



*Most Complete Transformer
Line in the World*

QUALITY • RELIABILITY

TRANSFORMER COMPONENTS

*for every
purpose*



BULLETIN
PS - 402

UNITED TRANSFORMER CORP.

72 SPRING STREET

NEW YORK, N. Y.

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



Most Complete Transformer Line in the World!

LINEAR STANDARD

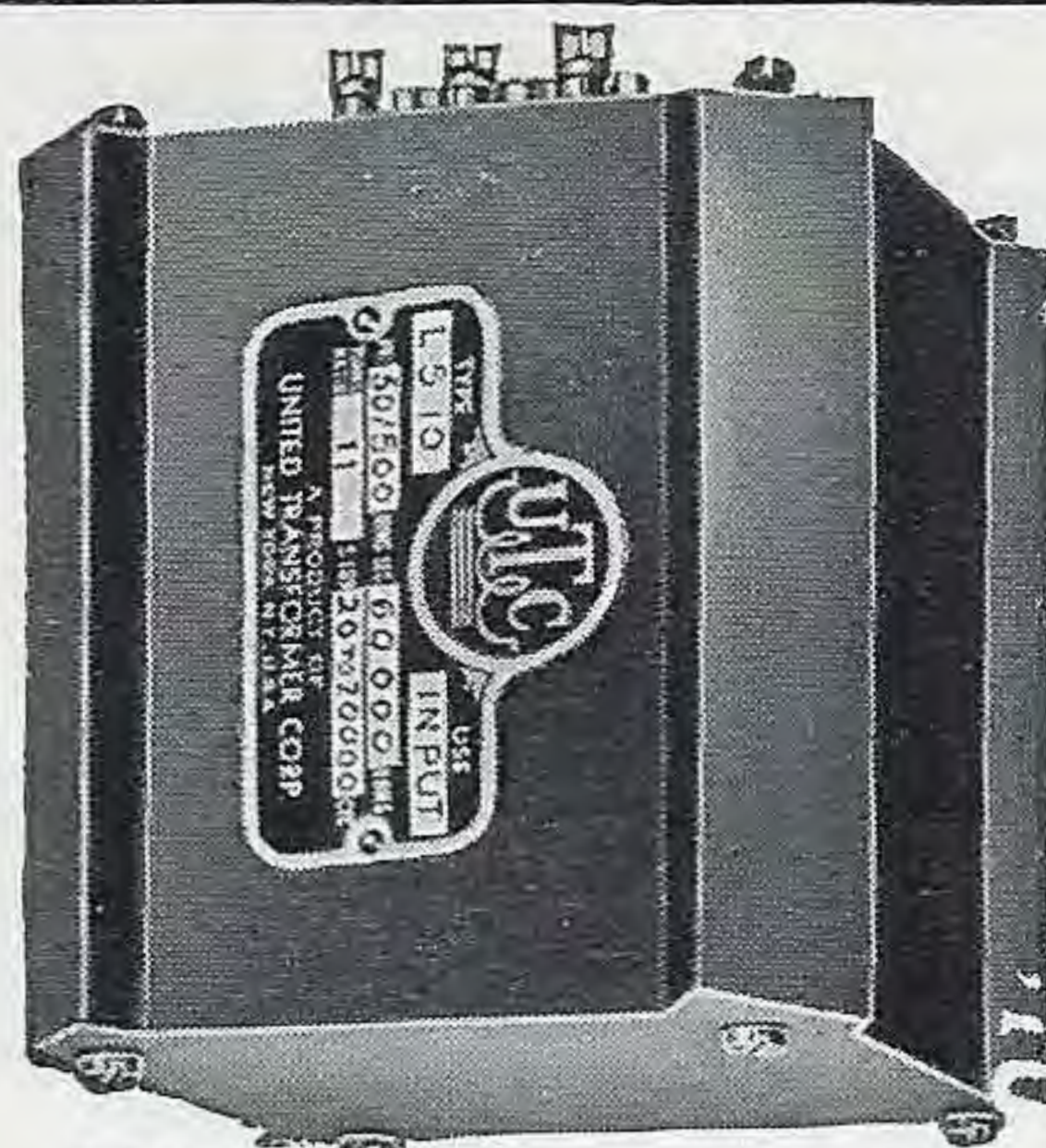
- **High Permeability Cast Shield** . . . maximum shielding from inductive pickup.
- **True Hum Balancing Coil Structure** . . . maximum neutralization of stray fields.
- **Balanced Variable Impedance Line** . . . permits highest fidelity on every tap of a universal unit . . . no line reflections or transverse coupling.
- **Reversible Mounting** . . . permits above chassis or subchassis wiring.
- **Full Electrostatic Shielding Between Windings** . . . brought out to separate terminal.
- **Multiple Coil, Semi-Toroidal Coil Structure** . . . minimum distributed capacity and leakage reactance.
- **Precision Winding** . . . accuracy of windings .1%, perfect balance of inductance and capacity; exact impedance reflection.
- **Hiper-Alloy** . . . a Stable high permeability nickel-iron core material.
- **High Fidelity** . . . UTC Linear Standard transformers are the **only** audio units with a **guaranteed** uniform response, from 30 to 20,000 cycles ± 1 db.

LOW IMPEDANCE TO GRID TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	Shielding and hum reduction	Case No. List Price	Your Cost
LS-10	Low impedance mike, pick-up, or multiple line to grid	50, 125, 200, 250, 333, 500 ohms	60,000 ohms in two sections	Dual Alloy shield—74DB	LS-1 15.00	\$9.00
LS-10X	As above	As above	50,000 ohms	Quadruple alloy shield — 92DB	LS-1 20.00	\$12.00
LS-12	Low impedance mike, pick-up, or multiple line to push pull grids	50, 125, 200, 250, 333, 500 ohms	120,000 ohms overall, in two sections	Dual alloy shield—74DB	LS-1 20.00	\$12.00
LS-12X	As above	As above	80,000 ohms overall, in two sections	Quadruple alloy shield — 92DB	LS-1 25.00	\$15.00
LS-14	Low impedance mike, pick-up, or parallel mixer to grid	2.5, 5.5, 10, 15, 22, 30, 38, 60 ohms	60,000 ohms in 2 sections	Dual alloy shield — 74DB	LS-1 20.00	\$12.00
LS-14X	As above	As above	50,000 ohms	Quadruple alloy shield — 92DB	LS-1 25.00	\$15.00
LS-15	Three isolated lines or pads to one or two grids	30, 50, 200, 250 ohms each primary	60,000 ohms overall, in two sections	Dual Alloy shield—74DB	LS-1 20.00	\$12.00
LS-15X	As above	As above	As above	Quadruple alloy shield — 92DB	LS-1 25.00	\$15.00
LS-18	High level multiple line to push pull grids	50, 125, 200, 250, 333, 500 ohms	50,000 ohms overall, in two sections	Alloy casting—50DB	LS-2 22.00	\$13.20

PLATE, CRYSTAL, PHOTOCELL AND BRIDGING TO LINE TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	Shielding and hum reduction	Case No. List Price	Your Cost
LS-50	Single plate to multiple line	8,000 to 15,000 ohms	50, 125, 200, 250, 333, 500 ohms	Dual alloy shield — 74DB	LS-1 15.00	\$9.00
LS-51	Push pull low level plates to multiple line	8,000 to 15,000 ohms each side	50, 125, 200, 250, 333, 500 ohms	Dual alloy shield — 74DB	LS-1 15.00	\$9.00
LS-37	Crystal microphone or pick-up to multiple line	100,000 ohms	50, 125, 200, 250, 333, 500 ohms	Dual alloy shield — 74DB	LS-1 15.00	\$9.00
LS-38	Crystal microphone or pick-up to multiple line, with internal equalizer	100,000 ohms	50, 125, 200, 250, 333, 500 ohms	Dual alloy shield — 74DB	LS-1 20.00	\$12.00
LS-39	Photocell, high mu triode, diode or over-biased detector to multiple line	100,000 ohms	50, 125, 200, 250, 333, 500 ohms	Dual alloy shield — 74DB	LS-1 15.00	\$9.00
LS-150	Bridging transformer from 50 to 500 ohm line to multiple line	4,000 ohms, bridging	50, 125, 200, 250, 333, 500 ohms	Dual alloy shield — 74DB	LS-1 15.00	\$9.00
LS-151	Bridging transformer from 50 to 500 ohm line to multiple line	16,000 ohms, bridging	50, 125, 200, 250, 333, 500 ohms	Dual alloy shield — 74DB	LS-1 15.00	\$9.00



OVERALL DIMENSIONS

LS-1	1-15/16x2-7/16
LS-2	2-11/16x3-11/16
LS-3	4-3/16x5-1/32
LS-4	5-3/4x5-3/4
LS-5	7-1/4x7-1/4

Mtg. Dimensions

	L	W	H
LS-1	2-9/16	3-3/16	3-11/16
LS-2	3-1/2	4-3/8	4-5/8
LS-3	5	5-3/4	5-3/16
LS-4	6-7/16	6-7/16	5-3/8
LS-5	8	8	6-1/2

TRANSFORMERS

UTC LINEAR STANDARD Component's 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.

In addition low level input transformers use the new UTC dual and quadruple alloy shields thus making possible a transformer with the lowest hum pickup of any available commercially.

MIXING TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	Shielding and hum reduction	Case No. List Price	Your Cost
LS-30	Mixing, low impedance mike, pickup, or multiple line to multiple line	50, 125, 200, 250, 333, 500 ohms	50, 125, 200, 250, 333, 500 ohms	Dual alloy shield — 74DB	LS-1 15.00	\$9.00
LS-30X	As above	As above	As above	Quadruple alloy shield — 92DB	LS-1 20.00	\$12.00
LS-31	Three isolated lines or pads to multiple line	30, 50, 200, 250 ohms each primary	50, 125, 200, 250, 333, 500 ohms	Dual alloy shield — 74DB	LS-1 20.00	\$12.00
LS-31X	As above	As above	As above	Quadruple alloy shield — 92DB	LS-1 25.00	\$15.00
LS-32	Mixing, low impedance mike, pickup, or parallel mixer to multiple line	2.5, 5.5, 10, 15, 22, 30, 38, 60 ohms	50, 125, 200, 250, 333, 500 ohms	Dual alloy shield — 74DB	LS-1 20.00	\$12.00

INTERSTAGE AUDIO TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	Shielding and hum reduction	Case No. List Price	Your Cost
LS-20	Single plate to single grid	8,000 to 15,000 ohms. Also for bridging 50/500 ohm line	60,000 ohms; 2:1 turn ratio	Dual alloy shield — 74DB	LS-1 10.00	\$6.00
LS-21	Single plate to push pull grids	8,000 to 15,000 ohms. Also for bridging 50/500 ohm line	135,000 ohms; turn ratio 1.5:1 each side. Primary and secondary each in two sections	Dual alloy shield — 74DB	LS-1 13.00	\$7.80
LS-22	Push pull plates to push pull grids	8,000 to 15,000 ohms	38,000 ohms each secondary, turn ratio 1.6:1 each side of center. Primary and secondary each in two sections	Alloy casting — 74DB	LS-2 22.00	\$13.20
LS-24	Single plate or multiple line to one or two grids	High impedance primary 8,000 to 15,000 ohms. Low impedance primary 50, 125, 200, 250, 333, 500 ohms	60,000 ohms; 2:1 turn ratio. Secondary impedance 60,000 ohms overall	Dual alloy shield — 74DB	LS-1 20.00	\$12.00

OUTPUT TRANSFORMERS TO HIGH IMPEDANCE (RF) LOAD

Type No.	Primary will match the following tubes	Primary Impedance	Secondary Impedance	Case No. List Price	Your Cost
LS-56	Push pull 2A3's, 6A5G's, 300A's, 275A's, 6A3's. +36DB	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	LS-2 20.00	\$12.00
LS-845M	845 tubes Class AB +42DB	8,800 ohms plate to plate	5000, 3500, 2500, 2100, 1250, 600	LS-5 50.00	\$30.00
LS-66	Class B 203A, 838, ZB120, 805 +46DB	9,000 ohms plate to plate	5000, 3500, 2500, 2100, 1250, 600	LS-5 70.00	\$42.00
LS-67	Class B 203A, 838, ZB 120, 805 +46DB	9,000 ohms plate to plate	10000, 2500	LS-5 70.00	\$42.00
LS-69	Class B 849, 204A +52DB	10,500 ohms plate to plate	6000, 5000, 4000, 1800, 1500, 1000	LS-6* 200.00	\$120.00
LS-169	Push pull parallel 849's Class B or six push pull parallel 204A's +55DB	5,250 ohms plate to plate	5000, 4200, 3300, 1500, 1250, 830	LS-7* 400.00	\$240.00

*Special oil filled casting



Most Complete Transformer Line in the World!

PLATE TRANSFORMERS

Type No.	Primary Voltage 50/60 Cycles	High Voltage	DC Current	List Price	Your Cost
LS-181	100, 110, 120, 220, 230, 240	1500-1250-0-1250-1500	200 MA	45.00	\$27.00
LS-182	100, 110, 120, 220, 230, 240	1500-1250-0-1250-1500	350 MA	60.00	\$36.00
LS-183	100, 110, 120, 220, 230, 240	1750-1500-0-1500-1750	400 MA	75.00	\$45.00
LS-184	100, 110, 120, 220, 230, 240	3500-3000-2500-0-2500-3000-3500	500 MA	110.00	\$66.00
LS-185	100, 110, 120, 220, 230, 240	3500-3000-2500-0-2500-3000-3500	1.2 amp.	250.00	\$150.00

COMBINED PLATE AND FILAMENT TRANSFORMERS

Type No.	Primary Voltage 50/60 cycles	High Voltage	Filament Windings	Case No. List Price	Your Cost
LS-180	110	225-0-225 15 MA	6.3 V.C.T.-2A 6.3 V.C.T.-5A	LS-1 10.00	\$6.00
LS-190	100, 105, 110, 115, 120, 125	350-300-0-300-350 125 MA	5 V.C.T.-3A 2.5 V.C.T.-6A 6.3 V.C.T.-3A	LS-3 18.00	\$10.80
LS-191	100, 105, 110, 115, 120, 125	325-250-0-250-325 35 MA	5 V.C.T.-3A 2.5 V.C.T.-2A 6.3 V.C.T.-2A	LS-2 15.00	\$9.00
LS-70	100, 105, 110, 115, 120, 125	425-375-0-375-425 200 MA	5 V.C.T.-3A 2.5 V.C.T.-3A 2.5 V.C.T.-10A 6.3 V.C.T.-1A 6.3 V.C.T.-3A	LS-4 25.00	\$15.00
LS-72	100, 105, 110, 115, 120, 125	525-450-0-450-525 250 MA 70-0-70 50 MA	5 V.C.T.-3A 2.5 V.C.T.-3A 2.5 V.C.T.-3A 6.3 V.C.T.-1A 6.3 V.C.T.-3A tapped at 5 V.C.T.-6A	LS-4 25.00	\$15.00
LS-73	100, 105, 110, 115, 120, 125	500-400-0-400-500 500 MA 70-0-70 50 MA	5 V.C.T.-6A 2.5 V.C.T.-10A 2.5 V.C.T.-3A 6.3 V.C.T.-4A 6.3 V.C.T.-6A tapped at 5 V.C.T.-6A	LS-5 35.00	\$21.00

OUTPUT TRANSFORMERS TO LINE AND VOICE COIL

Type No.	Primary will match following tubes	Primary Impedance	Secondary Impedance	Case No. List Price	Your Cost
LS-52	Push pull 245, 250, 6V6, 42 or 2A5 A prime	8,000 ohms	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	LS-2 20.00	\$12.00
LS-54	Same as above	8,000 ohms	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	LS-2 14.00	\$8.40
LS-55	Push pull 2A3's, 6A5G's, 300A's, 275A's, 6A3's	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	LS-2 20.00	\$12.00
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	LS-2 14.00	\$8.40
LS-58	Push pull parallel 2A3's, 6A5G's, 300A's, 6A3's	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	LS-4 30.00	\$18.00
LS-61	Push pull 6B5, 6A6, 53, 6F6, 71A, 59, 79, 89, Class B46, 59's	10,000 ohms plate 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	LS-2 20.00	\$12.00
LS-63	Same as above	10,000 ohms plate to plate and 6,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	LS-2 14.00	\$8.40
LS-64	Push pull 845's Class A	18,000 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	LS-4 35.00	\$21.00
LS-2451	Push pull 45's A prime, class B 46's-59's, 48's, 25L6's	6,000 ohms plate to plate and 3,500 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	LS-2 20.00	\$12.00
LS-6L1	Push pull 6L6's self bias, incorporates tertiary winding for stabilized feedback	6,600 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	LS-3 30.00	\$18.00
LS-6L3	Same as above	6,600 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	LS-3 20.00	\$12.00
LS-6L4	Push pull 6L6's fixed bias or push pull parallel 6L6's self bias with tertiary winding for stabilized feedback	3,800 ohms plate to plate and 3,300 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	LS-4 35.00	\$21.00
LS-845	845 tubes class AB	8,800 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	LS-5 50.00	\$30.00

HIGH LEVEL MATCHING TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary	Case No. List Price	Your Cost
LS-33	High level line matching, 15 watts	50, 125, 200, 250, 333, 500 ohms	1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125, 200, 250, 333, 500 ohms	LS-2 15.00	\$9.00
LS-34	High level line matching, 30 watts	50, 125, 200, 250, 333, 500 ohms	1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125, 200, 250, 333, 500 ohms	LS-3 20.00	\$12.00

