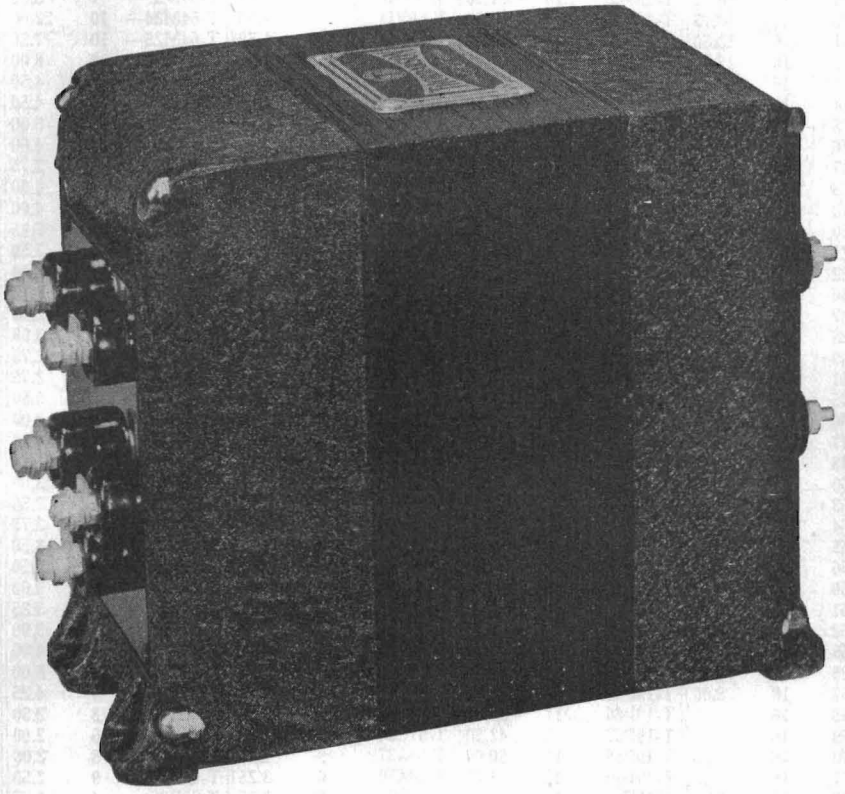
THORDARSON



POWER

CHOKES

AUDIO

DRIVER

OUTPUT

MODULATION

PLATE

FILAMENT

C. H. T.

TRU-FIDELITY

Complete Transformer Catalog 400-CX

1939—SPRING—SUMMER—1939

(Supersedes 400-AX and 400-C)

THORDARSON ELECTRIC MFG. CO.

500 W. HURON ST., CHICAGO, ILL.

Demand "Power by Thordarson"

