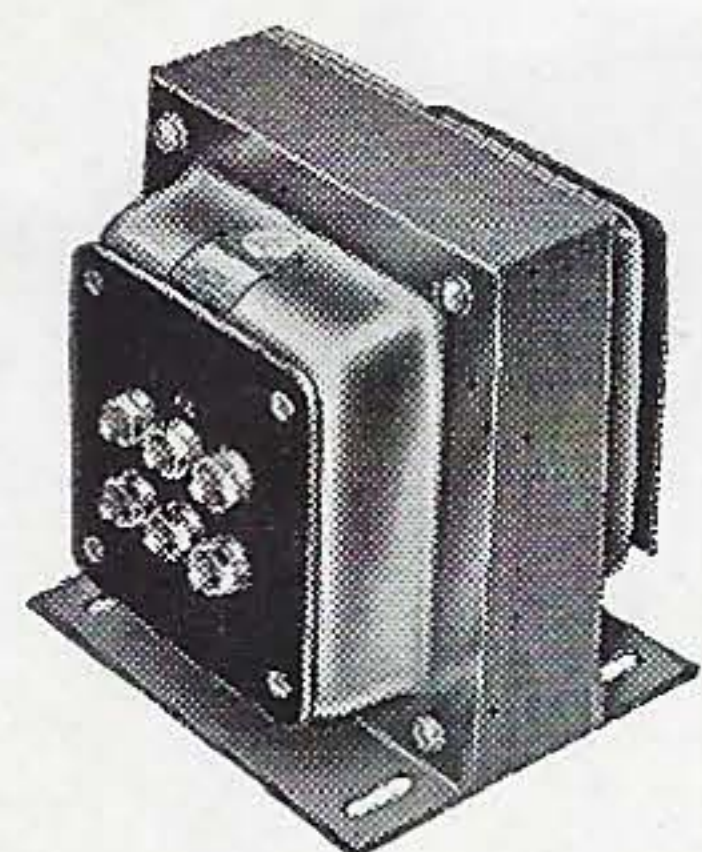
CS-120	85 Watt capacity	\$ 4.50
CS-121	125 Watt capacity	5.50
CS-122	175 Watt capacity	6.50
CS-123	250 Watt capacity	7.50

CHROMSHIELD POWER SUPPLY COMPONENTS

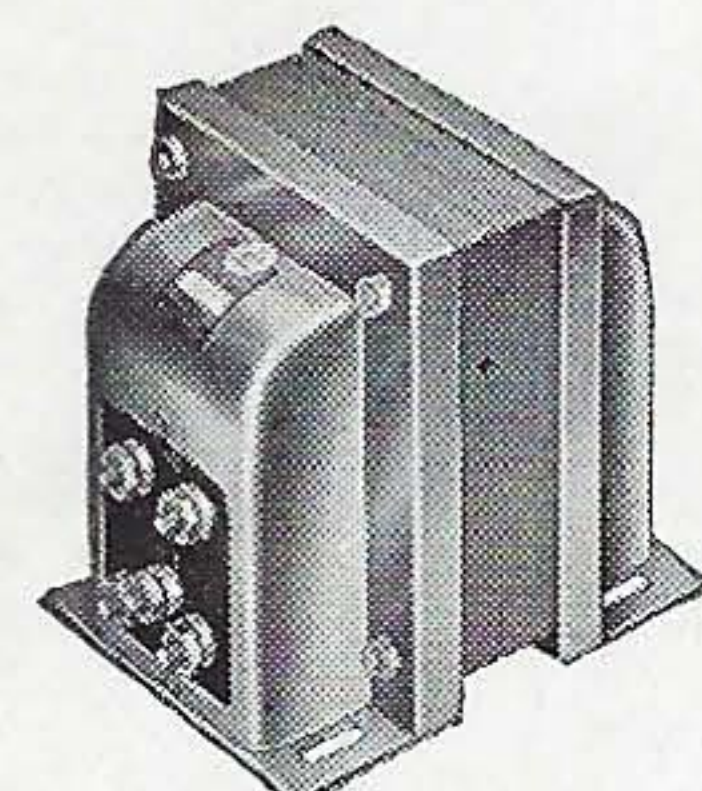
PLATE TRANSFORMERS, PRIMARY 115 VOLTS A.C. 50/60 CYCLES

CS-200	450 each side of center at 150 MA; 5V-3A; 2½ V-10A. CV mtg.	\$ 6.50
CS-201	500 each side of center at 200 MA; 2½ V.C.T. 14 A; 5 V.C.T. 3 A; CD mtg.	8.00
CS-202	600 each side of center at 200 MA; 2½ V-10A; 7½ V-3A; 5V-3A. CD mtg.	10.00
CS-203	800 each side of center at 150 MA; 660 V. P.S. CD mtg.	7.50
CS-204	800 each side of center at 250 MA; 650 V. DC. CD. mtg.	11.00
CS-205	750 or 950 each side of center at 350 MA; DC. voltage 600 or 750. PA-4 mtg.	17.00
CS-206	1250 or 1500 each side of center at 500 MA; DC. voltage 1050 or 1250. PA-6 mtg.	32.00
CS-207	1750 or 2100 each side of center at 500 MA; DC. voltage 1500 or 1750. PA-6 mtg.	43.50
CS-208	1750, 2350, 3000 or 3500 each side of center at 500 MA; DC. voltage 1500, 2000, 2500 or 3000.	65.00
CS-209	1250 or 1500 each side of center at 200 MA; DC. voltage 1050 or 1250. PA-5 mtg.	20.00
CS-210	1750 or 2400 each side of center at 325 MA; DC. voltage 1500 or 2000. PA-6 mtg.	35.00
CS-212	475 each side of center at 500 MA; 5 V.C.T. 6A, for 4-6L6's fixed bias etc. DC. voltage 400 CD mtg.	14.00
CS-213	1250 or 1500 each side of center at 300 MA; DC. voltage 1050 or 1250. PA-5 mtg.	23.00
CS-214	1500 or 1750 each side of center at 1 amp. DC. voltage 1250 or 1500. UTS mtg.	65.00

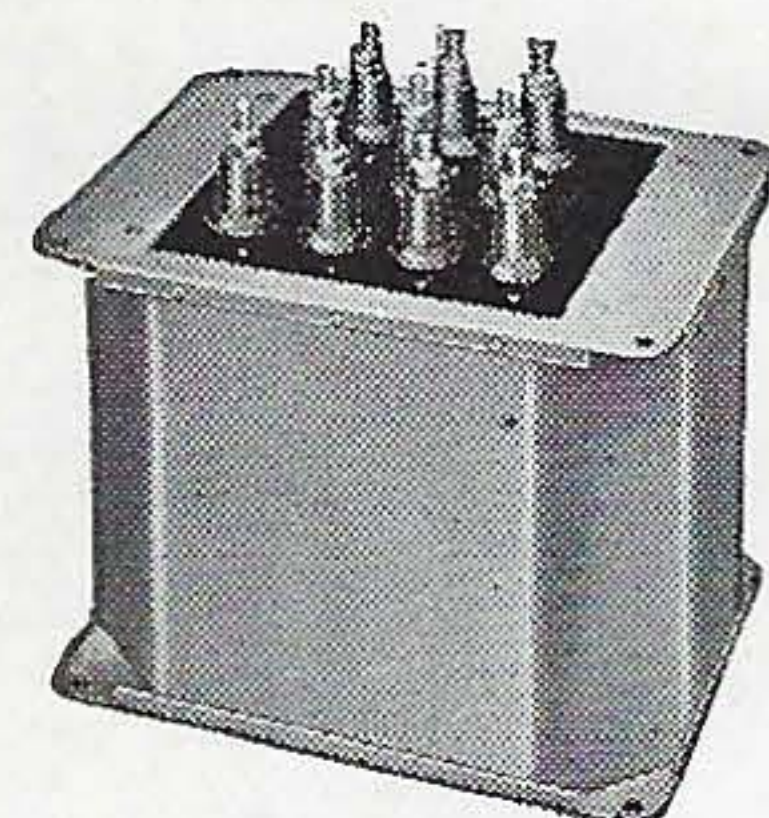
Note: Using a bridge type rectifier DC. voltages indicated above are doubled but permissible current drain is reduced one-third.