DRIVER TRANSFORMERS

Type No.	Application	Primary Impedance	Reflected Secondary Impedance	Case No. List Price	Your Cost
LS-5	Driver, multiple line to class B 838's, 805's, ZB-120's, 203A's and similar tubes.	50, 125, 200, 250, 333, 500 ohms	2,000 ohms; 1:2 overall turns ratio	LS-4 30.00	\$18.00
LS-6	Driver, push pull 45's, 59's, 2A3's, 6A5's, etc. to push pull 845 or 211D grids.	800 to 2,000 ohms	.11 primary impedance turns ratio 1:3 overall	LS-4 22.00	\$13.20
LS-7	Push pull 56, 6C5 or similar plates to A prime 45's, 42's, 6F6's, 2A3's.	8,000 to 15,000 ohms	.45 primary impedance turn ratio 1:5:1 overall	LS-2 22.00	\$13.20
LS-47X	Driver from push pull 2A3's, 6A5G's, or 300A's to Class B 838's, 203A's, 805's, or ZB120's.	800 to 1,000 ohms	.1 pri. imped-ance turns ratio, Pri./1/2 Sec. 3.2:1	LS-2 22.00	\$13.20
LS-48	Driver transformer push pull 845's to 204 or 849 grids in class B	1,000 to 2,000 ohms	.038 pri. imped-ance turns ratio, Pri./1/2 Sec. 5.1:1	LS-2 35.00	\$21.00
LS-49	Push pull parallel 2A3, 6A5G, or 300A tubes to four 838, 203A, 805, or ZB120 tubes.	800 to 2,000 ohms	.028 pri. imped-ance turns ratio, Pri./1/2 Sec. 6.0:1	LS-2 30.00	\$18.00

FILAMENT TRANSFORMERS

Type No.	Application	Primary Voltage 50/60 Cycles	Secondary Voltage	Insulation Voltage	Case No. List Price	Your Cost
LS-80	866A rectifiers	100, 110, 120, 220, 230, 240	2.5 V.C.T.-10A	12,000	LS-3 15.00	\$9.00
LS-82	872 rectifiers	100, 110, 120, 220, 230, 240	5 V.C.T.-20A	12,000	LS-3 20.00	\$12.00
LS-84	203A, 845, etc. HF200, HF300	100, 110, 120, 220, 230, 240	10 V.C.T.-8A	12,000	LS-3 15.00	\$9.00
LS-85	Combined filament transformer for 866 rectifiers and 845 or 203A audio tubes	100, 110, 120, 220, 230, 240	2.5 V.C.T.-10A 10 V.C.T.-8A	10,000	LS-3 25.00	\$15.00
LS-88	6.3 volt tubes	105, 115, 125	6.3 V.C.T.-2A	2,500	LS-1 7.50	\$4.50
LS-87A	7.5 volt tubes	105, 115, 125	7.5 V.C.T.-9A	2,500	LS-3 7.50	\$4.50
LS-118	849, 204A, HF300	100, 110, 120, 220, 230, 240	11 V.C.T.-10A	2,500	LS-3 20.00	\$12.00
LS-120	866 bridge rectifier	100, 110, 120, 220, 230, 240	2.5 V.C.T.-10A 2.5 V.C.T.-5A 2.5 V.C.T.-5A	12,000	LS-3 25.00	\$15.00
LS-121	872 bridge rectifier	100, 110, 120, 220, 230, 240	5 V.C.T.-20A 5 V.C.T.-10A 5 V.C.T.-10A	12,000	LS-4 35.00	\$21.00
LS-83	872A, 575 or 869 rectifiers	100, 110, 120, 220, 230, 240	5 V.C.T.-20A	35,000	Spec. 40.00	\$24.00
LS-89A	Three 869 rectifiers	100, 110, 120, 220, 230, 240	5 V.C.T.-60A	35,000	Spec. 50.00	\$30.00

FILTER, SWINGING, AND AUDIO CHOKES

Type No.	Application	Inductance	DC Current	DC Resistance	Case No. List Price	Your Cost
LS-90	Filter choke, hum bucking tap	Series-50 hy Parallel-12.5 hy	50 MA 100 MA	510 ohms 128 ohms	LS-2 8.50	\$5.10
LS-91	Filter choke, hum bucking tap	Series-14 hy Parallel-3.5 hy	125 MA 250 MA	200 ohms 50 ohms	LS-2 8.50	\$5.10
LS-92	Filter choke, hum bucking tap	Series-16 hy Parallel-4 hy	175 MA 350 MA	96 ohms 24 ohms	LS-3 15.00	\$9.00
LS-93	Filter choke, hum bucking tap	Series-26 hy Parallel-6.25 hy	200 MA 400 MA	112 ohms 28 ohms	LS-4 25.00	\$15.00
LS-96	Filter choke, hum bucking tap	Series-20 hy Parallel-5 hy	500 MA 1 amp	90 ohms 22.5 ohms	LS-5 40.00	\$24.00
LS-94	Parallel feed and filter choke	Series-320 hy Parallel-80 hy	3 MA 6 MA	6400 ohms 1600 ohms	LS-1 10.00	\$6.00
LS-95	Parallel feed and filter choke	Series-720 hy Parallel-180 hy	5 MA 10 MA	3600 ohms 900 ohms	LS-2 20.00	\$12.00
LS-99	Filter choke with hum bucking tap	Series-20 hy Parallel-5 hy	1 amp 2 amp	50 ohms 12.5 ohms	Spec. 60.00	\$36.00
LS-105	Swinging choke	8-40 hy	1 amp	50 ohms	Spec. 60.00	\$36.00
LS-102	Modulation reactor	50 hy	350 MA	250 ohms	LS-5 40.00	\$24.00
LS-103	Modulation reactor	50 hy	500 MA	175 ohms	Spec. 60.00	\$36.00



Most Complete Transformer Line in the World!

HIPERM ALLOY

The UTC Hiperm alloy audio and power transformers are specifically designed for portable and compact service. While light in weight and small in dimensions, neither dependability nor fidelity has been sacrificed. The frequency characteristic of the Hiperm alloy audio units is uniform from 30 to 20,000 cycles. These units are similar in general design and characteristics to the Linear Standard audio units, and



OVERALL DIMENSIONS

H1 Case $1\frac{7}{8} \times 2\frac{3}{8} \times 3$

H2 Case $2\frac{3}{8} \times 3 \times 3\frac{3}{4}$

MOUNTING DIMENSIONS

H1 $1\frac{3}{8}$

H2 $1-11/16 \times 2\frac{3}{8}$

INTERSTAGE AUDIO TRANSFORMERS

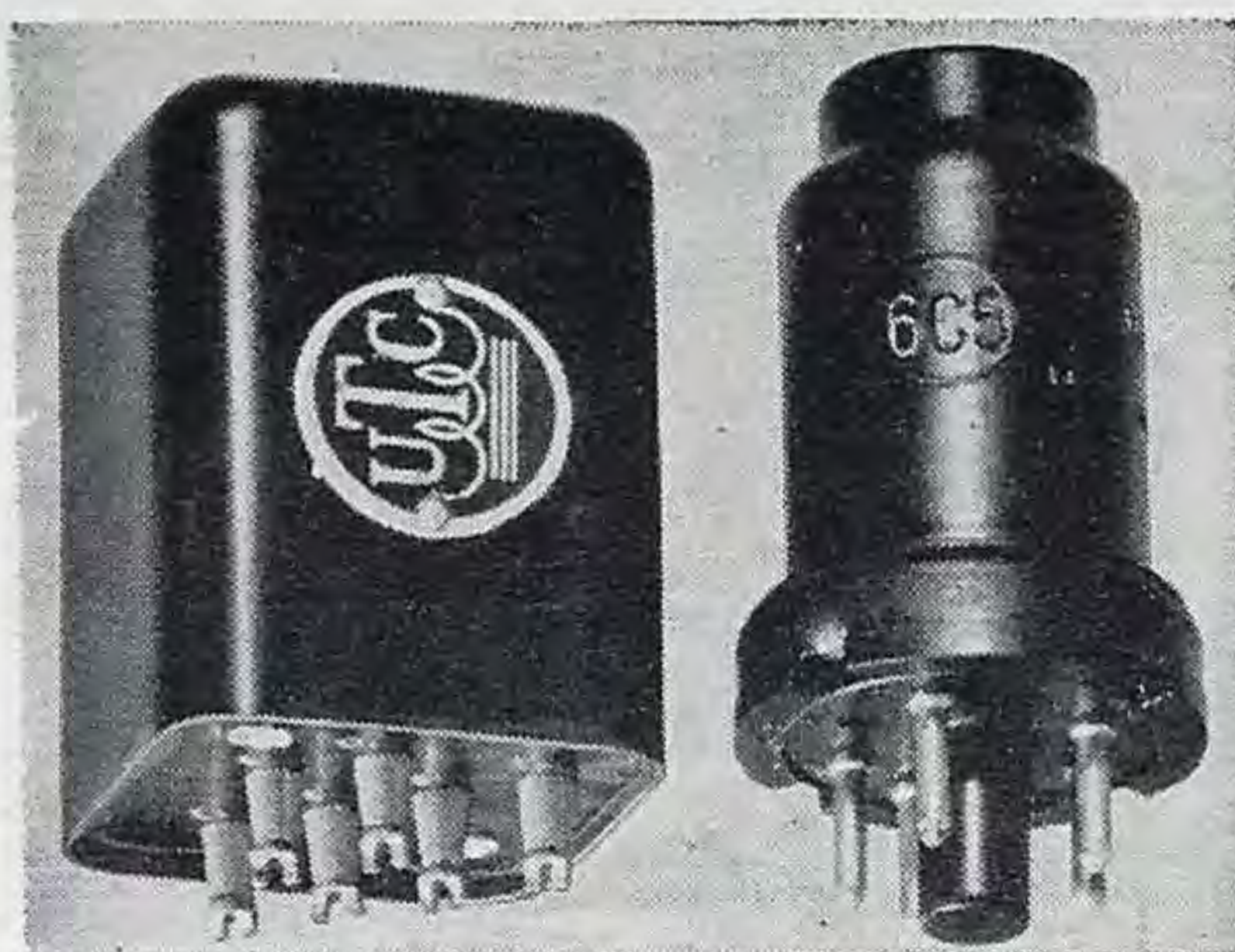
Type No.	Application	Primary Impedance	Secondary Impedance	Case No. List Price	Your Cost
HA-105	Single plate to single grid	8,000 to 15,000 ohms	60,000 ohms 2:1 turn ratio	H-1 9.00	\$5.40
HA-106	Single plate to push pull grids	8,000 to 15,000 ohms	135,000 ohms 1.5:1 ratio, each side	H-1 11.00	\$6.60
HA-107	Push pull plates to push pull grids	8,000 to 15,000 ohms	35,000 ohms each secondary 1.5:1 turn ratio overall	H-2 15.00	\$9.00

LOW IMPEDANCE TO GRID AND MIXING TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	Case No. List Price	Your Cost
HA-100	Low impedance mike, pickup, or multiple line to grid	50, 125, 200, 250, 333, 500 ohms	60,000 ohms in two sections	H-1 12.50	\$7.50
HA-100X	Same as above but with tri-alloy internal shield to effect very low hum pickup.			H-1 17.50	\$10.50
HA-101	Low impedance mike, pickup, or multiple line to push pull grids	50, 125, 200, 250, 333, 500 ohms	120,000 ohms overall, in two sections	H-1 15.00	\$9.00
HA-101X	Same as above but with tri-alloy internal shield to effect very low hum pickup.			H-1 20.00	\$12.00
HA-103A	Low impedance mike, pickup, or parallel mixer to grid	2.5, 5.5, 10, 15, 22, 30, 38, 60 ohms	60,000 ohms in two sections	H-1 15.00	\$9.00
HA-108	Mixing, low impedance mike, pickup, or multiple line	50, 125, 200, 250, 333, 500 ohms	50, 125, 200, 250, 333, 500 ohms	H-1 12.50	\$7.50
HA-108X	Same as above but with tri-alloy internal shield to effect very low hum pickup.			H-1 17.50	\$10.50
HA-130X	Three isolated lines or pads to one or two grids with tri-alloy internal shield	30, 50, 200, 250 ohms each primary	60,000 ohms overall, in two sections	H-1 20.00	\$12.00

ULTRA COMPACT

The UTC Ultra compact audio units represent the acme in small, light-weight units where portability or size is of paramount importance. Through the use of new design methods, high fidelity is obtainable in all individual units, the frequency response being ± 2 DB from 30 to 20,000 cycles on all units. There is no need to resonate one unit in an amplifier to compensate for the droop of another unit.



Type No.	Application	Primary Impedance	Secondary Impedance	List Price	Your Cost
A-10	Low impedance mike, pickup, or multiple line to grid	50, 125, 200, 250, 333, 500 ohms	50,000 ohms	10.00	\$6.00
A-12	Low impedance mike, pickup, or multiple line to push pull grids	50, 125, 2500, 250, 333, 500 ohms	80,000 ohms overall, in two sections	10.00	\$6.00
A-14	Dynamic microphone to one or two grids	30 ohms	50,000 ohms overall, in two sections	9.00	\$5.40
A-16	Single plate to single grid	8,000 to 15,000 ohms	60,000 ohms, 2:1 turn ratio	8.00	\$4.80
A-18	Single plate to two grids	8,000 to 15,000 ohms	80,000 ohms overall, 2.3:1 turn ratio overall	9.00	\$5.40

TRANSFORMERS

incorporate a Hiperm alloy nickel iron core. The outer case is of high conductivity alloy finished in high polish black enamel. Through the use of tapped metallic inserts, these transformers can be mounted with the terminals either up or down, and with no waste space. A hum balanced coil structure is used on all audio units to insure minimum pickup. The electrostatic shields are brought out to separate terminals on the terminal strip.

POWER TRANSFORMERS

Type No.	Primary Voltage 50/60 cycles	High Voltage	Filament Windings	Case No. List Price	Your Cost
HP-122	115	220-0-200 15 MA	6.3 V.C.T.-.5A 6.3 V.C.T.-1.2A	H-2 10.00	\$6.00
HP-123	115	275-0-275 35 MA	6.3 V.C.T.-.5A 6.3 V.C.T.-2A	H-3 15.00	\$9.00

PLATE, CRYSTAL AND PHOTOCELL TO LINE TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	Case No. List Price	Your Cost
HA-III	Crystal microphone or pickup, to multiple line	100,000 ohms	50, 125, 200, 250, 333, 500 ohms	H-1 12.50	\$7.50
HA-III-E	Crystal microphone or pickup, to multiple line, with internal equalizer	100,000 ohms	50, 125, 200, 250, 333, 500 ohms	H-1 17.50	\$10.50
HA-II-2	Photocell, high-mu triode, diode or overbiased detector to multiple line	100,000 ohms	50, 125, 200, 250, 333, 500 ohms	H-1 12.50	\$7.50
HA-II-3	Single plate to multiple line	8,000 to 15,000 ohms	50, 125, 200, 250, 333, 500 ohms	H-1 12.50	\$7.50
HA-II-4	Push pull low level plates to multiple line	8,000 to 15,000 ohms	50, 125, 200, 250, 333, 500 ohms	H-1 12.50	\$7.50

FILTER AND AUDIO CHOKES

Type No.	Inductance	DC Current	DC Resistance	Case No. List Price	Your Cost
HC-115	Series-400 hy Parallel-100 hy	2.5 MA 5 MA	7000 ohms 1750 ohms	H-1 8.50	\$5.10
HC-116	Series-600 hy Parallel-150 hy	8 MA 16 MA	4000 ohms 1000 ohms	H-2 15.00	\$9.00
HC-117	60 hy	15 MA	3000 ohms	H-1 8.50	\$5.10
HC-127	60 hy	40 MA	1000 ohms	H-2 15.00	\$9.00

AUDIO UNITS

All units employ true hum balancing coil structure, which combined with a high conductivity outer case, afford a maximum of inductive shieldings.

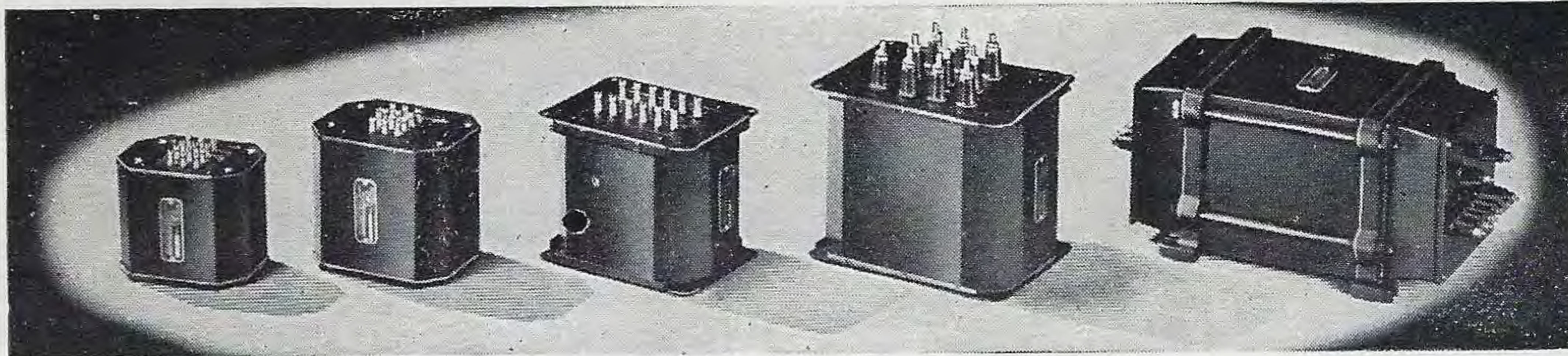
Ultra compact audio units weigh only $5\frac{1}{2}$ ounces and have overall dimensions of $1\frac{7}{16}'' \times 1\frac{7}{16}'' \times 1\frac{15}{16}''$. Mounting dimensions are $1\frac{1}{8}''$ between centers.

Type No.	Application	Primary Impedance	Secondary Impedance	List Price	Your Cost
A-20	Mixing, low impedance mike, pickup, or multiple line to multiple line	50, 125, 200, 250, 333, 500 ohms	50, 125, 200, 250, 333, 500 ohms	10.00	\$6.00
A-24	Single plate to multiple line	8,000 to 15,000 ohms	50, 125, 200, 250, 333, 500 ohms	10.00	\$6.00
A-26	Push pull low level plates to multiple line	8,000 to 15,000 ohms each side	50, 125, 200, 250, 333, 500 ohms	10.00	\$6.00
A-27	Crystal microphone to multiple line	100,000 ohms	50, 125, 200, 250, 333, 500 ohms	10.00	\$6.00
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	\$4.20



Most Complete Transformer Line in the World!

