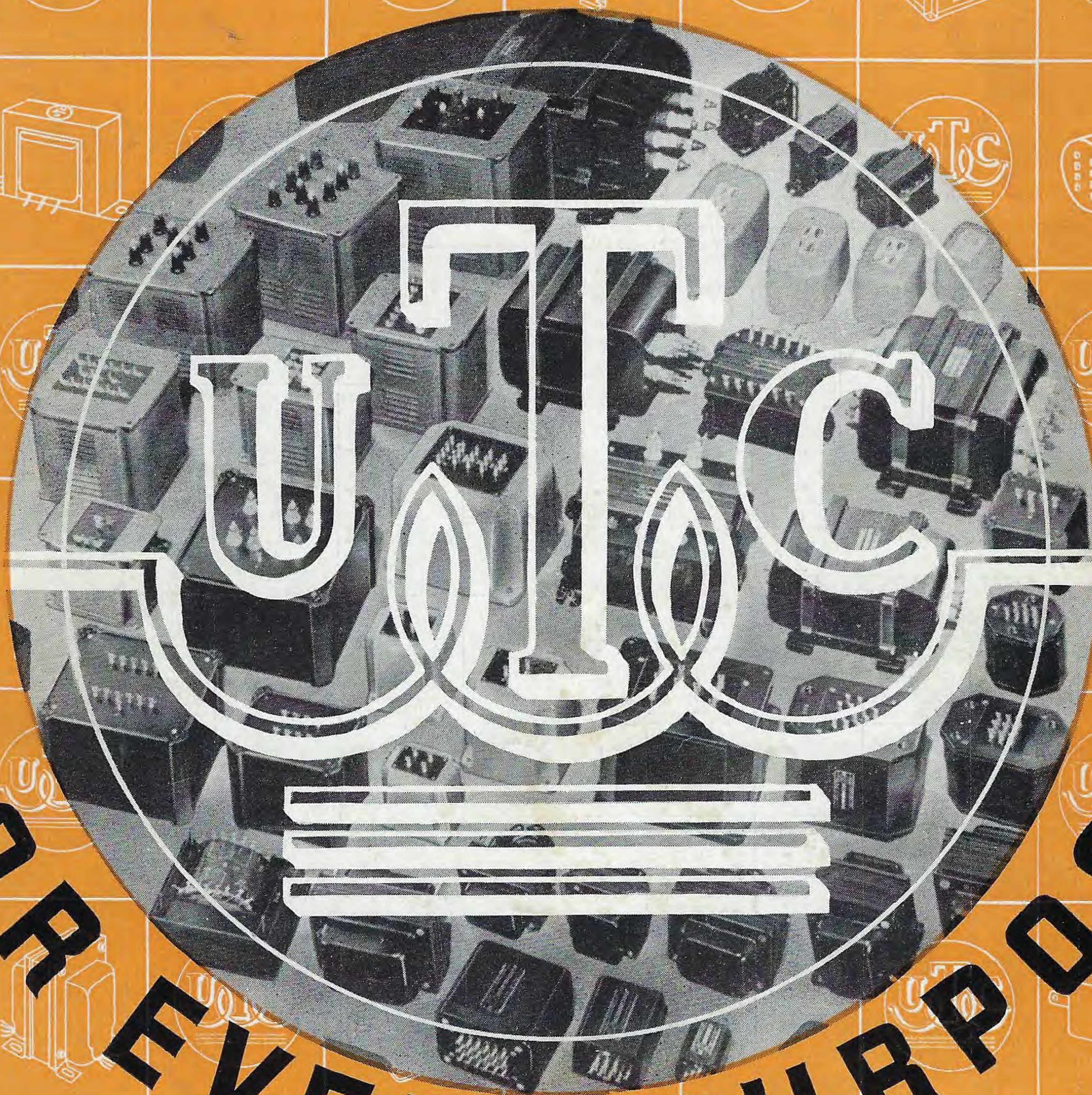


TRANSFORMER COMPONENTS



FOR EVERY PURPOSE

BULLETIN
PS - 403

UNITED TRANSFORMER CORP.

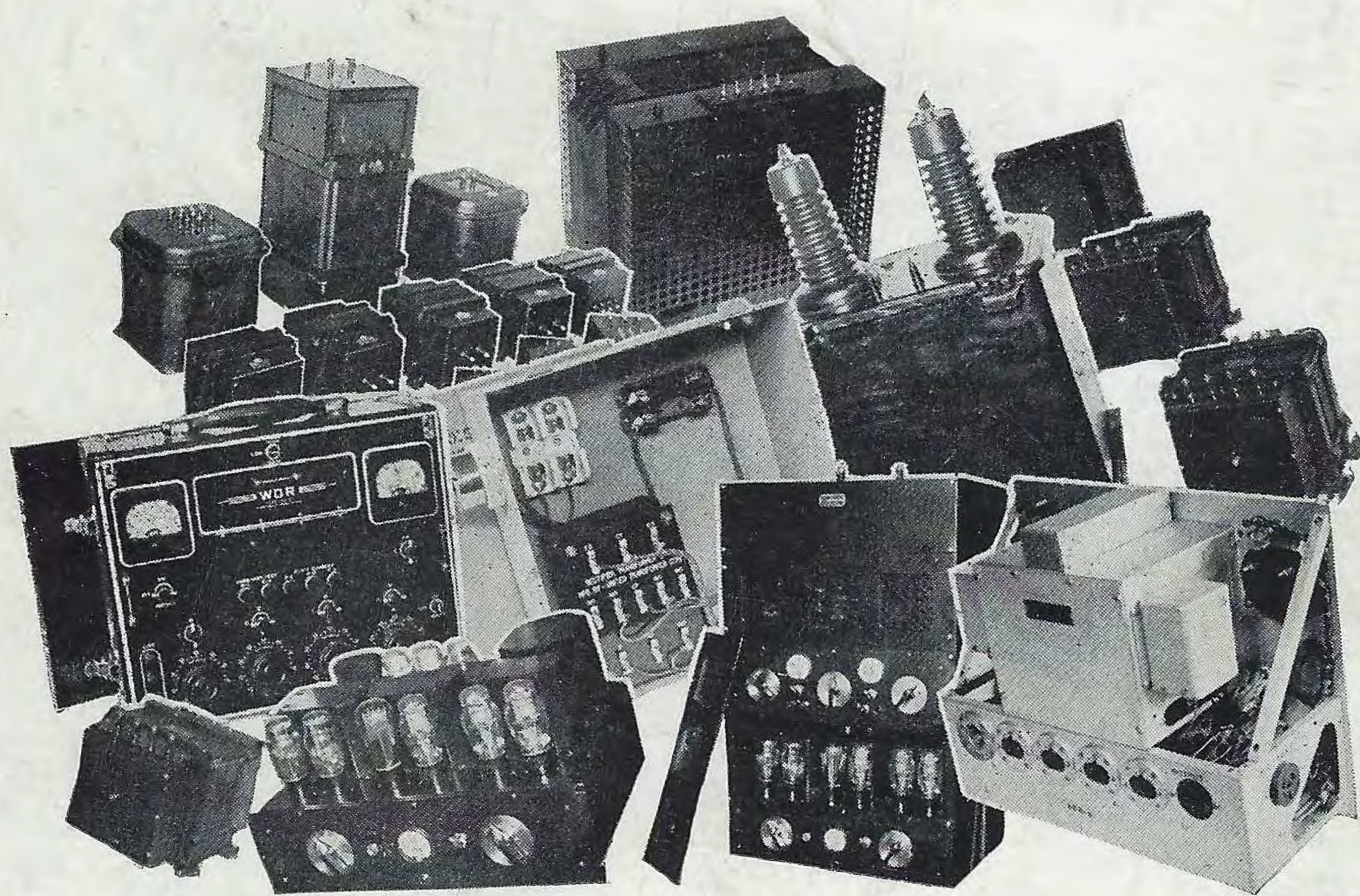
72 SPRING STREET

NEW YORK, N. Y.

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



UTC'S leadership in the quality transformer field is readily indicated by the great number of commercial organizations who are satisfied users of UTC products. Among these are such organizations as RCA, Western Electric, General Electric, Westinghouse, Bendix, Fairchild, C.B.S., N.B.C., Western Union, U. S. Army, U. S. Navy, U. S. Department of Commerce, etc. Due to the specialized nature of high fidelity audio equipment, a large number of requirements are encountered where stock units are not suitable. If you have a problem along these lines write to the UTC Engineering Staff.



I N D E

LINEAR STANDARDS

Low impedance to grid
Plate, crystal, PEC, to line
Mixing

Interstage

Driver

Output

Matching

Plate

Filament

Power

Chokes

HIPERM ALLOY

Complete listing

ULTRA COMPACT

Complete listing

OUNCER

Complete listing

VARITRAN

Complete listing

VARIPOWER

Complete listing

VARIMATCH

Complete listing

PUBLIC ADDRESS

Input

Mixing

Output

Varitone

Television

Plate

Bias

Chokes

Filament

Power

VARITAP

Power

Audios

Chokes

Stepdown

Filament

BEAM POWER KITS

Complete listing

SPECIAL SERIES KITS

Transmitters and amplifiers

SPECIAL SERIES

Input

Driver

Matching

Output

Power

RF output

Plate and filament

Bias

Chokes



LINEAR STANDARD TRANSFORMERS

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 make possible a wide combination of impedance connections without impairing the audio range or efficiency.

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 cast alloy 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.

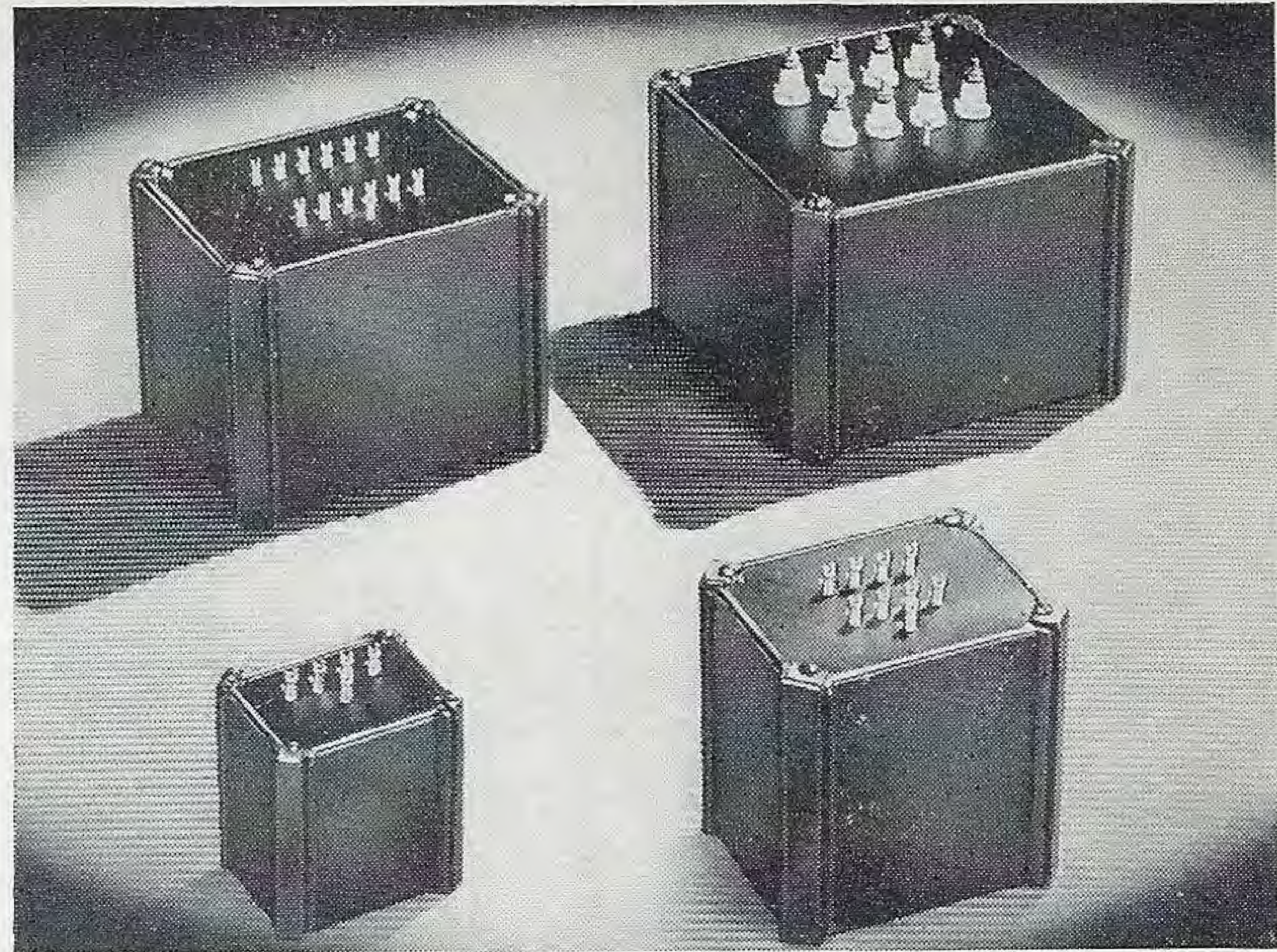
LINEAR STANDARD UNITS FEATURE:

- **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 . . .** brought out to separate terminal.
- **Alloy Shields . . .** maximum shielding from inductive pickup.
- **Multiple Coil, Semi-Toroidal Coil Structure . . .** minimum distributed capacity and leakage reactance.
- **Precision Winding . . .** accuracy of winding .1%, perfect balance of inductance and capacity; exact impedance reflection.
- **Hiperm-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.

OVERALL DIMENSIONS				Mtg.	Dim.	Weight Lbs.
Case	L	W	H			
LS-1	2 $\frac{9}{16}$	3 $\frac{3}{16}$	3 $\frac{11}{16}$	1 $\frac{15}{16}$	2 $\frac{7}{16}$	4
LS-2	3 $\frac{1}{2}$	4 $\frac{3}{8}$	4 $\frac{3}{8}$	2 $\frac{11}{16}$	3 $\frac{11}{16}$	8
LS-3	5	5 $\frac{3}{4}$	5 $\frac{3}{8}$	4 $\frac{3}{16}$	5 $\frac{1}{2}$	15
LS-4	6 $\frac{7}{16}$	6 $\frac{7}{16}$	5 $\frac{3}{8}$	5 $\frac{3}{4}$	5 $\frac{3}{4}$	23
CC-1	7 $\frac{3}{8}$	10 $\frac{1}{2}$	5 $\frac{1}{2}$	6 $\frac{1}{4}$	4 $\frac{1}{2}$	33
CC-2	11	11	9 $\frac{1}{4}$	9 $\frac{3}{8}$	4 $\frac{3}{4}$	83
LS-6	16	14	16	8	14 $\frac{1}{2}$	200
LS-7	21	18	21	11 $\frac{3}{4}$	19 $\frac{3}{4}$	500

LOW IMPEDANCE TO GRID TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	Shielding and hum reduction	Case No. List Price
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
LS-10X	As above	As above	50,000 ohms	Quadruple alloy shield -92DB	LS-1 20.00
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
LS-12X	As above	As above	80,000 ohms overall in two sections	Quadruple alloy shield -92DB	LS-1 25.00
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 two sections	Dual alloy shield -74DB	LS-1 20.00
LS-14X	As above	As above	50,000 ohms	Quadruple alloy shield -92DB	LS-1 25.00
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
LS-15X	As above	As above	As above	Quadruple alloy shield -92DB	LS-1 25.00
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



PLATE, CRYSTAL, PHOTOCELL AND BRIDGING TO LINE TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	Shielding and hum reduction	Case No. List Price
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
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
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
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
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
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
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

MIXING TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	Shielding and hum reduction	Case No. List Price
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
LS-30X	As above	As above	As above	Quadruple alloy shield -92DB	LS-1 20.00
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
LS-31X	As above	As above	As above	Quadruple alloy shield -92DB	LS-1 25.00
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

INTERSTAGE AUDIO TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	Shielding and hum reduction	Case No. List Price
LS-19	Single plate to PP grids like 2A3, 59, 46, 6L6	8,000 to 15,000 ohms; split primary	95,000 ohms; turn ratio 1.25; 1 each side; split secondary	Alloy casting -50 DB	LS-1 \$15.00
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
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
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 -50DB	LS-2 22.00
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
LS-25	P.P. plates to P.P. grids. Medium level	8,000 to 15,000 ohms; split primary	100,000 ohms overall; 25,000 ohms each side. Turn ratio 1.3:1. Split secondary	Alloy casting -50DB	LS-1 18.00

DRIVER TRANSFORMERS

Type No.	Application	Primary Impedance	Reflected Secondary Impedance	Case No. List Price
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-2 \$30.00
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	.6 primary impedance turns ratio 1.3:1 overall	LS-2 22.00
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
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. impedance turns ratio. Pri./1/2 Sec. 3.2:1	LS-2 22.00
LS-48	Driver transformer push pull 845's, to 204 or 849 grids in class B	1,000 to 2,000 ohms	.038 pri. impedance turns ratio. Pri./1/2 Sec. 5.1:1	LS-4 35.00
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. impedance turns ratio. Pri./1/2 Sec. 6.0:1	LS-4 30.00

OUTPUT TRANSFORMERS TO HIGH IMPEDANCE (RF) LOAD

Type No.	Primary will match the following tubes	Primary Impedance	Secondary Impedance	Case No. List Price
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	6,000, 5,000, 4,000, 1,800, 1,500, 1,000, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	LS-2 \$20.00
LS-845M	845 tubes Class AB +42DB	8,800 ohms plate to plate	5,000, 3,500, 2,500, 2,100, 1,250, 600	CC-1 50.00
LS-66	Class B 203A, 838, ZB120, 805 +46DB	9,000 ohms plate to plate	5,000, 3,500, 2,500, 2,100, 1,250, 600	CC-1 70.00
LS-67	Class B 203A, 838, ZB 120, 805 +46DB	9,000 ohms plate to plate	10,000, 2,500	CC-1 70.00
LS-69	Class B 849, 204A +52DB	10,500 ohms plate to plate	6,000, 5,000, 4,000, 1,800, 1,500, 1,000	LS-6* 200.00
LS-169	Push pull parallel 849's Class B or six push pull parallel 204A's +55DB	5,250 ohms plate to plate	5,000, 4,200, 3,300, 1,500, 1,250, 830	LS-7* 400.00

*Special oil filled construction



OUTPUT TRANSFORMERS TO LINE AND VOICE COIL

Type No.	Primary will match following tubes	Primary Impedance	Secondary Impedance	Case No. List Price
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
LS-54	Same as above	8,000 ohms	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	LS-2 14.00
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
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
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
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
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
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
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
LS-6L1	Push pull 6L6's self bias	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
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
LS-6L4	Push pull 6L6's fixed bias or push pull parallel 6L6's self bias	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
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	CC-1 50.00

HIGH LEVEL MATCHING TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary	Case No. List Price
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
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



LINEAR STANDARD POWER COMPONENTS

(SEE PAGE 2 FOR DIMENSIONS)

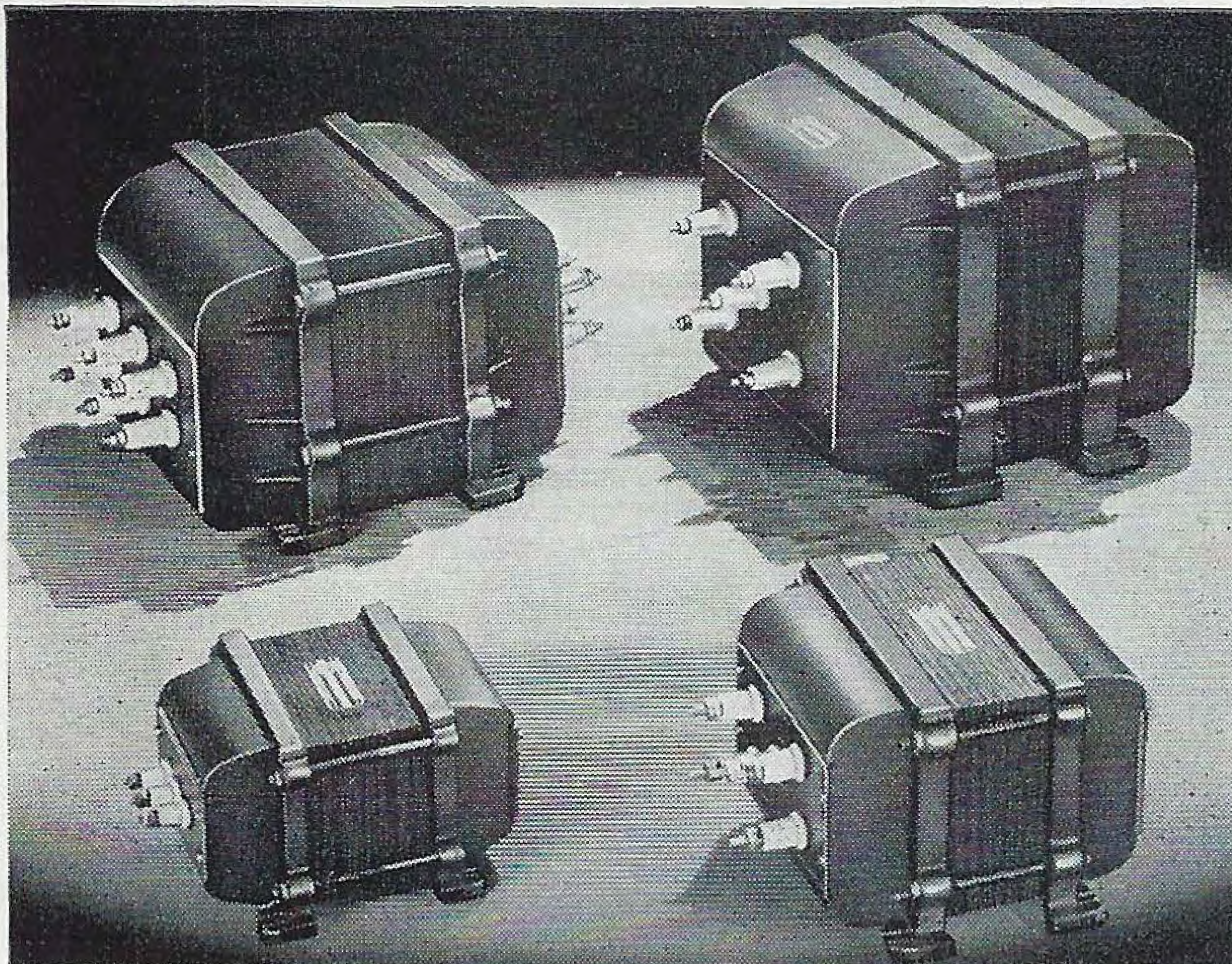


PLATE TRANSFORMERS

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

FILAMENT TRANSFORMERS

Type No.	Application	Primary Voltage 50/60 Cycles	Secondary Voltage	Insulation Voltage	Case No. List Price
LS-80	866A rectifiers	100, 110, 120, 220, 230, 240	2.5 V.C.T.-10A	12,000	LS-3 \$15.00
LS-82	872 rectifiers	100, 110, 120, 220, 230, 240	5 V.C.T.-20A	12,000	LS-3 20.00
LS-84	203A, 845, etc. HF200, HF300	100, 110, 120, 220, 230, 240	10 V.C.T.-8A	12,000	LS-3 15.00
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
LS-88	6.3 volt tubes	105, 115, 125	6.3 V.C.T.-2A	2,500	LS-1 7.50
LS-87A	7.5 volt tubes	105, 115, 125	7.5 V.C.T.-9A	2,500	LS-3 15.00
LS-118	849, 204A, HF300	100, 110, 120, 220, 230, 240	11 V.C.T.-10A	2,500	LS-3 20.00
LS-120	866 bridge rectifier	100, 110, 120, 220, 230, 240	2.5 V.C.T.-10A 2.5 V.C.T.-5A	12,000	LS-3 25.00
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
LS-83	872A, 575 or 869 rectifiers	100, 110, 120, 220, 230, 240	5 V.C.T.-20A	35,000	LS-4 40.00
LS-89A	Three 869 rectifiers	100, 110, 120, 220, 230, 240	5 V.C.T.-60A	35,000	CC-1 60.00