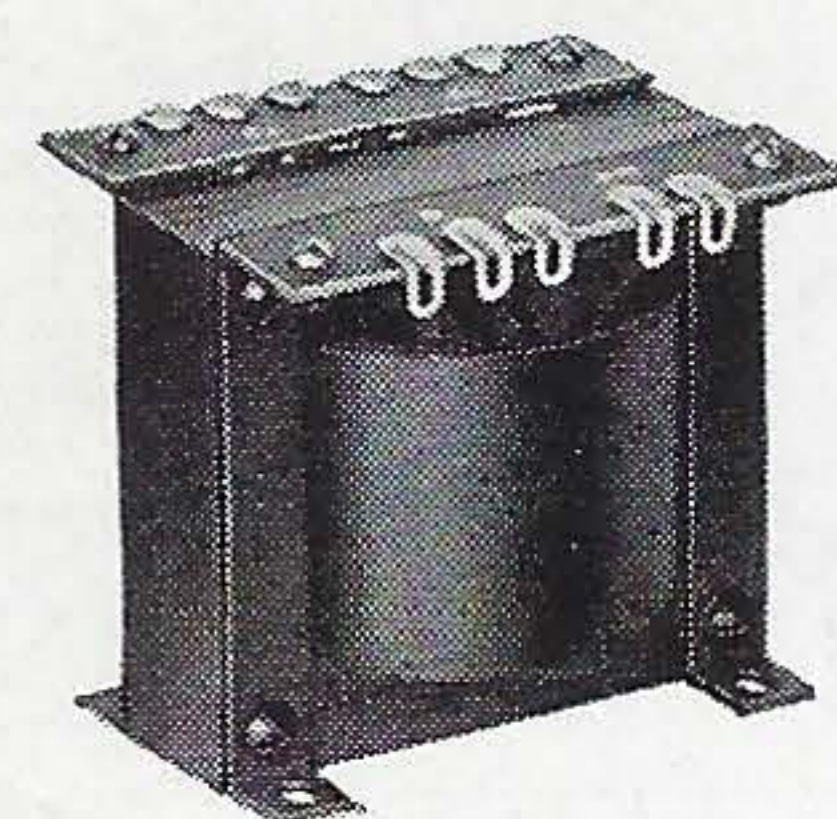
CD mtg.



CV mtg.



PA mtg.



OT mtg.

SMOOTHING CHOKES

CS-301	12 Henry, 200 MA; D.C. resistance 140 ohms. CV mtg.	\$5.00
CS-302	12 Henry, 300 MA; D.C. resistance 105 ohms. CD mtg.	7.50
CS-303	12 Henry, 500 MA; D.C. resistance 70 ohms. CD mtg.	13.00

INPUT SWINGING CHOKES

CS-304	5/25 Henry, 200 MA; D.C. resistance 140 ohms. CV mtg.	\$5.00
CS-305	5/25 Henry, 300 MA; D.C. resistance 105 ohms. CD mtg.	7.50
CS-306	5/25 Henry, 500 MA; D.C. resistance 70 ohms. CD mtg.	13.00

FILAMENT TRANSFORMERS, PRIMARY 115 VOLTS A.C. 50/60 CYCLES

CS-401	2½ V.C.T. 20 A; 5 V.C.T. 3 A; 7½ V.C.T. 6½ A. 2500 V. insulation	\$8.50
CS-402	10 V.C.T. 6½ A; 10 V.C.T. 6½ A; 7½ V.C.T. 2½ A; 2½ V.C.T. 5 A; 2500 V. insulation. CD mtg.	11.50
CS-403	11 V.C.T. tapped at 12 and 14 volts at 10 A. 5000 V. insulation. CD mtg.	8.50
CS-404	2½ V.C.T. 12 A; 5000 V. insulation; 10 V.C.T. 6½ A. CD mtg.	8.00
CS-405	5 V.C.T. 20 A; 7000 V. insulation. CD mtg.	7.50
CS-406	5 V.C.T. 20 A; 10,000 V. insulation. CD mtg.	10.00
CS-407	2½ V.C.T. 12 A; 7000 V. insulation. CV mtg.	4.50
CS-408	7½ V.C.T. 6½ A; 5000 V. insulation. CV mtg.	4.50
CS-409	10 V.C.T. 6½ A; 5000 V. insulation. CV mtg.	5.00
CS-410	5 V.C.T. 3 A; 5 V.C.T. 3 A; 5 V.C.T. 6 A; 5000 V. insulation. CV mtg.	5.00
CS-411	2½ V.C.T. 6 A; 2½ V.C.T. 6 A; 2½ V.C.T. 12 A; 10,000 V. insulation. CD mtg.	10.00
CS-412	6.3 V.C.T. 5 A; 5 V.C.T. 8A. CV mtg.	5.00
CS-413	5 V.C.T. 12 Amps. for 3-35 T's, 2-50 T's or 1-150 T. CV mtg.	5.00
CS-414	7½ V.C.T. 20 Amps. for 2-300 T's. CD mtg.	8.50
CS-415	11 V.C.T. tapped at 10 volts at 8 A. 7000 V. insulation CV. mtg.	6.50
CS-130	Chromshield Exciter lamp transformer primary tapped for 105, 115, 125 volts, 50-60 cycles, Secondary 8½ and 10 volts at from 4 to 8 amps	5.00