UTC VARIMATCH TRANSFORMERS



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
3000	1620	2950	3240	5500	5900	6500	9400	10000	11800	13000	17000	300
4000	1380	1850	2160	2850	3450	4300	5500	7300	8650	12500	17400	250
5000	1730	2300	2700	3500	4300	5400	7000	9150	10800	15700	21600	300
6000	1070	2140	2180	2750	3620	4250	4300	5150	6350	8300	8600	200
7000	1250	2400	2500	3200	4280	5000	5050	6000	7300	9700	10000	230
8000	1440	2760	2900	3700	4900	5650	5800	6900	8400	10000	12000	270
9000	1620	2050	3100	3240	3900	4150	6200	6500	7750	9400	12500	300
10000	1800	2300	3500	4300	4600	6100	6900	7100	8600	10500	14000	330
12000	2070	2150	2750	4250	4320	5150	7250	8300	8700	12500	17400	370
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.

VARIMATCH MODULATION TRANSFORMERS

VM-0 Will handle any power tubes to modulate a 10 to 25 watt Class C stage. PA-1. List Price \$5.00. **Your Cost \$3.00**

VM-1 Will handle any power tubes to modulate a 20 to 60 watt Class C stage. Maximum audio output 30 watts. List Price \$8.00. **Your Cost \$4.80**

VM-2 Will handle any power tubes to modulate a 40 to 120 watt Class C stage. Maximum audio output 60 watts. List Price \$12.50. **Your Cost \$7.50**

VM-3 Will handle any power tubes to modulate a 100 to 250 watt Class C stage. Maximum audio output 125 watts. List Price \$20.00. **Your Cost \$12.00**

VM-4 Will handle any power tubes to modulate a 200 to 600 watt Class C stage. Maximum audio output 300 watts. List Price \$32.50. **Your Cost \$19.50**

VM-5 Will handle any power tubes to modulate a 450 watt to 1 KW plus, Class C. Maximum audio output 600 watts. List Price \$70.00. **Your Cost \$42.00**

The secondaries of all Varimatch transformers are designed to carry the Class C plate current.

VARIMATCH INPUT TRANSFORMERS

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. List Price \$5.50. **Your Cost \$3.30**

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. List Price \$5.50. **Your Cost \$3.30**

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. List Price \$6.50. **Your Cost \$3.90**

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. List Price \$7.50. **Your Cost \$4.50**

PA-59AX 500, 200 or 50 ohm line to two 805, 838, 203A, 830 B, 800, RK-18, 801 or 210 Class B grids. PA-2. List Price \$7.50. **Your Cost \$4.50**

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. List Price \$17.50. **Your Cost \$10.50**

PA-512 500, 200 or 50 ohm line to two 150T, HF-300, HF-200, 204A or 849 Class B grids. PA-3. List Price \$20.00. **Your Cost \$12.00**

PA VARIMATCH TRANSFORMERS

PVM-1 For all audio tubes up to 12 watts audio. Output 500, 200, 15, 8, 5, 3, 1½ ohms. Some typical tubes single or push pull: 19, 31, 33, 41, 42, 43, 45, 47, 48, 49, 53, 59, 71A, 79, 89, 2A3, 2A5, 6A6, 6F6, 6V6, 25A6, 25L6. PA-1. List price \$5.00. **Your Cost \$3.00**

PVM-2 For all audio tubes up to 30 watts audio. Output 500, 200, 16, 8, 5, 3 1½ ohms. Some typical tubes for single, push pull, or push pull parallel: 19, 31, 33, 41, 42, 43, 45, 46, 47, 48, 49, 50, 52A, 300A, 53, 59, 71A, 79, 89, 841, 843, 1602, 2A3, 2A5, 6A6, 6F6, 6L6, 6V6, 25A6, 25L6. PA-2. List Price \$8.00. **Your Cost \$4.80**

PVM-3 For all audio tubes up to 60 watts audio. Output 500, 200, 16, 8, 5, 3, 1½ ohms. Some typical tubes in push pull parallel: 42's, 45's, 46's, 50's, 52's, 300A's, 59's, 2A3's, 2A5's, 6F6's. In push pull self or fixed bias: 6L6's, 10's, 807's, 801's. PA-3. List Price \$12.50. **Your Cost \$7.50**

PVM-4 For all audio tubes up to 125 watts audio. Output 500, 200, 16, 8, 5, 3, 1½ ohms.

The Varimatch transformer will not only match PRESENT available modulator tubes, but any tube that may be released at a FUTURE date. All you have to decide is the DC input to your RF stage. Then just pick the VARI-MATCH output transformer that will handle the maximum audio power required. These transformers will also match the line impedance output of PA or similar amplifiers direct to the Class C tubes.

THE VARIMATCH TRANSFORMER NEVER BECOMES OBSOLETE

Some typical tubes push pull parallel: 6L6's, 10's, 807's, 801's, push pull 845's, 800's, etc. PA-4. List Price \$20.00.

Your Cost \$12.00

PVM-5 For all audio tubes up to 300 watts audio. Output 500, 200, 16, 8, 5, 3, 1½ ohms. Typical tubes: 211, 242A, 203A, 830B, 852, 838, 4-800's, 4-845's, ZB 120, etc. PA-6. List Price \$32.50. **Your Cost \$19.50**

LINE VARIMATCH TRANSFORMERS

The UTC Line Varimatch Units will match any voice coil or group of voice coils to a 500 ohm line. Impedance range is from .2 to 75 ohms in 50 combinations. UTC Line Varimatch Autoformers will match one to ten 500 ohm lines or LVM 500 ohm windings to the 500 ohm output of an audio amplifier.

LVM-1 15 Watt Line Varimatch unit. 500 ohms to a variable voice coil winding .2 to 75 ohms. PA-1 case. List Price \$4.50. **Your Cost \$2.70**

LVM-2 40 Watt Line Varimatch unit. 500 ohms to voice coil winding of .2 to 75 ohms. PA-2 case. List Price \$7.00. **Your Cost \$4.20**

LVM-3 75 Watt Line Varimatch unit. 500 ohms to voice coil winding of .2 to 75 ohms. PA-3 case. List Price \$10.00. **Your Cost \$6.00**

LVM-10 Line Varimatch Autoformer. 500, 250, 167, 125, 100, 83, 71, 62, 50 ohms. 15 Watts. PA-1 case. List Price \$4.50. **Your Cost \$2.70**

LVM-11 Line Varimatch Autoformer. 500, 250, 167, 125, 100, 83, 71, 62, 50 ohms. 30 Watts. PA-2 case. List Price \$7.00. **Your Cost \$4.20**

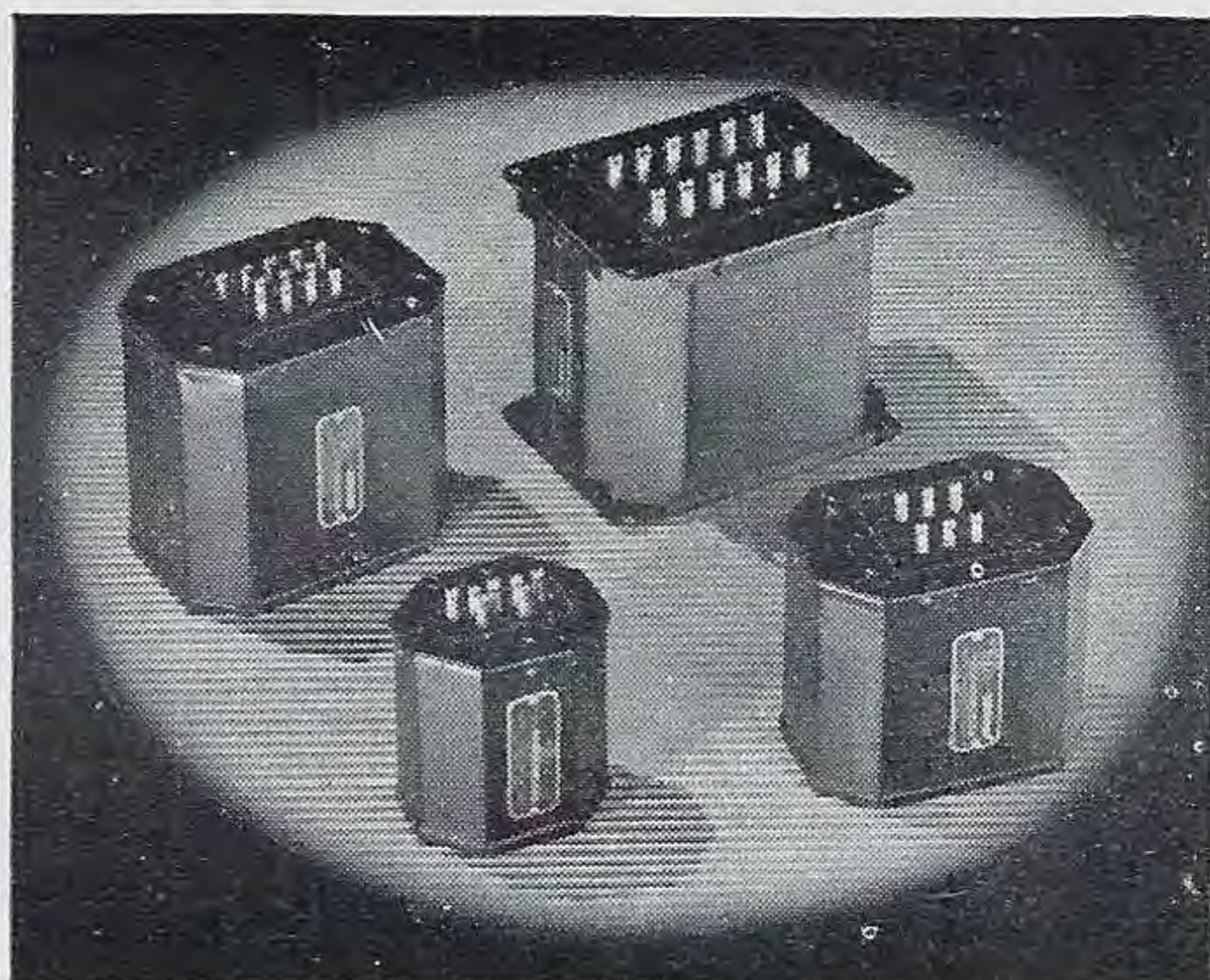
LVM-12 Line Varimatch Autoformer. 500, 250, 167, 125, 100, 83, 71, 62, 50 ohms. 60 Watts. PA-3 case. List Price \$10.00. **Your Cost \$6.00**

LVM-13 Line Varimatch Autoformer. 500, 250, 167, 125, 100, 83, 71, 62, 50 ohms. 125 Watts. PA-4 case. List Price \$18.00. **Your Cost \$10.80**

LVM-14 Line Varimatch Autoformer. 500, 250, 167, 125, 100, 83, 71, 62, 50 ohms. 300 Watts. PA-5 case. List Price \$25.00. **Your Cost \$15.00**



Most Complete Transformer Line in the World



MOUNTING DIMENSIONS

	(With Flange)	(Without Flange)
PA-1	1-15/16 x 2-7/16	PA-1 1-13/16
PA-2	2-7/16 x 3-7/16	PA-2 1-5/8 x 3-1/16
PA-3	3-1/16 x 4-5/16	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	4 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. List Price \$4.50.

Your Cost\$2.70

PA-132 From 1 plate to 2 grids. 2:1 ratio each side. Split sec. PA-1. List Price \$5.00.

Your Cost\$3.00

PA-133 From 2 plates to 2 grids. 1:75 ratio each side. Primary and secondary each in two sections. PA-1. List Price \$6.00.

Your Cost\$3.60

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. List Price \$6.00.

Your Cost\$3.60

PA-333 This input transformer is designed to operate from 6C5's, or similar driver tubes to two 6L6's fixed bias. PA-1. List Price \$6.00.

Your Cost\$3.60

PA-433 From 45 or 2A3 plates to two or four fixed bias 6L6 grids. PA-2. List Price \$6.50.

Your Cost\$3.90

PA-134 500, 200, or 50 ohm line to single grid. PA-1. List Price \$6.50.

Your Cost\$3.90

PA-135 500, 200, or 50 ohm line to push pull grids. PA-1. List Price \$7.50.

Your Cost\$4.50

PA-136 Single plate or pickup and carbon mike or low impedance pickup to one or two grids. PA-1. List Price \$7.50.

Your Cost\$4.50

MIXING, MATCHING TRANSFORMERS

PA-137 Mixing 500, 200, or 50 ohm line to 500, 200 or 50 ohm line. PA-1. List Price \$5.50.

Your Cost\$3.30

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. List Price \$7.50.

Your Cost\$4.50

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. List Price \$12.50.

Your Cost\$7.50

REACTORS

PA-40 Filter choke. 12 henrys. Max. D.C. 200 MA. Resistance 110 ohms. PA-2. List Price \$4.50.

Your Cost\$2.70

PA-41 Class B input filter choke for 46, 53, and 59 tubes. Max. D.C. 200 MA. Resistance 100 ohms. PA-2. List Price \$4.50.

Your Cost\$2.70

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.

PA-43 Filter choke. 15 henrys. Max. D.C. 165 MA. Resistance 375 ohms. PA-2. List Price \$4.50.

Your Cost\$2.70

PA-44 Filter choke. 30 henrys. Max. D.C. 100 MA. Resistance 375 ohms. PA-2. List Price \$4.00.

Your Cost\$2.40

PA-45 Parallel feed audio choke, 250 henrys. Max. D.C. 15 MA. Resistance 4500 ohms. PA-1. List Price \$4.50.

Your Cost\$2.70

PA-48C High inductance filter choke 100 hys, maximum D.C. 50 MA., resistance 2500 ohms. PA-1. List Price \$4.50.

Your Cost\$2.70

PA-35 Cathode ray transformer for 9" tube. Pri. 115-50/60 cy. Sec. 1000 volts A.C. at 15 MA.; 80 volts A. C. at 20 MA. for sweep circuit. 2 1/2 V.C.T. at 3A. 5V.-3A. PA-2. List Price \$8.00.

Your Cost\$4.80

PA-913 Cathode ray transformer for 913 tube. Pri. 115-50/60 cy. Sec. 950 V.C.T. at 10 MA. 6.3 volts at 1.2 A. 2 1/2 volts at 1.5 A. 5 volts at 3 A. PA-2. List Price \$4.00.

Your Cost\$2.40

PA-430 Low voltage high current power transformer. Pri. 115 V.-50/60 cy. Secondaries 165-100-0-100-165 at 250 MA. 5 V.-3A. 6.3 V.C.T. at 2A. PA-2. List Price \$6.00.

Your Cost\$3.60

CLASS A OUTPUT TRANSFORMERS

PA-140 From a triode plate like 864, 27, 112A, 55, 30 to 500, 200 or 50 ohms. List Price \$6.50.

Your Cost\$3.90

PA-141 From push pull triode plates like 864's, 27's, 112A's, 30's to 500, 200 or 50 ohms. List Price \$7.50.

Your Cost\$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. 6A. PA-3. List Price \$8.00.

Your Cost\$4.80

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. List Price \$10.00.

Your Cost\$6.00

PA-425 Plate transformer for parallel push pull 45A prime tubes. Pri. 115 V. A.C. 60 cycles. Secondaries 400-0-400 at 200 MA.; 2 1/2 V.C.T. 6A.; 2 1/2 V. C. T. 10A, 5V.C.T. 3A., 6.3 V.C.T. 3A. PA-3. List Price \$12.50.

Your Cost\$7.50

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 125 MA.; 2 1/2 V.C.T. 6 A. 6.3 V.C.T. 4 A. 5 V.C.T. 3 A. PA-3. List Price \$10.00.

Your Cost\$6.00

PA-428 Power transformer for push pull 6L6 tubes self or fixed bias primary 115 V. A.C., 60 cycles. Secondaries 450-0-450 at 250 MA.; 6.3 V.C.T.-4A, 6.3 V.C.T.-3A also tapped for 2 1/2 V-3A; 2 1/2 V.C.T.-3A; 5 V.C.T.-3A. Taps on high voltage winding for bias supply rectifier. PA-4 List Price \$14.00.

Your Cost\$8.40

PA-431 Plate and filament supply for 4-6L6's in fixed bias. Pri. 115, 50/60 cy. Secondaries: 500-425-0-425-500 at 500 MA. fixed bias winding for 6L6's, 5V.-6A; 5V.-3A; 6.3 V.C.T.-5A; 6.3 V.C.T.-3A; PA-5. List Price \$22.50.

Your Cost\$13.50

CLASS A AND CLASS B OUTPUTS

PA-14 For 4-25L6's in push pull parallel 1000 ohms plate to plate. Secondary 500, 200, 16, 8, 5, 3, 1 1/2 ohms. PA-2. List Price \$7.00.

Your Cost\$4.20

PA-15 8000 ohms plate to plate for class A, in push pull: 250's, 245's, 43's, single: 211, 843, 842, 205D, 47, to 500, 200, 16, 8, 5, 3, 1.5 ohms. PA-2 case. List Price \$7.00.

Your Cost\$4.20

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, to 500, 200, 16, 8, 5, 3, 1.5 ohms. PA-2 case. List Price \$7.00.

Your Cost\$4.20

PA-19 10,000 ohms plate to plate or 6000 ohms plate to plate, for 10,000 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, to 500, 200, 16, 8, 5, 3, 1.5 ohms. PA-2 case. List Price \$7.00.

Your Cost\$4.20

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, to 500, 200, 16, 8, 5, 3, 1.5 ohms. PA-2 case. List Price \$7.00.

Your Cost\$4.20

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 W.E. 252A's; for 3500 ohms, class A prime 45's fixed bias, to 500, 200, 16, 8, 5, 3, 1.5 ohms. PA-2 case. List Price \$7.00.

Your Cost\$4.20

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 W.E. 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, to 500, 200, 16, 8, 5, 3, 1.5 ohms. PA-3 case. List Price \$12.50.

Your Cost\$7.50

***PA-2L6** 6600 ohms plate to plate for push pull 6L6's self bias, 35-40 watts output, to 500, 200, 16, 8, 5, 3, 1.5 ohms. PA-3 case. List Price \$10.00.