COMBINED PLATE AND FILAMENT TRANSFORMERS

Type No.	Primary Voltage 50/60 cycles	High Voltage	Filament Windings	Case No. List Price
LS-180	115	225-0-225 15 MA	6.3 V.C.T.-2A 6.3 V.C.T.-5A	LS-1 \$10.00
LS-180H	Same as above but in hum-balanced construction (dual coils)			LS-1 13.00
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
LS-190H	Same as above but in hum-balanced construction (dual coils)			LS-3 25.00
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
LS-70	100, 105, 110, 115, 120, 125	425-375-0-375-425 200 MA 70-0-70 50 MA	5 V.C.T.-3A 5 V.C.T.-2A 2.5 V.C.T.-10A 6.3 V.C.T.-1A 6.3 V.C.T.-3A	LS-4 25.00
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
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	CC-1 35.00

FILTER, SWINGING, AND AUDIO CHOKES

Type No.	Application	Inductance	DC Current	DC Resistance	Case No. List Price
LS-90	Filter choke with hum bucking tap	Series-50 hy Parallel-12.5 hy	50 MA 100 MA	510 ohms 128 ohms	LS-2 \$8.50
LS-91	Filter choke with hum bucking tap	Series-14 hy Parallel-3.5 hy	125 MA 250 MA	200 ohms 50 ohms	LS-2 8.50
LS-92	Filter choke with hum bucking tap	Series-16 hy Parallel-4 hy	175 MA 350 MA	96 ohms 24 ohms	LS-3 15.00
LS-93	Filter choke with hum bucking tap	Series-26 hy Parallel-6.25 hy	200 MA 400 MA	112 ohms 28 ohms	LS-4 25.00
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
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
LS-950	Filter choke with hum bucking tap	Series-100 hy Parallel-25 hy	35 MA 75 MA	1000 ohms 250 ohms	LS-2 10.00
LS-96	Filter choke with hum bucking tap	Series-20 hy Parallel-5 hy	500 MA 1 amp.	90 ohms 22.5 ohms	CC-1 40.00
LS-97	Swinging choke	8-40 hy	200 MA	100 ohms	LS-3 15.00
LS-980	Filter choke with hum bucking tap	Series-14 hy Parallel-3.5 hy	400 MA 800 MA	90 ohms 22.5 ohms	LS-4 25.00
LS-98	Swinging choke	8-40 hy	400 MA	90 ohms	LS-4 25.00
LS-99	Filter choke with hum bucking tap	Series-20 hy Parallel-5 hy	1 amp. 2 amp.	50 ohms 12.5 ohms	CC-2 60.00
LS-105	Swinging choke	8-40 hy	1 amp.	50 ohms	CC-2 60.00
LS-1110	Filter choke with hum bucking tap	Series-20 hy Parallel-5 hy	350 MA 700 MA	80 ohms 20 ohms	CC-1 32.00
LS-1120	Filter choke with hum bucking tap	Series-12 hy Parallel-3 hy	700 MA 1.4 amp	65 ohms 16 ohms	CC-1 40.00
LS-101	Modulation reactor	50 hy	175 MA	350 ohms	LS-4 25.00
LS-102	Modulation reactor	50 hy	350 MA	250 ohms	CC-1 40.00
LS-103	Modulation reactor	50 hy	500 MA	175 ohms	CC-2 60.00
LS-104A	Modulation reactor	50 hy	1.3 amp	75 ohms	Spec. 300.00

UTC HIPERM ALLOY TRANSFORMERS

The UTC Hiperm Alloy audio and power transformers are specifically designed for portable and compact high fidelity service. The frequency characteristic of the Hiperm Alloy audio units is uniform from 30 to 20,000 cycles. The outer case is of high conductivity alloy finished in high polish black anodic. 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.

The H-1 case units weigh $1\frac{3}{4}$ lbs. and are $2\frac{1}{8}$ " x $2\frac{3}{8}$ " x 3 " high with $1\frac{3}{8}$ " mtg. centers. The H-2 case units weigh $2\frac{1}{4}$ lbs. and are $2\frac{7}{8}$ " x $3\frac{5}{8}$ " x $3\frac{3}{4}$ " high with 2 " x $2\frac{3}{4}$ " mtg. centers.

LOW IMPEDANCE TO GRID AND MIXING TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	Case No. List Price
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
HA-100X	Same as above but with tri-alloy internal shield to effect very low hum pickup			H-1 17.50
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
HA-101X	Same as above but with tri-alloy internal shield to effect very low hum pickup			H-1 20.00
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
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
HA-108X	Same as above but with tri-alloy internal shield to effect very low hum pickup			H-1 17.50
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

PLATE, CRYSTAL AND PHOTOCELL TO LINE TRANSFORMERS

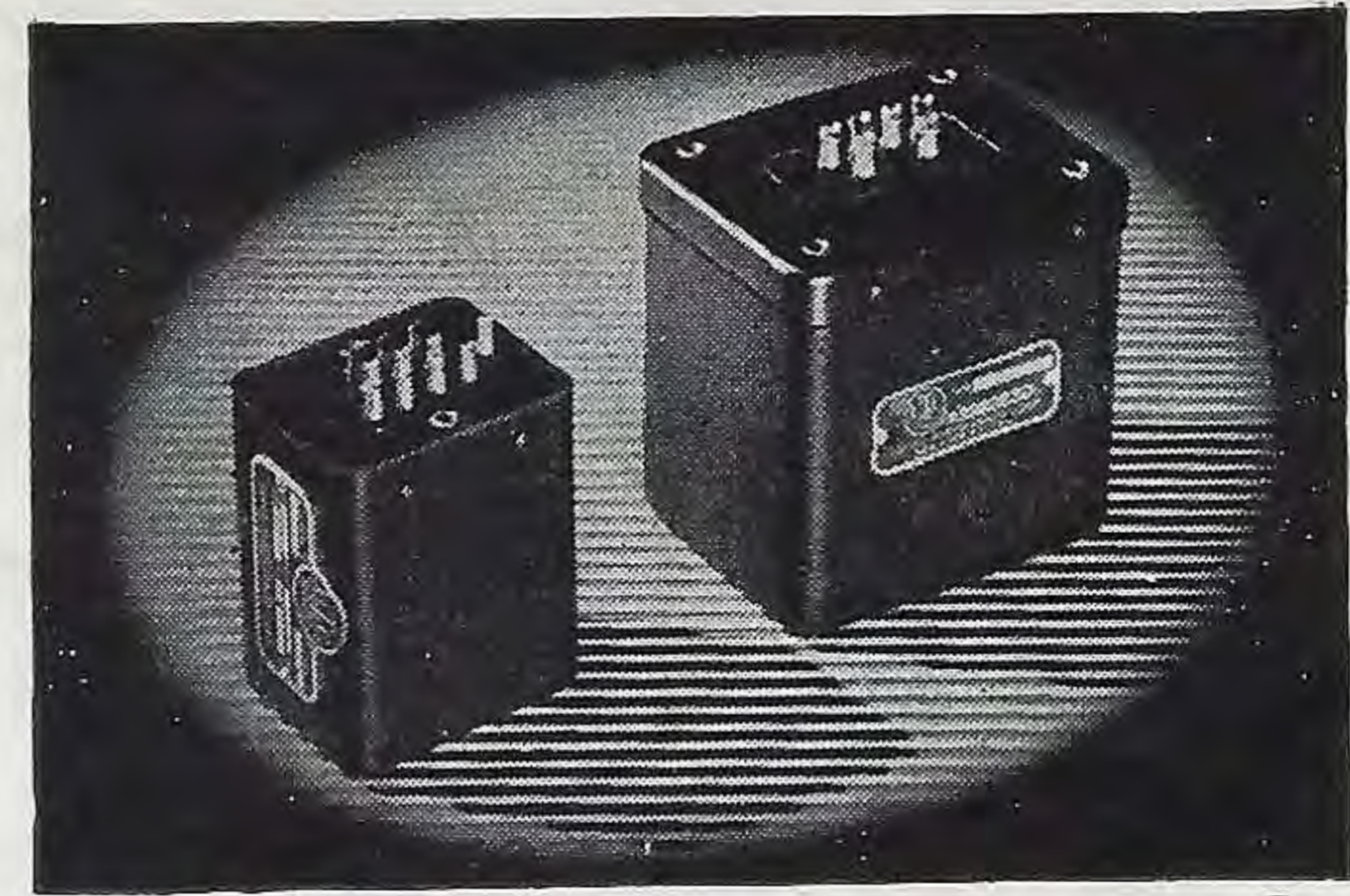
Type No.	Application	Primary Impedance	Secondary Impedance	Case No. List Price
HA-111	Crystal microphone or pickup, to multiple line	100,000 ohms	50, 125, 200, 250, 333, 500 ohms	H-1 \$12.50
HA-111E	Crystal microphone or pickup, to multiple line, with internal equalizer	100,000 ohms	50, 125, 200, 250, 333, 500 ohms	H-1 17.50
HA-112	Photocell, high-mu triode, diode or over-biased detector to multiple line	100,000 ohms	50, 125, 200, 250, 333, 500 ohms	H-1 12.50
HA-113	Single plate to multiple line	8,000 to 15,000 ohms	50, 125, 200, 250, 333, 500 ohms	H-1 12.50
HA-114	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

UTC ULTRA COMPACT AUDIO UNITS

The UTC Ultra Compact audio units are small, light-weight units ideal for remote pickup and similar equipment. 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. There is no need to resonate one unit in an amplifier to compensate for the droop of another unit. All units employ true hum balancing coil structures, which combined with a high conductivity outer case, afford a maximum of inductive shielding.

Ultra Compact audio units weight $5\frac{1}{2}$ ounces and have overall dimensions of $1\frac{7}{16}$ " x $1\frac{7}{16}$ " x $1\frac{5}{16}$ ". Mounting dimensions are $1\frac{1}{8}$ " between centers, top and bottom.

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



INTERSTAGE AUDIO TRANSFORMERS

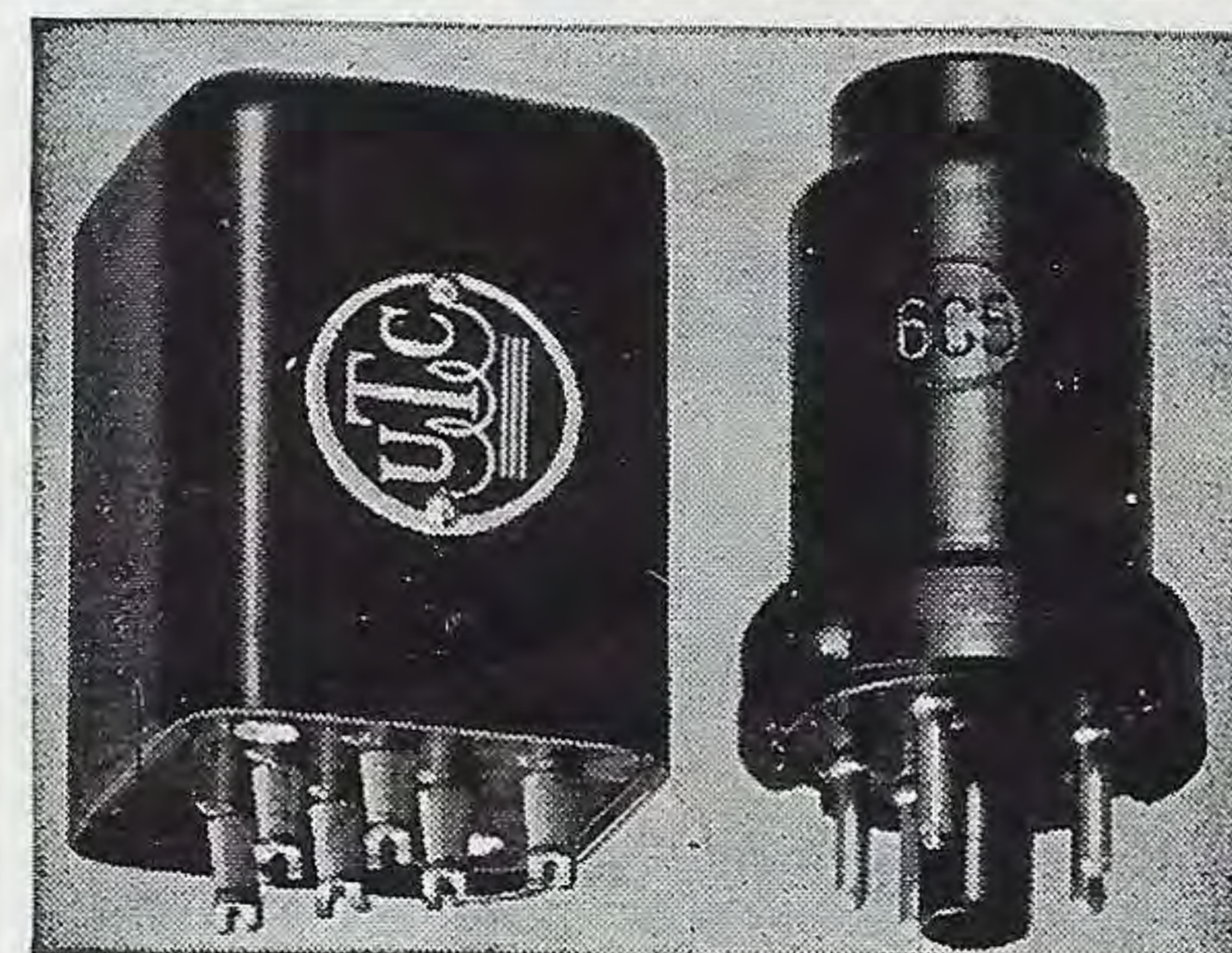
Type No.	Application	Primary Impedance	Secondary Impedance	Case No. List Price
HA-104	Single plate to P.P. grids like 2A3, 59, 46, 6L6	8,000 to 15,000 ohms	95,000 ohms; turn ratio 1.25:1	H-1 \$13.00
HA-105	Single plate to single grid	8,000 to 15,000 ohms	60,000 ohms 2:1 turn ratio	H-1 9.00
HA-106	Single plate to push pull grids	8,000 to 15,000 ohms	135,000 ohms 1.5:1 ratio, each side	H-1 11.00
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-3 15.00
HA-109	P. P. plates to P. P. grids	8,000 to 15,000 ohms	25,000 ohms each secondary turn ratio 1.3:1 overall	H-1 15.00

POWER TRANSFORMERS

Type No.	Primary Voltage 50/60 Cycles	High Voltage	Filament Windings	Case No. List Price
HP-122	115	220-0-220 15 MA	6.3 V.C.T.-.5A 6.3 V.C.T.-1.2A	H-1 \$10.00
HP-123	115	275-0-275 35 MA	6.3 V.C.T.-.5A 6.3 V.C.T.-2A	H-3 15.00

FILTER AND AUDIO CHOKES

Type	Inductance	DC Current	DC Resistance	Case No. List Price
HC-115	Series-400 hy Parallel-100 hy	2.5 MA 5 MA	7,000 ohms 1,750 ohms	H-1 \$8.50
HC-116	Series-600 hy Parallel-150 hy	8 MA 16 MA	4,000 ohms 1,000 ohms	H-3 15.00
HC-117	60 hy	15 MA	3,000 ohms	H-1 8.50
HC-127	60 hy	40 MA	1,000 ohms	H-3 15.00



Type No.	Application	Primary Impedance	Secondary Impedance	Case No. List Price
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
A-24	Single plate to multiple line	8,000 to 15,000 ohms	50, 125, 200, 250, 333, 500 ohms	10.00
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
A-27	Crystal microphone to multiple line	100,000 ohms	50, 125, 200, 250, 333, 500 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

OUNCER HIGH FIDELITY AUDIO UNITS

The new UTC OUNCER series represents the acme in compact quality transformer practice. These units are ideal for hearing aid, aircraft, glider, portable, concealed service, and similar applications. The overall dimensions are $\frac{7}{8}$ " diameter by $1\frac{3}{16}$ " height, including lugs. Mounting is effected by two screws, opposite the terminal board side, spaced $\frac{13}{16}$ ". Weight approximately one ounce. Units not carrying D.C. have high fidelity characteristics being uniform from 40 to 15,000 cycles. Items with D.C. in pri. and O-14 and O-15 are for voice frequencies from 150 to 4,000 cycles.



OUNCER HIGH FIDELITY AUDIO UNITS (MAX. LEVEL 0 DB)

200 ohm balanced winding may be used for 250 ohms.

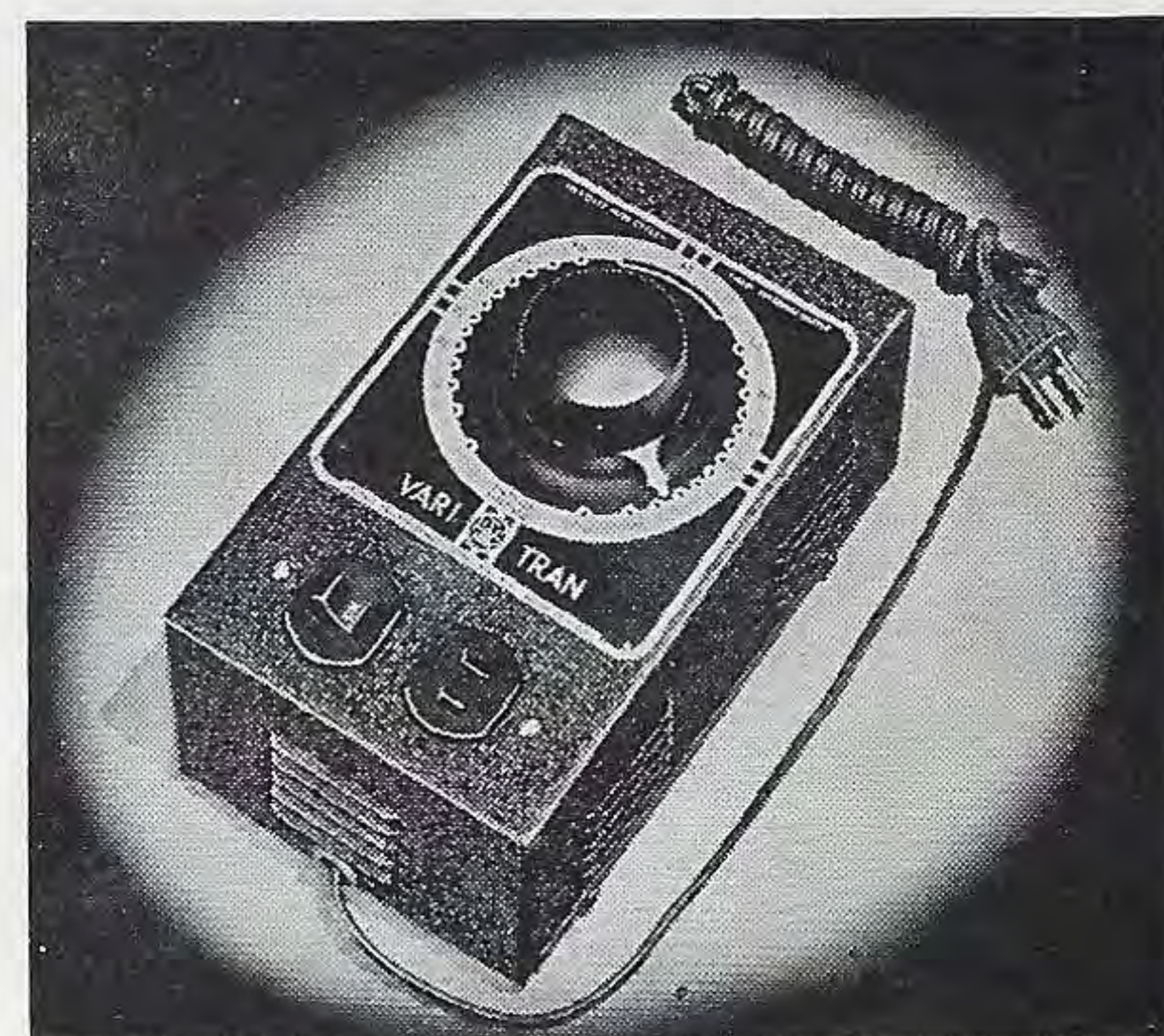
Type No.	Application	Pri. Imp.	Sec. Imp.	List Price
0-1	Mike, pickup or line to 1 grid	50, 200, 500	50,000	\$10.00
0-2	Mike, pickup or line to 2 grids	50, 200, 500	50,000	10.00
0-3	Dynamic mike to 1 grid	7.5 / 30	50,000	9.00
0-4	Single plate to 1 grid	8,000 to 15,000	60,000	8.00
0-5	Single plate to 1 grid, D.C. in Pri.	8,000 to 15,000	60,000	8.00
0-6	Single plate to 2 grids	8,000 to 15,000	95,000	9.00
0-7	Single plate to 2 grids, D.C. in Pri.	8,000 to 15,000	95,000	9.00
0-8	Single plate to line	8,000 to 15,000	50, 200, 500	10.00
0-9	Single plate to line, D.C. in Pri.	8,000 to 15,000	50, 200, 500	10.00
0-10	Push pull plates to line	8,000 to 15,000 each side	50, 200, 500	10.00
0-11	Crystal mike or pickup to line	50,000	50, 200, 500	10.00
0-12	Mixing and matching	50,200	50, 200, 500	9.00
0-13	Reactor, 200 Hys.—no D.C.; 50 Hys.—2 MA. D.C.; 6,000 ohms			7.00
0-14	50:1 mike or line to 1 grid	200	$\frac{1}{2}$ megohm	10.00
0-15	10:1 single plate to 1 grid	8,000 to 15,000	1 megohm	10.00