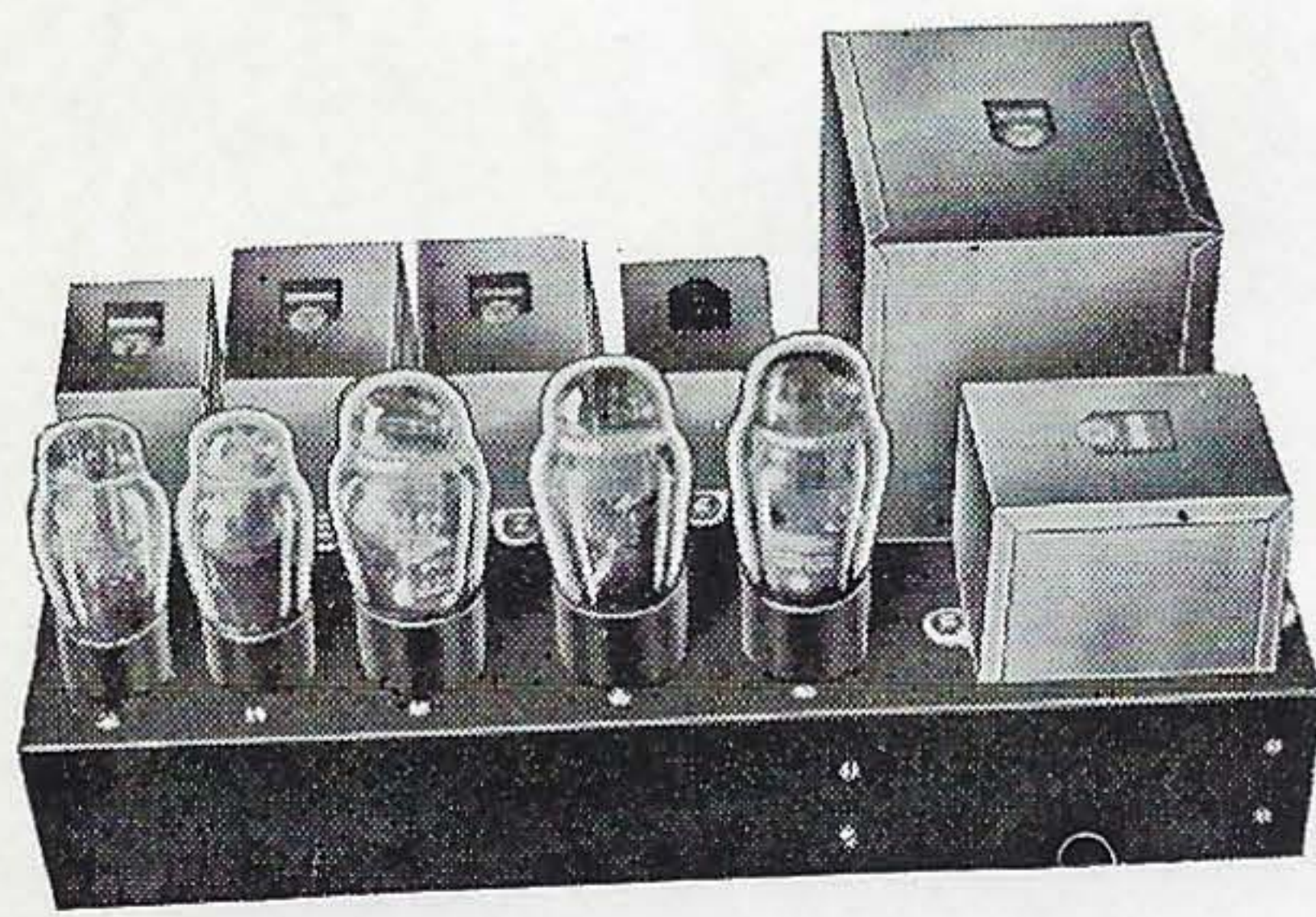
LM-1	2½ V.C.T. 20 A; 2500 V. insulation. OT mtg.	3.00
LM-2	7½ V.C.T. 6.5 A; 2500 V. insulation. OT mtg.	3.50
LM-3	10 V.C.T. 6½ A; 2500 V. insulation. OT mtg.	4.00
LM-4	6.3 V.C.T. 5 A; 5 V.C.T. 6 A; 2500 V. insulation. OT mtg.	4.00
LM-5	2½ V.C.T. 12 A; 5000 V. insulation. OT mtg.	3.50
LM-6	5 V.C.T. 3 A; 5 V.C.T. 3 A; 5 V.C.T. 6 A; 2500 V. insulation. OT mtg.	4.00
LM-7	Three 7½ V.C.T. 2½ Amp. windings; 2500 V. insulation. OT mtg.	4.00
LM-8	2½ V.C.T. 5 A; 2½ V.C.T. 5 A; 5 V.C.T. 3 A; 2500 V. insulation. OT mtg.	3.50
LM-9	2½ V.C.T. 5 A; 5 V.C.T. 3 A; 7½ V.C.T. 3 A; 2500 V. insulation. OT mtg.	4.00
LM-10	2½ V.C.T. 5 A; 7½ V.C.T. 3 A; 7½ V.C.T. 3 A; 2500 V. insulation. OT mtg.	4.00
LM-11	5 V.C.T. 3 A; 7½ V.C.T. 3 A; 7½ V.C.T. 3 A; 2500 V. insulation. OT mtg.	4.00
LM-12	2½ V.C.T. 5 A; 5 V.C.T. 3 A; 6.3 V.C.T. 3 A; 2500 V. insulation. OT mtg.	4.00

UTC VARIPOWER AUTOFORMERS

VA-1	150 watt output rating	\$ 6.00
VA-2	250 watt output rating	7.50
VA-3	500 watt output rating	10.00
VA-4	1000 watt output rating	15.00
VA-5	2000 watt output rating	20.00

These units are designed to serve three functions, namely, to effect reduced power for transmitter operation, to take care of line voltage variations from 95 to 130 volts, and to permit minor voltage variation from other transformers. Taps are provided at 55, 75, 95, 100, 105, 110, 115, 120, 125, and 130 volts.