INDEX—WITH LIST PRICES

Type No.	Page No.	List Price
T-10K10—	15	$10.00
T-10W11	15	160.00
T-10K20	15	5.50
T-10K21	15	4.75
T-10K50	15	1.90
T-10K60—	15	12.00
T-10W61—	15	155.00
T-11W06—	15	59.25
T-11K16	24	3.00
T-11K17	24	2.00
T-11W18—	15	80.90
T-11K19	24	2.25
T-11K20	24	2.00
T-11W30—	15	93.25
T-11F50	17	9.50
T-11F51	17	10.00
T-11F52	17	13.25
T-11F53	17	8.00
T-11F54	17	16.00
T-11F55	17	11.50
T-11F56	17	7.75
T-11F57	17	13.75
T-11F58	17	15.00
T-11F59	17	5.75
T-11F60	17	6.25
T-11F61	17	18.50
T-11F62	17	6.75
T-11F63	17	8.00
T-11F64	17	9.50
T-11M74	19	9.00
T-11M75	19	12.50
T-11M76	19	19.50
T-11M77	19	30.00
T-11M78	19	60.00
T-13R00	3	4.00
T-13R01	3	2.50
T-13R02	3	3.25
T-13R03	3	3.50
T-13R04	3	4.25
T-13R05	3	4.00
T-13R06	3	5.25
T-13R07	3	5.50
T-13R08	3	4.50
T-13R09	3	6.50
T-13R11	3	2.50
T-13R12	3	3.25
T-13R13	3	4.00
T-13R14	3	4.25
T-13R15	3	5.75
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T-13R18	3	4.75
T-13R19	3	2.35
T-13C26	5	.90
T-13C27	5	1.10
T-13C28	5	1.20
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T-13A35	6	1.50
T-13A36	6	1.75
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T-13S38	9	1.50
T-13S39	8	1.25
T-13S40	8	1.75
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T-14R33	3	2.75
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T-14R39	3	2.75
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T-14S81	8	1.25
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T-14A90	9	2.50
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T-15R00	17	10.50
T-15R01	17	15.00
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T-15R03	17	13.75
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T-15R06	17	9.75
T-15R07	17	10.50
T-15R08	17	13.75
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T-15C41	18	23.00
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T-15R61	16	10.50
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T-15A66	18	7.25
T-15A67	18	8.00
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T-15A72	18	7.25
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T-15D79	19	8.25
T-15D80	19	11.50
T-15D81	19	11.50
T-15D82	19	8.25
T-15D83	19	11.50
T-15D84	19	11.50
T-15D85	19	7.50
T-15D86	19	7.50
T-15D87	18	11.00
T-15S90	19	9.25
T-15S91	19	11.50
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T-17S57	9	2.25
T-17M59	10	3.50
T-18V00	14	9.00
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T-18V02	14	27.50
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T-19C35	13	4.75
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T-19C37	13	9.00
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T-19C42	13	4.75
T-19C43	13	6.50
T-19C44	13	9.00
T-19C45	13	11.50
T-19P55	11	7.50
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T-19P65	11	29.50
T-19P66	11	37.50
T-19P67	11	42.50
T-19P68	11	50.00
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T-19F81	12	1.65
T-19F82	12	5.75
T-19F83	12	2.25
T-19F84	12	2.75
T-19F85	12	3.50
T-19F86	12	6.00
T-19F87	12	6.25
T-19F88	12	1.75
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T-19F90	12	3.00
T-19F91	12	2.25
T-19F92	12	3.25
T-19F93	12	2.25
T-19F94	12	3.00
T-19F95	12	2.75
T-19F96	12	3.50
T-19F97	12	2.00
T-19F98	12	2.75
T-19F99	12	3.50
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T-23A57—	9	2.25
T-26V04	14	4.50
T-29C27	5	1.50
T-29A56—	6	3.00
T-29A99	6	1.75
T-30A20—	9	3.00
T-33A91	6	2.00
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T-40V15	14	6.50
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T-47V02	14	9.75
T-47V03	14	21.75
T-47V04	14	35.00
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T-47A25	6	1.75