UTC VARITRAN CONTROL UNITS

For controlling: Rectifier output . . . motors . . . heaters . . . lights . . . line voltage

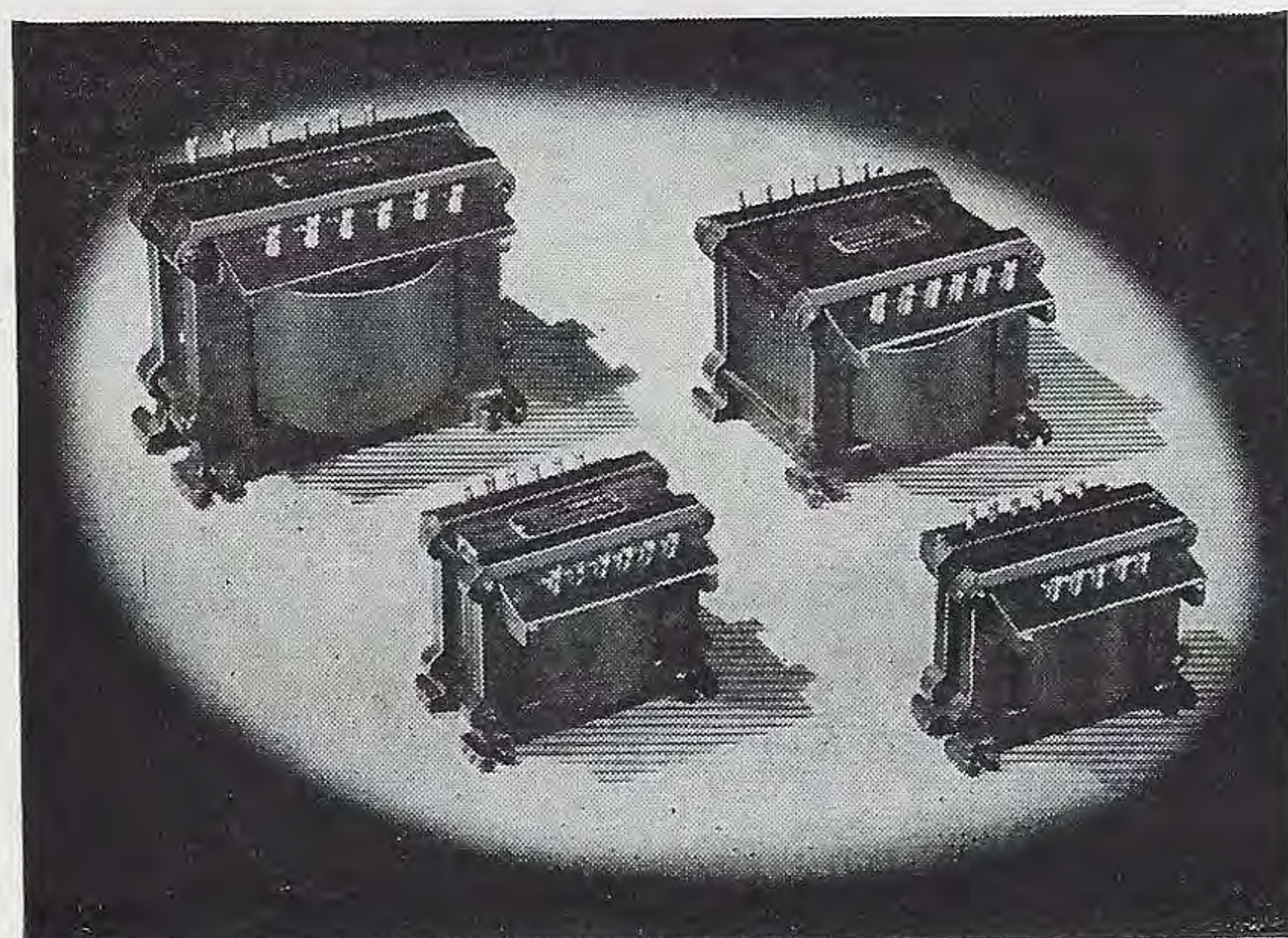
The standard UTC VARITRAN is an auto-transformer designed for 115 volts input and zero to 130 volts output. Stepless control of the output voltage from zero to maximum is effected by taking the tap from the unit with a sliding contact riding over the transformer turns. The circuit is never interrupted. V-1 unit is supplied complete with cord plug and switch. Other units are cased and with terminal strip.

VARITRAN units are designed to work into a load equal to the transformer rating at 115 volts. As the voltage is reduced, the corresponding output current is reduced proportionately. Units are available up to 50 K.V.A. in rating and also for automatic voltage regulator service. 220 volt units are priced at 30% more than 115 volt units.



Type No.	Watts Rating	Max. Amps.	Dimensions	Weight Lbs.	Net Price
V-1	570	5	7 $\frac{1}{2}$ x 6 x 4	14	\$10.00
V-2	570	5	7 x 5 x 4	13	9.00
V-3	850	7.5	8 x 8 x 6	20	14.00
V-4	1,250	11	10 x 10 x 7	35	20.00
V-5	2,000	17.5	10 x 10 x 8 $\frac{1}{2}$	45	32.00

VARIPOWER AUTO-FORMERS



Designed for line voltage control, filament voltage control and reduced power operation. Output voltage from 0 to 130 volts, 50/60 cycles. Varipower units permit control of filament voltage at the **tube socket** to within 2 $\frac{1}{2}$ % of desired value simultaneously with line voltage control and plate voltage control. Can be used to reduce or increase voltages on filament transformers. Taps at 25, 55, 75, 95, 100, 105, 110, 115, 120, 125 and 130 volts permit output voltages from 0 to 130 volts in 5 volt steps.

Type No.	Watts Output	Dimensions	Weight Lbs.	List Price
VA-1	150	4 $\frac{3}{4}$ x 3 $\frac{1}{4}$ x 3 $\frac{1}{2}$	6	\$6.00
VA-2	250	4 $\frac{3}{4}$ x 4 $\frac{1}{2}$ x 3 $\frac{1}{2}$	9	7.50
VA-3	500	5 $\frac{1}{2}$ x 4 $\frac{1}{2}$ x 4	11	10.00
VA-4	1000	5 $\frac{1}{2}$ x 6 x 4	19	15.00
VA-5	2000	7 x 6 x 5 $\frac{1}{4}$	25	20.00



VARIMATCH TRANSFORMERS

(For dimensions of cases see following page)

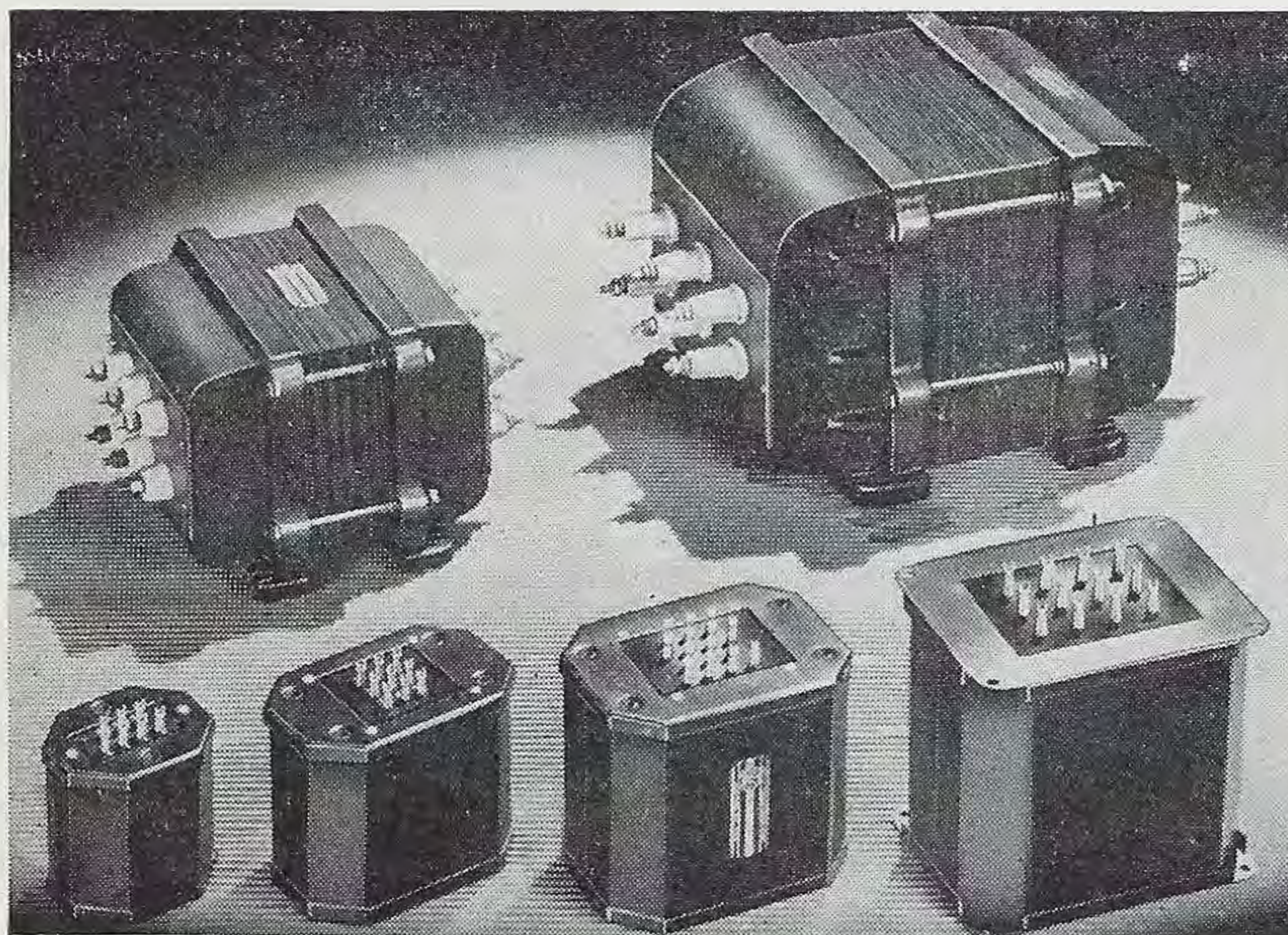
UTC VARIMATCH transformers are available in various types for every PA and transmitter requirement. Thru unique construction high efficiency and good response are obtainable on all terminations.

Pri. Ohms P to P	SECONDARY RF LOAD IMPEDANCES AVAILABLE											AUDIO LOAD IMPEDANCE	
	1070	1950	2150	3620	3920	4300	6350	6550	7900	8600	11400	200	350
2000	1070	1950	2150	3620	3920	4300	6350	6550	7900	8600	11400	200	350
3000	1070	1950	2150	3620	3920	4300	6350	6550	7900	8600	11400	300	520
4000	1070	1950	2150	3620	3920	4300	6350	6550	7900	8600	11400	250	400
5000	1070	1950	2150	3620	3920	4300	6350	6550	7900	8600	11400	300	500
6000	1070	1950	2150	3620	3920	4300	6350	6550	7900	8600	11400	200	370
7000	1070	1950	2150	3620	3920	4300	6350	6550	7900	8600	11400	230	430
8000	1070	1950	2150	3620	3920	4300	6350	6550	7900	8600	11400	270	500
9000	1070	1950	2150	3620	3920	4300	6350	6550	7900	8600	11400	300	550
10000	1070	1950	2150	3620	3920	4300	6350	6550	7900	8600	11400	330	600
12000	1070	1950	2150	3620	3920	4300	6350	6550	7900	8600	11400	370	400
14000	1070	1950	2150	3620	3920	4300	6350	6550	7900	8600	11400	430	
16000	1070	1950	2150	3620	3920	4300	6350	6550	7900	8600	11400	500	
18000	1070	1950	2150	3620	3920	4300	6350	6550	7900	8600	11400	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

Will match any modulator tube to any RF load
Here's the answer to your modulation problem. A line of transformers providing a universal range of load impedances for any modulator combination. The VARIMATCH transformer can never become obsolete. All units carry class C current and are supplied with charts giving impedance combinations.

Type No.	Max. Audio Watts	Max. Class C Input	Typical Modulator Tubes	Case	List Price
VM-0	12	25	30, 49, 79, 6A6, 53, 2A3, 6B5	PA-1	\$5.00
VM-1	30	60	6V6, 6B5, 2A3, 42, 46, 6L6, 210	PA-2	8.00
VM-2	60	125	801, 6L6, 809, 4-46, T-20, 1608	PA-3	12.50
VM-3	125	250	800, 807, 845, TZ-20, RK-30, 35-T	PA-4	20.00
VM-4	300	600	50-T, 203A, 805, 838, T-55, ZB-120	CA-1	32.50
VM-5	600	1200	805, HF-300, 204A, HK-354, 250TH	CA-2	70.00

PA VARIMATCH OUTPUTS

Universal units designed to match **any tubes** within the rated output power, to line or voice coil. Output impedance 500, 200, 50, 15, 8, 5, 3, 1.5 ohms.

Type No.	Audio Watts	Typical Tubes	Case No.	List Price
PVM-1	12	42, 43, 45, 47, 2A3, 6A6, 6F6, 25L6	PA-1	\$5.00
PVM-2	30	42, 45, 2A3, 6L6, 6V6, 6B5	PA-2	8.00
PVM-3	60	46's, 50's, 300A's, 6L6's, 801, 807	PA-3	12.50
PVM-4	125	800's, 801's, 807's, 4-6L6's, 845's	PA-4	20.00
PVM-5	300	211, 242A's, 203A's, 838's, 4-845's, ZB-120's	CA-1	32.50

VARIMATCH DRIVER TRANSFORMERS

Type No.	Primary	Typical Output Tubes	Case No. List Price
PA-51AX	All single tubes like: 6C5, 30, 49, 53, 79, 89, 6A6, 45, 46, 2A3	19, 30, 49, 79, 89, 2A3, 45, 46, 6L6, 42, 59	PA-1 \$5.50
PA-53AX	P. P. tube like: 45, 59, 2A3, 6B5, 6L6	46, 4-46, 841, 210, 801, RK-18, 800, 203A, 838, 805, 50T, 830B	PA-2 7.50
PA-59AX	50, 200, 500 ohm line	805, 838, 203A, ZB-120, 100TH, 800, 55T, RK-18	PA-2 7.50
PA-238AX	4-2A3, 4-45, 4-50, 2-211A, 2-845	4-805's, 4-838's, 4-203A's, 2-204's, 2-849's, 2-HF300's, 2-HF200's, 2-250TH's, 2-450TH's	PA-3 17.50
PA-512	50, 200, 500 ohm line	2-250TH, 2-450TH, 2-HF200, 2-HF300, 2-204A, 2-849	PA-3 20.00

VARIMATCH LINE TO VOICE COIL TRANSFORMERS

The UTC VARIMATCH line to voice coil transformers will match any voice coil or group of voice coils to a 500 ohm line. More than 50 voice coil combinations can be obtained from the LVM-1, LVM-2, LVM-3, and the actual impedances are as follows:

.2, .4, .5, .62, 1, 1.25, 1.5, 2, 2.5, 3, 3.3, 3.8, 4, 4.5, 5, 5.5, 6, 6.25, 6.6, 7, 7.5, 8, 9, 10, 11, 12, 14, 15, 16, 18, 20, 25, 28, 30, 31, 40, 47, 50, 63, 69, 75.

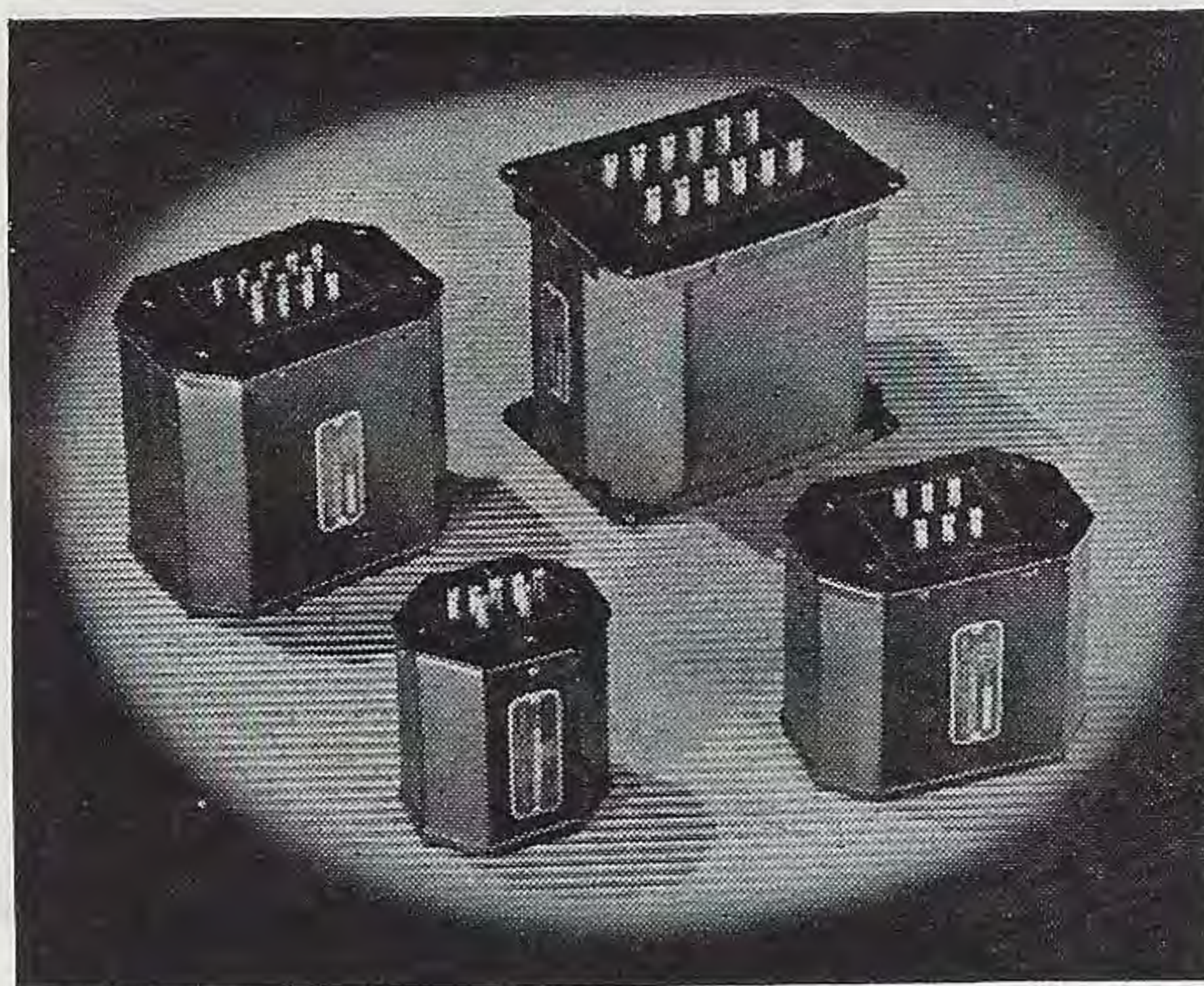
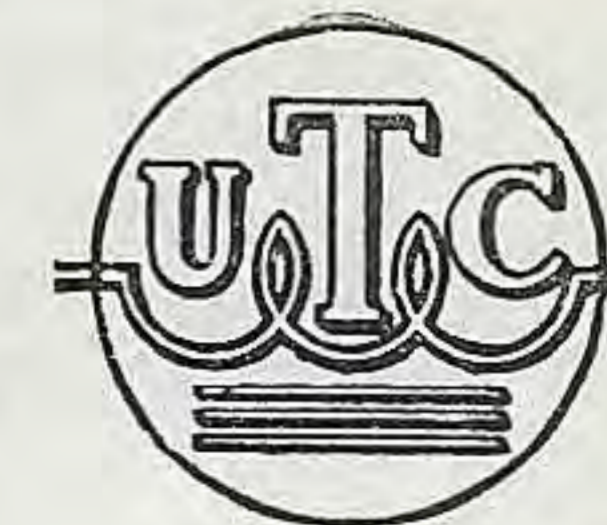
Type No.	Audio Watts	Primary Impedance	Secondary Impedance	Case No.	List Price
LVM-1	15	500 ohms	.2 to 75 ohms	PA-1	\$4.50
LVM-2	40	500 ohms	.2 to 75 ohms	PA-2	7.00
LVM-3	75	500 ohms	.2 to 75 ohms	PA-3	10.00

VARIMATCH LINE AUTOFORMERS

UTC Varimatch Line Autoformers will match one to ten 500 ohm lines or LVM-500 ohm windings to the 500 ohm output of an audio amplifier. The LVM-10 to LVM-14 autoformers have impedances of 500, 250, 167, 125, 100, 83, 71, 62, 50.