Your Cost\$6.00

***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, to 500, 200, 16, 8, 5, 3, 1.5 ohms. PA-4 case. List Price \$15.00.

Your Cost\$9.00

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

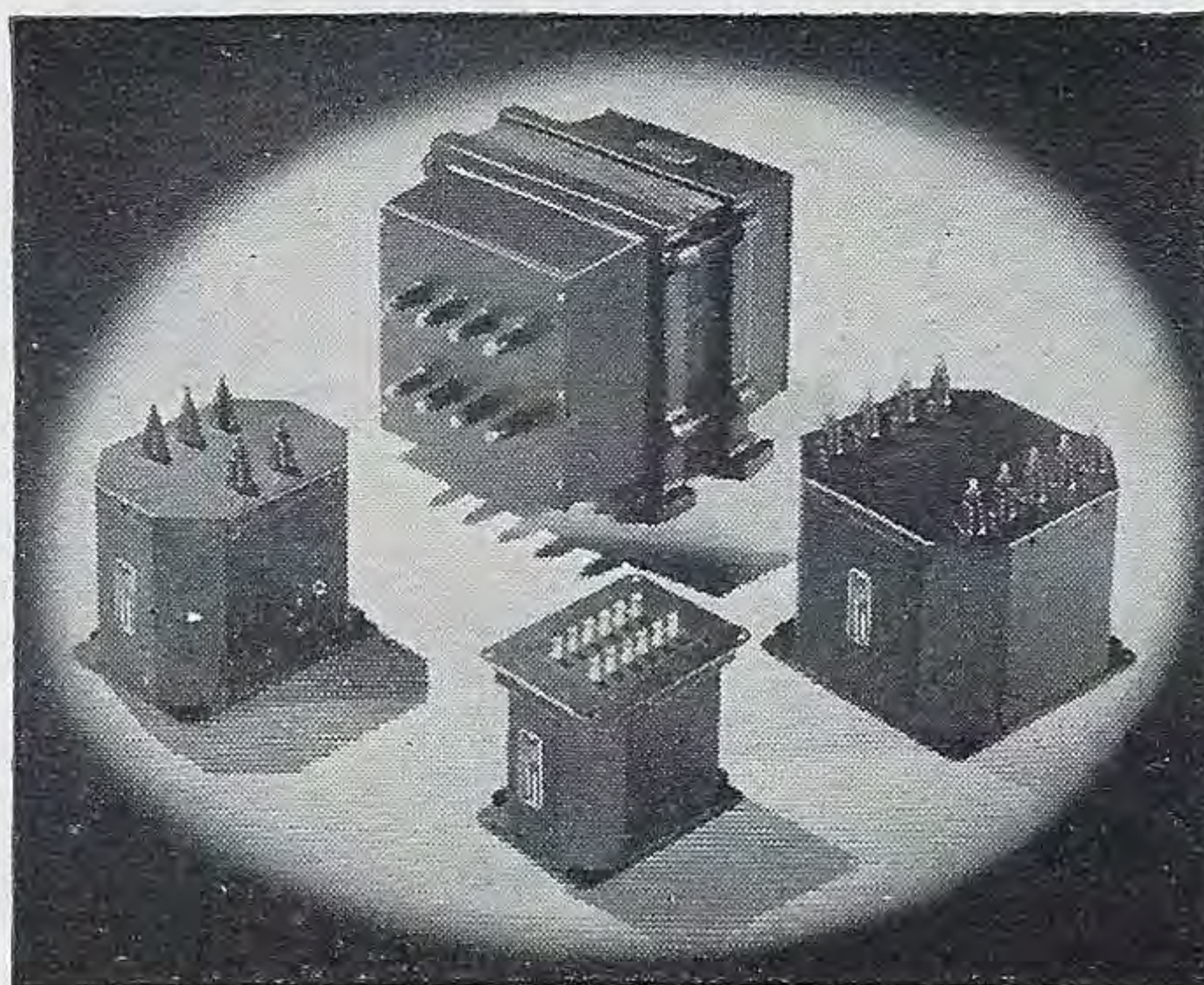


Most Complete Transformer Line in the World!

UTC TRANSMITTING COMPONENTS

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.

Mounting Dimensions

PA-1	1-15/16x2-7/16
PA-2	2-7/16x3 7/8
PA-3	3-1/16x4-5/16
PA-4	3 3/4x5-7/32
PA-5	4 3/4x6 3/8
PA-6	7x7

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 1/2
PA-4	6	4 1/2	4 3/4
PA-5	7	5 3/4	5 1/2
PA-6	7 3/4	7 3/4	7 1/2

PLATE TRANSFORMERS

Primary 105, 115, 220, 230 Volts A. C. 50-60 Cycles

PA-110 515 or 625 each side of center at 200 M.A. 400 V.D.C. or 500 V.D.C. PA-3, List Price \$10.00. **Your Cost**\$6.00
PA-111 750 or 950 each side of center at 350 M.A., D.C. voltage 600 or 750. PA-4, List Price \$17.00. **Your Cost**\$10.20
PA-112 1250 or 1500 each side of center at 500 M.A.; D.C. voltage 1050 or 1250. PA-6, List Price \$32.00.

Your Cost\$19.20
PA-113 1750 or 2100 each side of center at 500 M.A.; D.C. voltage 1500 or 1750. PA-6, List Price \$43.50.

Your Cost\$26.10
PA-114 1750, 2350, 3000 or 3500 each side of center at 500 M.A.; D.C. voltage 1500, 2000, 2500 or 3000, UTS mtg. List Price \$76.00. **Your Cost**\$45.60

PA-154 3500, 4000 each side of center at 500 M.A.; 3050 V.D.C. or 3500 V.D.C. UTS Case. List Price \$100.00.

Your Cost\$60.00
PA-155 1250 or 1500 each side of center at 750 M.A.; D.C. voltage 1050 or 1250 U.T.S. case. List Price \$50.00.

Your Cost\$30.00
PA-115 C bias plate transformer for class B 203A's, 830 B's, 800's, or 210's using one or two 82 rectifiers. PA-3, List Price \$10.00.

Your Cost\$6.00
PA-116 1250 or 1500 each side of center at 300 M.A.; D.C. voltage 1050 or 1250. PA-5, List Price \$23.00.

Your Cost\$13.80
PA-117 3500 or 3000 each side of center at 1 ampere, 2620 V.D.C. or 3050 V.D.C. UTS case. List Price \$115.00.

Your Cost\$69.00
PA-118 1750 or 2400 each side of center at 325 M.A.; D.C. voltage 1500 or 2000. PA-6 mtg. List Price \$35.00 **Your Cost** \$21.00
PA-119 1500 or 1750 each side of center at 1 amp. D.C. voltage 1250 or 1500. UTS case, List Price \$76.00. **Your Cost**\$45.60

Note: Operating the above transformers on 115 volt line the D.C. 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

PA-101 Swinging action 5 to 25 henrys, current range 15 to 150 M.A., ohmic resistance 115. PA-2 case. List Price \$5.00.

Your Cost\$3.00
PA-103 Swinging action 5 to 25 henrys, current range 20 to 200 M.A., ohmic resistance 110. PA-3 case. List Price \$8.00.

Your Cost\$4.80
PA-105 Swinging action 6 to 30 henrys, current range 25 to 250 M.A., ohmic resistance 90. PA-4 case. List Price \$12.00.
Your Cost\$7.20

PA-109 Swinging action 5 to 25 henrys, current range 75 to 500 M.A., ohmic resistance 60. PA-5 case. List Price \$20.00.

Your Cost\$12.00
PA-1C Swinging action 5 to 25 henrys, current range 100 to 1000 M.A. ohmic resistance 50. UTS case. List Price \$35.00.

Your Cost\$21.00

TRAP RESONANT SMOOTHING CHOKES

Smoothing Chokes Have an Off Center Tap for Hum Bucking Arrangements

PA-100 Inductance 8 henrys, D.C. output 150 M.A., ohmic resistance 115. PA-2 case. List Price \$5.00 **Your Cost**\$3.00

PA-102 Inductance 10 henrys, D.C. output 200 M.A., ohmic resistance 110. PA-3 case. List Price \$8.00. **Your Cost** \$4.80

PA-104 Inductance 12 henrys, D.C. output 250 M.A., ohmic resistance 90. PA-4 case. List Price \$12.00. **Your Cost** \$7.20

PA-108 Inductance 10 henrys, D.C. output 500 M.A., ohmic resistance 60. PA-5 case. List Price \$20.00 **Your Cost** \$12.00

PA-1S Inductance 10 henrys, D.C. output 1000 M.A., ohmic resistance 50. UTS case. List Price \$35.00. **Your Cost**\$21.00

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. PA-2. List Price \$7.50.

Your Cost\$4.50
PA-120 2 1/2 V.C.T. 10 amps. for 2-866's—10,000 V. insulation. PA-3. List price \$9.00

Your Cost\$5.40
PA-121 5 V.C.T. 20 amps. for 2-872's—10,000 V. insulation PA-3. List Price \$14.00.

Your Cost\$8.40
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. List Price \$11.00.

Your Cost\$6.60
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. List Price \$12.00.

Your Cost\$7.20
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. List Price \$20.00.

Your Cost\$12.00
PA-128 5 V.C.T. 12 amps. for 3-35T's, 2-50T's or 1-150 T. 7000 V. insulation PA-3. List Price \$10.00. **Your Cost**\$6.00

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. List Price \$6.25 **Your Cost**\$3.75

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. List Price \$6.75. **Your Cost**\$4.05

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. List Price \$6.75. **Your Cost**\$4.05

PA-32 Secondaries. 5 V.C.T. 3 A., 5 V.C.T. 3 A. PA-2. List Price \$6.75. **Your Cost**\$4.05

PA-33X Secondaries. 5 V.C.T. 3 A., C.T. 2 1/2 A., 6.3 V.C.T. 3 A., 6.3 V.C.T. 3 A. PA-2. List Price \$6.75. **Your Cost** \$4.05

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

VARIPOWER AUTOFORMERS

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. Output voltages from 0 to 130 volts in 5V. steps can be obtained.

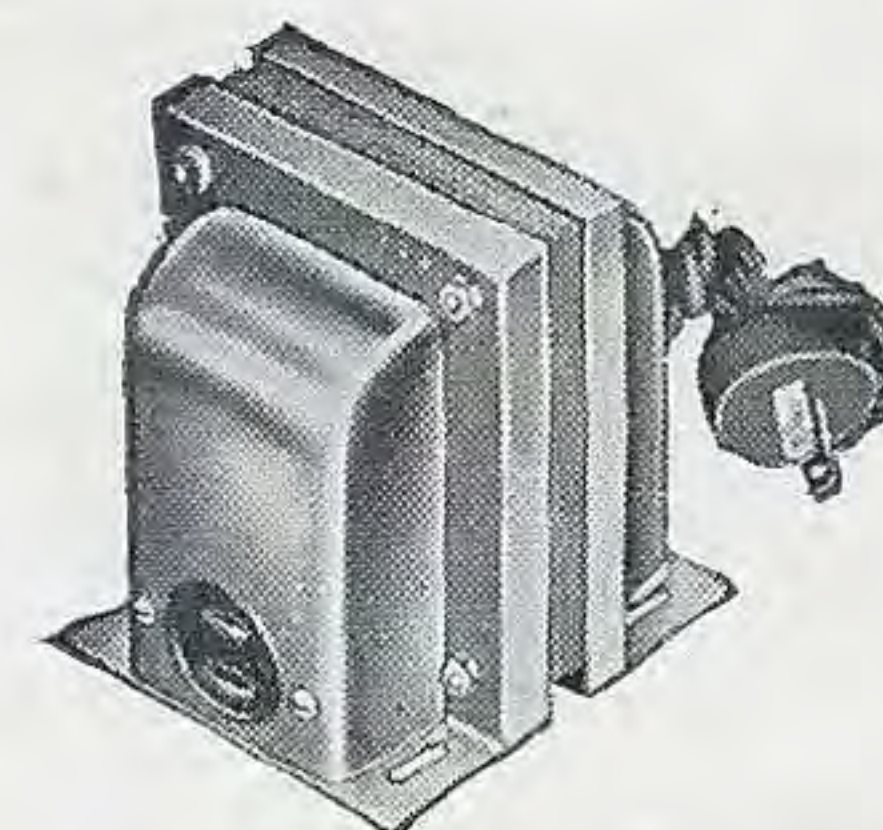
VA-1 150 watt output rating. List Price \$6.00. **Your Cost**\$3.60

VA-2 250 watt output rating. List Price \$7.50. **Your Cost**\$4.50

VA-3 500 watt output rating. List Price \$10.00. **Your Cost**\$6.00

VA-4 1000 watt output rating. List Price \$15.00. **Your Cost**\$9.00

VA-5 2000 watt output rating. List Price \$20.00. **Your Cost**\$12.00



CHROMSHIELD STEP DOWN TRANSFORMERS

220-240 to 110-120 Volts, 50-60 Cycles

CS-120 85 Watt capacity. List Price \$4.50 **Your Cost**\$2.70

CS-121 125 Watt capacity. List Price \$5.50 **Your Cost**\$3.30

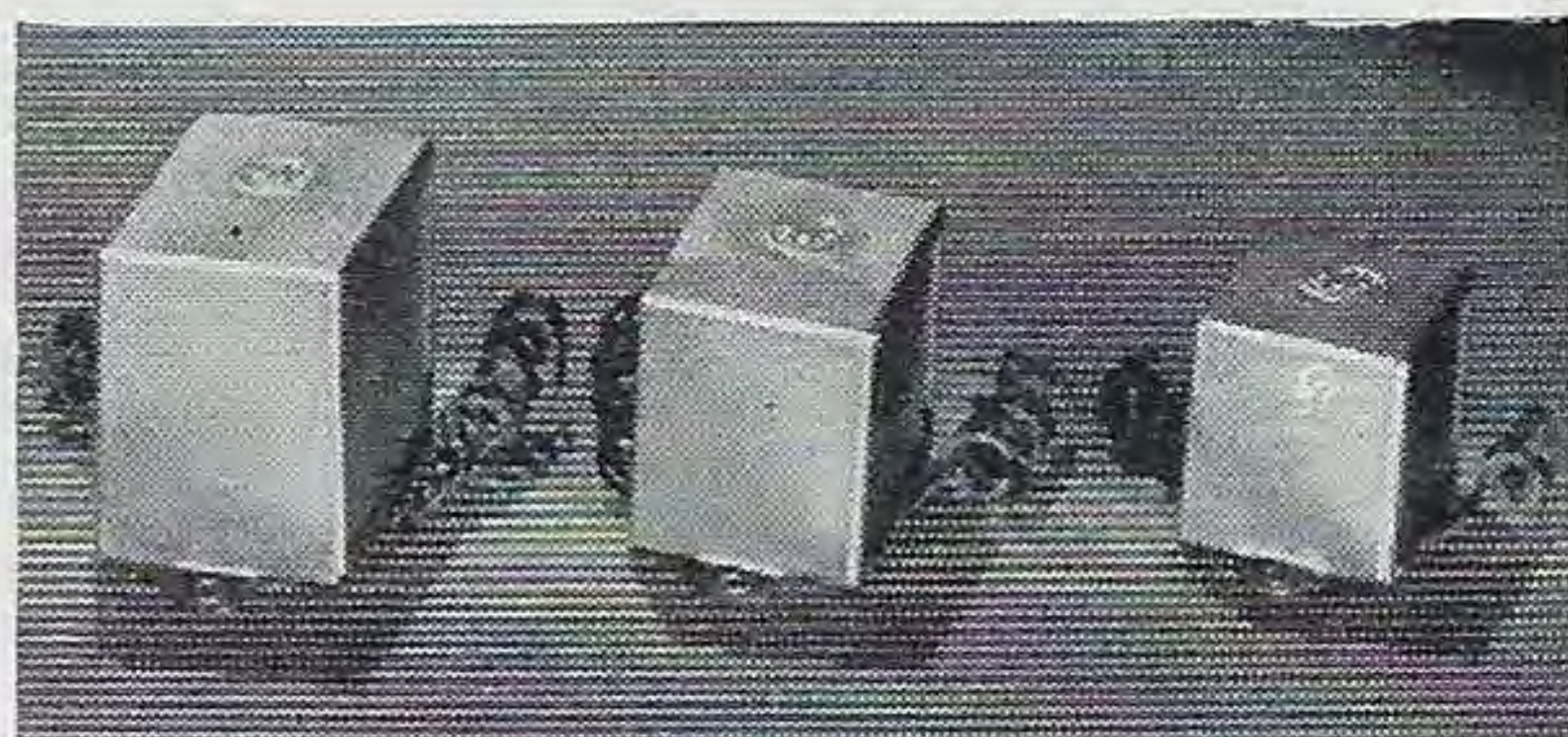
CS-122 175 Watt capacity. List Price \$6.50 **Your Cost**\$3.90

CS-123 250 Watt capacity. List Price \$7.50 **Your Cost**\$4.50



Most Complete Transformer Line in the World!

UTC CHROMSHIELD TRANSFORMERS



Gleaming chromium plate! Welded cases! Vacuum treated and humidity proof. Transformers fully clamped internally. All outputs with a variety of impedances! Trim professional units all physically symmetrical and with uniform mounting arrangements.

Seven Chromshield Cases

Type	L	W	H	Mounting Dimen.
C-1	3	1½	1-11/16	2-7/16
C-2	3¾	1¾	2-1/16	2¾
C-3	3¾	2	2¾	3¾
C-4	4½	2½	2¾	3½
C-5	5	2¾	3¾	1-15/16x4½
C-6	6	3¾	4¾	1½x5¾
C-7	4¾	4½	4½	3-7/16x4-3/16

CLASS A INPUT TRANSFORMERS

CS-1 1 plate to 1 grid. 3½:1 ratio. C-2 mtg. List Price \$2.35. **Your Cost \$1.41**
CS-2 1 plate to 2 grids, split secondary. 2:1 ratio. C-2 mtg. List Price \$2.50.

Your Cost \$1.50
CS-3 Push pull plates to push pull grids 1.8:1 ratio. C-3 mtg. List Price \$2.75.