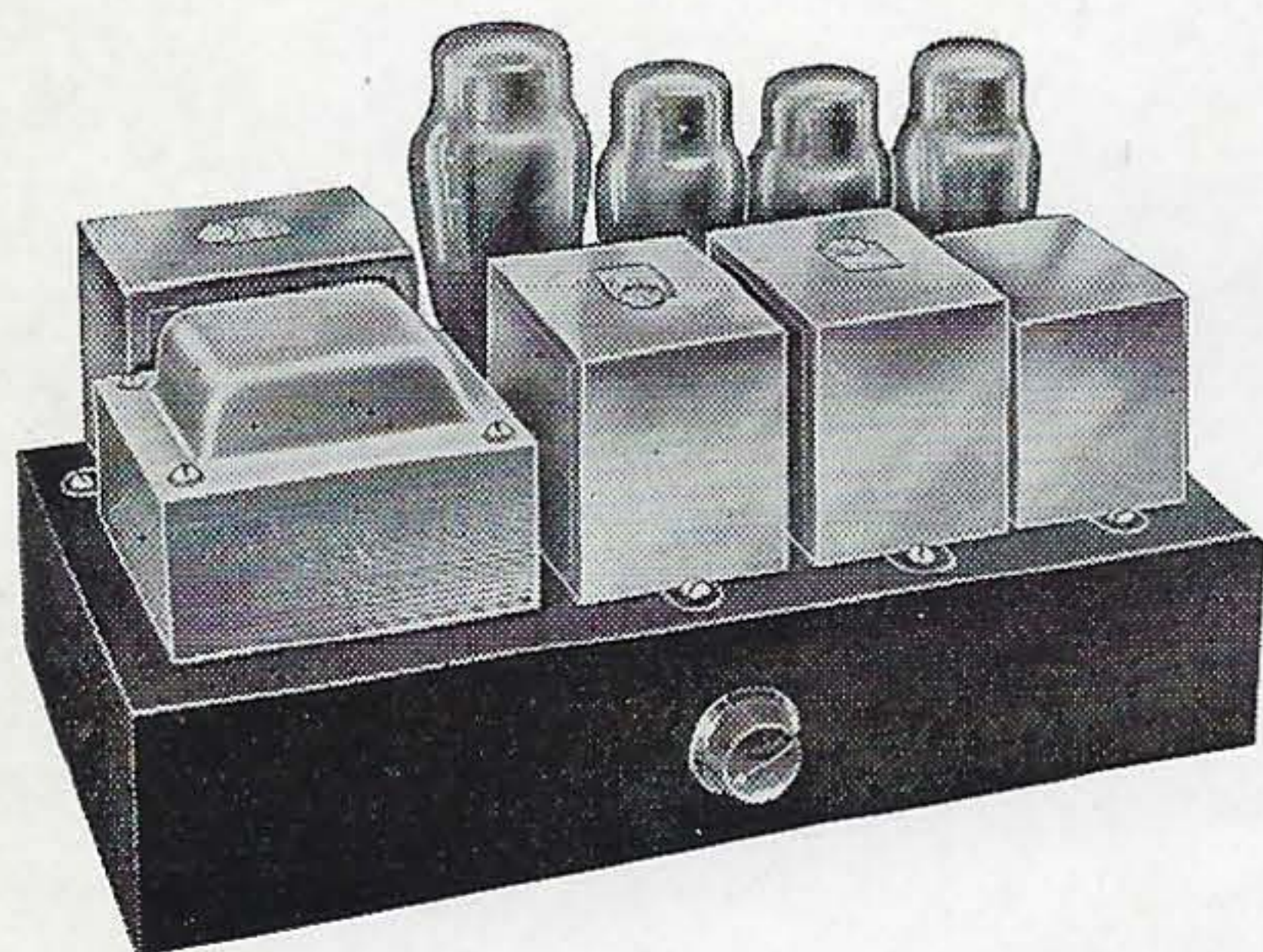
CHROMSHIELD AMPLIFIER KITS



Overall dimensions, 14 x 7½ x 7¼

CAK-1 AMPLIFIER KIT

This kit consists of a two-stage amplifier using push pull 56 tubes into push pull 2A3 or 45 tubes. The input transformer, type CS-10, accommodates either a high impedance plate such as the detector tube of a radio receiver, or a pick up, or a single button mike, double button mike or line. The output transformer, type CS-21, has secondary impedances of 500, 15, 8, 4 and 2 ohms. The overall gain is approximately 48 DB. The power output is 14 watts peak, 10 watts normal. The frequency response is unusually good for PA and general broadcast programs. This amplifier can be used with metal tubes using 6C5's in place of the 56's and 6F6's triode connected in place of the 45 or 2A3 tubes. The list price of complete kit including all accessories, \$ 32.75



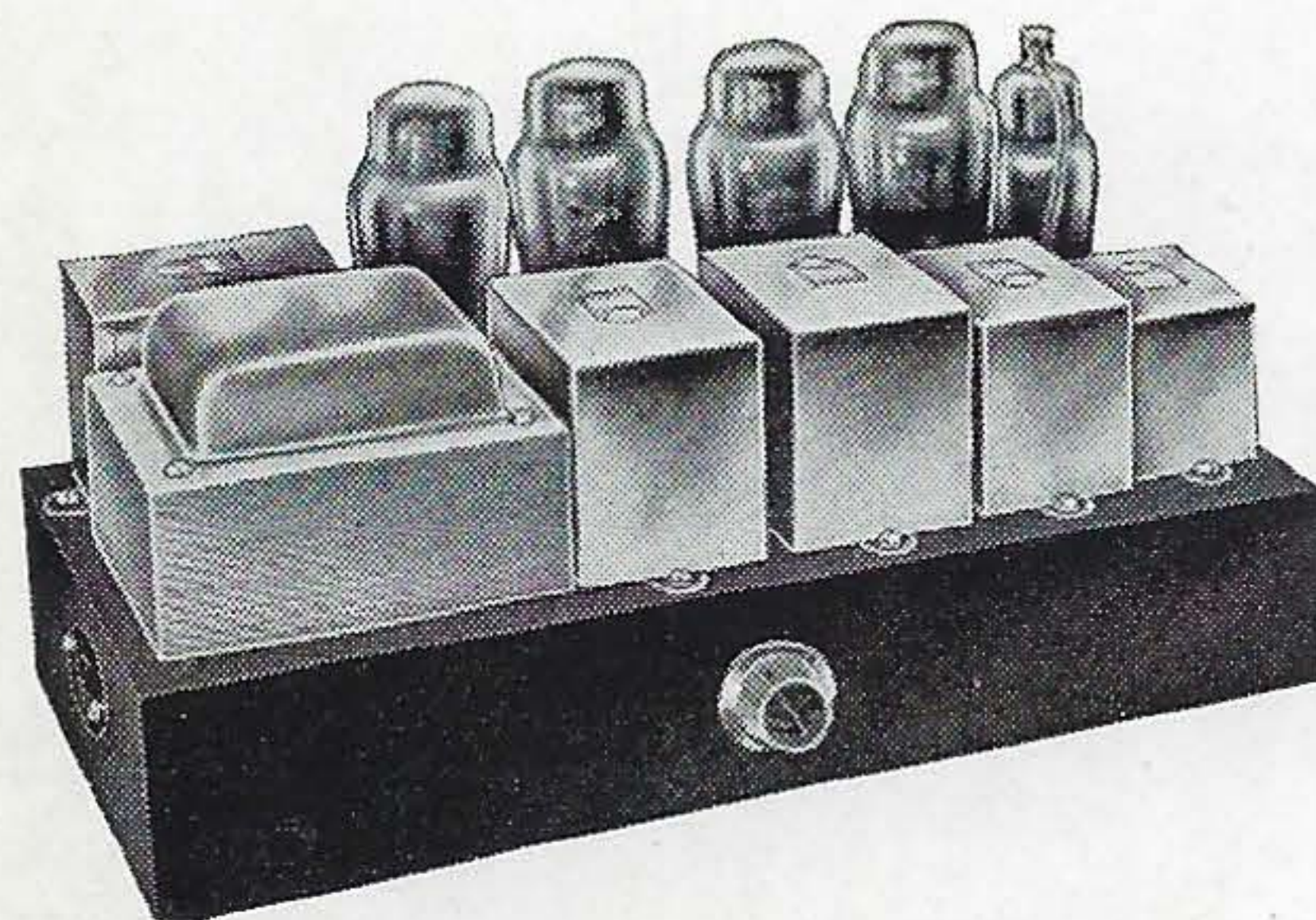
Overall dimensions, 12 x 6½ x 7¼

CAK-2 AMPLIFIER KIT

The CAK-2 amplifier is very popular for transmitter and PA work, as it provides a stable high gain amplifier that is light in weight and reasonable in cost. The input is arranged to match the new crystal microphones, or other high impedance input.

This unit incorporates a 6A6 tube cascaded feeding 6A6 tube parallel connected. The second 6A6 drives an output 6A6 tube in class B using a special driver transformer. The type CS-35 output transformer has secondary impedances of 500, 15, 8, 4 and 2 ohms. The list price of complete kit including all accessories, \$ 30.00

If type CS-33 modulator output transformer having secondary impedances of 5000 and 3500 ohms is desired, use designation CAK-2X.



Overall dimensions 14 x 7 x 7¼

CAK-3 AMPLIFIER KIT

The CAK-3 kit is a simply constructed unit very popular in the PA and transmitter fields. It has a high impedance input and consists of a 57 tube transformer coupled to a 46 tube which in turn drives a pair of 46 tubes in class B. The tonal quality and overall fidelity are excellent. The power output is 40 watts peak, 28 watts normal, and the overall gain 75 DB. The CS-36 output transformer has impedances of 500, 15, 8, 4 and 2 ohms. The list price of complete kit including all accessories, \$ 35.00

If this kit is desired with CS-34 modulator transformer having secondary impedances of 3500 and 5000 ohms, use designation CAK-3X.