Type No.	Audio Watts	Case No.	List Price
LVM-10	15	PA-1	\$4.50
LVM-11	30	PA-2	7.00
LVM-12	60	PA-3	10.00
LVM-13	125	PA-4	18.00
LVM-14	300	CA-1	25.00

UTC PUBLIC ADDRESS AUDIO COMPONENTS



A quality line of popular-priced transformers incorporating conservative design and construction to assure dependability under the most adverse operative and climatic conditions. Uniform drawn cases finished in telephone black enamel with threaded inserts for top or bottom mounting. These units are professional in appearance and suited for continuous commercial service in amplifiers and transmitters. All items are poured with special moisture-proof sealing compound in addition to vacuum impregnation of coil structures. Items in same case size have approximately the same weights, as noted below.

PA-132, PA-134, 135 and 136 are of the hum-bucking type to assure low hum pick-up. All audio components are linear, $\pm 1\frac{1}{2}$ DB from 60 to 8,500 cycles. 200 ohm windings on input transformers are balanced and may be used for 250 ohm circuits.

OVERALL DIM., IN.				Mtg. Dim.		Weight Lbs.
Case	L	W	H	L	W	
PA-1	2 1/2	3	3	1 13/16	...	2
PA-2	3 1/16	4 1/2	4 1/2	1 5/8	3 1/16	5
PA-3	3 5/8	4 7/8	4 1/4	1 13/16	3 7/8	10
PA-4	6	4 9/16	6	3 3/4	5 1/4	18
CA-1	7 3/8	9	5 1/2	...	...	28
CA-2	11	11	9	...	...	83

VARITONE UNITS

The UTC VARITONE is a revolutionary audio device incorporating a transformer and frequency response corrective network. Using the VARITONE, tone correction can be effected for defects in acoustic conditions or overall audio response from microphones, pickups, loud speakers, etc. It is also possible to produce new tonal effects from phonograph recordings or radio reception, bringing back notes which would be practically lost otherwise. Due to the high equalization obtainable, an additional stage of amplification is sometimes necessary if the equalizer is to be used at maximum setting. The VT-1 and VT-2 require an external 50,000 ohm potentiometer as the control device.

INPUT TO GRID TRANSFORMERS

PA-1 CASE

Type No.	Application	Primary Impedance Ohms	Secondary Impedance Ohms	List Price
PA-131	1 plate to 1 grid	8,000/15,000	90,000 3:1 ratio	\$4.50
PA-132	1 plate to 2 grids hum-bucking	8,000/15,000	160,000 centertapped 2:1 ratio each side	5.00
PA-133	2 plates to 2 grids	8,000/15,000	30,000 each side 1.75:1 ratio each side	6.00
PA-134	Line to 1 grid hum-bucking	50, 200, 500	100,000	6.50
PA-135	Line to 2 grids hum-bucking	50, 200, 500	150,000 overall	7.50
PA-136	Single plate and low impedance mike or line to 1 or 2 grids. Hum-bucking	8,000/15,000 50, 200, 500	120,000 overall	7.50
PA-233	PP 6C5, 56, similar triodes to AB 45's, 2A3's, 6L6's, etc.	8,000/15,000	8,000 .9:1 ratio	6.00
PA-333	PP 6C5, 56, similar triodes to fixed bias 6L6's	8,000/15,000	2,500 .5:1 ratio	6.00
PA-433	PP 45, 2A3, similar tubes to fixed bias 2 or 4 6L6's	5,000	1,250 .5:1 ratio PA-2 case	6.50

MIXING AND LOW LEVEL OUTPUT TRANSFORMERS

PA-1 CASE

Type No.	Application	Pri. Imp. Ohms	Sec. Imp. Ohms	List Price
PA-137	Mixing	50, 200, 500	50, 200, 500	\$5.50
PA-140	Triode plate to line	8,000/15,000	50, 200, 500	6.50
PA-141	PP triode plates to line	8,000/15,000	50, 200, 500	7.50

Type No.	Matching	Equalization	List Price
VT-1	Triode plate, low impedance mike or line—to 1 or 2 grids	High end, low end, or both	\$8.50
VT-2	Connects across triode plate or low impedance mike or line	High end, low end, or both	6.00
VT-3	Connects across triode plate	10 DB at 70 and 8,000 cycles	5.00
VT-4	Connects across triode plate—built in potentiometer	High end, low end, or both	6.00

OUTPUT TRANSFORMERS

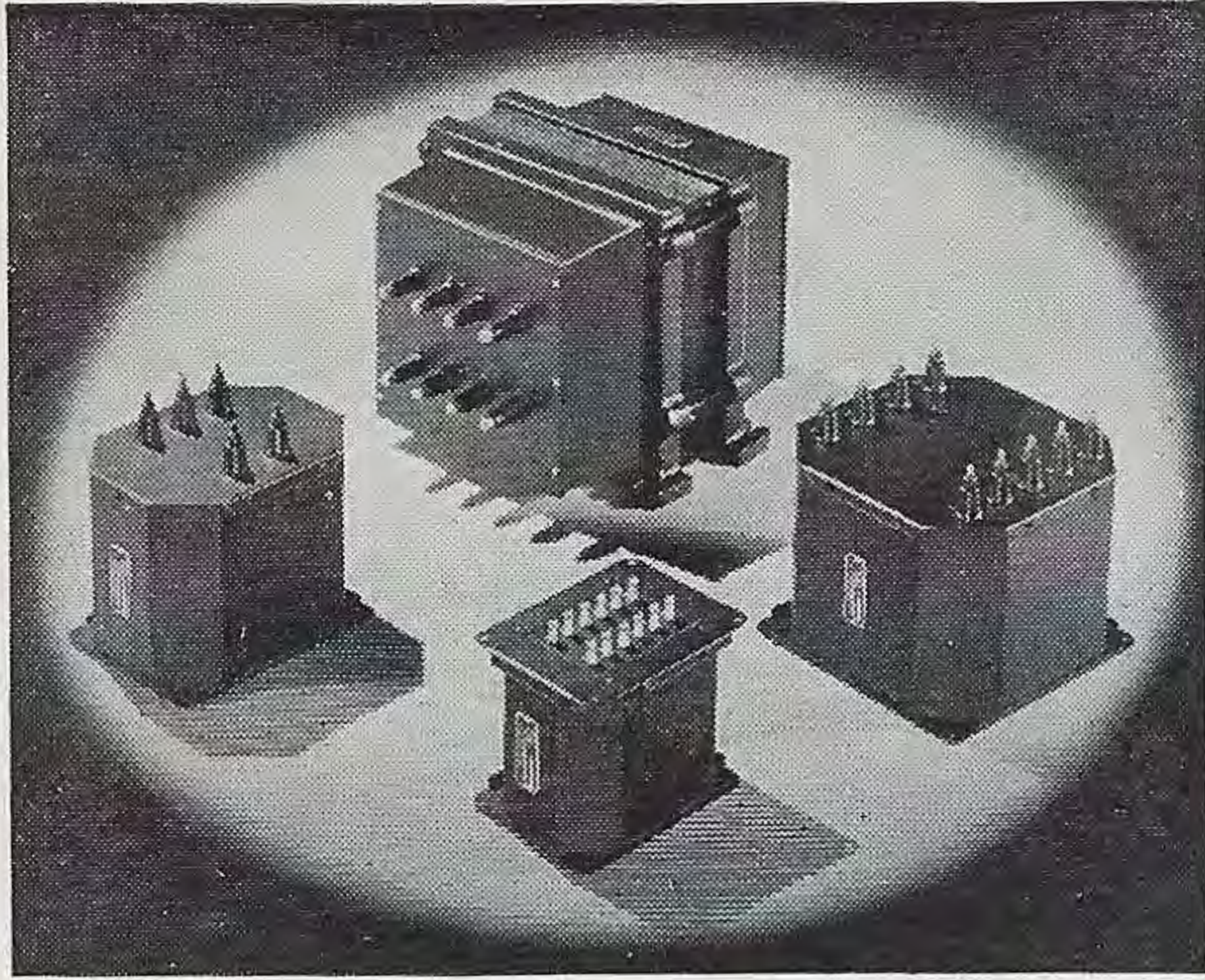
Secondary Impedances 500, 200, 50, 16, 8, 5, 3, 1.5 ohms

Type No.	Imped. P.P. Ohms	Typical Tubes	Case	List Price
PA-15	8,000	45's, 50's, 6F6 triodes	PA-2	\$7.00
PA-16	3,000/5,000	2A3's, 6A5G's	PA-2	7.00
PA-19	6,000/10,000	6B5, 6A6, 6F6, 89, 46	PA-2	7.00
PA-710	14,000/20,000	10's, 47's, 2A5 pentodes	PA-2	7.00
PA-2L6	6,500	6L6's self bias	PA-3	10.00
PA-4L6	3,300/3,800	2-6L6's, AB2 or 4-6L6's AB	PA-4	15.00

TELEVISION COMPONENTS

Type No.	Application	Case	List Price
PA-320	Deflecting yoke for 1800 and 1801 tubes	2 1/2" O.D.	\$12.00
PA-321	Power transformer 4,500 V. and two 2.5 V. windings	PA-4	15.00
PA-322	Power transformer 2,300 V. and two 2.5 V. windings	PA-3	10.00
PA-323	Vertical output auto-transformer	PA-1	4.50
PA-324	Vertical oscillation transformer	PA-1	4.50
PA-325	Horizontal oscillation transformer	PA-1	4.50
PA-326	Horizontal output transformer	PA-2	12.00
PA-327	1,500 Hy. High voltage filter reactor	PA-2	7.00

NEW COMMERCIAL TYPE POWER SUPPLY COMPONENTS



The new UTC PA power transformers and chokes have been designed to commercial standards. Temperature rise and insulation requirements are in accordance with the conservative specifications of the A.I.E.E. and Fire Underwriters. Ratings are conservative, for continuous duty, and suitable for all commercial and amateur applications. All items are vacuum impregnated in addition to sealing with special insulating compound. Rugged ceramic bushings are used for high voltage terminals.

These transformers and reactors are designed for temperature rise less than 55 degrees C., and are tested for breakdown on all windings at twice working voltage plus 1,000 volts. In addition, plate transformers are given a surge test at 2½ times normal applied voltage using a 500 cycle supply. In view of the conservative ratings and manufacturing procedure, these units are suitable for use on most types of government and standard commercial communication equipment. However, these same quality features make these units ideal for amateur transmitter equipment and also for quality PA units.

COMBINED PLATE AND FILAMENT TRANSFORMERS

Primary 115 volts 50/60 cycles. *Tapped for either voltage.
† Replaces former transformer types PA-22, PA-425 and PA-426

Type No.	High Voltage	D.C. MA.	Fil. 1	Fil. 2	Fil. 3	Fil. 4	Case No. List Price
PA-422	435-365-0-365-435 125-0-125	125 25	5V-3A	5V-2A	6.3 VCT-3A	2.5 VCT-5A	PA-3 \$10.00
PA-428	500-0-500 80-0-80	250 100	5V-3A	5V-2A	6.3 VCT-4A	*6.3 VCT-3A 2.5 VCT-3A	PA-4 14.00
PA-429	600-525-0-525-600	250	5V-3A	6.3 VCT-3-A	*7.5 VCT-3A 6.3 VCT-3A		PA-4 15.00
PA-431	500-400-0-400-500 80-0-80	500 100	5V-6A	5V-2A	6.3 VCT-5A	6.3 VCT-2A	CA-1 22.50

UNIVERSAL BIAS TRANSFORMERS

Primary 115 V. 50/60 cycles. No filament windings.

Type No.	D.C. Voltage	D.C. Ma.	Case No. List Price
PA-315	Tapped for any voltage from 15 to 100 V. within 6 %	250	PA-2 \$8.50
PA-316	Tapped for any voltage from 75 to 400 V. within 6 %	250	PA-4 15.00

HIGH POWER PLATE TRANSFORMERS

Primaries for 105, 115, 220, 230 volts, 50/60 cycles. For reduced power secondary voltages can be reduced to half by using 220V. Pri. on 110 volts. These transformers may be used on 25 to 43 cycles if 220V. Pri. is used on 110 volts.

Type No.	High Voltage	D.C. Voltage	D.C. MA	Case No.	List Price
PA-300	625-515-0-515-625	500/400	200	PA-3	\$10.00
PA-301	580-530-300-0-300-530-580	475/425/250	500	PA-4	14.00
PA-302	950-750-0-750-950	760/610	325	PA-4	17.00

Type No.	High Voltage	D.C. Voltage	D.C. MA.	L	W	H	Wt. lbs.	List Price
PA-303	1500-1235-400-0-400-1235-1500	1250/1000 300	300 175	8	7½	5½	32	\$25.00
PA-304	1500-1235-0-1235-1500	1250/1000	800	14	11	9¼	118	65.00
PA-305	2400-1750-0-1750-2400	2000/1500	300	10	7½	5½	50	35.00
PA-306	2400-1750-0-1750-2400	2000/1500	500	14	11	9¼	120	65.00
PA-307	3500-3000-2400-0-2400-3000-3500	3000/2500/ 2000	300	13	11	9¼	110	60.00
PA-308	3500-3000-2400-0-2400-3000-3500	3000/2500/ 2000	500	15	11	9¼	140	85.00
PA-309	3500-3000-2400-0-2400-3000-2500	3000/2500 2000	1000	17	14	11¼	210	135.00
PA-310	4600-4050-3500-0-3500-4050-4600	4000/3500/ 3000	600	15	14	11¼	168	105.00
PA-311	1500-1235-0-1235-1500	1250/1000	500	10	7½	5½	50	35.00

LOW POWER FILTER CHOKES

Type No.	Inductance Henrys	D.C. MA	D.C. res. Ohms	Case No.	List Price
PA-40	10	200	110	PA-2	\$4.50
PA-41	5-25	200	100	PA-2	4.50
PA-44	30	100 max.	375	PA-2	4.00
PA-45	250	15 max.	4500	PA-1	4.50
PA-48C	100	50 ma.	2500	PA-1	4.50

SMOOTHING CHOKES

Tapped for humbucking circuit. Commercial safety factors. Inductance rating at max. DC.

Type No.	Inductance Henrys	D.C. M.A.	D.C. res. Ohms	Case No.	List Price
PA-100	12	150	115	PA-2	\$5.00
PA-102	12	200	105	PA-3	8.00
PA-104	12	300	90	PA-4	12.00
PA-108	10	500	60	CA-1	20.00
PA-1S	10	1000	50	CA-1	35.00

SWINGING INPUT CHOKES

Type No.	Inductance Henrys	D.C. M.A.	D.C. res. Ohms	Case No.	List Price
PA-101	5-25	150	115	PA-2	\$5.00
PA-103	5-25	200	105	PA-3	8.00
PA-105	5-25	300	90	PA-4	12.00
PA-109	5-25	500	60	CA-1	20.00
PA-1C	5-25	1000	50	CA-1	35.00

FILAMENT TRANSFORMERS

Primary for 105, 115, 220, 230 volts, 50/60 cycles. These transformers may be used on 25 to 43 cycles if 220 volt primary is used on 110 volts. Secondary voltage is simultaneously reduced to half.

*Two Windings.

Type No.	Sec. Volts C. T.	Sec. Amps.	Working Voltage	Test Voltage	Case No.	List Price
PA-34	2½	10	2500	6000	PA-2	\$7.50
PA-120	2½	10	5000	11000	PA-3	9.00
PA-121	5	22	5000	11000	PA-3	14.00
PA-122	7.5/6.3	8	1500	4000	PA-3	11.00
PA-124	10	10	1500	4000	PA-3	12.00
PA-125	14/12/11	10	1500	4000	PA-3	14.00
PA-126	*14/11/10 14/11/10	10 10	1500	4000	PA-4	20.00

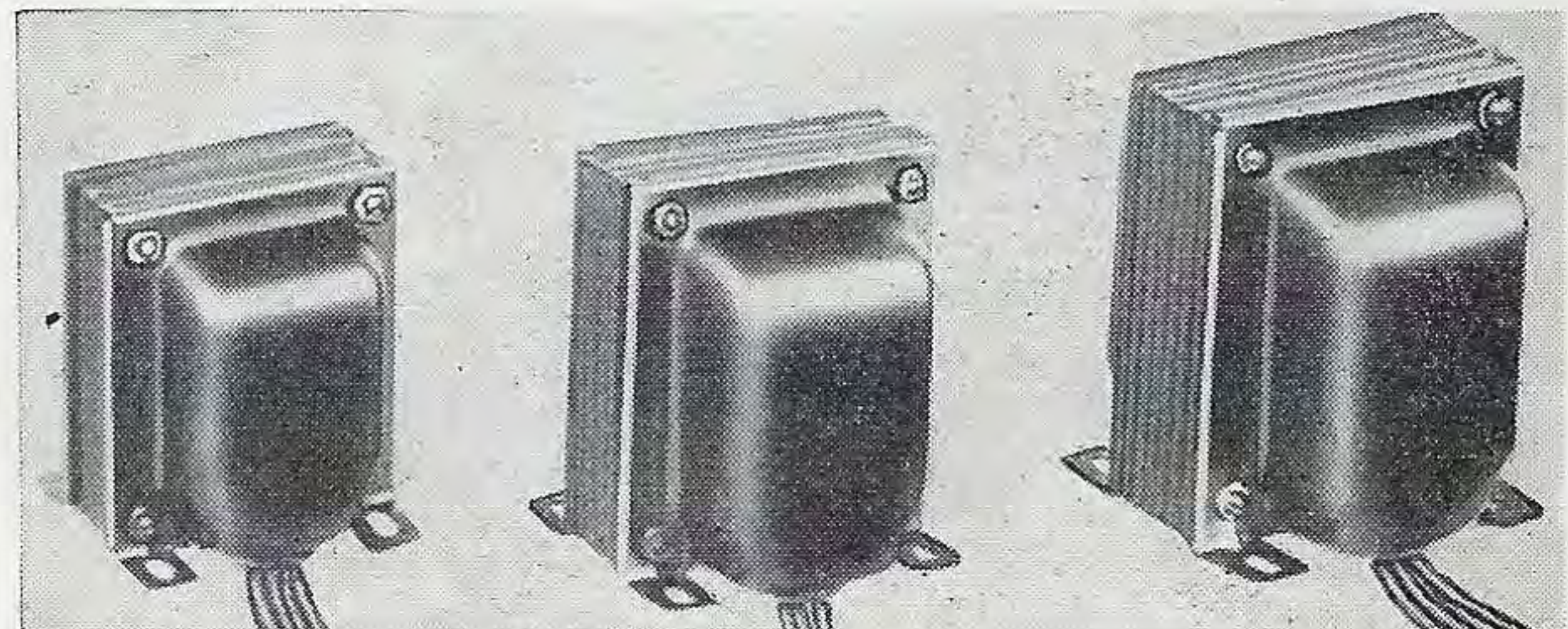
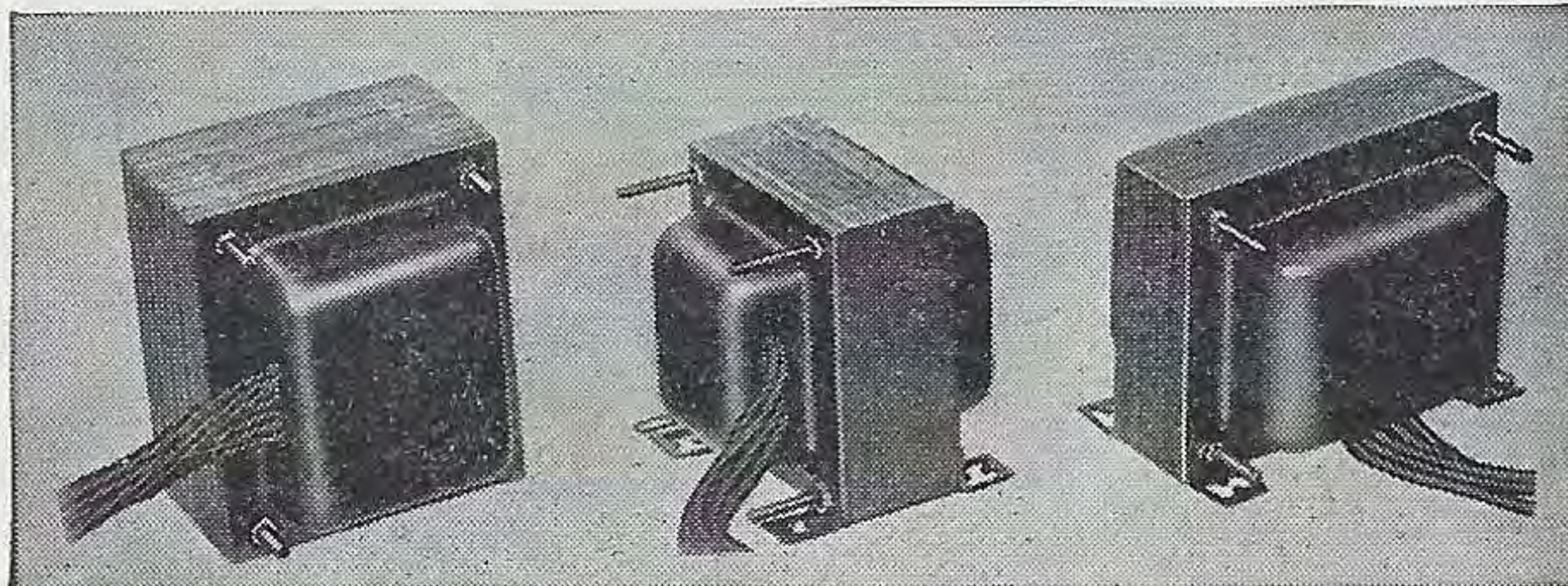


RADIO SET REPLACEMENT TRANSFORMERS



The new UTC replacement type transformers represent the culmination of years of development in this field. All units are vacuum sealed against humidity with special impregnating materials to prevent corrosion and electrolysis. Shells and brackets are finished in attractive high lustre black enamel.