Your Cost \$1.65

CS-4 Low or high impedance pickup to grid. Pri. 500, 1000, 2000 ohms. C-2 mtg. List Price \$3.00. **Your Cost \$1.80**

CS-5 Single or double button mike to 1 grid. C-2 mtg. List Price \$2.50.

Your Cost \$1.50

CS-6 Single or double button mike to 2 grids. C-2 mtg. List Price \$3.00.

Your Cost \$1.80

CS-10 Single plate and carbon mike to one or two grids. C-2 mtg. List Price \$3.50.

Your Cost \$2.10

CS-2W Single plate to push pull grids. Wide range response, 1:1 ratio. C-3 mtg. List Price \$3.50. **Your Cost \$2.10**

The new chromshield VARIMATCH modulation transformer incorporates a modified VARIMATCH coil structure making possible universal matching from all the popular modulator tubes to a 5,000 or 3,500 ohm rf load. It will handle 20 watts of audio.

CS-R designed for class A, AB and B tubes like the 45, 50, 2A3, 42, 59, 46, 47, 2A5, 6F6, 6V6, 6B5, 6A6, 53, 79 and similar tubes to an rf load of 5000 and 3500 ohms. C-4 case. List Price \$3.50.

Your Cost \$2.10

CS-L will match same tubes as above but to a 500, 15, 8, 4 or 2 ohm line. C-4 case. List Price \$3.75. **Your Cost \$2.25**

CS-V will match same tubes as CS-R but to a 15, 8, 4 and 2 ohm line. C-4 Case. List Price \$3.25. **Your Cost \$1.95**

MATCHING TRANSFORMERS

CS-9 Mixing carbon mike, 500 or 200 ohm line. C-3 mtg. List Price \$3.50.

Your Cost \$2.10

CS-26 Single 26, 56, 27, 55, 77, 6C5 triode or 864 plate to 500 or 200 ohms. C-2 mtg. List Price \$3.00. **Your Cost \$1.80**

CS-27 Push pull 26, 56, 27, 55, 77, 6C5 triodes or 864 plates to 500 to 200 ohms. C-3 mtg. List Price \$3.50.

Your Cost \$2.10

CS-28 Line to speaker matching transformer. Input 4000 ohms and 500 ohms. Output 15, 8, 4, and 2 ohms. Will handle up to 15 watts. C-4 mtg. List Price \$4.50.

Your Cost \$2.70

A PRIME AND CLASS B INPUT TRANSFORMERS

CS-29 Driver plate to 53, 6A6, 49, 79 or 89 grids. C-4 mtg. List Price \$2.75.

Your Cost \$1.65

CS-30 Driver 46 or 59 plate to 46 or 59 grids. C-4 mtg. List Price \$2.75.

Your Cost \$1.65

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. List Price \$3.75. **Your Cost \$2.25**

CS-292 Push pull 53 or 6A6 triode plates to two or four class B 53 or 6A6 grids. C-3 mtg. List Price \$3.25. **Your Cost \$1.95**

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. List Price \$3.50. **Your Cost \$2.10**

CS-456 Push pull self bias 6L6's AB to 500, 15, 8, 4, 2 ohms. C-5 mtg. List Price \$7.50. **Your Cost \$4.50**

CS-457 Push pull fixed bias or four self biased 6L6's, AB to 500, 15, 8, 4, 2 ohms. List Price \$10.00. **Your Cost \$6.00**

HUMIDITY PROOF CHROMSHIELD TRANSCEIVER AUDIO UNITS

All Chromshield Transceiver Units Fit in the C-1 Case

CS-101 Interstage audio 4:1 ratio. List Price \$1.95. **Your Cost \$1.17**

CS-102 Single plate to 2 grids, 2½:1 ratio. List Price \$2.00.

Your Cost \$1.20

CS-103 Single or double button mike to 1 grid. List Price \$2.00.

Your Cost \$1.20

CS-104 Single plate and carbon mike to 1 grid. List Price \$2.25.

Your Cost \$1.35

CS-105 Velocity mike to 500 to 200 ohms. List Price \$2.25. **Your Cost \$1.35**

CS-106 Single 56, 6C6, 6C5, 864 plate to 500 or 200 ohms. List Price \$2.25.

Your Cost \$1.35

CS-107 Driver plate to 19, 49, 79, 89 grids. List Price \$2.25. **Your Cost \$1.35**

CS-108 Class B 19, 49, 79, 89 plates to 5000 or 3500 ohms. List Price \$2.75.

Your Cost \$1.65

FILTER AND AUDIO CHOKES, FILAMENT TRANSFORMERS

CS-37 Filter choke. 25 henrys 30 MA.; resistance 900 ohms. C-2 mtg. List Price \$2.00. **Your Cost \$1.20**

CS-38 Filter choke. 15 henrys 60 MA.; resistance 240 ohms. C-2 mtg. List Price \$2.00. **Your Cost \$1.20**

CS-39 Filter choke. 20 henrys 90 MA.; resistance 400 ohms. C-4 mtg. List Price \$2.50. **Your Cost \$1.50**

CS-40 Filter choke. 30 henrys 75 MA.; resistance 350 ohms. C-4 mtg. List Price \$3.00. **Your Cost \$1.80**

CS-41 Filter choke. 10 henrys 75 MA.; 95 ohms. C-4 mtg. List Price \$3.00.

Your Cost \$1.80

CS-42 Class B input choke. Max. D.C. 175 MA.; C-4 mtg. List Price \$3.00.

Your Cost \$1.80

CS-43 Center tapped audio choke for push pull triode plates. Resistance 12,000 ohms. C-3 mtg. List Price \$3.50.

Your Cost \$2.10

CS-44 Detector plate shunt choke. Max. D.C. 3 MA.; C-2 mtg. List Price \$2.25.

Your Cost \$1.35

CS-45 Pri. 115 A.C. Sec. 2½ V.C.T. 6 A. C-2 mtg. List Price \$1.75.

Your Cost \$1.05

CS-46 Pri. 115 A.C. Sec. 6.3 V.C.T. 3A. C-2 mtg. List Price \$2.25.

Your Cost \$1.35

CS-47 Pri. 115 A.C. Sec. 2½ V.C.T. 12 A. C-3 mtg. List Price \$2.25.

Your Cost \$1.35

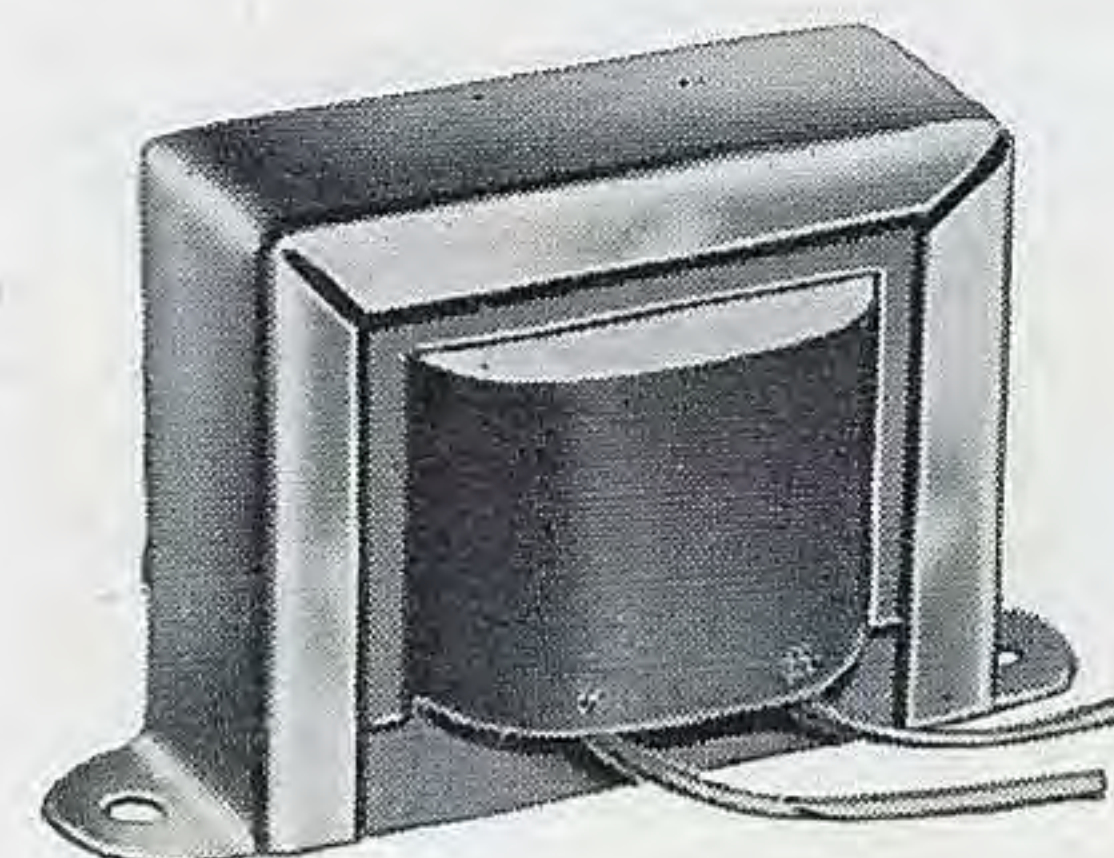
CS-48 Pri. 115 A.C. Sec. 5 V. 4 A. C-3 mtg. List Price \$2.25.

Your Cost \$1.35

CS-49 Pri. 115 A.C. Sec. 7½ V.C.T. 3 A. C-3 mtg. List Price \$2.25.

Your Cost \$1.35

UNCASED FILTER, CHOKES AND FILAMENT TRANSFORMERS



PC-1 10 henrys, 40 MA.; 200 ohms D.C. List Price 95c. **Your Cost 57c**

PC-2 15 henrys, 35 MA.; 300 ohms D.C. List Price 95c. **Your Cost 57c**

PC-3 16 henrys, 30 MA.; 450 ohms D.C. List Price 95c. **Your Cost 57c**

PC-4 20 henrys, 25 MA.; 600 ohms D.C. List Price \$1.10. **Your Cost 66c**

PC-5 25 henrys, 25 MA.; 1000 ohms D.C. List Price \$1.25. **Your Cost 75c**

PC-5X 5 henrys, 125 MA.; 150 ohms D.C. List Price \$1.25. **Your Cost 75c**

PC-6 10 henrys, 75 MA.; 265 ohms D.C. List Price \$1.25. **Your Cost 75c**

PC-7 15 henrys, 100 MA.; 450 ohms D.C. List Price \$2.00. **Your Cost \$1.20**

PC-8 1 henry, 250 MA.; 40 ohms D.C. List Price \$2.50. **Your Cost \$1.50**

PC-9 8 henrys, 150 MA.; 105 ohms D.C. List Price \$2.50. **Your Cost \$1.50**

PC-10 Class B input choke. 165 MA.; DC. List Price \$2.50. **Your Cost \$1.50**

PC-11 Parallel feed choke. Max. D.C., 3 MA. List Price \$1.75. **Your Cost \$1.05**

PC-12 15 henrys, 250 MA.; 120 ohms D.C. List Price \$5.50. **Your Cost \$3.30**

PC-13 Class B input choke. Max. D.C. 350 MA. List Price \$5.50. **Your Cost \$3.30**

FT-1 Pri. 115 A.C. Secondary 2½ V.C.T. 3 A. List Price \$1.25. **Your Cost 75c**

FT-2 Pri. 115 A.C. Secondary 6.3 V.C.T. 1.2 A. List Price \$1.25. **Your Cost 75c**

FT-3 Pri. 115 A.C. Secondary 2½ V.C.T. 6 A. List Price \$1.50. **Your Cost 90c**

FT-4 Pri. 115 A.C. Secondary 6.3 V.C.T. 2½ A. List Price \$1.75. **Your Cost \$1.05**

FT-5 Pri. 115 A.C. Secondary 2½ V.C.T. 10 A. List Price \$1.75. **Your Cost \$1.05**

FT-6 Pri. 115 A.C. Secondary 5 V. 3 A. List Price \$1.75. **Your Cost \$1.05**

FT-7 Pri. 115 A.C. Secondary 7½ V.C.T. 3 A. List Price \$1.75. **Your Cost 90c**



Most Complete Transformer Line in the World!

PLATE TRANSFORMERS

CS-200 450 each side of center at 150 MA.; 5V-3A; 2½ V-10A. CV mtg. L 5½ x W 3¼ x H 4½. Mtg. Dim. 3½ x 2½. List Price \$6.50.

Your Cost\$3.90

CS-201 500 each side of center at 200 MA.; 2½ V.C.T. 14 A; 5 V.C.T. 3 A; CD mtg. L 5 x W 3¼ x H 4½. Mtg. Dim. 2½ x 3. List Price \$8.00. **Your Cost**\$4.80

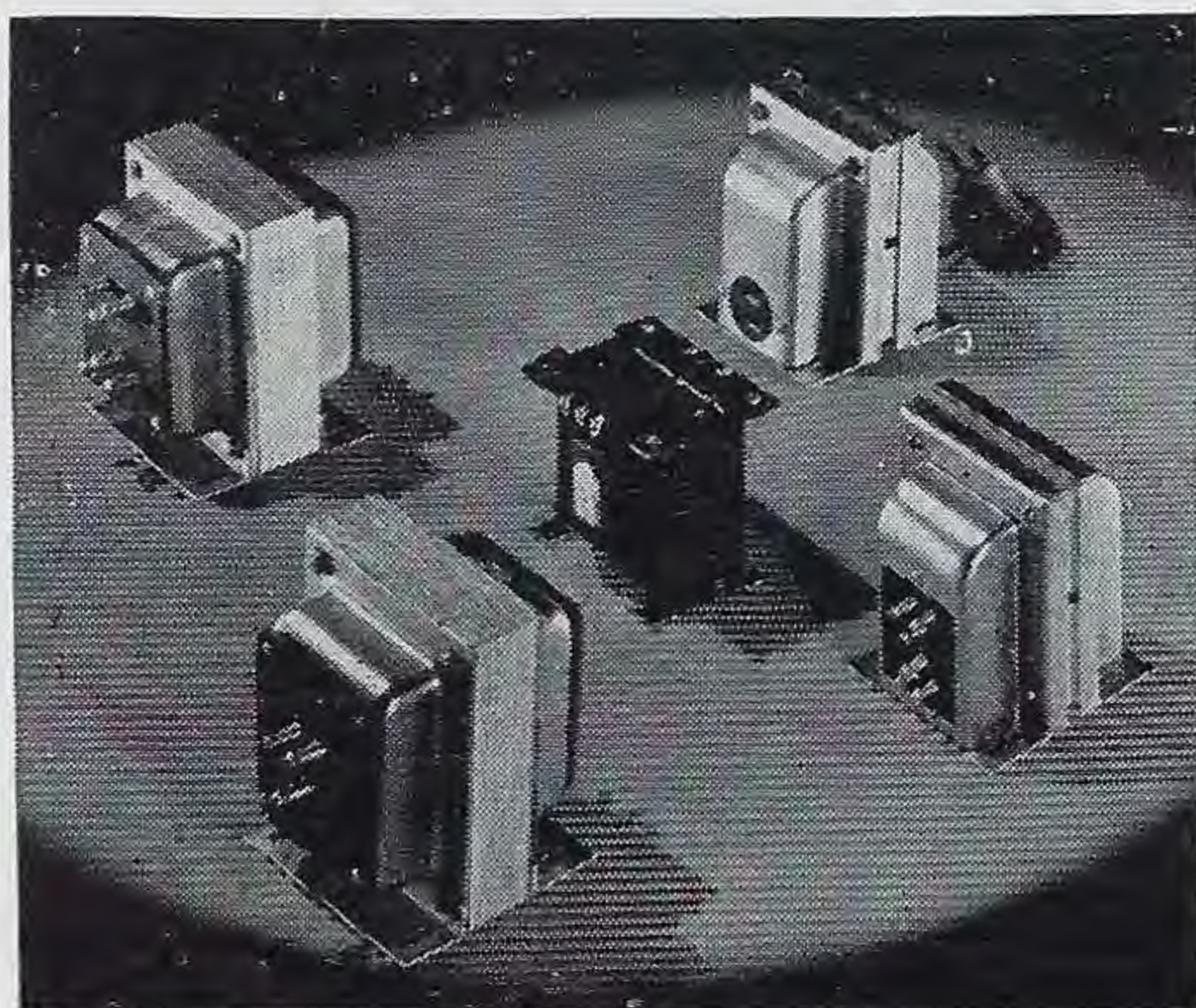
CS-202 600 each side of center at 200 MA.; 2½ V-10A; 7½ V-3A; 5V-3A. CD mtg. L 6 x W 3¼ x H 4½. Mtg. Dim. 2¾ x 3. List Price \$10.00. **Your Cost**\$6.00

CS-203 800 each side of center at 150 MA.; 600 V. D.C. CD mtg. L 4½ x W 3¼ x H 4½. Mtg. Dim. 2½ x 2½. List Price \$7.50.

Your Cost\$4.50

CS-204 800 each side of center at 250 MA.; 650 V. D.C. CD mtg. L 6 x W 3¼ x H 4½. Mtg. Dim. 3¼ x 2½. List Price \$11.00.

Your Cost\$6.60



FILAMENT TRANSFORMERS

CS-401 2½ V.C.T. 20 A; 5 V.C.T. 3 A; 7½ V.C.T. 6½ A. 2500 V. insulation. L 5 x W 3¼ x H 4½. Mtg. Dim. 2¼ x 2¾. List Price \$8.50.

Your Cost\$5.10

CS-402 10 V.C.T. 6½ A; 10 V.C.T. 6½ A; 7½ V.C.T. 2½ A; 2½ V.C.T. 5A; 2500 V. insulation. CD mtg. L 6 x W 3¼ x H 4½. Mtg. Dim. 3¼ x 2½. List Price \$11.50.

Your Cost\$6.90

CS-403 11 V.C.T. tapped at 12 and 14 volts at 10 A. 5000 V. insulation. CD mtg. L 5¼ x W 3¼ x H 4½. Mtg. Dim. 2½ x 3. List Price \$8.50. **Your Cost**\$5.10

CS-404 2½ V.C.T. 12 A; 5000 V. insulation; 10 V.C.T. 6½ A. CD mtg. L 4¾ x W 3¼ x H 4½. Mtg. Dim. 2¼ x 2¾. List Price \$8.00.