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T-54F66—	12	3.25
T-54F69—	12	1.75
T-54P89—	11	21.00
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T-55A16	9	2.75
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T-56R04—	4	5.25
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T-57A38	6	2.75
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T-57A40	6	2.75
T-57A41	6	3.00
T-57A42	6	3.25
T-57A43—	6	3.50
T-57C51	5	1.50
T-57C52	5	1.75
T-57C53	5	2.00
T-57C54	5	2.25
T-58A37	9	2.25
T-58A70	6	3.25
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T-60S48	9	3.00
T-60R49	4	2.25
T-60F94—	12	6.00
T-61V07	14	5.00
T-61S25	9	3.50
T-61S26	9	3.50
T-61D40—	7	5.50
T-61S67—	8	12.00
T-61F85	12	2.00
T-61A94	9	3.25
T-61A96—	9	3.50
T-62A26—	9	2.25
T-62P57—	11	9.00
T-62D65—	9	6.00
T-62P80—	11	7.75
T-62P82—	11	32.00
T-62P83—	11	32.00
T-62P84—	11	65.00
T-62P85—	11	80.00
T-63C15—	13	8.50
T-63C16—	13	14.00
T-63R62—	4	3.50
T-63R63—	4	4.00
T-63A71	9	3.75
T-63A72	9	3.75
T-63A73—	9	3.25
T-63A74—	9	$2.50
T-63F99	12	3.25
T-64C05—	13	4.25
T-64C06—	13	12.00
T-64C07—	13	16.00
T-64C08—	13	10.00
T-64C09—	13	5.50
T-64C10—	13	17.00
T-64P11—	11	21.00
T-64P12—	11	16.50
T-64F13—	12	3.25
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T-64F33	12	4.50
T-64F35—	12	4.50
T-64F37—	13	5.00
T-64F38—	13	4.00
T-65A73	9	2.75
T-65D78—	7	4.00
T-65S94	8	4.00
T-66D98—	7	5.25
T-67D34—	9	7.50
T-67A45—	9	3.50
T-67C46	5	1.75
T-67D47	7	2.50
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T-67C49	5	2.75
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T-67S52	8	4.00
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T-67M73	10	3.50
T-67M74	10	4.50
T-67D78	7	3.00
T-67D89—	7	3.25
T-67A91—	6	3.00
T-67S92	8	4.00
T-67R93—	4	8.00
T-67R97	4	4.25
T-68S06	8	2.50
T-68C07	5	2.00
T-68C08	5	2.00
T-68A22—	9	2.50
T-68R26	4	6.75
T-69R35	4	6.25
T-70R20	4	2.75
T-70R21—	4	3.50
T-70P33—	11	30.00
T-70P41—	11	9.00
T-70F46—	12	7.75
T-70R61	4	4.00
T-70R62	4	5.50
T-70R78	4	3.25
T-70A82	9	3.50
T-70A83	9	3.50
T-70M84—	10	15.00
T-71P27—	11	10.00
T-71A97—	6	5.00
T-72D01—	7	3.75
T-72M02—	10	6.00
T-72A11—	9	2.50
T-72C15—	13	24.00
T-72C16—	13	20.00
T-72S58	13	1.65
T-72A59	13	1.65
T-73P51—	11	45.00
T-73M52	10	16.00
T-73F60	12	3.75
T-74F23	12	5.00
T-74F24	12	7.00
T-74R28	4	$6.50
T-74C29	5	3.75
T-74C30	5—24	1.50
T-74A31	5—6	3.25
T-74D32	7	3.50
T-75K06—	15	4.50
T-75D10	7	5.50
T-75M11—	10	22.00
T-75K18—	15	6.00
T-75K30—	15	8.00
T-75R47	4	3.75
T-75C49	5	1.50
T-75R50	4	7.50
T-75C51	5	5.00
T-75D57—	6	5.00
T-75A73—	9	2.50
T-75A74	6	2.50
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T-76S74	9	3.00
T-78D46	6	1.50
T-79F84	12	4.75
T-79M94—	10	5.50
T-80D54—	7	5.50
T-81S01	8	1.65
T-81C15	5	2.50
T-81D42	7	3.25
T-81D52	7	3.50
T-82M08—	10	15.00
T-82M09—	10	24.00
T-82M10—	10	40.00
T-82V11	14	12.50
T-82V12	14	17.50
T-82V13	14	22.50
T-82M25	10	40.00
T-83D21	9	3.50
T-83M22	10	8.00
T-83A78	9	2.00
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T-83R85	4	12.00
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T-83S87	8	8.00
T-84S58	8	6.00
T-84D59	7	3.50
T-84P60	11	7.75
T-84M70	10	10.00
T-85F14—	12	17.50
T-86A02	9	1.75
T-86A03	6	2.00
T-86A04—	6	1.75
T-87R85	4	7.00
T-89R28	4	11.00
T-89S68	8	6.50
T-89S74	8	3.75
T-89S75	8	4.00
T-89R91—	4	6.25
T-90A00	23	17.00
T-90A01	23	16.50
T-90A02	23	17.50
T-90A03	23	15.00
T-90A04	23	15.00
T-90A05	23	16.50
T-90A06	23	18.00
T-90S07	23	18.00
T-90S08	23	17.50
T-90C09	23	12.50
T-90A10	23	16.00
T-90A11	23	20.00
T-90S12	23	18.00
T-90S13	23	20.00
T-92F20	12	4.75
T-92R21	4	7.50
T-92R25—	5	2.25
T-92R33	5—24	4.00
T-92R53	4	5.75
T-93A12—	9	6.00
T-93C20	5	3.00