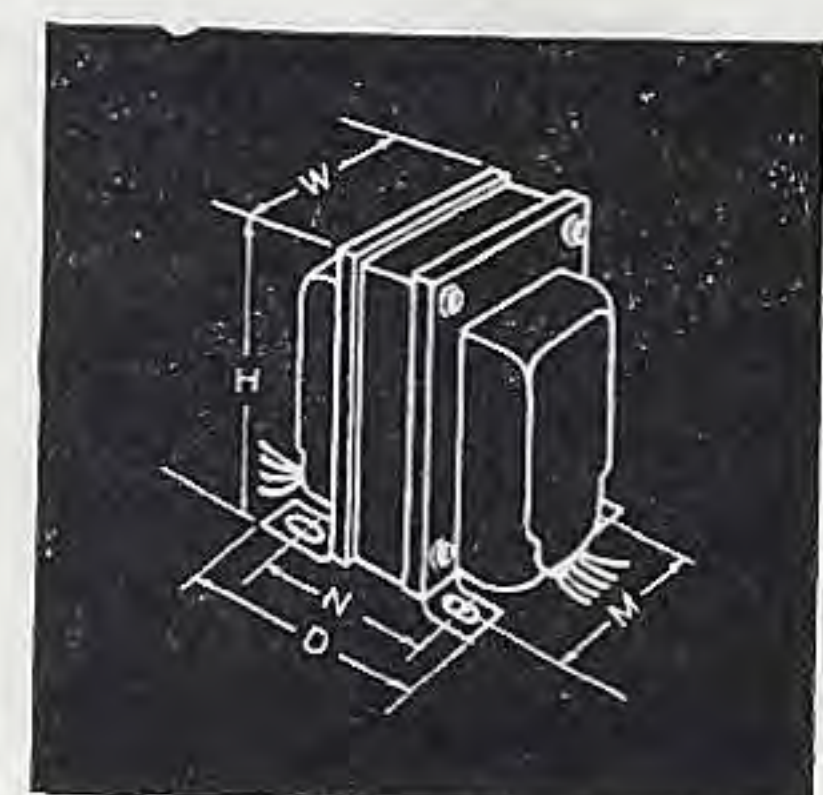
The new UTC shells and universal brackets employed make possible a latitude in mounting dimensions never approached heretofore. Using Varitap coil construction a minimum number of transformers have been developed to cover any requirement in the replacement field.



Through unique construction the five UTC Varitap Duplicate replacement transformers will service as many types of radio receivers as the 15 or 20 units more customarily employed for such service. The universal feet may be used for upright or horizontal mounting, or eliminated for flush mounting.



UTC vertical power transformers are unusually attractive in appearance, having smooth drawn cases finished in high lustre black enamel. The Varitap coil structure assures flexibility of application and permits the three units described to take the place of 5 to 8 units customarily employed for equivalent service.



VARITAP DUPLICATE REPLACEMENT POWER TRANSFORMERS

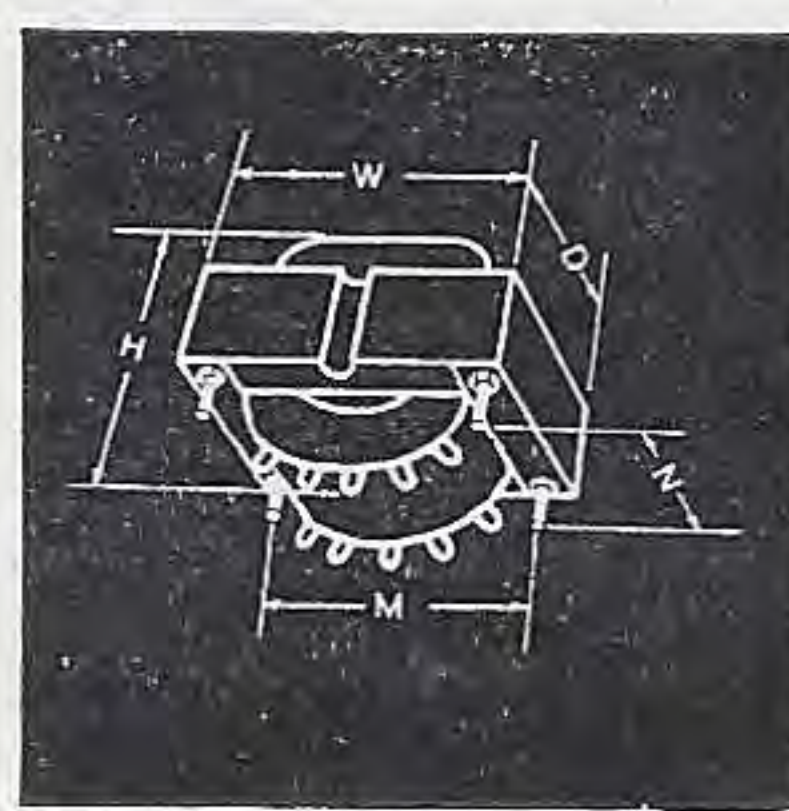
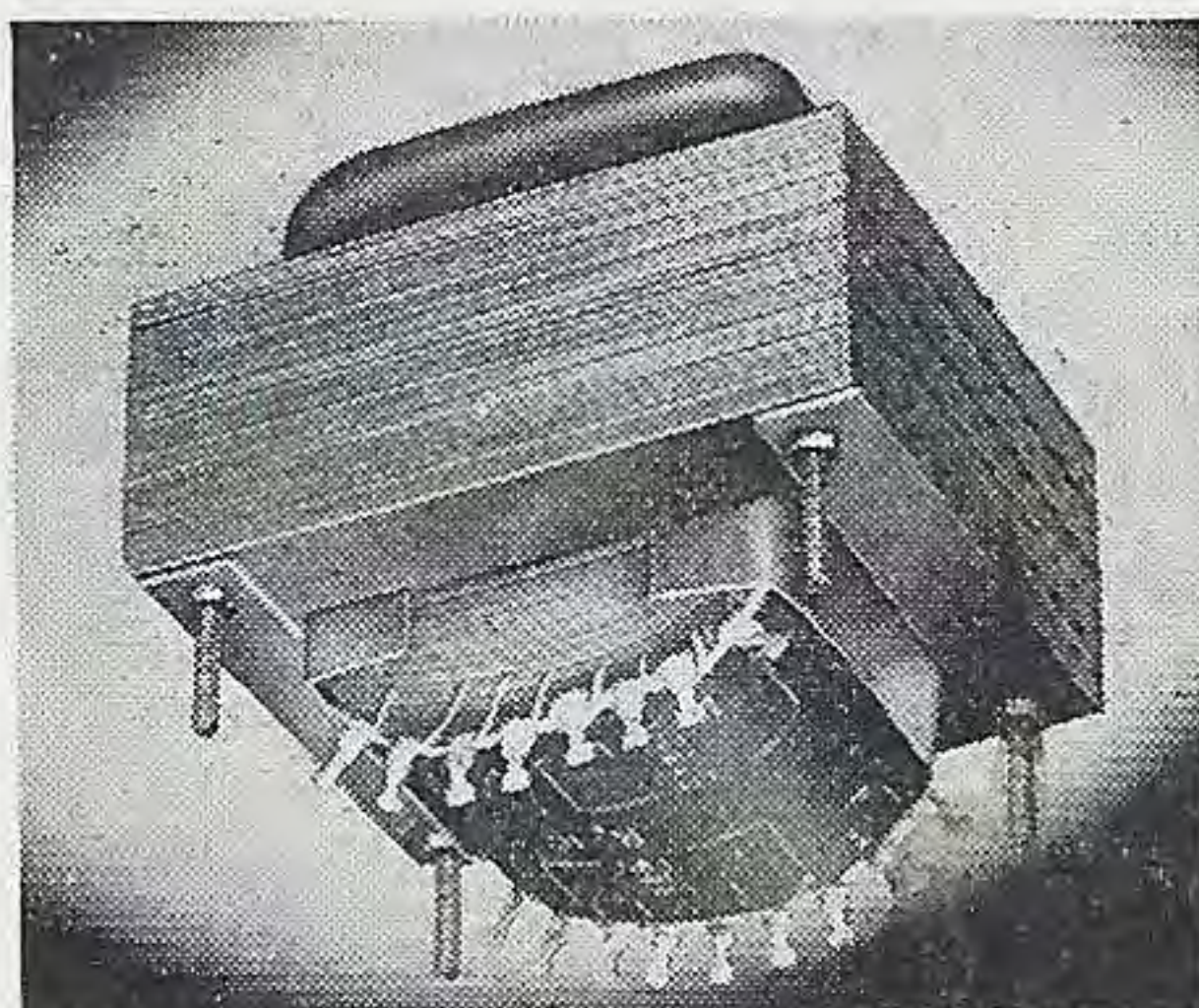
Type No.	High Voltage	Rect. Fil.	Fil. 1	Fil. 2	Dimensions, In.					Wt. Lb.	List Price
					W	D	H	M	N		
R-1	325-0-325 40MA	5V-2A	6.3 VCT-2A or 2.5-VCT-4A		3	2 1/2	2 3/4	2 1/2	2	2 1/2	\$2.50
R-2	350-0-350 70MA	5V-3A	6.3 VCT-2.5A or 2.5-VCT-8A		3 3/8	2 7/8	3	2 1/8	2 1/4	3 1/4	3.00
R-3	350-0-350 95MA	5V-3A	6.3 VCT-4.5A or 2.5-VCT-4.5A	2.5 VCT-9A	3 3/4	3 3/8	3 3/8	3 3/8	2 1/2	6 1/2	4.00
R-4	375-0-375 120-MA	5V-4A	6.3 VCT-5A or 2.5-VCT-5A	2.5 VCT-15A	4 1/2	3 3/4	3 3/4	3 3/4	3	6 1/2	5.00
R-5	385-0-385 180-MA	5V-4A	6.3 VCT-4A or 2.5-VCT-6A	6.3 VCT-5A	4 1/2	3 3/4	4 1/2	3 3/4	3	8 1/2	6.00

VERTICAL SHIELDED POWER TRANSFORMERS FOR RECEIVERS AND AMPLIFIERS

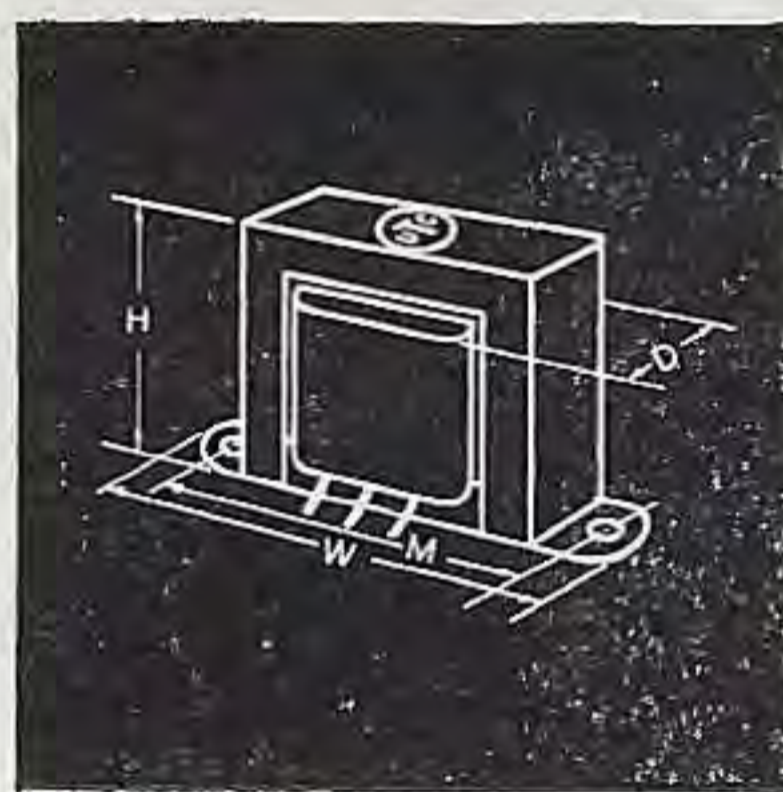
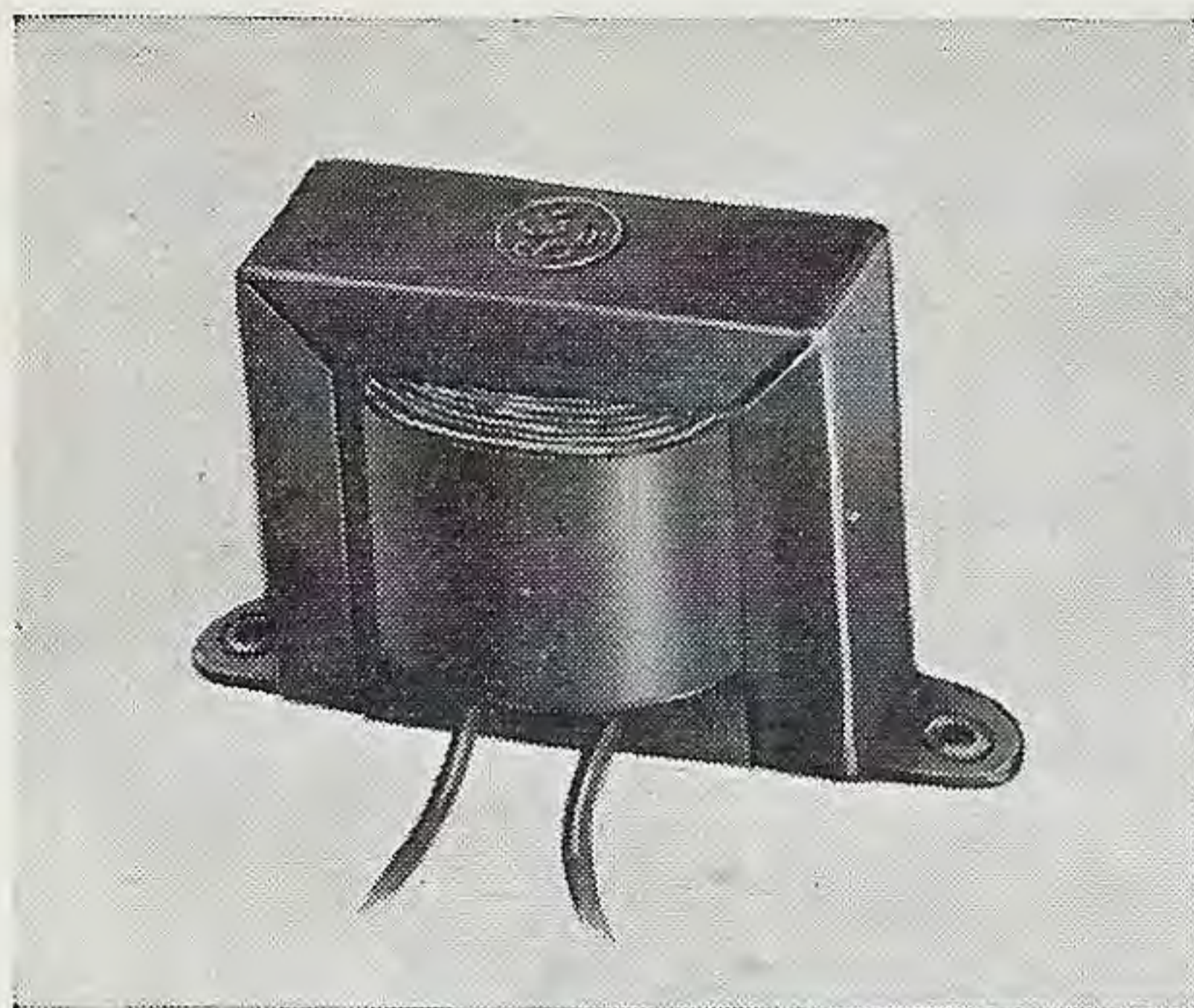
Type No.	High Voltage	Rect. Fil.	Fil. 1	Fil. 2	Dimensions, In.					Wt. Lb.	List Price
					W	D	H	M	N		
R-11	350-0-350 75MA	5V-3A	6.3 VCT-3A or 2.5-VCT-3A	2.5 VCT-8A	3	3 3/4	3 1/2	2 1/4	2 1/4	4	\$4.25
R-12	375-0-375 100-MA	5V-3A	6.3 VCT-4A or 2.5-VCT-4A	6.3 VCT-2A or 2.5 VCT-8A	3 3/4	3 3/8	4	2 1/2	2 1/2	6 1/2	5.25
R-13	425-0-425 200-MA	5V-3A	6.3 VCT-5A or 2.5-VCT-5A	6.3 VCT-3A or 2.5 VCT-12A	3 7/8	4 1/2	4 5/8	3	3 3/8	8 1/2	7.50

VARITAP FLUSH TYPE POWER TRANSFORMERS

The UTC flush type transformers are husky units designed for low temperature rise and good regulation. By employing a Varitap universal coil structure, (brought out to sturdy lugs) the five units described take the place of 12 to 15 units normally found in a flush type series.



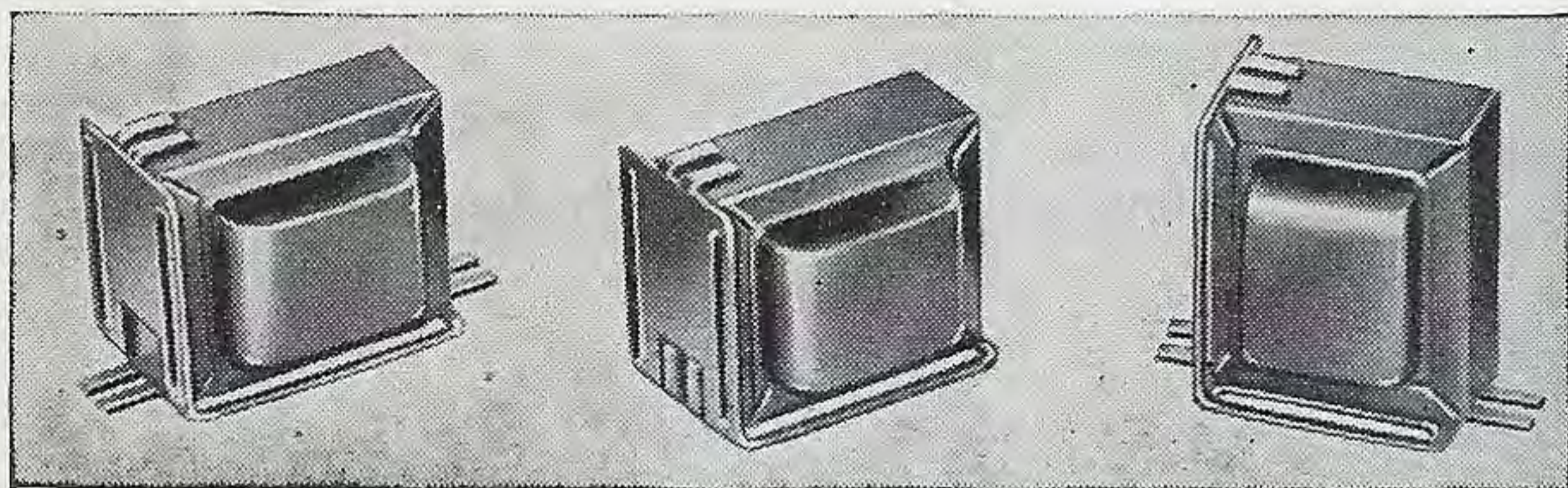
Type No.	High Voltage	Rect. Fil.	Fil. 1	Fil. 2	Dimensions, In.					Wt. Lb.	List Price
					W	D	H	M	N		
R-6	300-0-300 50MA	5V-2A	6.3 VCT-2A or 2.5-VCT-5A		3	2 1/2	3	2 1/2	2	2 1/2	\$2.50
R-7	350-0-350 75MA	5V-3A	6.3 VCT-3A or 2.5-VCT-3A	2.5 VCT-8A	3 3/8	2 7/8	3 1/4	2 1/8	2 1/4	3	3.25
R-8	375-0-375 100-MA	5V-3A	6.3 VCT-4A or 2.5-VCT-4A	2.5 VCT-10A	3 3/4	3 3/8	3 3/4	3 3/8	2 1/2	5 1/2	4.25
R-9	400-0-400 125-MA	5V-3A	6.3 VCT-4A or 2.5-VCT-4A	6.3 VCT-2A or 2.5 VCT-10A	4 1/2	3 3/4	4	3 3/4	3	6 1/2	5.50
R-10	425-0-425 200-MA	5V-3A	6.3 VCT-5A or 2.5-VCT-5A	6.3 VCT-3A or 2.5 VCT-12A	4 1/2	3 3/4	4 3/4	3 3/4	3	8 1/2	6.50



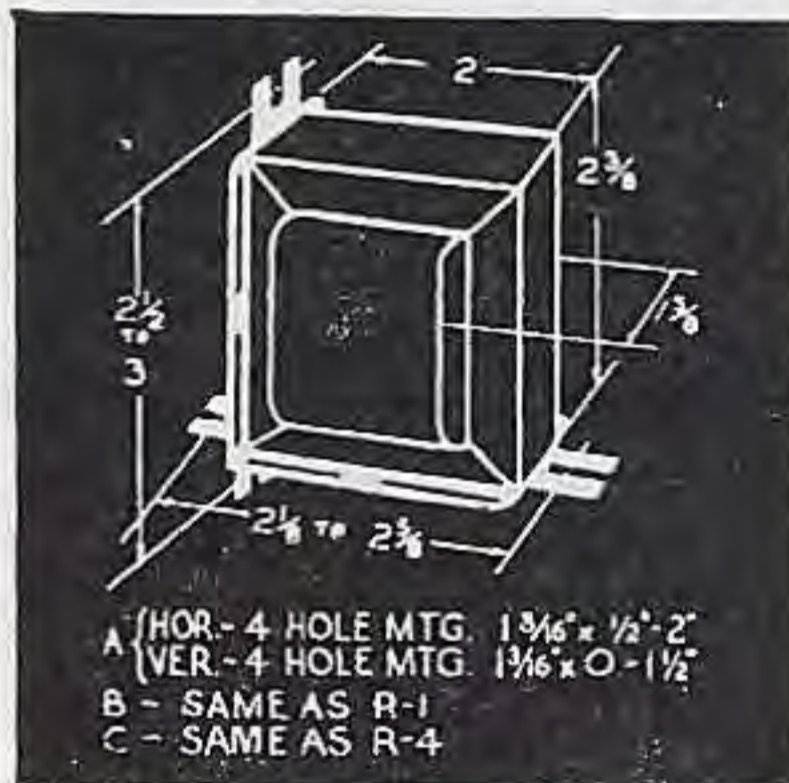
UTC filter chokes are conservatively designed and rated. Standard black enamel mounting channels are employed. Coils are completely sealed against adverse humidity conditions.