Overall dimensions, 16½ x 8½ x 7¼

CAK-4 AMPLIFIER KIT

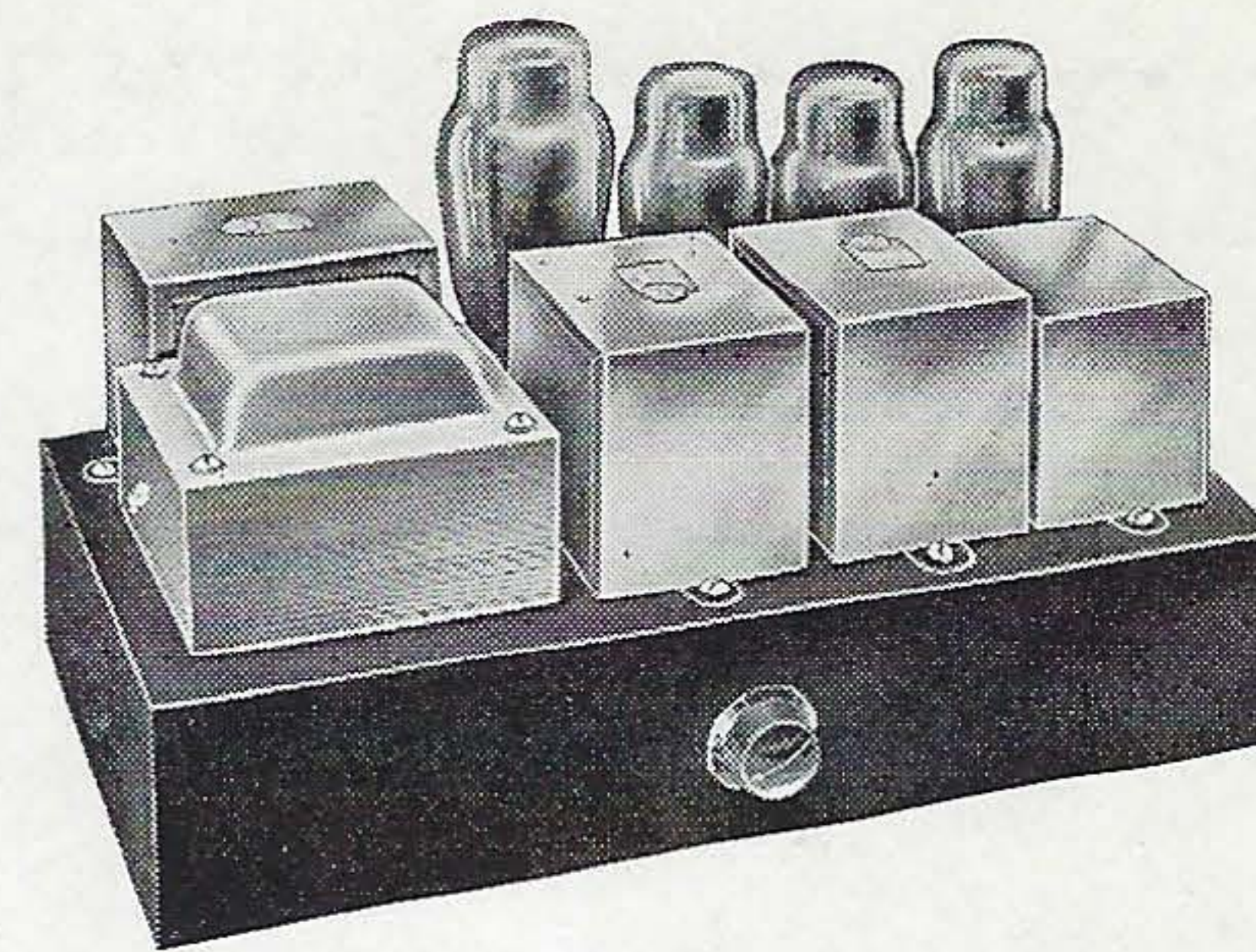
This kit is unusually popular because of its high power output and its simplicity of construction. The circuit consists of a high impedance input, a 57 tube transformer coupled to push pull 56 tubes driving four type 2A3 or 45 tubes in A prime. A separate bias rectifier is provided to permit maximum power from the output stage with low distortion. A peak power of 40 watts and normal power of 30 watts is available. Harmonic distortion up to 10 watts is under 3%, up to 30 watts under 7%. The overall gain is more than 80 DB. The CS-452 output transformer has secondary impedances of 500, 15, 8, 4 and 2 ohms. The list price of complete kit including all accessories, \$ 44.50

If type CS-455 modulator output transformer having secondary impedances of 10,000, 7500 or 5000 ohms is desired, use designation CAK-4X.

CAK-5 AMPLIFIER KIT

The CAK-5 kit is unusually popular because of its simple construction involving a minimum number of tubes. The new 6B5 power tubes are used in the output stage providing a peak power output of 22 watts and a normal output of 15 watts. The input to this amplifier is high impedance and is fed into a 6A6 tube cascaded which in turn is transformer coupled to 6B5's. The overall gain is approximately 100 DB. The CS-35 output transformer has secondary impedances of 500, 15, 8, 4 and 2 ohms. The list price of complete kit including accessories, **\$ 31.25**

If type CS-33 modulator output transformer having secondary impedance of 5000 and 3500 ohms is desired, use designation CAK-5X.