Your Cost\$4.80

CS-405 5-5¼ V.C.T. 20-22 A; 7000 V. insulation. CD mtg. L 5¼ x W 3¼ x H 4½. Mtg. Dim. 2½ x 3. List Price \$7.50.

Your Cost\$4.50

CS-406 5 V.C.T. 20 A; 10,000 V. insulation. CD mtg. L 5¼ x W 3¼ x H 4½. Mtg. Dim. 2½ x 3. List Price \$10.00. **Your Cost**\$6.00

CS-407 2½ V.C.T. 12 A; 7000 V. insulation. CV mtg. L 4½ x W 3¼ x H 4½. Mtg. Dim. 2½ x 2½. List Price \$4.50. **Your Cost**\$2.70

CS-408 7½ V.C.T. 6½ A; 5000 V. insulation. CV mtg. L 4 x W 3¼ x H 4½. Mtg. Dim. 2¼ x 2½. List Price \$4.50. **Your Cost**\$2.70

CS-409 10 V.C.T. 6½ A; 5000 V. insulation. CV mtg. L 4 x W 3¼ x H 4½. Mtg. Dim. 2¼ x 2½. List Price \$5.00. **Your Cost**\$3.00

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. L 4 x W 3¼ x H 4½. Mtg. Dim. 2¼ x 2½. List Price \$5.00. **Your Cost**\$3.00

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. L 6 x W 3¼ x H 4½. Mtg. Dim. 3¼ x 2½. List Price \$10.00. **Your Cost**\$6.00

CS-412 6.3 V.C.T. 5 A; 5 V.C.T. 8 A. CV mtg. L 4¼ x W 3¼ x H 4½. Mtg. Dim. 2½ x 2½. List Price \$5.00. **Your Cost**\$3.00

SILCHROME

REPLACEMENT AUDIO, FILAMENT AND FILTER COMPONENTS

are built to highest standards ever set for material of this type. All coils are accurately machine wound, vacuum impregnated and sealed, and finished with a beautiful silver coil wrapper bearing the lead code. The laminations used are of high grade silicon steel annealed for maximum permeability. The entire lamination structure is housed in a chromium plated channel frame bearing the UTC medalion. . . . the mark of quality and reliability.



SMOOTHING CHOKES

CS-301 12 henry, 200 MA.; D.C. resistance 140 ohms. CV mtg. L 4 x W 3¼ x H 4½. Mtg. Dim. 2¼ x 2½. List Price \$5.00. **Your Cost**\$3.00

CS-302 12 henry, 300 MA.; D.C. resistance 105 ohms. CD mtg. L 4¼ x W 3¾ x H 4½. Mtg. Dim. 2¾ x 3. List Price \$7.50. **Your Cost**\$4.50

CS-303 12 henry, 500 MA.; D.C. resistance 70 ohms. CD mtg. L 6 x W 3¼ x H 4½. Mtg. Dim. 4½ x 3. List Price \$13.00. **Your Cost**\$7.80

INPUT SWINGING CHOKES

CS-304 5/25 henry, 200 MA.; D.C. resistance 140 ohms. CV mtg. L 4 x W 3¼ x H 4½. Mtg. Dim. 2½ x 2¼. List Price \$5.00. **Your Cost**\$3.00

CS-305 5/25 henry, 300 MA.; D.C. resistance 105 ohms. CD mtg. L 4¼ x W 3¾ x H 4½. Mtg. Dim. 2¾ x 3. List Price \$7.50. **Your Cost**\$4.50

CS-306 5/25 henry, 500 MA.; D.C. resistance 70 ohms. CD mtg. L 6 x W 3¼ x H 4½. Mtg. Dim. 4½ x 3. List Price \$13.00. **Your Cost**\$7.80

OPEN CHANNEL FRAME AUDIO TRANSFORMERS

Horizontal Mounting Centers, 2-13/16"
L. 3-5/16"; W. 1½"; H. 2"

U-31 1 plate to 1 grid 3:1 ratio. List Price \$1.75. **Your Cost**\$1.05

U-32 1 plate to 2 grids 2:1 ratio. List Price \$1.85. **Your Cost**\$1.11

U-32X 1 plate to 2 grids 2:1 ratio. Split secondary. List Price \$1.90.

Your Cost\$1.14

U-33 2 plates to 2 grids 1.75:1 ratio. List Price \$2.00. **Your Cost**\$1.20

U-47 Single power pentode to single voice coil. List Price \$1.50.

Your Cost90c

U-45 Single power triode to single voice coil. List Price \$1.50.

Your Cost90c

U-245 Push Pull power triodes to single voice coil. List Price \$1.60.

Your Cost96c

UNCASED MIGHTY MITE AUDIO TRANSFORMERS

For Transceivers—For Compact Head Amplifiers—For Pee Wee and Aeroplane Receivers

Horizontal Mounting Centers, 2¾"
L. 2¾" W. 1½"; H. 1-11/16"

U-41 Interstate audio 4:1 ratio. List Price \$1.50. **Your Cost**90c

U-15 Single plate to two grids 2½:1 ratio. List Price \$1.55. **Your Cost**93c

UPM Single pentode 18, 20, 33, 41, 42, 2A5 plate to 4000 and 2000 ohms. List Price \$1.75. **Your Cost**\$1.05

UMC Double button mike to 1 grid. List Price \$1.60. **Your Cost**96c

UTC Single plate and carbon mike to single grid. List Price \$1.65.

Your Cost99c

UHO Single 56, 27, or 864 plate to 500 and 200 ohms. List Price \$2.02.

Your Cost\$1.21

U30B Driver 30 plate to Class B 19, 49, 79, 89 grids. List Price \$1.75.

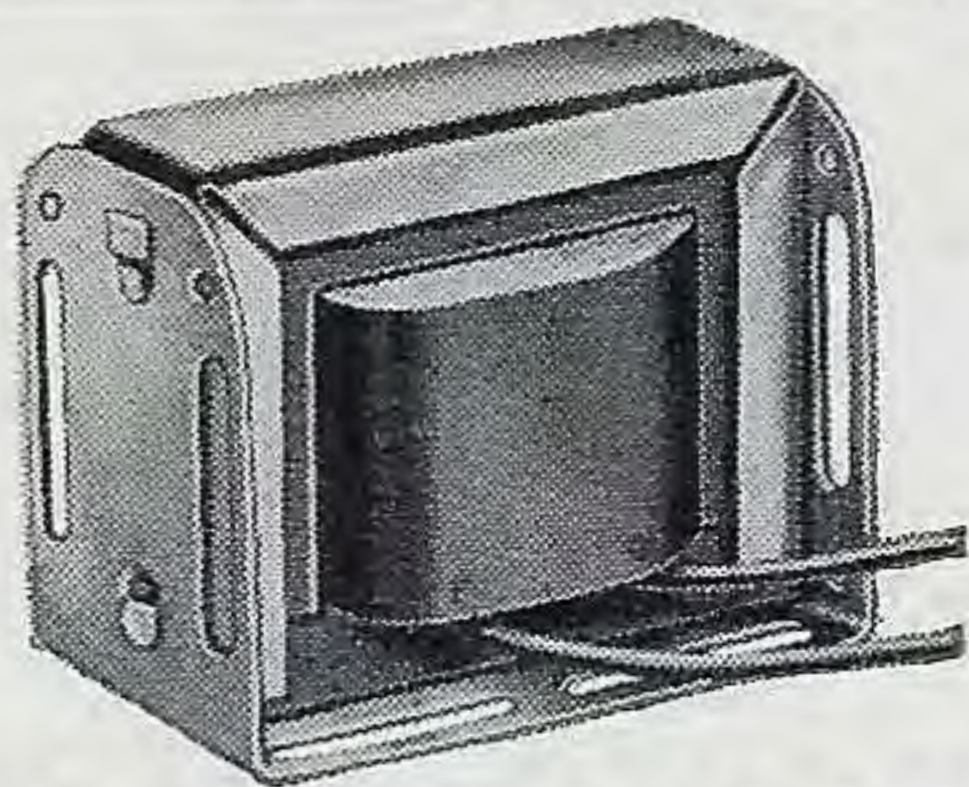
Your Cost\$1.05

U19B Class B 19, 49, 79 or 89 plates to 5000 or 3500 ohms. List Price \$1.75.

Your Cost\$1.05



Most Complete Transformer Line in the World!



UNIVERSAL REPLACEABLE INPUTS AND OUTPUTS

UR-1 Interstage, 1 plate to 1 grid, 3:1 ratio. List Price \$1.75. **Your Cost \$1.05**
UR-2 One plate to two grids, 2:1 ratio. List Price \$1.85. **Your Cost \$1.11**
USO Universal output—single and push pull triodes and pentodes Class A, push pull triodes Class B to voice coils from .1 to 30 ohms. List Price \$1.75.

Your Cost \$1.05
 Horizontal Mounting Centers, 2 3/8" L., 2 7/8"; W., 1 3/8"; H., 1-11/16"

MA-1 Single power pentode to voice coil. List Price \$1.25. **Your Cost .75c**
MA-2 Push pull power pentodes to voice coil. List Price \$1.35. **Your Cost .81c**

ALL-PURPOSE REPLACEABLE OUTPUT TRANSFORMERS

Due to their ingenious mounting arrangement, these transformers will easily fit a Rola, Wright De Coster Jensen, Utah, Magnavox, and other small dynamic speakers.

These units are compact. The mounting centers are from 3/4" to 2 3/8"; the height 1 5/8". A fine grade of silicon core material is used and each unit has a high degree of efficiency. A tapped secondary winding will match voice coils from two to eight ohms. A top lug terminal bracket is supplied so that field coil leads may be soldered directly to each unit.

US-47 Single power pentode like 18, 20, 33, 41, 42, 57, 2A5 to single voice coil. List Price \$1.50. **Your Cost .90c**

UPP-47 Push pull power pentodes like 18, 20, 33, 41, 42, 47, 2A5 to single voice coil. List Price \$1.50. **Your Cost .90c**

US-45 Single power triode like 71, 45, or 59 to single voice coil. List Price \$1.50.

Your Cost .90c
UPP-45 Push pull power triodes like 71, 45, or 59 to single voice coil. List Price \$1.50. **Your Cost .90c**

UPPO Compact type Universal output for single and push pull triodes or pentodes to any voice coil. List Price \$1.50.

Your Cost .90c

FLYWEIGHT UNIVERSAL OUTPUT

Overall Size 1 1/4" x 1 3/8"; Horizontal Mtg. Centers, 2-1/16"

FUO For single or push pull power tubes to voice coils from 1/10 to 30 ohms. List Price \$1.25. **Your Cost .75c**

MIXING AND MATCHING UNITS

U-21 Mixing 50 or 200 ohm line to 50 or 200 ohm line. List Price \$1.60.

Your Cost .96c

ULM Line matching to voice coil 250, 500 or 2000 ohms to 15, 8, 4, or 2 ohms. Will handle 15 watts audio. List Price \$2.75.

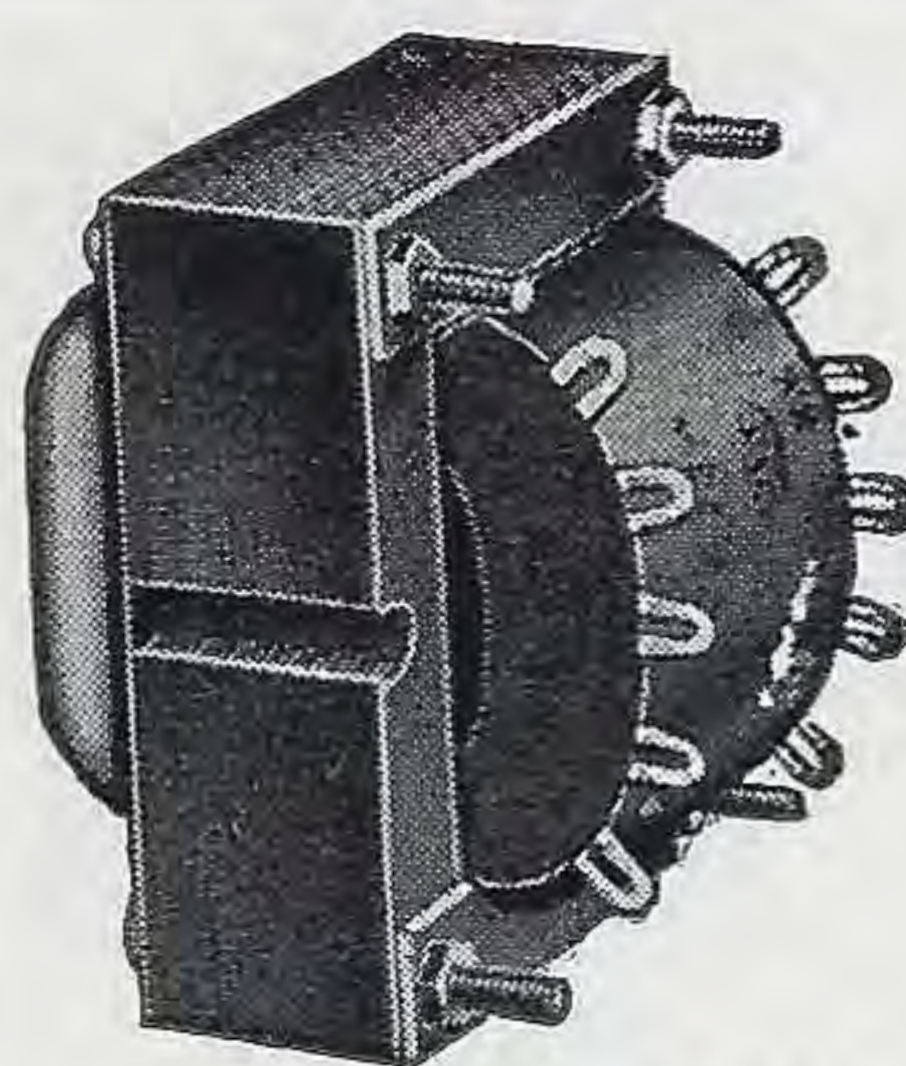
Your Cost \$1.65

UNCASED MIGHTY MITE AUDIO TRANSFORMERS

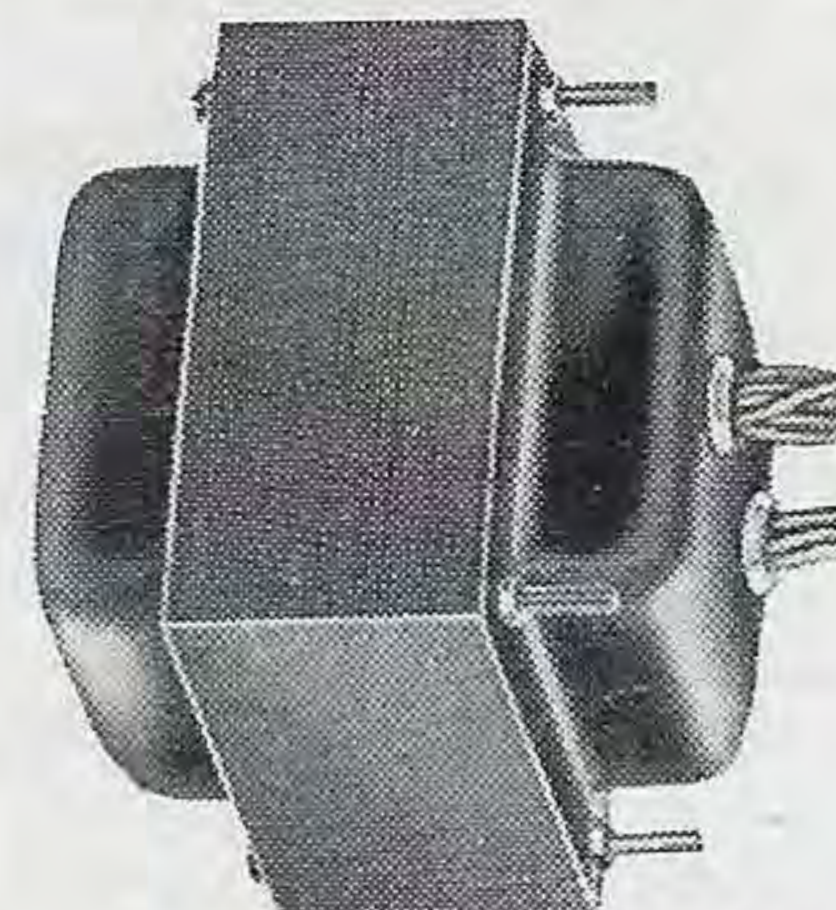
S-41 Interstage audio 4:1 ratio. List Price \$1.50. **Your Cost .90c**

S-51 Single plate to two grids 2 1/2:1 ratio. List Price \$1.55. **Your Cost .93c**

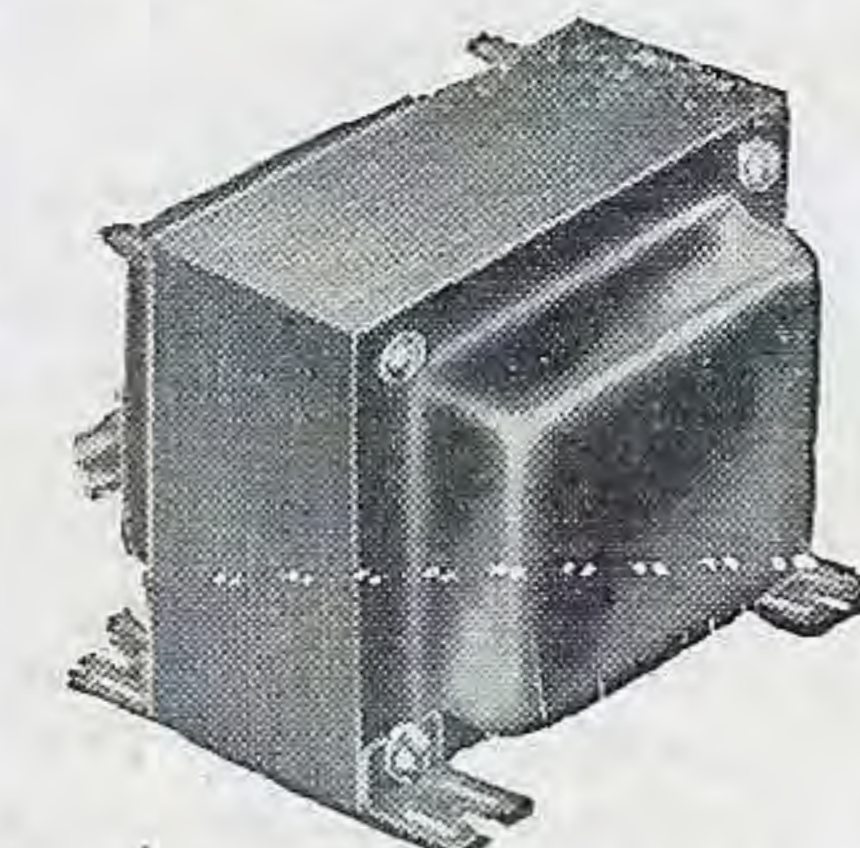
USMG Head phone or single button mike 75 or 100 ohms to single grid. List Price \$1.60. **Your Cost .96c**