FILTER AND AUDIO CHOKES

Type No.	Induct. Hys.	Current	Resistance Ohms	Dimensions, Ins.				Wgt. Lbs.	List Price
				W	D	H	M		
R-14	12	40MA	250	2 7/8	1 3/8	1 11/16	2 3/8	3/4	\$.90
R-15	15	30MA	450	2 7/8	1 3/8	1 11/16	2 3/8	3/4	.90
R-16	20	30MA	600	2 7/8	1 3/8	1 11/16	2 3/8	3/4	1.10
R-17	25	30MA	850	3 5/16	1 5/8	2	2 7/8	1	1.20
R-18	10	75MA	250	3 5/16	1 5/8	2	2 7/8	1	1.20
R-19	15	100MA	450	3 3/4	1 3/4	2 5/16	3 1/4	1 1/2	1.75
R-20	8	160MA	100	4 1/8	2	2 5/8	3 5/8	2 1/2	2.00
R-21	5/25	160MA	100	4 1/8	2	2 5/8	3 5/8	2 1/2	2.00
R-22	500	5MA	4000	3 5/16	1 5/8	2	2 7/8	1	1.75



The Varitap Duplicate audio units represent the acme in replacement transformer development. The units are extremely attractive, the double shells and universal mounting brackets being finished in high lustre black enamel. The figure A units use the new UTC universal bracket. This bracket makes possible four hole horizontal or vertical mounting and two hole, channel type, horizontal or vertical mounting. The coils of these units, in addition to efficient design and mechanical shielding, are vacuum impregnated and completely sealed with a special compound to assure complete protection against adverse climatic conditions.



VARITAP DUPLICATE AUDIO TRANSFORMERS AND FILTER CHOKES

(Completely Shielded Units, Universal Mtg.)

Type No.	Application	Description	Fig.	Wgt. Lbs.	List Price
R-23	1 plate* to 1 grid	3 1/2:1 ratio	A	1	\$1.75
R-24	1 plate* to 2 grids	2:1 ratio	A	1	1.85
R-25	2 plates* to 2 grids	1.5:1 stepup for class A triodes 1.5:1 stepdown for 6L6's, 2A3's, 2A5's, etc.	A	1 1/4	2.00
R-26	Driver, 1 plate to 2 grids	Single 42, 2A5, 6F6, 45, 46 to AB 6L6's, 42's, 2A5's, 6F6's, 46's	A	1 1/4	2.00
R-27	15 watt Universal Output	All tubes up to 15 watts to any voice coil from .1 to 30 ohms	A	1 1/4	1.75
R-28	35 watt Universal Output	All tubes up to 35 watts to any voice coil from .1 to 30 ohms	B	2 1/2	2.50
R-29	Mike to grid	Single or double button mike or line to 1 grid	A	1 1/4	1.85
R-30	Filter choke	13 Hys—250 MA—100 ohms	C	7	5.00
R-31	Filter choke	10 Hys—80 MA—250 ohms	A	2 1/2	1.50
R-32	Filter choke	10 Hys—150 MA—100 ohms	B	2 1/4	2.25

*Will match tubes like 27, 37, 56, 6C6 triode, 6C5. Can be used with high mu triodes with loss in low frequencies.

UTC channel frame audios are excellently designed. In addition to good frequency range, coils are vacuum impregnated and completely sealed against moisture absorption. Standard channels with black enamel finish are employed.

CHANNEL FRAME AUDIO TRANSFORMERS

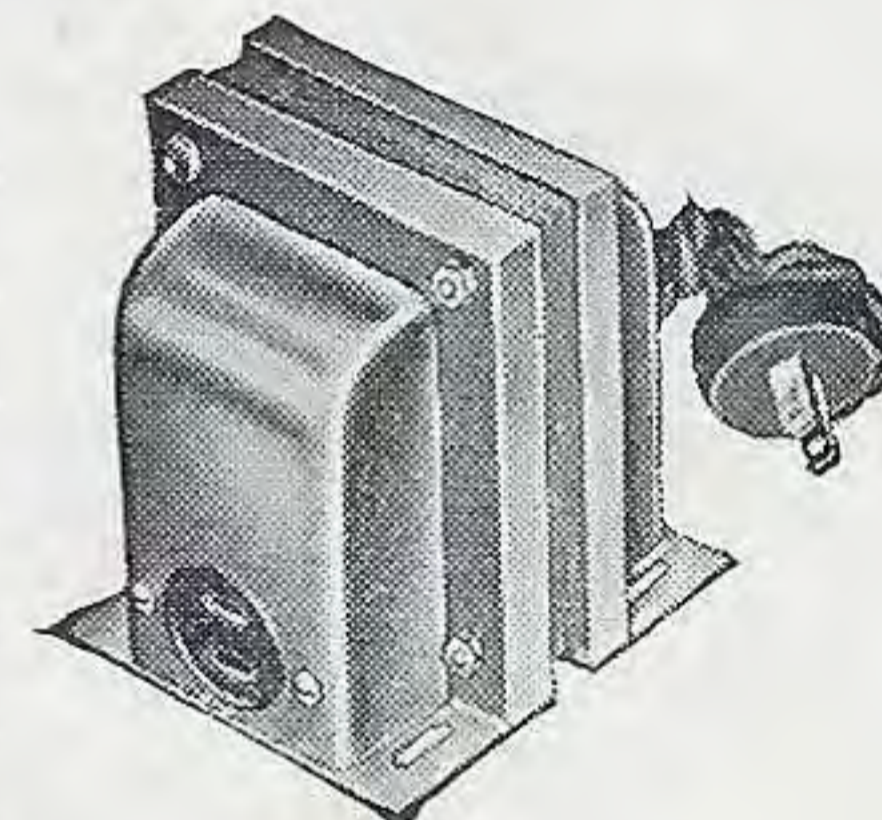
Type No.	Application	Description	Dimen., Ins.				Wt. Lbs.	List Price
			W	D	H	M		
R-33	1 plate* to 1 grid	4:1 ratio	2 7/8	1 3/8	1 11/16	2 3/8	3/4	\$1.20
R-34	1 plate* to 2 grids	2:1 ratio	2 7/8	1 3/8	1 11/16	2 3/8	3/4	1.25
R-35	Mike to 1 grid	17:1 ratio	2 7/8	1 3/8	1 11/16	2 3/8	3/4	1.50
R-53	Plate and mike to grid	3:1 and 17:1 ratio	2 7/8	1 3/8	1 11/16	2 3/8	3/4	1.65
R-36	Driver	30, 49, etc. to class B 19, 49, 79, 89 grids	2 7/8	1 3/8	1 11/16	2 3/8	3/4	1.50
R-37	R.F. Output	Class B 19, 49, 79, 89 plates to 3500 and 5,000 ohms	2 7/8	1 3/8	1 11/16	2 3/8	3/4	1.60
R-38	10 watt Universal Output	Any tubes up to 10 watts to any voice coil, .1 to 30 ohms	2 1/2	1 3/8	1 3/8	2 3/8	1/2	1.50
R-39	10 watt line Matching Transformer	250, 500, 1,500 ohms to 2, 8, 15 ohms	2 7/8	1 3/8	1 11/16	2 3/8	3/4	1.60
R-40	25 watt line Matching Transformer	250, 500, 1,500 ohms to 2, 8, 15 ohms	4 1/8	2 1/4	2 5/8	3 5/8	2 1/4	2.50

*Will match tubes like 27, 37, 56, 6C6 triodes, 6C5. Can be used with high mu triodes with loss in low frequencies.

STEP DOWN AUTO-TRANSFORMERS

220-240 to 110-120 Volts—50/60 Cycles

Type No.	Application	Wgt. Lbs.	List Price
R-41	85 watt capacity	4	\$4.50
R-42	125 watt capacity	5	5.00
R-43	175 watt capacity	5 1/2	6.00
R-44	250 watt capacity	6 1/2	7.00
R-45	500 watt capacity	13	14.00
R-46	1000 watts, no cord	26	25.00



CHANNEL FRAME FILAMENT TRANSFORMERS

Pri. 115 V.—50/60 Cycles

Type No.	Secondary	Dimensions, Inches				List Price
		W	D	H	M	
FT-1	2.5 V. C. T.-3A	2 7/8	1 3/8	1 11/16	2 3/8	\$1.25
FT-2	6.3 V. C. T.-1.2A	2 7/8	1 3/8	1 11/16	2 3/8	1.25
FT-3	2.5 V. C. T.-6A	3 5/16	1 5/8	2	2 7/8	1.50
FT-4	6.3 V. C. T.-2.5A	3 5/16	1 5/8	2	2 7/8	1.75
FT-5	2.5 V. C. T.-10A	3 3/4	1 3/4	2 5/16	3 1/4	1.75
FT-6	5 V. C. T.-3A	3 3/4	1 3/4	2 5/16	3 1/4	1.75
FT-7	7.5 V. C. T.-3A	3 3/4	1 3/4	2 5/16	3 1/4	1.75

EXPORT VOLTAGE ADAPTERS

Auto-transformers designed to accommodate receivers and appliances to the various line voltages encountered in export service. Complete with cord and plug and special locking switch providing for line voltages of 105, 115, 125, 135, 150, 210, 230, 250 volts; 42 to 60 cycles. Output voltage 115.

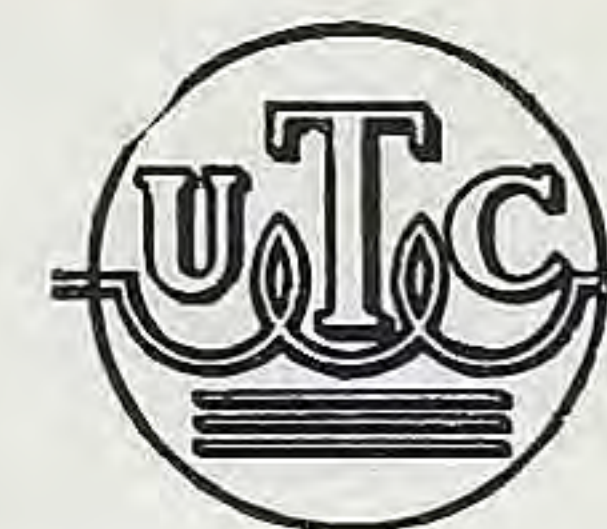
Type No.	Rating	Weight, Lbs.	List Price
R-47	85 watts	4 1/2	\$6.50
R-48	150 watts	5 1/2	7.50
R-49	250 watts	7	8.50

LINE VOLTAGE CORRECTORS

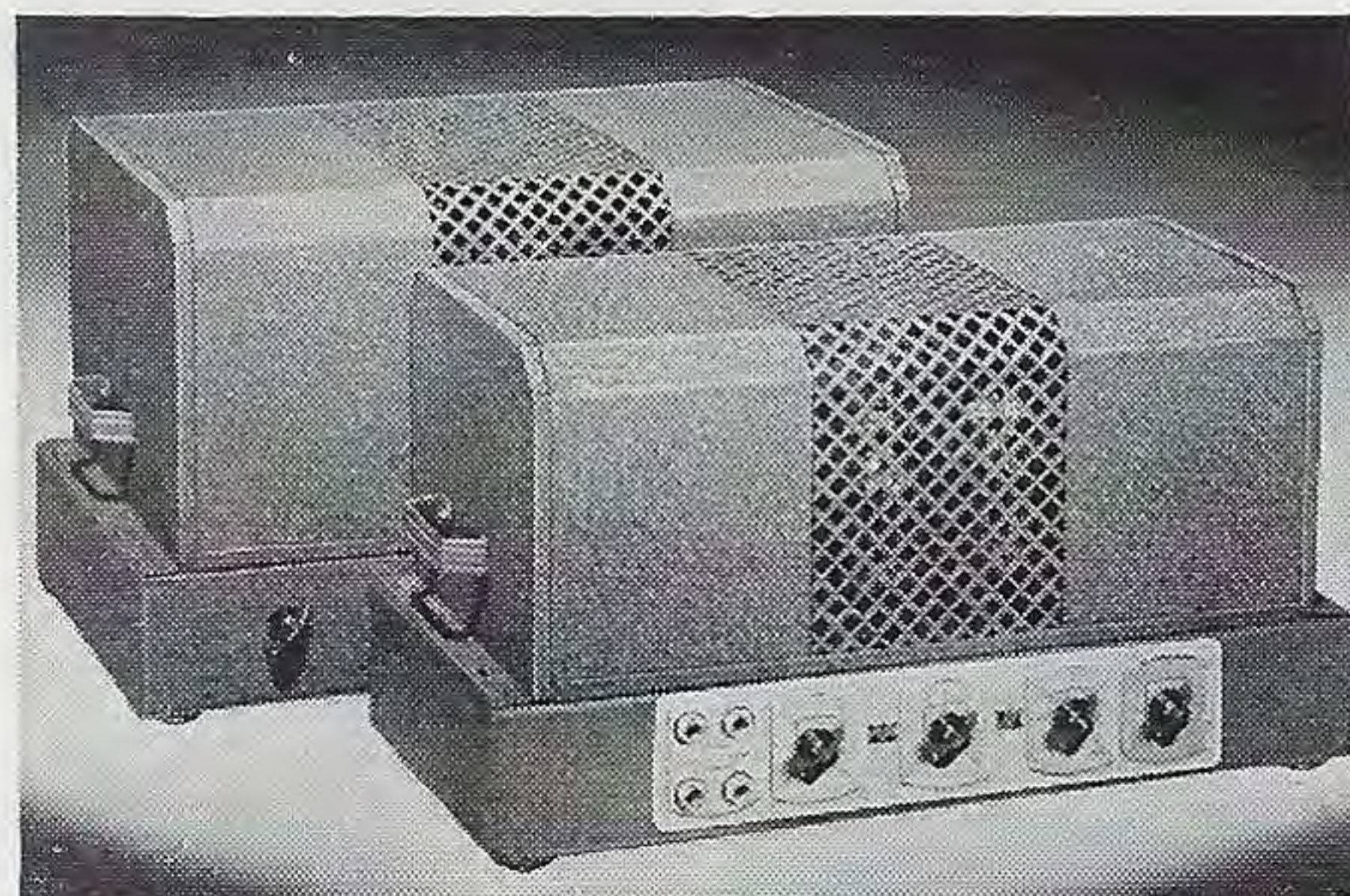
Auto-transformers complete with cord, plug and tap switch. Switch will effect 115 volts plus or minus 2 1/2 volts output for any input voltage from 88 to 137 volts, 50/60 cycles. Switch can also be used to obtain any output voltage from 95 to 130V. with 115V. line.

Type No.	Rating	Weight, Lbs.	List Price
R-50	100 watts	4	\$6.50
R-51	250 watts	5 1/2	8.00
R-52	1000 watts	18	25.00

NEW BEAM POWER-COMPRESSOR AMPLIFIER KITS



The new improved UTC PA amplifier and modulator kits incorporate every advanced circuit feature desirable for PA and amateur work.



The kits are provided complete with panels, covers, resistors, condensers, sockets, jacks, etc. All components are completely mounted and ready to wire; complete constructional details and diagrams are furnished.

VOLUME LIMITING

Volume limiting in amplifier equipment is ideal for the home and PA application inasmuch as the equipment can be operated at high levels without any fear of blasting on peaks of power. In PA service the changes in level encountered when a speaker moves toward the microphone is minimized by the amplifier compression. In modulator work the limiting action minimizes the tendency for over-modulation due to sudden increase of input signals, thus permitting a higher gain control setting **doubling the effective transmitter power.**

COMPONENTS

The new UTC PA amplifier kits are unusually trim in appearance, employing blackchrome etched panels contrasting with the gray commercial wrinkle finish of the chassis and perforated metal cover.

All kits are furnished with four input jacks providing for dual input (high or low gain) to both channels of the mixer. The mixing system is completely cross-talk proof. The unique UTC VARITONE equalizer is incorporated to equalize high frequencies or low frequencies, as desired. VARIMATCH output transformers are employed in kits for PA, modulator and driver service.

The output impedances on PA kits are 500, 200, 15, 8, 5, 3, and 1½ ohms.

TECHNICAL CHARACTERISTICS

P-1A

PA kit, self bias, 30 watts output, audio and power units on separate chassis for rack or cabinet mounting. Four jack, dual channel, high impedance input, two high gain (120DB), two low gain (80DB). VARITONE equalizer and **compression controls.** Output impedances for line and voice coil as above. Weight, 60 pounds.

List price..... \$87.50

P-1M

Modulator amplifier kit, same as above, but for modulation purposes. VARIMATCH output has the following impedances: 200, 405, 1180, 2350, 2400, 3000, 4000, 4670, 4750, 5660, 7000, 9100, 9500. Weight 60 pounds.

List price..... \$87.50

Tubes required for P-1A or P-1M kits are: two 6J7, one 6N7, two 6C5, two 6L6, one 83, one 6H6.

P-2A

PA kit, fixed bias, 50 watts output, audio and power units on separate chassis for rack and cabinet mounting. Four jack, dual channel, high impedance input, two high gain (120DB), two low gain (80DB). VARITONE equalizer and **compression controls.** Has output for line or voice coils, as specified. Weight, 64 pounds.

List price..... \$97.50

P-2M

Modulator kit, same as above, but has VARIMATCH output having impedances of 360, 660, 2050, 3740, 4100, 7000, 7500, 8200, 12000, 12600, 15000, 16400, 21500, 29800 on the 3800 ohm plate to plate terminals. Also has 237, 1300, 1750, 2700, 3270, 5200 ohms on the 4000 ohm plate to plate input terminals. Weight, 64 pounds.

List price..... \$97.50

Tubes required for the P-2A or P-2M kits: two 6J7, one 6N7, two 6C5, two 6L6, one 83, one 80, one 6H6.

P-3A

PA kit, fixed bias, 100 watts output. Audio and power on separate chassis for rack or cabinet mounting. Four jack, dual channel, high impedance input, two high gain (120DB), two low gain (80DB). VARITONE equalizer and **compression controls.** Line and voice coil output. Weight, 110 pounds.

List price..... \$142.50

P-3M

Same as P-3A, but has VARIMATCH output with impedances of 270, 500, 1440, 2760, 2900, 3700, 4900, 5650, 5800, 6900, 8400, 11000, 12000. Weight, 110 pounds.

List price..... \$142.50

Tubes required for the P-3A and P-3M kit: two 6J7, one 6N7, two 6C5, four 6L6, two 6F6, three 83, one 5Z3, one 6H6.

P-4D

10 watt compressor driver amplifier, self bias. 10 watts output, sufficient to drive any class AB, or class B amplifier of 100 watt to 250 watt rating. The ideal driver, incorporating: compression, low reflected drive impedance, multi-channel input, high gain, and VARITONE equalizer. One chassis. Four jack, dual channel, high impedance input, two high gain (117DB), two low gain (77DB). VARITONE equalizer and **compression controls.** VARIMATCH driver transformer incorporated as output unit. Weight, 36 pounds.

List price..... \$65.00

P-4A

Ideal 10 watt home amplifier. Same as above, but with PA VARIMATCH output transformer to 500, 15, 8, 5, 3, 1½ ohms. Weight, 36 pounds.

List price..... \$65.00

Tubes required for the P-4D and P-4A kit: two 6J7, one 6N7, one 6C5, two 2A3, one 5Z3, one 6H6.

P-5A

PA kit, self bias, 15 watts output. One chassis. Four jack, dual channel, high impedance input: two high gain (120DB), two low gain (80DB). VARITONE equalizer and **compression controls.** Output impedance for line and voice coils, as specified. Weight, 36 pounds.

List price..... \$62.50

P-5M

Modulator kit, same as P-5A, but with VARIMATCH output having impedances of 270, 500, 1440, 2760, 2900, 3700, 4900, 5650, 5800, 6900, 8400, 11000, 12000. Weight, 36 pounds.

List price..... \$62.50

Tubes required for P-5A or P-5M kit: two 6J7, one 6N7, one 6C5, two 6V6, one 83, one 6H6.

P-7A

AC operated pre-amplifier kit designed especially for amateurs and PA service. Very efficient filtering assuring freedom from hum. Has a gain of 70DB, and a two channel high impedance, high level mixer with jack input for each channel. Output impedances are 50, 200, and 500 ohms. Weight, 15 pounds.

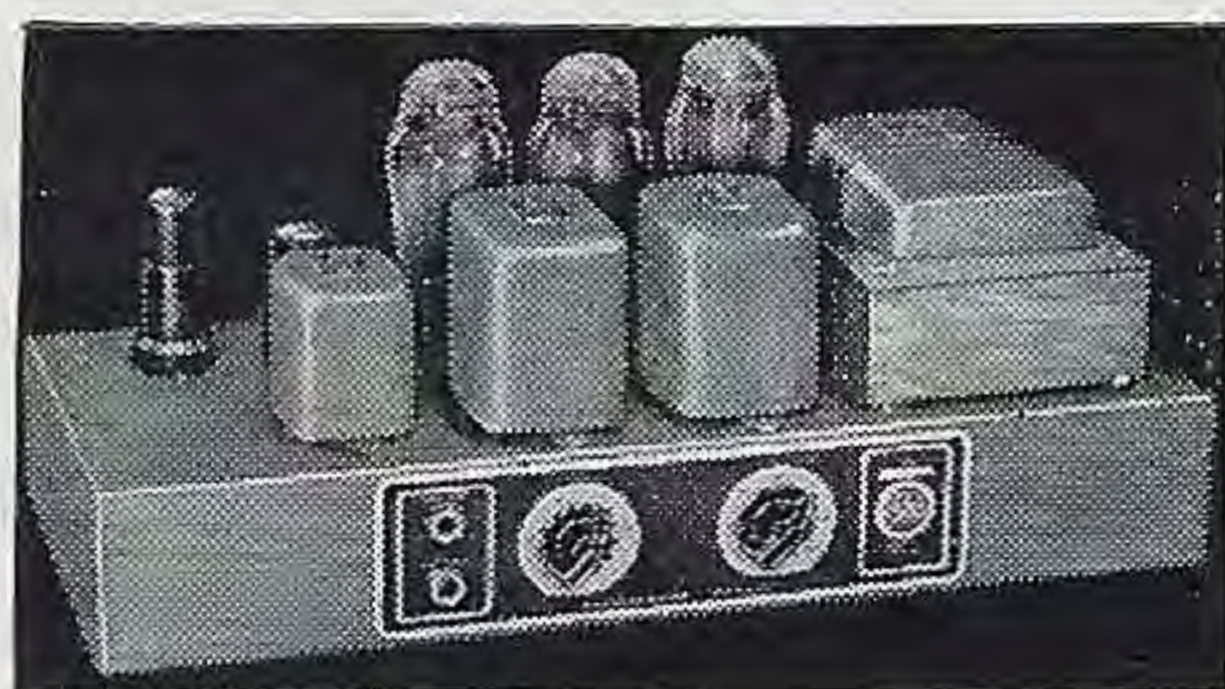
List price..... \$30.00

Tubes required for the P-7A: two 6J7, one 6N7, one 6X5.