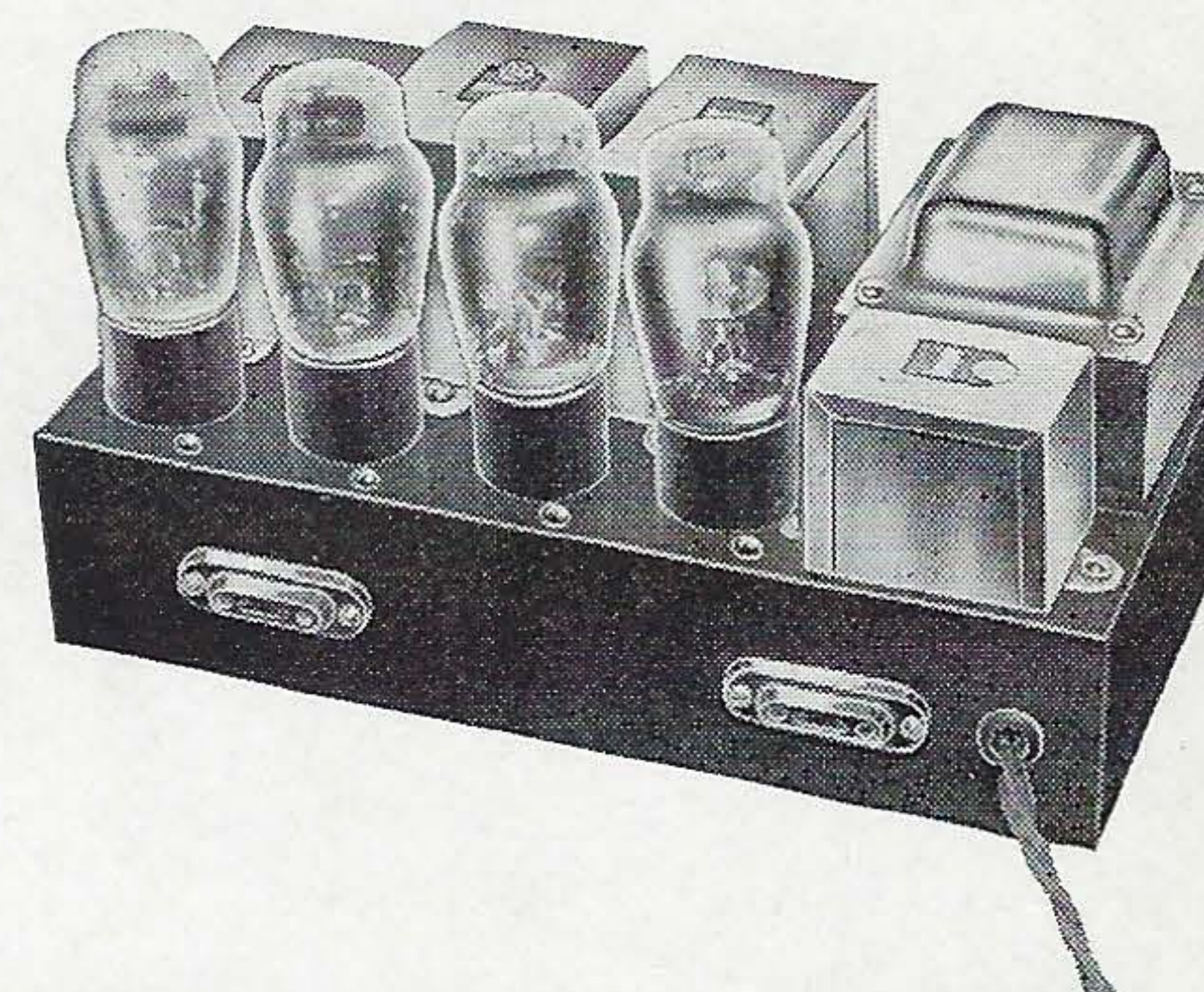


Overall dimensions, 12 x 6 $\frac{1}{2}$ x 7 $\frac{1}{4}$

CAK-6 AMPLIFIER KIT

This amplifier is a single stage high power A prime unit designed to convert standard receivers using a single output tube to a high power, high fidelity unit. The input transformer is designed to work directly from any standard output tube in a radio receiver, which if a pentode must be reconnected for triode operation. A separate bias rectifier is provided to effect ideal, fixed bias, A prime operation. The harmonic content is less than 1% up to 5 watts, less than 5% up to 18 watts. The CS-19 output transformer has impedances of 500, 15, 8, 4 and 2 ohms. The list price of complete kit including all accessories, **\$ 26.00**

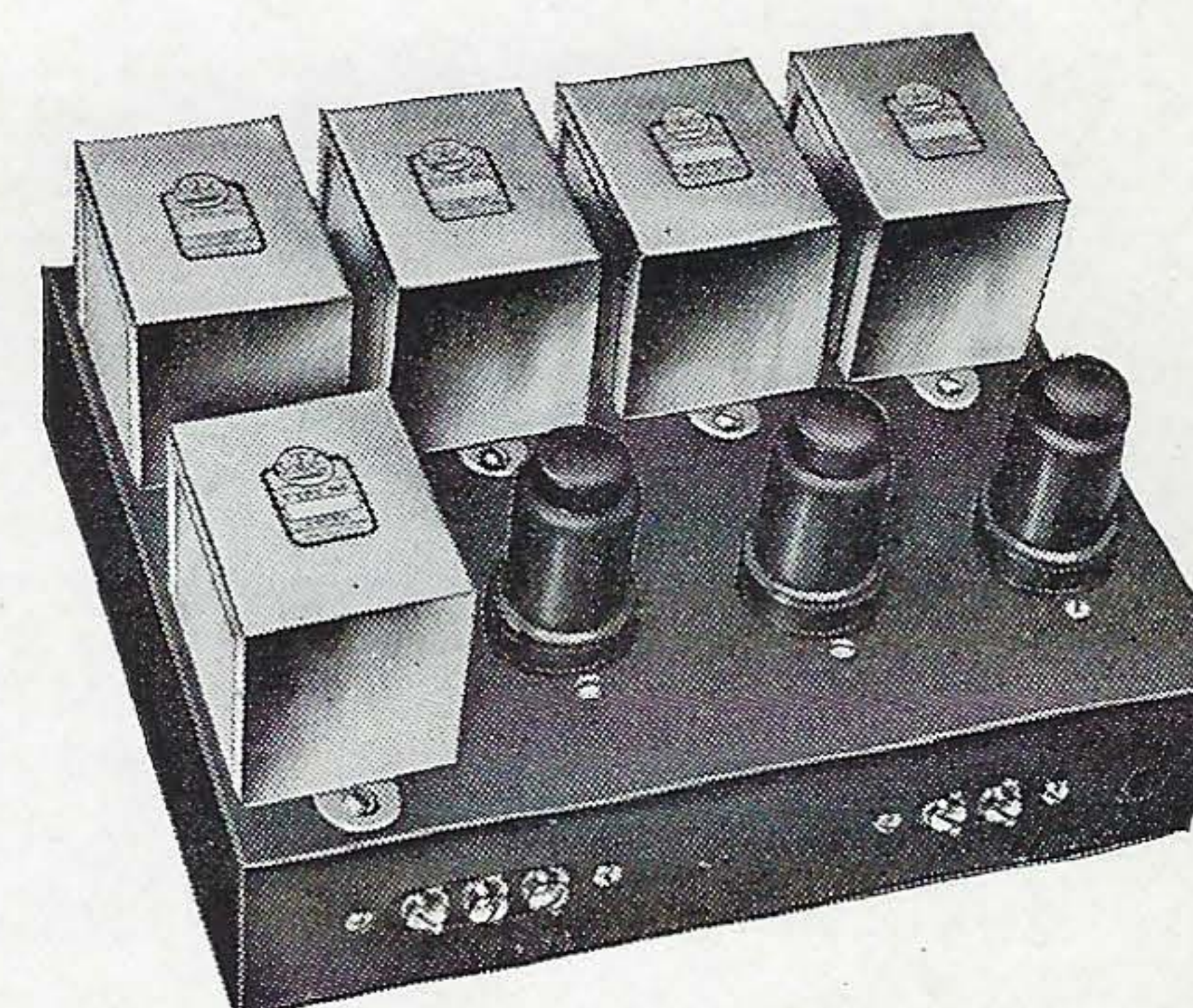
If it is desired to use type CS-24 modulator output transformer having 4000 and 2000 ohm secondary impedance, use designation CAK-6X.