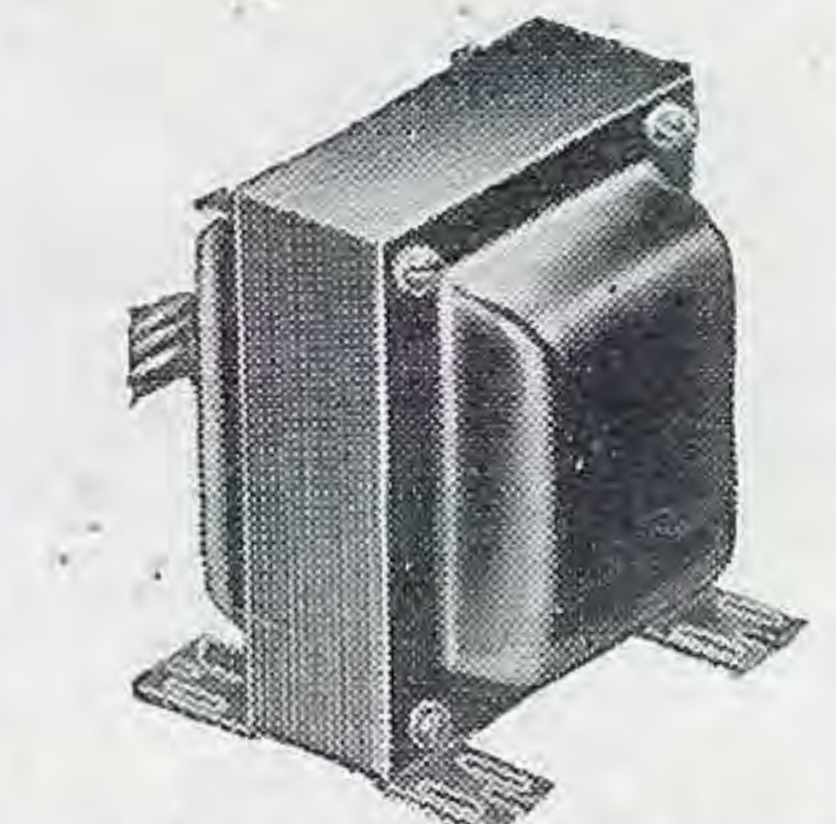
UM MOUNTING



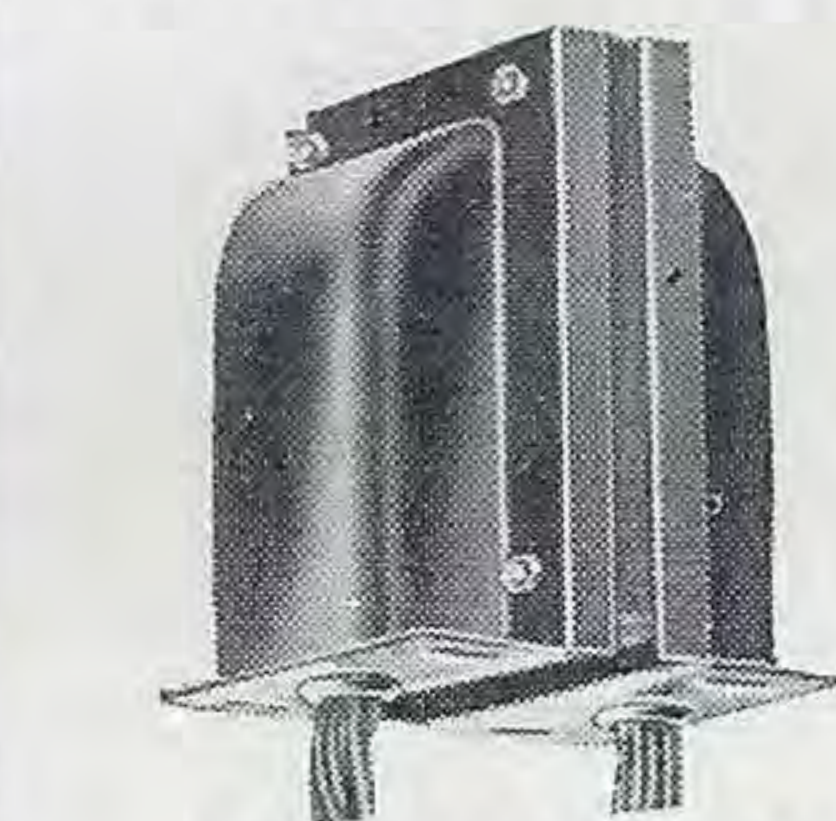
DF MOUNTING



DF MOUNTING



DF MOUNTING



VE MOUNTING



UNIVERSAL MTG. BRACKETS

DF MOUNTING—DOUBLE SHELLS WITH LEADS—2.5 VOLTS

Type No.	No. of Tubes	AC Plate Voltage C.T.	5V. Fil	2.5V. Fil	Overall Dim.	Mtg. Centers	List Price	Your Cost
DFX	4	500-40 MA	2A	5 1/2 A.C.T.	2 1/2 x 3	2 1/2 x 2	2.00	1.20
DFO	4	600-45 MA	2A	5 1/2 A.C.T.	2 1/2 x 3	2 1/2 x 2	2.25	1.35
DF-1	5	650-55 MA	2A	7 A.C.T.	2-13/16 x 3 3/8	2 1/2 x 2-13/16	2.50	1.50
DF-2	6	680-60 MA	2A	9 A.C.T.	2-13/16 x 3 3/8	2 1/2 x 2-13/16	2.75	1.65
DF-3	7	700-75 MA	2A	10 1/2 A.C.T.	3 3/8 x 3 3/8	2 1/2 x 3 3/8	3.25	1.95
DF-4	7	700-75 MA	2A	3 A.C.T.	3 3/8 x 3 3/8	2 1/2 x 3 3/8	3.50	2.10
DF-4X	8	650-100 MA	2A	12 A.C.T.	3 3/8 x 3 3/8	2 1/2 x 3 3/8	4.00	2.40
DF-5	8-10	750-100 MA	3A	3 A.C.T.	3 3/8 x 3 3/8	2 1/2 x 3 3/8	4.50	2.70
DF-6	10-12	800-125 MA	3A	5 A.C.T.	3 3/8 x 4 1/2	3 x 3 3/8	5.50	3.30
DF-7	10-15	850-250 MA	3A	5 A.C.T.	3 3/8 x 4 1/2	3 x 3 3/8	7.50	4.50
DF-8	10-12	1100-175 MA	3A	5 A.C.T.	3 3/8 x 4 1/2	3 x 3 3/8	8.75	5.25

UM MOUNTING — HALF SHELL WITH LUGS—2.5 VOLTS

Type No.	No. of Tubes	AC Plate Voltage C.T.	5V. Fil	2.5V. Fil	Overall Dim.	Mtg. Centers	List Price	Your Cost
UMX	4	500-40 MA	2A	5 1/2 A.C.T.	2 1/2 x 3	2 1/2 x 2	2.00	1.20
UMO	4	600-45 MA	2A	5 1/2 A.C.T.	2 1/2 x 3	2 1/2 x 2	2.25	1.35
UM-1	5	650-55 MA	2A	7 A.C.T.	2-13/16 x 3 3/8	2 1/2 x 2-13/16	2.50	1.50
UM-2	6	680-60 MA	2A	9 A.C.T.	2-13/16 x 3 3/8	2 1/2 x 2-13/16	2.75	1.65
UM-3	7	700-75 MA	2A	10 1/2 A.C.T.	3 3/8 x 3 3/8	2 1/2 x 3 3/8	3.25	1.95
UM-4	7	700-75 MA	2A	3 A.C.T.	3 3/8 x 3 3/8	2 1/2 x 3 3/8	3.50	2.10
UM-4X	8	650-100 MA	2A	12 A.C.T.	3 3/8 x 3 3/8	2 1/2 x 3 3/8	4.00	2.40
UM-5	8-10	750-100 MA	3A	3 A.C.T.	3 3/8 x 3 3/8	2 1/2 x 3 3/8	4.50	2.70
UM-6	10-12	800-125 MA	3A	5 A.C.T.	3 3/8 x 4 1/2	3 x 3 3/8	5.50	3.30
UM-7	10-15	850-250 MA	3A	5 A.C.T.	3 3/8 x 4 1/2	3 x 3 3/8	7.50	4.50
UM-8	10-12	1100-175 MA	3A	5 A.C.T.	3 3/8 x 4 1/2	3 x 3 3/8	8.75	5.25

DF MOUNTING—DOUBLE SHELLS WITH LEADS—2.5 AND 6.3 VOLTS

Type No.	No. of Tubes	AC Plate Voltage C.T.	5V. Fil	2.5V. Fil 6.3V. Fil	Overall Dim.	Mtg. Centers	List Price	Net Price
DH-1	4-5	600-50 MA	2A	(1) 6.3—2A. C.T.	2 1/2 x 3	2 x 2 1/2	2.50	1.50
DH-2	6-7	700-75 MA	2A	(1) 6.3—3A. C.T.	3 3/8 x 3 3/8	2 1/2 x 3 3/8	4.00	2.40
DH-3	8-10	700-100 MA	3A	(1) 2.5—3A. C.T.	3 3/8 x 3 3/8	2 1/2 x 3 3/8	5.00	3.00
DH-4	10-12	800-125 MA	3A	(1) 6.3—4A. C.T.	3 3/8 x 4 1/2	3 x 3 3/8	6.00	3.60
DH-5	10-14	800-200 MA	3A	(1) 2.5—4A. C.T.	3 3/8 x 4 1/2	3 x 3 3/8	8.00	4.80
DH-6	10-14	800-200 MA	3A	(1) 6.3—3A. C.T.	3 3/8 x 4 1/2	3 x 3 3/8	8.00	4.80
DH-7	10-15	950-250 MA	3A	(2) 6.3—4A. C.T.	3 3/8 x 4 1/2	3 x 3 3/8	10.50	6.30

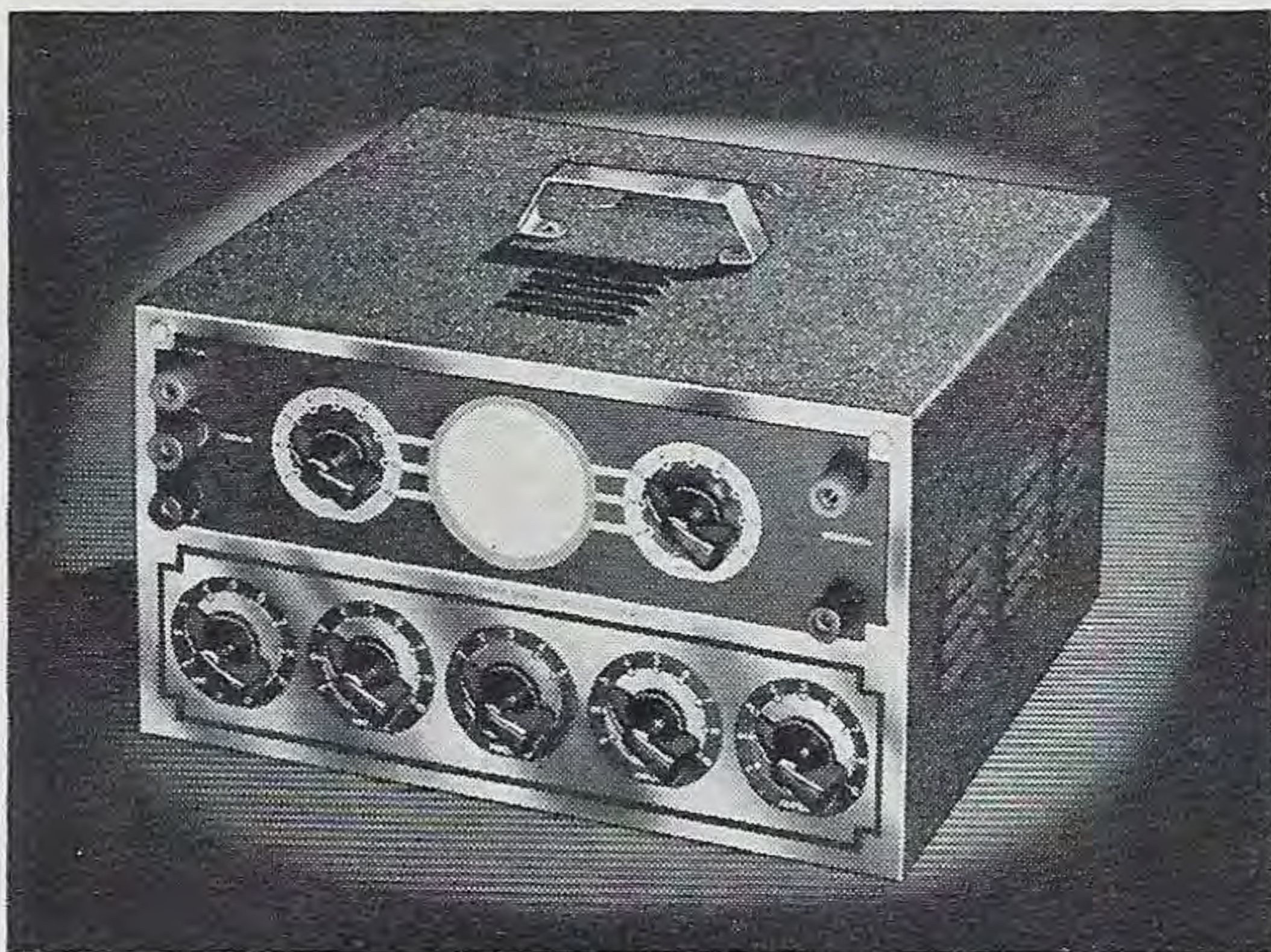
UM MOUNTING — HALF SHELL WITH LUGS — 2.5 AND 6.3 VOLTS

Type No.	No. of Tubes	AC Plate Voltage C.T.	5V. Fil	2.5V. Fil 6.3V. Fil	Overall Dim.	Mtg. Centers	List Price	Net Price
UH-1	4-5	600-50 MA	2A	(1) 6.3—2A. C.T.	2 1/2 x 3	2 x 2 1/2	2.50	1.50
UH-2	6-7	700-75 MA	2A	(1) 6.3—3A. C.T.	3 3/8 x 3 3/8	2 1/2 x 3 3/8	4.00	2.40
UH-3	8-10	700-100 MA	3A	(1) 2.5—3A. C.T.	3 3/8 x 3 3/8	2 1/2 x 3 3/8	5.00	3.00
UH-4	10-12	800-125 MA	3A	(1) 6.3—4A. C.T.	3 3/8 x 4 1/2	3 x 3 3/8	6.00	3.60
UH-5	10-14	800-200 MA	3A	(1) 2.5—4A. C.T.	3 3/8 x 4 1/2	3 x 3 3/8	8.00	4.80
UH-6	10-14	800-200 MA	3A	(1) 6.3—3A. C.T.	3 3/8 x 4 1/2	3 x 3 3/8	7.50	4.50
UH-7	10-15	950-250 MA	3A	(1) 2.5—5A. C.T.	3 3/8 x 4 1/2	3 x 3 3/8	10.50	6.30

VE MOUNTING—FULLY SHIELDED WITH LEADS—2.5 AND 6.3 VOLTS

Type No.	No. of Tubes	AC Plate Voltage C.T.	5V. Fil	2.5V. Fil 6.3V. Fil	Overall Dim.	Mtg. Centers	List Price	Net Price
VE-3	7	700-75 MA	2A	(1) 2.5—10A. C.T.	3 3/8 x 3 3/8	2 1/2 x 2 1/2	3.75	2.25
VE-4	7	700-75 MA	2A	(1) 2.5—3A. C.T.	3 3/8 x 3 3/8	2 1/2 x 2 1/2	4.00	2.40
VE-4X	8	650-100 MA	2A	(2) 2.5—9A. C.T.	3 3/8 x 3 3/8	2 1/2 x 2 1/2	4.50	2.70
VE-5	8-10	750-100 MA	3A	(1) 2.5—12A. C.T.	3 3/8 x 4 1/2	2 1/2 x 2 1/2	5.00	3.00
VE-12	7	700-75 MA	2A	(1) 6.3—3A. C.T.	3 3/8 x 3 3/8	2 1/2 x 2 1/2	4.50	2.70
VE-13	8-10	750-100 MA		(1) 2.5—4A. C.T.	3 3/8 x 4 1/2	2 1/2 x 2 1/2	5.00	3.00

UTC CATHODE RAY OSCILLOSCOPE FOR THE SERVICE ENGINEER, AMATEUR, EXPERIMENTER, MANUFACTURER, AND RADIO DEALER



The UTC OSCILLOSCOPE incorporating the new 2" cathode ray tube has every feature required for application in the radio field. It includes linear sweep, audio amplification, brilliance, focus, beam centering and amplitude controls. Grouping of the controls on the simple control panel is such that rapid and simple adjustment is possible.