Popular Priced

TRANSMITTER AND AMPLIFIER KITS



S-15A The S-15A audio amplifier is an ideal medium power amplifier for P. A. and modulator service, delivering 15 watts of audio power. The power supply and audio amplifier are combined on one compact chassis. High gain, sufficient for crystal microphone operation, is effected through proper choice of tubes, including 6V6G tubes in the output stage. High impedance dual input is provided for either low or high gain, using standard jacks. A universal output plug is supplied at the back of the unit. A tone control is mounted on the common etched panel which sets off the modern beauty of the slate-gray crinkle chassis. The tubes required are one 6J7, one 6C5, two 6V6G's and one 83. This kit is supplied completely mounted ready to wire, less dust cover and tubes, including all components, accessories, etched plate, etc. Size 17" long x 7" wide x 8" high. Weight 23 pounds.

Net price **\$24.00**

If kit is desired with Special Series universal modulation transformer, use amplifier kit No. S-15M.

Net price **\$24.00**

If kit is desired with 2A3 output tubes and additional stage of amplification, line and voice coil output, use Kit No. S-10A.

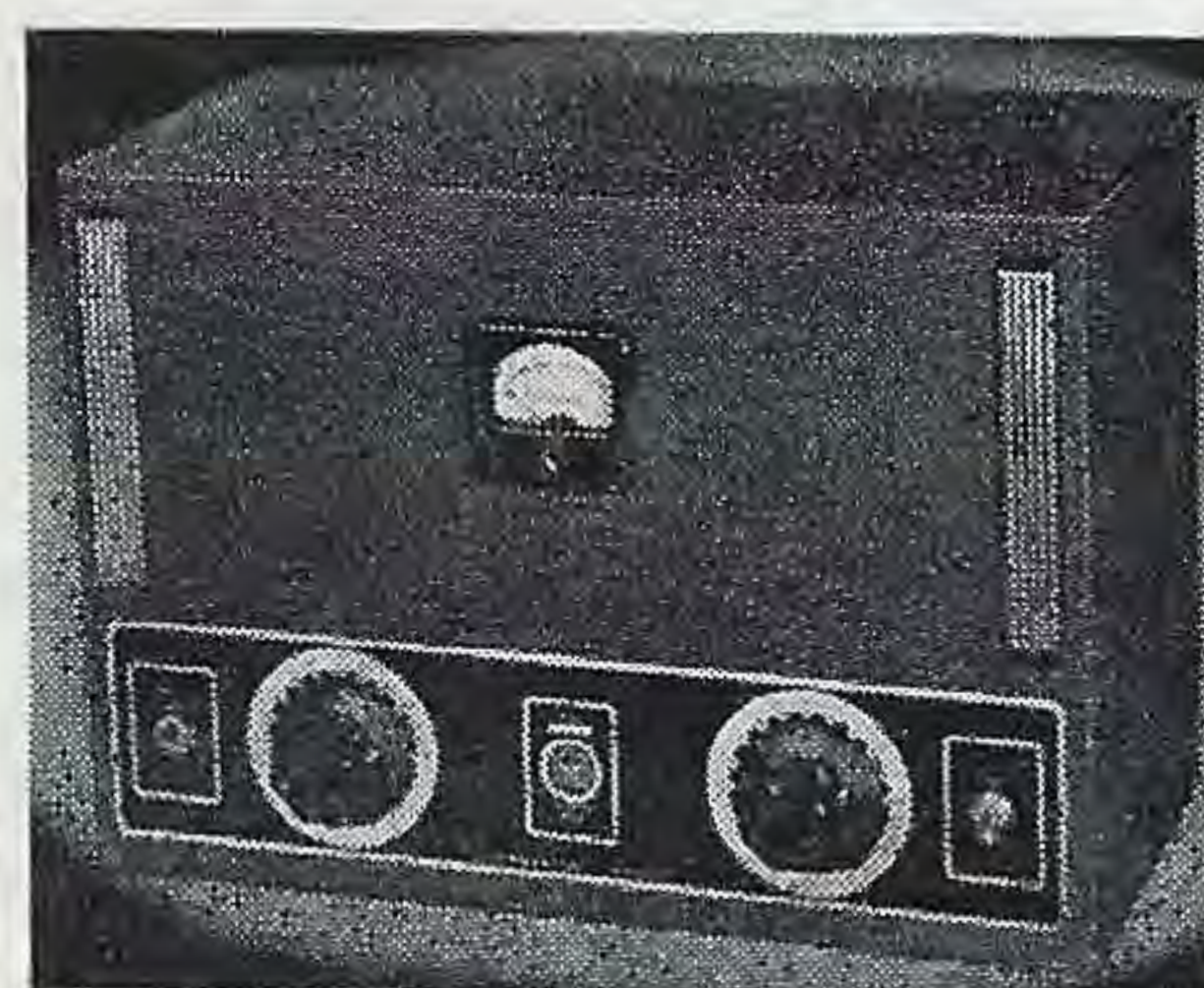
Net price **\$25.20**

2A3 kit as above, but universal driver output transformer, use Kit No. S-10D.

Net price **\$25.20**

Tubes for S-10A and S-10D are one 6V7, one 6F8G, two 2A3's, one 83.

Dust cover for above amplifiers, type S-15D. Net price **\$1.50**



SX-25 The UTC SX-25 kit is an ideal unit for the beginner and also as a stand-by transmitter for the experienced amateur. Its low price represents unprecedented value. With a good antenna this transmitter has made contacts over a range of several thousand miles.

The circuit of the SX-25 is very simple, being a straight crystal controlled oscillator of high power output (25 watts CW) and stability. It is constructed with a self-contained power supply and antenna tuning condenser. Keying is accomplished in the cathode circuit of the oscillator, thus permitting break-in operation. The SX-25 will operate on all amateur bands from 160 to 10 meters. It is supplied completely mounted, ready to wire, less 2"-200MA meter, tubes, and crystal. The kit includes the cabinet and all components and accessories, such as resistors, condensers, coil form, sockets, etched plate line cord, etc. The tubes required are one 6L6G and one 83. Size 15" long x 7½" wide x 10½" high. Weight 20½ pounds.

Amateur net price **\$18.00**

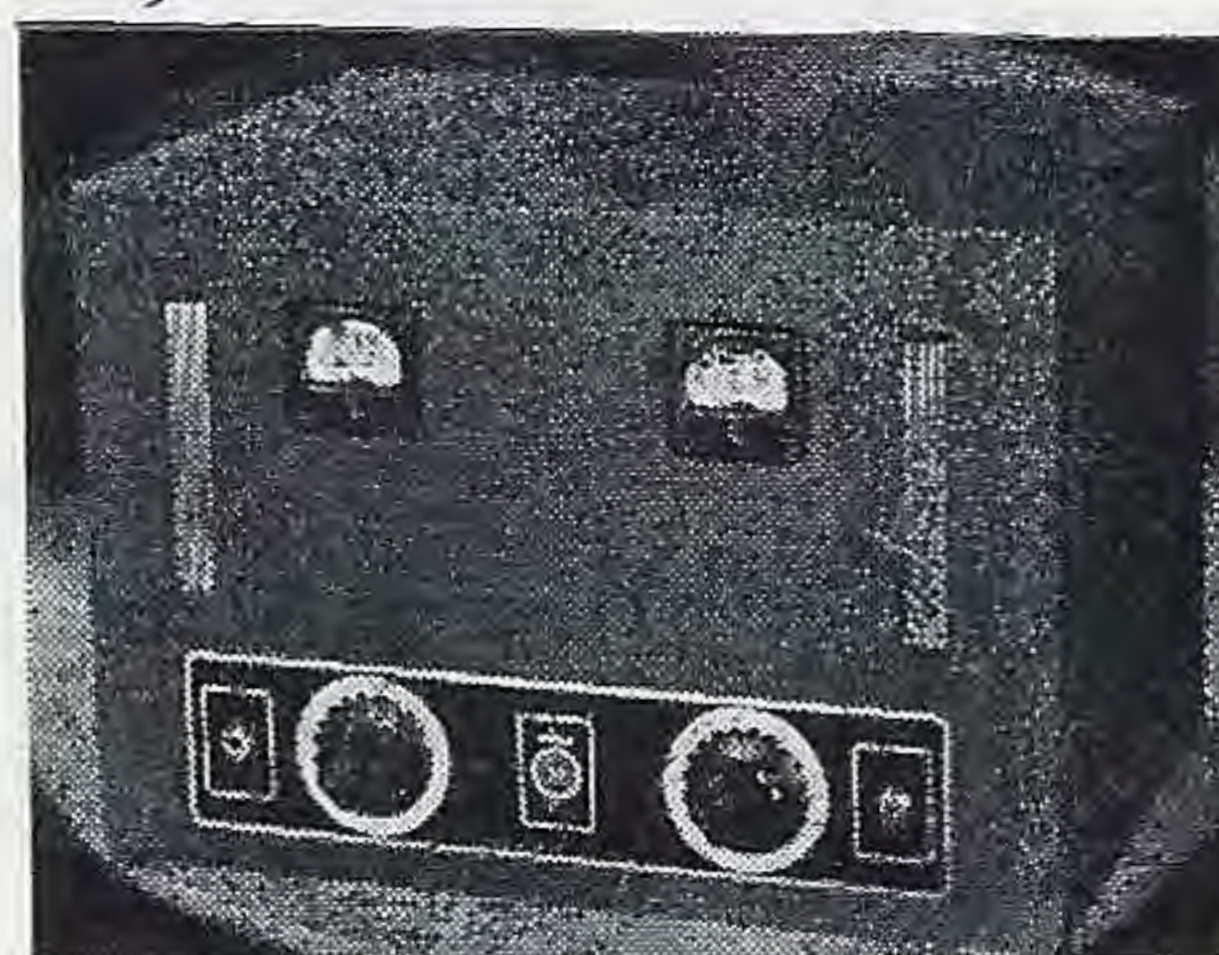


S-25A The S-25A audio amplifier has been designed specifically for the high power P. A. and modulator field. This unit employs 6L6 tubes in the output stage to obtain 25 watts of undistorted power. The circuit is simple but highly efficient, effecting sufficient gain in three stages to operate from crystal or similar microphones. The tone and volume controls are mounted with the dual high impedance, high and low gain input jacks on one etched panel. A universal output plug is provided on the back of the chassis. The power supply is unusually rugged and employs a two-section filter for optimum regulation and hum reduction. The kit is normally supplied with universal voice coil output impedances. The tubes required are one 6J7, one 6C5, two 6L6's and one 83. The S-25A kit is supplied completely mounted, ready to wire, less tubes, including all components, accessories, dust cover, etched plate, etc. Size 17" long x 7" wide x 9¼" high. Weight 32 pounds.

Net price **\$30.00**

If kit is desired with Special Series universal modulation transformer use amplifier kit No. S-25M.

Net price **\$30.00**



SX-80 The SX-80 transmitter kit is a complete 80 watt C.W. transmitter of modern design. Operation on all bands is obtained through the use of plug-in coils. Keying is accomplished in the oscillator cathode circuit to permit break-in operation. A rugged power supply using choke input filter is incorporated on the same chassis.

The output of the SX-80 consists of a link circuit terminated at two Isolantite feed-through insulators at the rear of the chassis, and may be connected to a twisted pair feeder or to an external antenna coupling system.

The SX-80 combines modern appearance with simplicity of control and flexibility of operation. It may be used either as a complete 80 watt C.W. unit or as an exciter to drive a high power final stage. It lends itself to the possibility of being incorporated in future equipment should higher power be desired. The tubes required are three 6L6G's and one 83. The kit includes the cabinet and all components and accessories such as resistors, condensers, sockets, coil forms, etched plate, line cord, etc.

This unit is supplied completely mounted, ready to wire, less 2"-100MA and 200MA meters, tubes, and crystal. Size 18" long x 13" wide x 12½" high.

Weight 46 pounds.

Amateur net price **\$37.50**

SX-82A Antenna matching kit, similar to SX-80 and SX-200 in appearance. . . will handle any transmitter up to 300 watts input. Complete including cabinet and accessories less 2.5A—2" meter. Net price **\$19.60**

Amateur net price



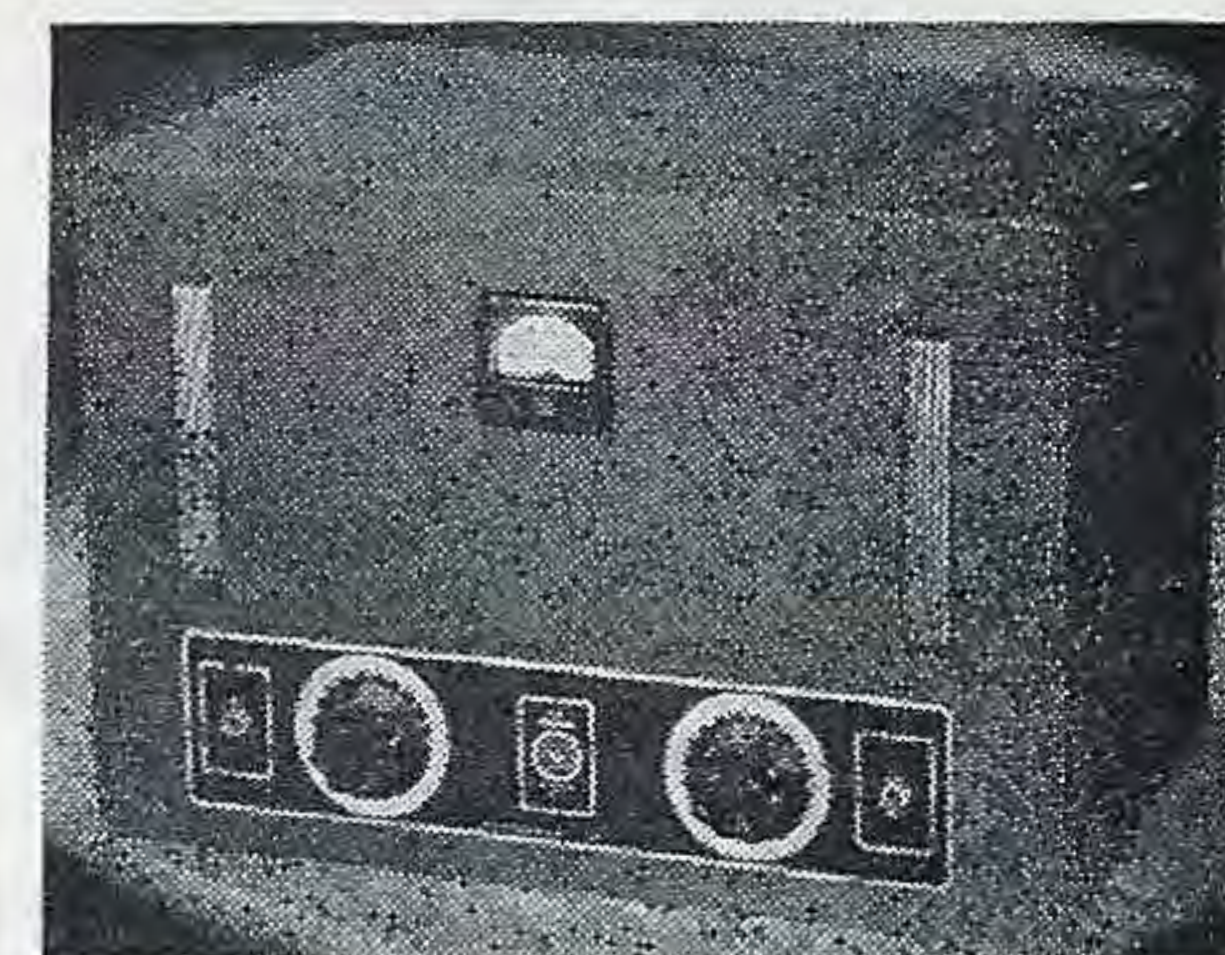
S-100 The S-100 audio amplifier is an ideal inexpensive unit for amateur use. Four highly efficient stages are employed, permitting crystal, microphone input and 100 watt undistorted output. Four 6L6 tubes are employed in the output stage for maximum tube economy and minimum plate potential. Fixed bias is employed on the output stage, permitting peak power handling ability appreciably over the normal rating. A modern etched panel sets off the attractive appearance of the gray crinkle cabinet, which is similar to that of the SX-80 and SX-200 transmitter kits. Tone and volume controls are provided. High impedance, high or low gain, dual input is arranged using standard jacks. A Special Series universal modulation transformer is employed to effect maximum flexibility for matching any RF stage. Tubes required are one 6J7, one 6C5, two 6F6's, four 6L6's, three 83's. The kit is supplied completely mounted, ready to wire, less tubes and dust cover, including all components, accessories, etched plate, etc. Size, less cabinet, 17" long x 12" wide x 9¼" high; with cabinet, 18" long x 13" wide x 12½" high. Weight 59 pounds.

Net price **\$52.50**

If this kit is desired with a P. A. output transformer for universal voice coil impedances, order by No. S-100PA.

Net price **\$55.00**

Cabinet for above to match SX-80 and SX-200 in appearance—Type S-100C. Net price **\$3.75**



SX-200 The UTC SX-200 transmitter kit is a high power output stage designed to be used in conjunction with the SX-80 to form a complete 300 watt C. W. transmitter. When supplemented by the UTC type S-100 modulator amplifier, it becomes a 200 watt phone transmitter. The SX-200 is of modern design, employing four type 809 tubes in a push pull parallel circuit, thus effecting high power at moderate plate potentials and permitting operation at lower power by eliminating one pair of tubes, if so desired. The SX-200 may be used as a power amplifier stage following any exciter which has a power output of 40 watts. It will operate at all frequencies up to 30 megacycles. A rugged, highly efficient power supply is combined on the same chassis with the RF amplifier. Single section high efficiency choke input filtering is employed to obtain good regulation. The tubes required are two 866's or 866A's and four 809's. This unit is supplied completely mounted, ready to wire, less 2"-500MA meter and tubes, including all components, accessories, and cabinet. Size 18" long x 13" wide x 12½" high. Weight 66 lbs.