Mounting Dimensions, 11 x 5 $\frac{3}{4}$ x 7 $\frac{1}{4}$

CAK-7 AMPLIFIER KIT

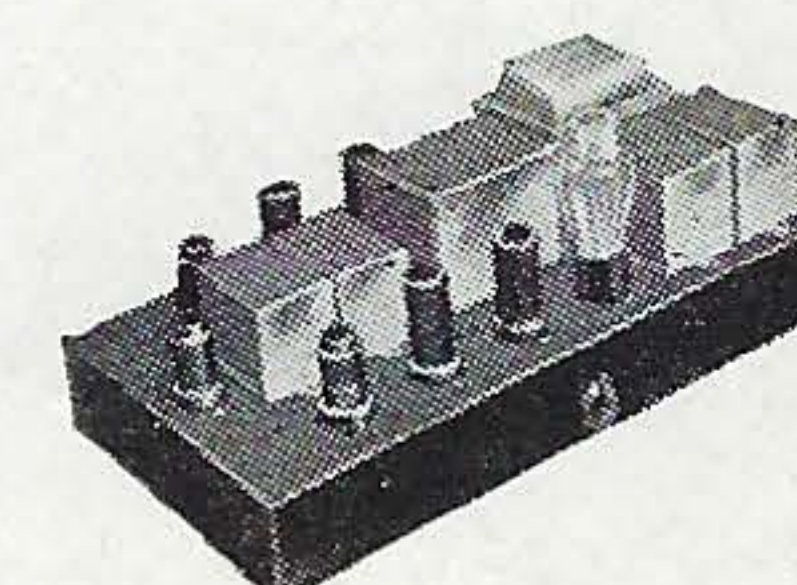
The CAK-7 pre-amplifier kit has been designed to take advantage of the ideal characteristics of the new metal tubes when applied to pre-amplifier service. These tubes have low harmonic content and low hum level. This amplifier will work on any 110 Volts 25 to 60 cycle AC or DC line. Three identical 6C5 tubes are used. One is a rectifier, the other two are used as transformer coupled amplifiers. The overall gain is 55 DB. The input transformer is designed to work from any standard microphone or line. The output transformer is tapped for a 500 or 200 ohm line. The list price of complete kit including all accessories, **\$ 22.00**



Overall Amplifier Dimensions, 8 $\frac{3}{8}$ x 7 x 4 $\frac{1}{8}$

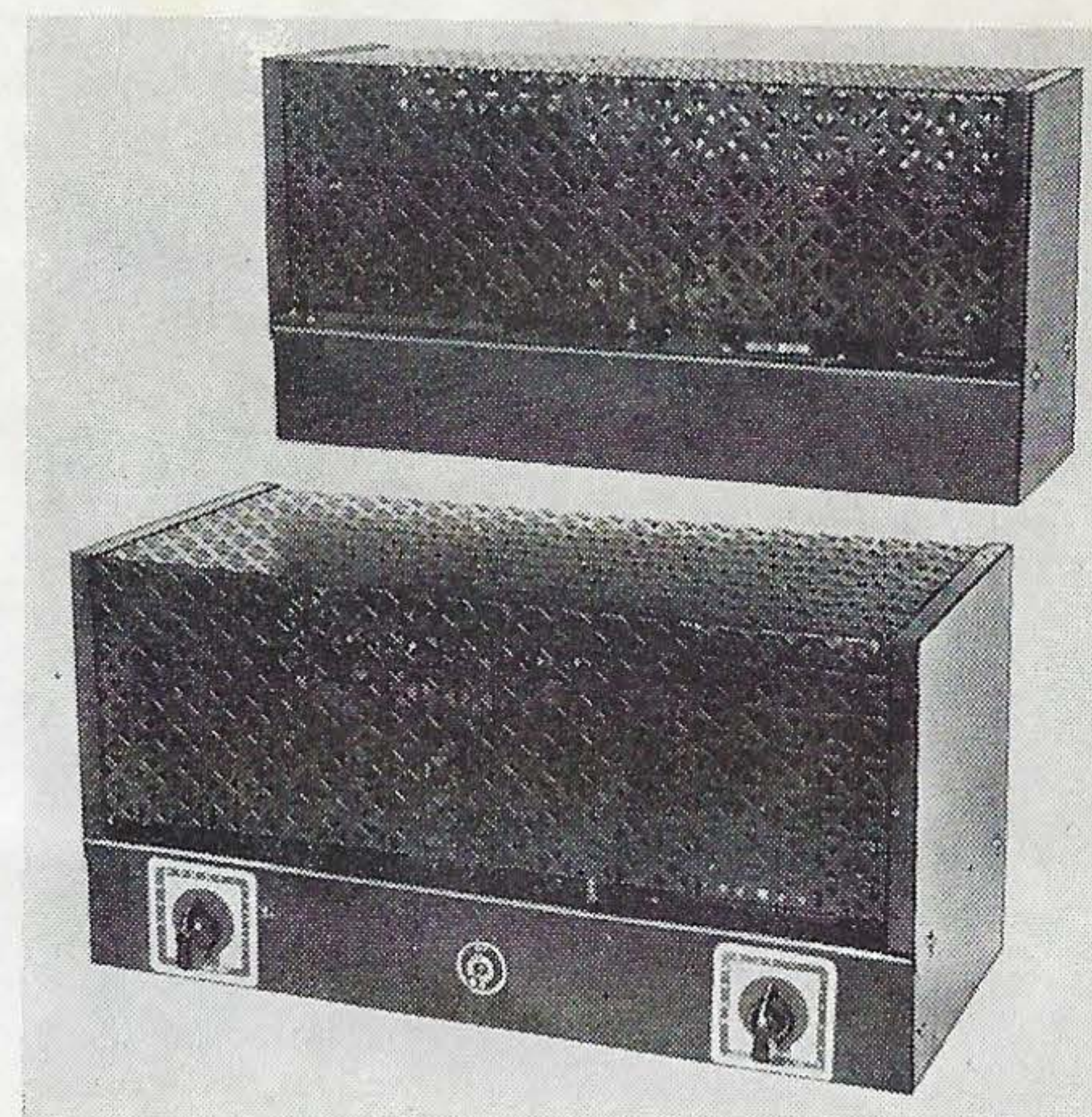
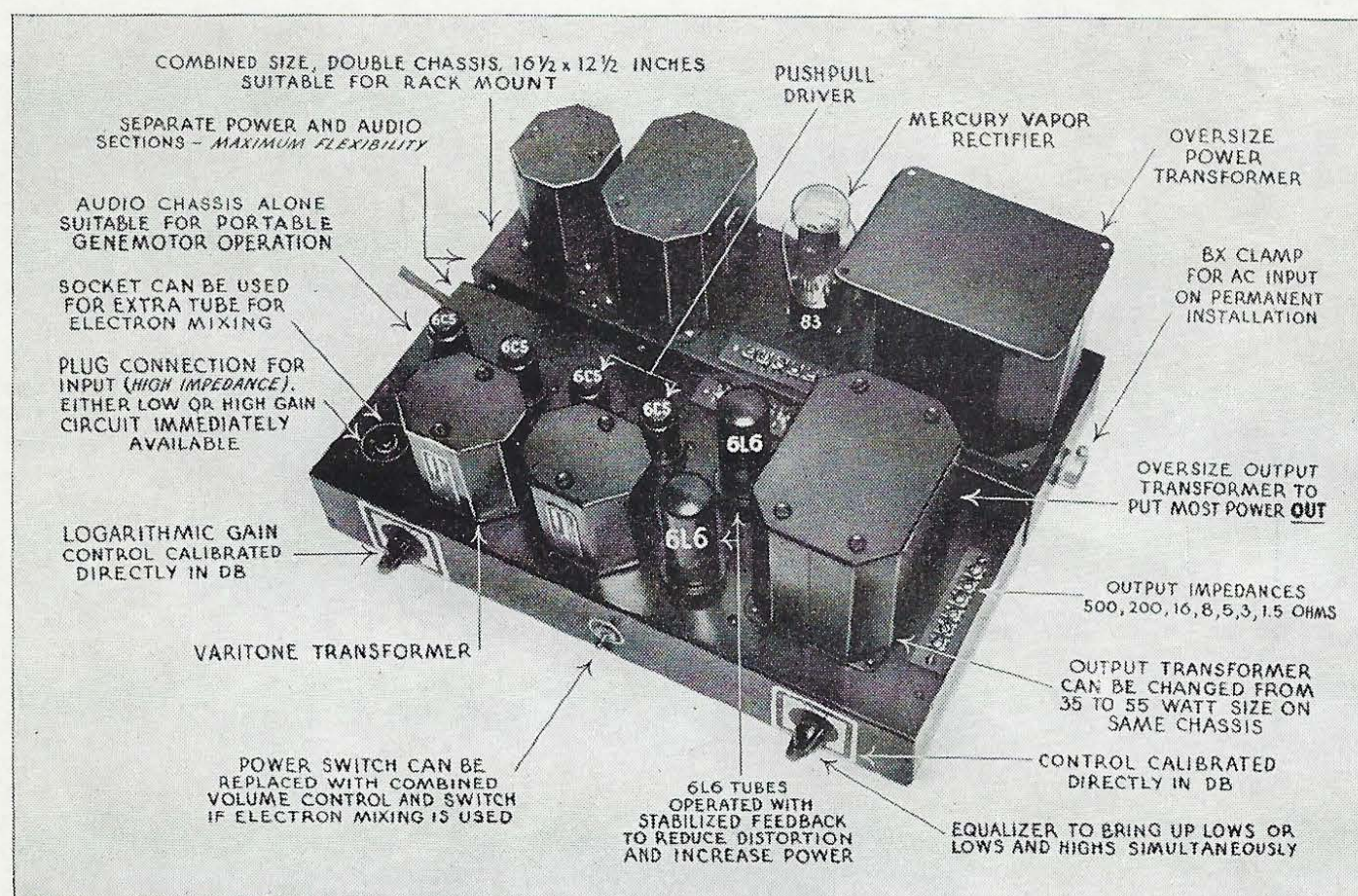
CAK-8 AMPLIFIER KIT