The entire unit is housed in a black crystal finished carrying case with etched aluminum front panel. The size of this unit is extremely small considering the 2" cathode ray tube and multiplicity of applications.

NET PRICE

Complete, less tubes,

\$30.00

TYPICAL FEATURES ARE

Large Tube	2" screen
Linear sweep	15 to 25,000 cycles
Amplifier response	30 to 20,000 cycles
High sensitivity	.2 volts per inch (amplified)
All controls including beam centering on main panel	
Small size	6½ x 10 x 9½ inches overall
A.C. Power Supply	115 volts — 60 cycles
Tubes used	885, 80, 6J7, 6K7, 24-XH
Low hum pickup	choke filtered plate supply

UTC VARITRAN VOLTAGE CONTROL UNIT

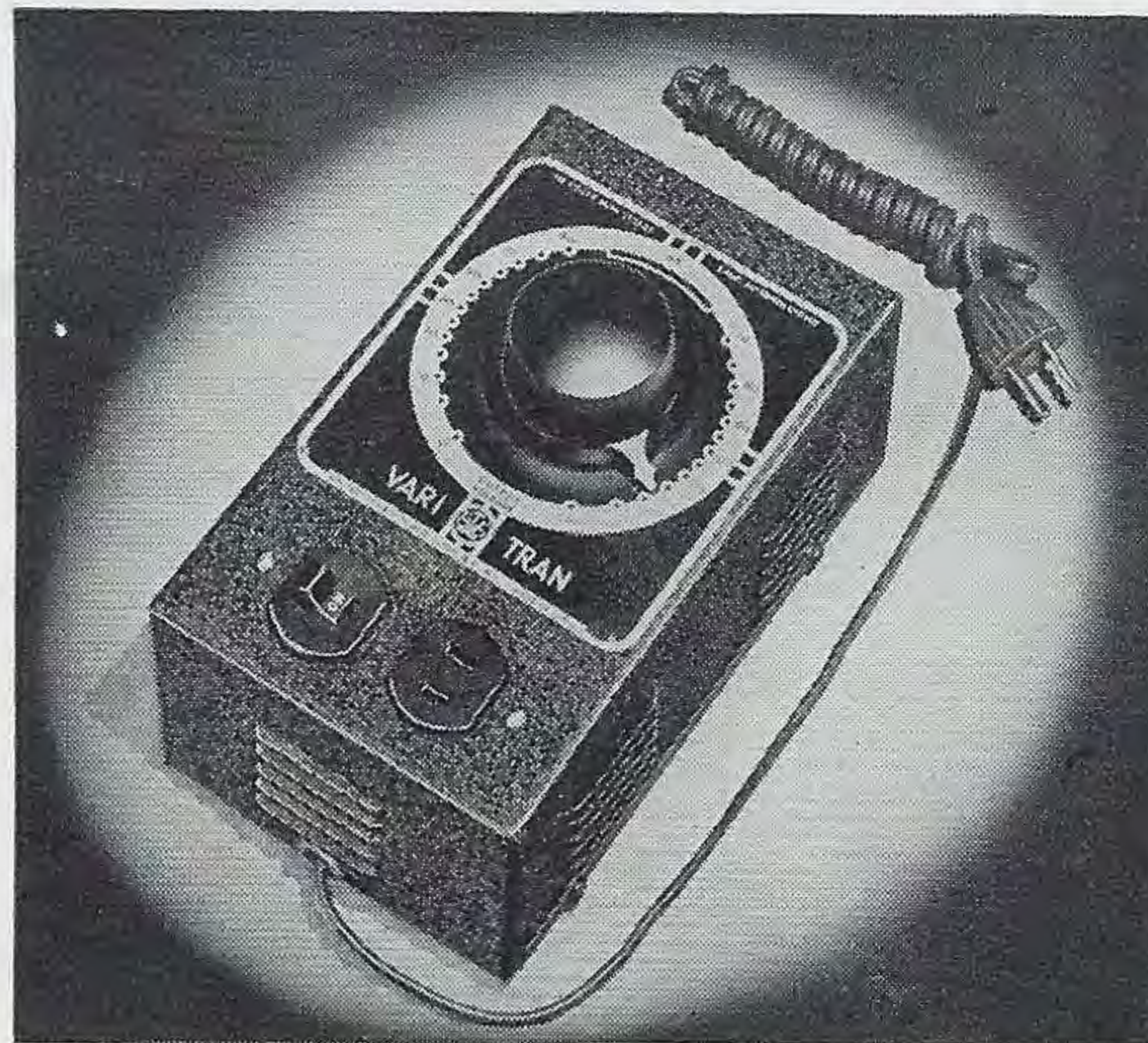
The UTC VARITRAN makes possible continuously variable output voltage, using a sliding contact riding over the turns of an auto-transformer. Standard units are designed for 115 volt input, 0-130 volts continuously variable output.

FEATURES

- Smooth control
- High efficiency
- Excellent regulation
- Low cost

APPLICATIONS

- Motor control
- Heat control
- Rectifier control
- Light control
- Line voltage control



Model V-1. 570 Watts—5 amp. maximum rating, complete with cord, plug and switch, net **\$10.00**

Model V-2. Same as V-1, but uncased, with terminal strip for rack or panel mounting, net **\$9.00**

Model V-3. 850 Watts maximum rating 7.5 amps., uncased, with terminal board and provisions for mounting, net **\$14.00**

Model V-4. 1250 Watts—11 amps. maximum rating, uncased, net..... **\$20.00**

Model V-5. 2000 Watts maximum rating, 17.5 amps., uncased, net..... **\$32.00**

Automatic VARITRANS are available to maintain line voltage constant. Details and prices on request.

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.

Your Cost **\$5.10**

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.

Your Cost **\$3.60**

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.

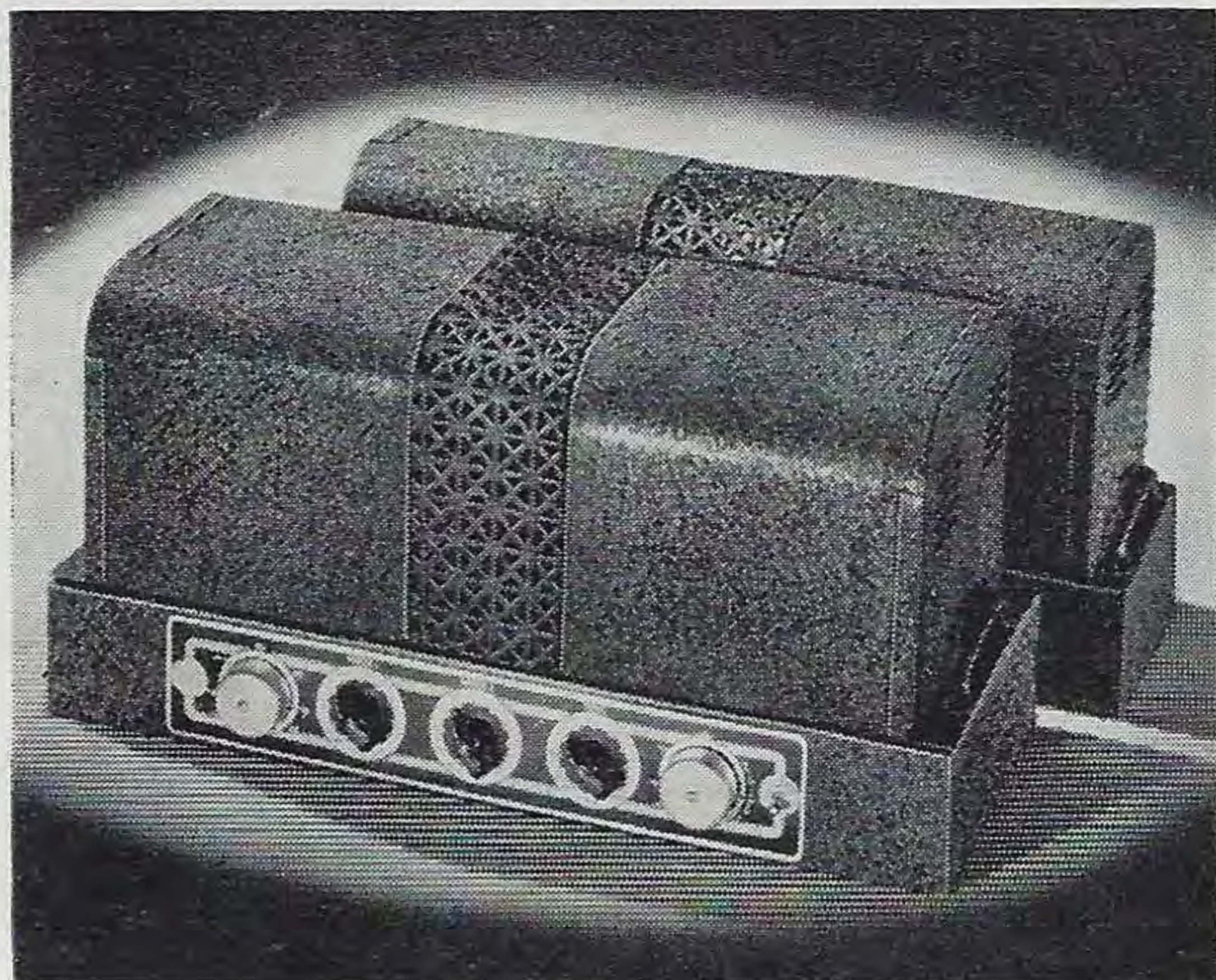
Your Cost **\$3.00**

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. **Your Cost** **\$3.60**

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. **Your Cost** **\$3.60**



Most Complete Transformer Line in the World



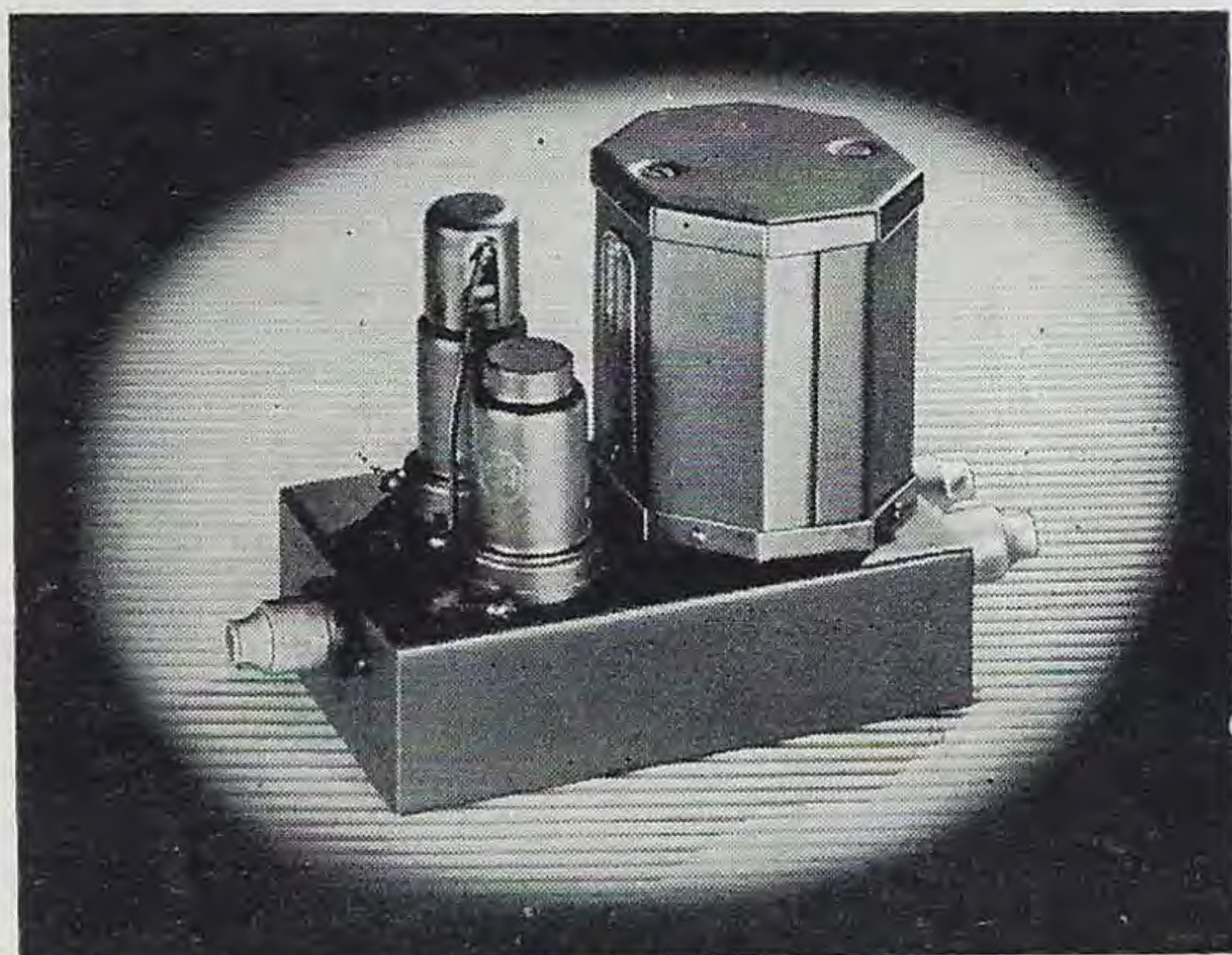
PAK-1M PAK-2M



PAK-3M PAK-3XM



PAK-5M



PAK-7A

BEAM POWER AMPLIFIERS

The UTC PAK kits are now acknowledged by the PA field as ideal Universal amplifiers. PAK power amplifier kits are available with outputs of 8, 15, 35, 55, 70, 110 and 250 watts. Stabilized feedback can be used in the PAK-1, PAK-2, PAK-3 and the PA output transformers have special feedback windings for this purpose. There is provision for mixing of two high impedance inputs. An etched panel providing a dual gain, two position mixer with gain links for high or low gain on each position and a VARITONE equalizer control are now standard equipment on these kits.

PAK-1M Self bias 35 watt output. Audio and power on separate chassis for rack or cabinet mounting. High impedance input 110 to 120 DB gain. Provision for immediate switchover to 95 DB gain with connections either for triode plate or 500-200 ohm input line. Output transformer impedances 500, 200, 16, 8, 5, 3, 1.5 ohms. Includes all components and accessories such as resistors, condensers, sockets, calibration plates, etched mixer panel, controls and accessories for a dual gain, two position high impedance mixer, chassis, dust covers with handles, hardware—except tubes—all fully mounted. List Price \$80.00.

Your Cost\$48.00

PAK-1XM Same as PAK-1M but with VARIMATCH modulation output transformer. Impedances available are 220, 408, 1180, 2350, 2400, 3000, 4000, 4670, 5560, 7000, 9150, 9470 ohms. List Price \$80.00.

Your Cost\$48.00

PAK-2M Same chassis layout as PAK-1M but has output of 55 watts in fixed bias. List Price \$85.00. **Your Cost**\$51.00

PAK-2XM Same as PAK-2M but has VARIMATCH modulation output. Impedances on 3800 ohms plate to plate 380, 660, 2050, 3740, 4100, 7000, 7500, 8200, 12,000, 15,000, 16400, 21500, 29800. On 4000 ohm plate to plate 237, 1300, 1750, 2700, 3270, 5200. List Price \$85.00 **Your Cost** \$51.00
Tubes required for PAK-1M and PAK-2M kits are 1-6J7, 3-6C5's, 2-6L6's, 1-83.

PAK-3M Uses 4-6L6's—70 watts self bias—100 watts fixed bias, total gain 110 DB. High impedance input. Separate chassis for power and audio for rack or cabinet mounting. Tubes are 1-6J7, 1-6C5, 2-6A5G's, 4-6L6's, 3-83's, 1-80. Output transformer impedances 500, 200, 16, 8, 5, 3, 1.5 ohms. Includes all accessories such as resistors, condensers, sockets, calibration plates, etched mixer panel, controls and accessories for a dual gain, two position high impedance mixer, chassis, dust covers, handles, hardware—except tubes—all fully mounted. List Price \$130.00. **Your Cost**\$78.00

PAK-3XM Same as PAK-3M but with VARIMATCH modulation output transformer. Impedances available for fixed bias are 200, 350, 1070, 1950, 2150, 3620, 3920, 4300, 6350, 6550, 2900, 8600, 11400, 15700. For self bias 330, 580, 1800, 3250, 3550, 6100, 6500, 7100, 10400, 11000, 13000, 186000, 26000. List Price \$130.00. **Your Cost**\$78.00

PAK-5M 15 watt compact power amplifier. Uses two 6V6 Beam Power tubes. Power supply and audio amplifier on one chassis 6 x 9 x 17 inches. Tubes are 6J7, 6C5, 2-6V6's—120 DB gain. High impedance input, 500, 200, 16, 8, 5, 3, 1½ ohms output. Kit includes all accessories and pre-wired resistor—condenser strip, mixer panel, controls and accessories for a dual gain, two position mixer and VARITONE equalizer control, less tubes. List Price \$55.00. **Your Cost**\$33.00

PAK-5XM Same as PAK-5M but with VARIMATCH modulation output. List Price \$55.00. **Your Cost**\$33.00

PAK-6X 250 watts output stage. This amplifier is designed to operate from the 500 ohm output of any audio amplifier using 42's 45's, 59's, 2A3's, 6L6's, 6A5G's, 6V6's or other similar tubes in the output stage. 805's 838's or ZB-120's can be used in the class B output stage of this amplifier. The circuit consists of a 500 ohm line to grid transformer of the VARIMATCH type and an output transformer also of the VARIMATCH type. Separate power and audio decks are provided. Output impedances to match any RF requirements are available. Kit completely mounted with all accessories less tubes. List Price \$150.00. **Your Cost**\$90.00

PAK-7A Pre-amplifier. High gain well filtered pre-amplifier designed to operate from power supply in main amplifier. High impedance input. 6F5 resistance coupled to 6C5—50, 200, 500 ohm output. Gain 60 DB. amplifier kit only including all accessories, less tubes. List Price \$15.00. **Your Cost**\$9.00
PAK-7P Power supply—components and accessories for 7A pre-amplifier. List Price \$15.00 **Your Cost**\$9.00