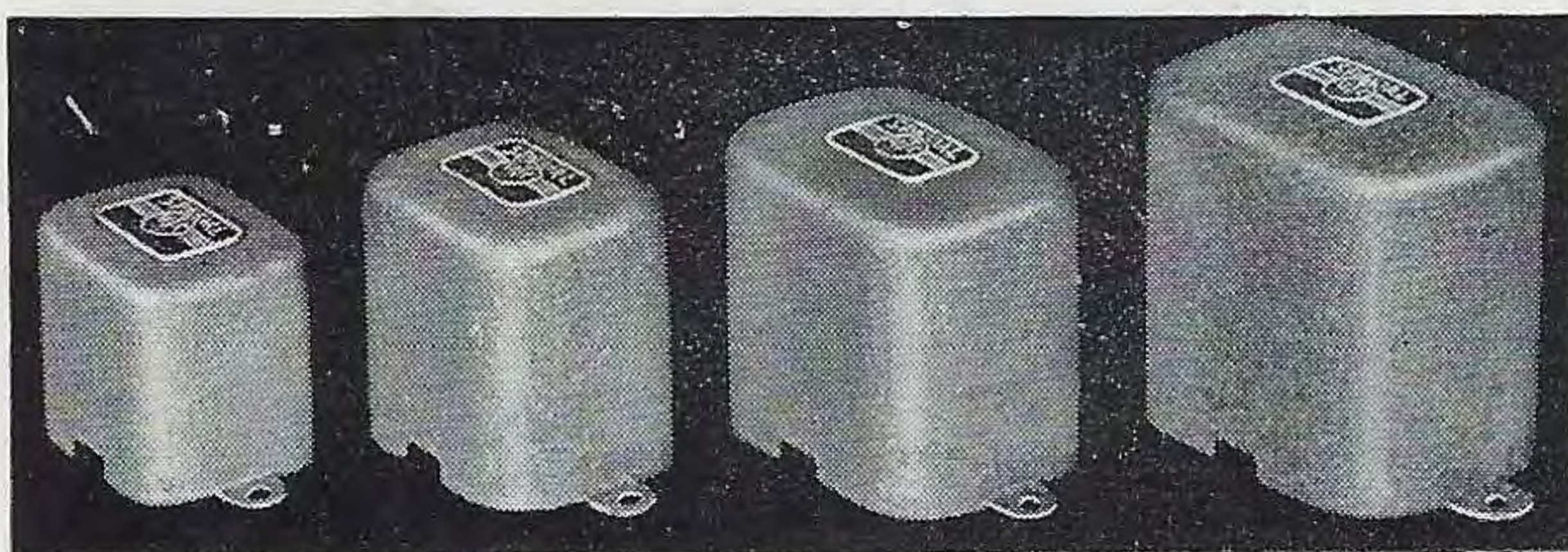
Amateur net price **\$43.50**



SPECIAL SERIES AUDIO TRANSFORMERS

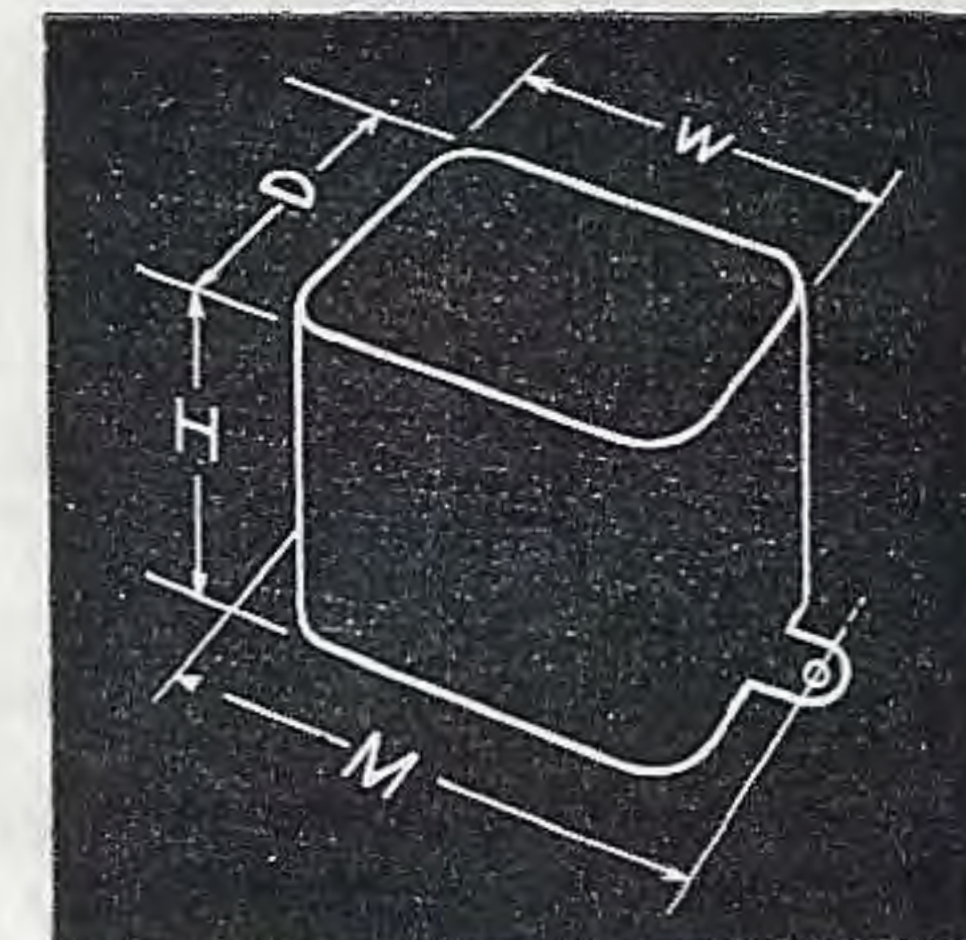


UTC Special Series transformers represent unprecedented value. These items are specifically designed for amateur and popular-priced PA service. For commercial equipment the PA or LS series of units are recommended. The Special Series units are finished in a rich, commercial type gray crinkle enamel. Small units are poured with humidity-proof sealing compound in modern drawn cases. A recessed terminal strip is provided permitting above chassis or breadboard wiring in addition to standard chassis type wiring. The universal windings provided on driver, matching and output transformers assure a maximum of flexibility. Modulator output units will carry the DC current in the class C stage and will match practically any audio tubes to any RF load within the power rating of the transformer. Large components are housed in formed cases with top or bottom mounting and louvers for good ventilation.



CASE SIZES

Type No.	H	W	D	M	Weight Lbs.
G-1	1 7/8	2	1 3/4	2 7/16	1
G-2	2 5/16	2 3/8	1 15/16	2 7/8	1 1/2
G-3	2 1/2	2 3/4	2 1/8	3 1/4	2
G-4	2 15/16	3 1/8	2 5/16	3 5/8	3



CLASS A INPUT TRANSFORMERS

Type No.	Application	Ratio	Case No.	Net Price
S-1	1 plate* to 1 grid	3 1/2:1	G-2	\$1.35
S-2	1 plate* to 2 grids	2:1	G-2	1.50
S-3	1 plate* to 1 or 2 grids compact type	4:1 2:1 P.P.	G-1	1.20
S-4	1 plate* to 2 grids wide range response	1:1	G-3	2.10
S-5	Single or double button mike or line to 1 grid hum-bucking type	16:1	G-2	1.80
S-6	Single or double button mike or line to 1 grid, compact type	16:1	G-1	1.20
S-7	Single plate* and carbon mike to one or two grids	3:1 16:1	G-2	2.10

*Will match tubes like 56, 6C5, 6C6 triode, 77 triode, 37, etc. Can be used with high mu triodes with loss in low frequencies.

UNIVERSAL DRIVER TRANSFORMERS

Type No.	Primary	Typical Output Tubes	Case No. Net Price
S-8	All single tubes like: 6C5, 30, 49, 53, 79, 89, 6A6, 45, 46, 2A3	19, 30, 49, 79, 89, 2A3, 45, 46, 6L6, 42, 59	G-3 \$1.65
S-9	P. P. tubes like: 45, 59, 2A3, 6B5, 6L6	46, 4-46, 841, 210, 801, RK-18, 800, 203A, 838, 805, 50T, 830B	G-4 2.25
S-10	P. P. 56, 6C5, etc.	AB 45, 42, 2A3, 6L6	G-3 2.10
S-73	500 or 200 ohm line to all Class B grids up to 400 watts		G-4 2.25

MATCHING TRANSFORMERS

Type No.	Application	Pri. Ohms	Sec. Ohms	Case No. Net Price
S-11	Single 56, 6C6 triode, 6C5 or similar tube to line.	10,000	200/500	G-2 \$1.80
S-12	Line to speaker 15 watts	500, 2000, 4000	2, 4, 8, 15	G-2 2.10
S-13	Line to speaker 30 watts	500, 2000, 4000	2, 4, 8, 15	G-4 2.70

UNIVERSAL OUTPUT TRANSFORMERS TO LINE AND VOICE COIL

Type No.	Tubes and Pri. Ohms	Sec. Ohms	Power	Case No. Net Price
S-14	Single tubes: 2500 ohms for 2A3, 6A3, 6A5 G, 6B4 G, 6L6, 6Y6, 25L6 4,000 ohms for 2A5, 6F6 triode, 12A5, 25A6, 43, 45, 50, 71A 7,000 ohms for 2A5, 6F6, 6K6, 20, 31, 33, 47 10,000 ohms for 6G6, 38, 41	2, 8, 15, 500	10 W	G-2 \$1.95
S-15	P. P. tubes: 4,000 ohms for 25L6, 6Y6G 5,000 ohms for 2A3, 6A3, 6A5G, 6B4G, 45 10,000 ohms for 19, 7J6G, 30, 49, 89, 6Z7G, 6AC5G, 53, 6A6, 6N6, 6N7, 6B5	2, 8, 15, 500	12 W	G-2 2.10
S-16	3,000 ohms for 2A3, 6A3, 6A5G, 6B4G, AB 6,000-6,600 ohms for 2A5-6F6-42 triodes AB, 46, 59, 6L6 10,000 ohms for 6B5, 6V6, 2A5-6F6-42 pentodes AB	2, 8, 15, 500	30 W	G-4 2.85
S-17	3,300 ohms for 4 6L6's, 4-46's 3,800 ohms for 2 6L6's, AB2 5,000 ohms for 1608, 809	2, 8, 15, 500	55 W	G-5 3.90

COMBINED PLATE AND FILAMENT TRANSFORMERS

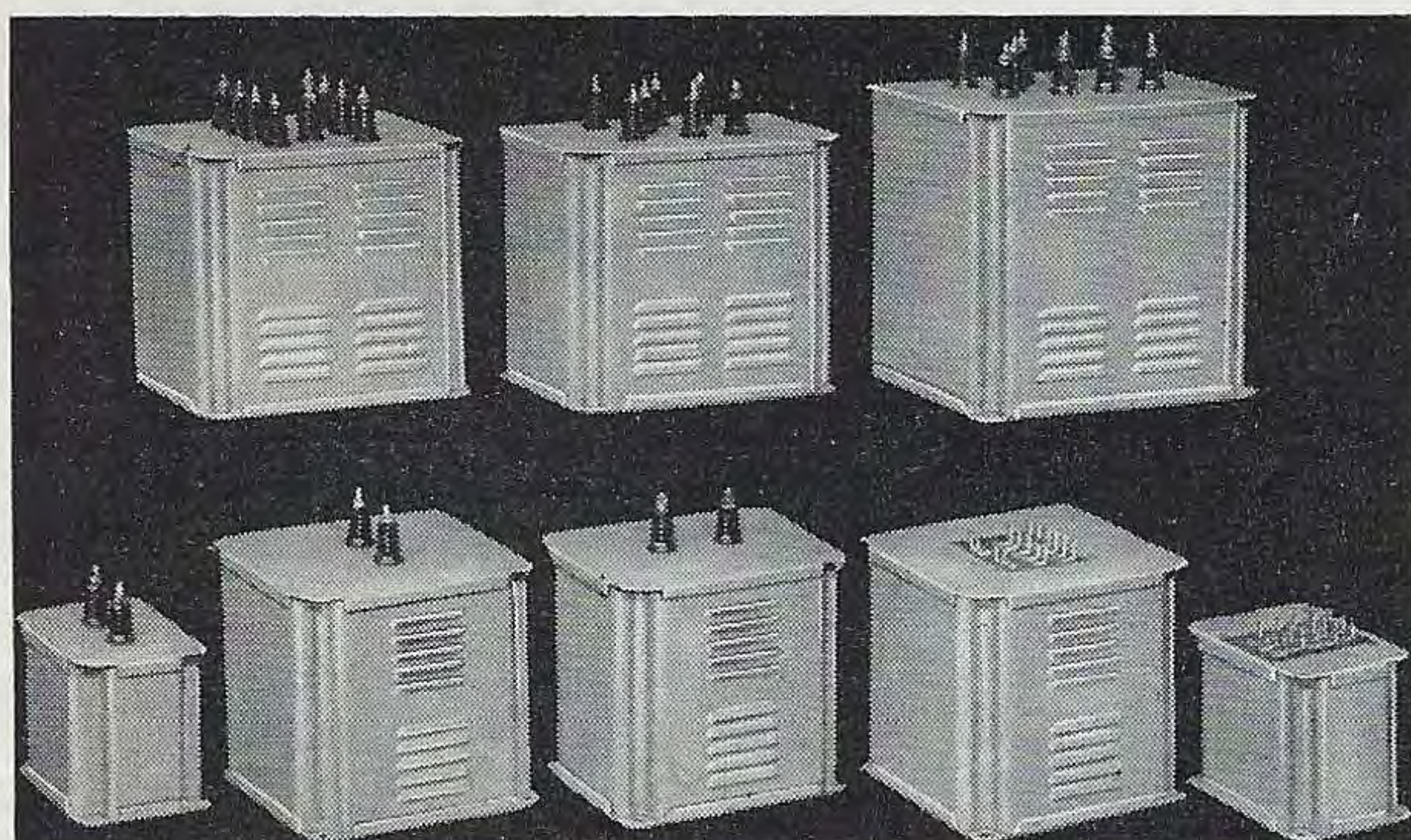
Primary 115 V.—50/60 Cycles

Type No.	High Voltage	D.C. Voltages *	Rectifier Fil.	Fil. No. 1	Fil. No. 2	Case No. Net Price
S-39	490-400-0-400-490 175 Ma.	400/310	5V.-3A.	2.5 V. C. T. 6A	6.3 V. C. T. 4A	G-6 \$3.30
S-40	525-425-0-425-525 250 Ma.	400/310	5V.-3A.	6.3 V.C.T.-3A	6.3 V.C.T.-3A	G-7 3.60
S-41	600-0-600 200 Ma.	475	5V.-3A.	7.5V. tapped 6.3V-3A	6.3 V.C.T.-2A	G-7 3.60
S-42	600-525-0-525-600 300 Ma.	480/400	5V.3A-	7.5V. tapped 6.3V.-3A	6.3 V.C.T.-3A	G-8 5.10
S-43	525-0-525 450 Ma. 40-0-40, 200 Ma.	400	5V.-3A 5V.-6A	6.3 V.C.T.-2A	6.3 V.C.T.-5A	G-9 7.20

*Based on two section filter, choke input.

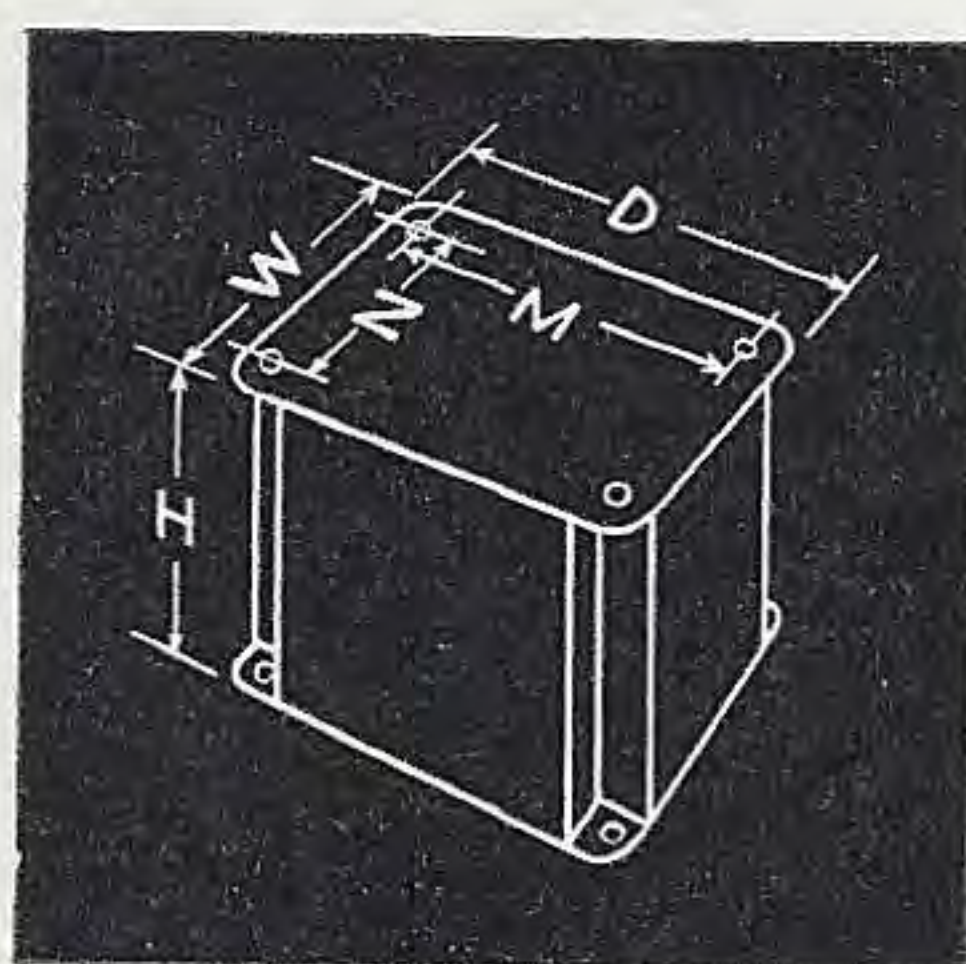
SPECIAL SERIES POWER EQUIPMENT

UTC Special Series power supply components are designed specifically for amateur and popular-priced PA service. The ratings are based on such applications and recommended for intermittent service. For commercial applications, PA or LS grade components should be employed. Tapped coil structures on power and bias supply transformers afford maximum flexibility, permitting a given transformer to be used with many circuits and types of tubes. Large stand-off insulators and conservative coil insulation are provided on all high voltage units.



CASE SIZES

Type	H	W	D	M	N	Wt. Lbs.
G-5	3 7/8	3 1/8	4 9/16	3 7/8	2 7/16	4 1/2
G-6	4 5/8	3 3/4	5 1/2	4 13/16	3 3/32	8
G-7	5 3/8	4 9/16	5 9/16	4 27/32	3 25/32	9
G-8	5 3/8	5 1/2	5 1/2	4 25/32	4 3/4	13
G-9	6 1/8	5 5/16	6 13/16	6 3/32	4 19/32	18
G-10	6 1/8	6 3/16	6 11/16	5 15/16	5 13/32	24
G-11	7 1/8	6 9/16	7 3/8	6 21/32	5 29/32	31



FILTER, SWINGING, AND AUDIO CHOKES

Type No.	Service	Inductance	Current	Resistance	Case No.	Net Price
S-23	Audio	500 Hy.	5 Ma.	4,500 ohms	G-2	\$1.35
S-24	P.P. Choke	500 Hy. C.T.	3 Ma.	4,000 ohms	G-2	1.50
S-25	Filter	30 Hy.	30 Ma.	800 ohms	G-2	1.20
S-26	Filter	15 Hy.	60 Ma.	230 ohms	G-2	1.20
S-27	Filter	30 Hy.	75 Ma.	350 ohms	G-4	1.65
S-28	Filter	20 Hy.	100 Ma.	350 ohms	G-4	1.65
S-29	Filter	6 Hy.	175 Ma.	95 ohms	G-4	1.65
S-30	Swinging	5/25 Hy.	175 Ma.	95 ohms	G-4	1.65
S-31	Filter	15 Hy.	225 Ma.	120 ohms	G-5	2.10
S-32	Swinging	5/25 Hy.	225 Ma.	120 ohms	G-5	2.10
S-33	Filter	15 Hy.	300 Ma.	90 ohms	G-7	3.00
S-34	Swinging	5/25 Hy.	300 Ma.	90 ohms	G-7	3.00
S-35	Filter	15 Hy.	400 Ma.	85 ohms	G-8	3.90
S-36	Swinging	5/25 Hy.	400 Ma.	85 ohms	G-8	3.90
S-37	Filter	15 Hy.	550 Ma.	60 ohms	G-9	5.40
S-38	Swinging	5/25 Hy.	550 Ma.	60 ohms	G-9	5.40

UNIVERSAL BIAS TRANSFORMERS

Primary 115 V.—50/60 Cycles No Filament Windings

Type No.	Application	D.C. Current	Case No. Net Price
S-51	Will supply any bias voltage from 15 to 100 volts D.C. within approximately 6% of desired value.	200 Ma.	G-5 \$3.00
S-52	Will supply any bias voltage from 75 to 400 volts D.C. within approximately 6% of desired value.	200 Ma.	G-7 4.20

UNIVERSAL OUTPUT TRANSFORMERS

Any modulator tubes to any RF load.

Type No.	Audio Power	Case No.	Net Price
S-18	12 watts	G-3	\$2.10
S-19	30 watts	G-4	2.85
S-20	55 watts	G-5	3.90
S-21	110 watts	G-7	6.00
S-22	250 watts	G-9	8.40

PLATE TRANSFORMERS

Primary 115 V.—50/60 Cycles

Type No.	High Voltage	D.C. Voltages*	D.C. Current	Case No. Net Price
S-44	575-525-0-525-575	470/430	500 Ma.	G-9 \$5.70
S-45	900-750-0-750-900	750/620	200 Ma.	G-8 3.90
S-46	1000-750-0-750-1000	825/600	300 Ma.	G-9 5.70
S-47	1500-1250-1000-0-1000-1250-1500	1275/1050/825	300 Ma.	G-10 7.20
S-48	1500-1250-1000-0-1000-1250-1500	1300/1075/850	500 Ma.	G-11 11.70
S-49	2100-1800-1500-0-1500-1800-2100	1815/1540/1275	300 Ma.	G-11 10.80
S-50	3000-2500-0-2500-3000	2625/2175	300 Ma.	G-11 12.90

*Based on two section filter for 200 Ma. and 300 Ma. units, single section filter for 500 Ma. units, both choke input.

Note: Using a bridge rectifier circuit D.C. Voltages shown are doubled but available D.C. current reduced to half. S-49 and S-50 are not suitable for bridge rectifiers.

SINGLE SECONDARY FILAMENT TRANSFORMERS

Primary Tapped 105, 115 Volts—50/60 Cycles

Type No.	Secondary Volts	Secondary Current	Insulation	Case No.	Net Price
S-53	2.5 VCT	10 A.	1500 V.	G-3	\$1.35
S-54	5 VCT	4 A.	2500 V.	G-3	1.35
S-55	6.3 VCT	3 A.	1,500 V.	G-3	1.35
S-56	7.5 VCT	3 A.	1,500 V.	G-3	1.35
S-57	2.5 VCT	10 A.	10,000 V.	G-5	1.80
S-58	2.5 VCT	20 A.	10,000 V.	G-5	2.40
S-59	5 to 5.25 VCT	13 A.	5,000 V.	G-5	2.10
S-60	5 to 5.25 VCT	22 A.	10,000 V.	G-7	4.50
S-61	7.5 VCT tapped 6.3 VCT	8 A.	3,000 V.	G-5	2.10
S-62	10 VCT	10 A.	3,000 V.	G-5	2.40
S-63	14 VCT tapped 12 VCT and 11 VCT	10 A.	5,000 V.	G-7	4.50

MULTIPLE SECONDARY FILAMENT WINDINGS

Primary Tapped 105, 115 Volts—50/60 Cycles

Type No.	Fil. 1	Fil. 2	Fil. 3	Insulation V.	Case No.	Net Price
S-64	2.5 VCT-5A	2.5 VCT-5A	5 VCT-6A	3,000	G-5	\$2.40
S-65	2.5 VCT-5A	5 VCT-4A	6.3 VCT-3A	3,000	G-5	2.40
S-66	2.5 VCT-10A	7.5 VCT-6.5A		3,000	G-5	2.40
S-67	5 VCT-6A	6.3 VCT-5A		3,000	G-5	2.40
S-68	5 VCT-3A	6.3 VCT-4A	7.5 VCT-5A	3,000	G-5	2.70
S-69	6.3 VCT-3A	7.5 VCT-6.5A		3,000	G-5	2.70
S-70	6.3 VCT-5A	6.3 VCT-5A		3,000	G-5	2.70
S-71	2.5 VCT-6A	2.5 VCT-6A	2.5 VCT-12A	10,000	G-7	4.50
S-72	5 VCT-3A	5 VCT-3A	5 VCT-6A	5,000	G-5	3.00