The CAK-8 super power amplifier kit employs the new metal tubes in all audio stages resulting in reduced tube noise, positive shielding and increased strength and compactness. A gain of 95 DB and a power output of 35 watts is available. The output transformer type CS-341A has secondary impedances of 500, 15, 8, 4 and 2 ohms. The list price of complete kit including all accessories, **\$42.75**



Overall dimensions, 16 $\frac{5}{8}$ x 8 $\frac{1}{2}$ x 7 $\frac{1}{4}$

THE UTC BEAM POWER AMPLIFIER



The UTC beam power amplifier kits are designed to take full advantage of the unusual characteristics of the new 6L6 tubes. Some of the unique features of this amplifier are:

HIGH POWER 35 watts self bias, 55 watts fixed bias.

HIGH GAIN 118 DB with provision for immediate change-over to 95 DB.

SEPARATE CHASSIS for power supply and audio sections permitting maximum flexibility and minimum hum pickup.

STABILIZED FEEDBACK effects increase in output power and reduction in overall distortion.

EQUALIZER with calibrated control to bring up the low frequency end or to bring up both low and high frequencies simultaneously.

MOBILE OPERATION can be obtained using the audio chassis alone and genemotor. 20 watts available.

RACK PANEL MOUNTING or rack cabinet mounting permissible. Combined overall dimensions 16 1/2 x 12 1/2 x 8 inches.

ELECTRON MIXING can be added to this kit with very little change.

CIRCUIT DETAILS

The high power sensitivity of the 6L6 lends itself very well to a simple high gain amplifier using a minimum number of tubes. A total of four stages are used in this amplifier to give an overall gain of 118 DB. The circuit consists of a single 6C5 resistance coupled to a second 6C5, Varitone transformer coupled to push pull 6C5's, which in turn drive the 6L6's. The use of a special driver transformer and stabilized feedback in the output transformer permits maximum efficiency to be obtained from the output stage. Under some conditions, it is desirable to couple a high level source into an audio amplifier of this type. For this service, a low gain terminal from the grid of the second tube is brought out. This permits a reduction in hum level and a more uniform operation of the gain control. The input circuit of this amplifier is high impedance, suitable for crystal microphones, etc. Where a low impedance input is desired, a UTC ultra compact unit can be mounted on the chassis. Due to their small size, the ultra compact units have a minimum of hum pickup.

Self bias operation of the 6L6 tubes with the corresponding 35 watt power output will take care of practically all PA, home or low power transmitter applications. If higher power is desired, fixed bias should be used. A bracket is provided under the audio section of this amplifier for mounting a 22 1/2 volt C battery which is used to provide the fixed bias. A larger output transformer must also be used for this service.

For mobile service, the audio section alone is used. A 22 1/2 volt C battery is used for bias in this application also so that the full plate voltage obtainable from a filtered genemotor can be used. A 350 volt 100 ma genemotor will provide 20 watts of output power.

MECHANICAL CHARACTERISTICS

The combined overall dimensions of the two decks with perforated covers is 16 1/2 x 12 1/2 x 8. These dimensions permit this amplifier to be readily mounted on a rack or in a cabinet. In addition, the separate chassis construction permits the units to be mounted individually in a radio set cabinet or in a portable amplifier cabinet with loudspeakers. The terminal strips which connect the power supply and audio amplifier are placed adjacent to each other on the chassis so that there is no possibility of improper connection. The terminal strip for the output of the amplifier is arranged so that the leads can be brought directly out from the strip through the perforated protective cover.

PAK-1	Self bias amplifier kit. 35 watt operation. Output transformer impedances 500, 200, 16, 8, 5, 3, 1.5 ohms. Includes all accessories except tubes. Fully mounted. List price	\$75.00
PAK-1X	Same as PAK-1, but with Varimatch modulation output transformer. List price	75.00
PAK-2	Fixed bias amplifier kit. 55 watts operating condition. Output transformer with impedances of 500, 200, 16, 8, 5, 3, 1.5 ohms. Includes all accessories except tubes. Fully mounted. List price	80.00
PAK-2X	Same as PAK-2, but with Varimatch modulation output transformer. List price	80.00

UTC

LEADS THE FIELD

Most Complete Transformer Line in the World

The UTC organization manufactures the most complete and diversified group of transformers produced in the entire world. The scope of activity is partially illustrated by the following products which UTC produces.

- Broadcast quality audio transformers from —140 DB to 50 KW rating.
- Aircraft — portable audio and power components weighing but 6 oz. completely poured with compound in drawn metal containers.
- Television transformers linear from 30 to 200,000 cycles.
- High Q audio reactors with Q factor (L/R) as high as 200 and over.
- Saturable control reactors.
- Battery chargers and speaker field exciters.
- Rectifiers for broadcast and industrial applications.
- Automatic voltage regulators.
- Oscillation transformers.
- Plate and distribution transformers up to 200 KVA 100,000 volts.
- High potential and high current test sets.
- Audio and carrier frequency amplifiers for special applications.
- Amplifier kits.

Write to us if you are interested in any items running along parallel lines to the above. UTC consulting service is gratis.

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