Catalog prices are list, subject to regular discount. Add 60% for 25 cycle 115 v. primary; 30% for 220 v. 60 cycle primary.

The letter separating the first two digits of the type number from the last two indicates the classification of the unit. The following legend will further explain:

A = Audio, D = Driver, K = Foundation Unit, P = Plate, S = Output or Speaker, W = Wired Amplifier.
C = Choke, F = Filament, M = Modulation, R = Power, V = Voltage Changer,

POWER TRANSFORMERS

THORDARSON

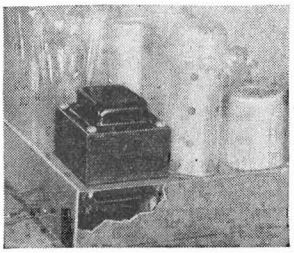

Fig. 3A

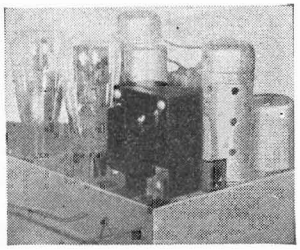

Fig. 3A

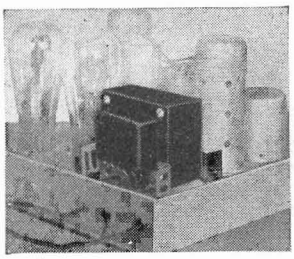

Fig. 3A

UNIVERSAL DUPLICATE POWER TRANSFORMERS

EASY TO MOUNT IN ANY POSITION (adjustable mounting brackets included) — A TYPE FOR PRACTICALLY EVERY APPLICATION — ELECTROSTATIC SHIELDS — RMA COLOR CODED FLEXIBLE LEADS — PRIMARY 115 VOLTS 50-60 CYCLES — In less than a year the "13R" series has stepped up to first rank in popularity. Specified for over 4000 receivers in the Thordarson Replacement Transformer Encyclopedia, servicemen like their ability to "stay in there and take it."

CODE SHOWING FILAMENT CAPACITIES: LETTER (B) INDICATES TYPE OF TUBE; PRIME FIGURE (^{2}) INDICATES NUMBER OF TUBES. THUS B^2 = TWO 1 AMP. HEATERS @ 2½ VOLTS.

A = 1.75 ampere heaters @ 2½ volts (24, 27, etc.)
B = 1 ampere heaters @ 2½ volts (56, 58, etc.)
C = 1.75 ampere power tubes @ 2½ volts (45, 47, etc.)
D = 0.3 ampere heaters @ 6.3 volts (75, 77, etc.)
E = 0.7 ampere heaters @ 6.3 volts (42, 6F6, etc.)
F = 0.25 ampere filaments @ 5 volts (71A's, etc.)

Type No.	List Price	Pri. V.A.	Secondary Volts	Secondary M.A.	Filament Windings: Rect.	Filament Windings: Fil. No. 1	Filament Windings: Fil. No. 2	Mtg. Fig.	Dimensions: W.	Dimensions: D.	Dimensions: H.	Wt. Lbs.
T-13R01	**$2.50**	60	650 Ct.	40	5V—3A	B^2+C^1 2.5V—4A Ct.		3A	2½	2 15/16	3	3¼
T-13R02	**3.25**	60	700 Ct.	50	5V—3A	A^3 or B^5+C^1 2.5V—7.25A Ct.		3A	2½	2 15/16	3	3¼
T-13R03	**3.50**	75	700 Ct.	70	5V—3A	A^3 or B^5+C^2 2.5V—9A Ct.		3A	2 13/16	3 5/32	3⅜	4
T-13R04	**4.25**	115	700 Ct.	90	5V—3A	A^5 or B^9+C^2 2.5V—12.5A Ct.		3A	3⅛	3½	3¾	5¼
T-13R05	**4.00**	110	700 Ct.	70	5V—3A	A^5 or B^9 2.5V—9A Ct.	C^2 2.5V—3.5A Ct.	3A	3⅛	3½	3¾	5¼
T-13R06	**5.25**	130	700 Ct.	120	5V—3A	A^7 or B^{12} 2.5V—12.5A Ct.	C^2 2.5V—3.5A Ct.	3A	3¾	3⅜	4½	6½
T-13R07	**5.50**	140	800 Ct.	110	5V—3A	A^8 or B^{15} 2.5V—15A Ct.	C^2 2.5V—3.5A Ct.	3A	3¾	3½	4½	6¾
T-13R08	**4.50**	105	700 Ct.	90	5V—3A	E^4 or D^{10} 6.3V—3.3A Ct.	A^3 or B^6 2.5V—6A Ct.	3A	3⅛	3½	3¾	5¼
T-13R09	**6.50**	160	750 Ct.	180	5V—3A	E^4 or D^{10} 6.3V—3.3A Ct.	A^4 or B^6 2.5V—6A Ct.	3A	3¾	3 9/16	4½	7½
T-13R00	**4.00**	70	550 Ct.	70	5V—3A	F^2 5V—.5A Ct.	A^6 or B^{10} 2.5V—10.5A Ct.	3A	2 13/16	3 3/16	3⅜	4
T-13R19	**2.35**	45	480 Ct.	40	5V—2A	6.3V—2A Ct.		3A	2½	2⅝	2 13/16	2¼
T-13R11	**2.50**	60	650 Ct.	40	5V—3A	D^3+E^1 6.3V—2A Ct.		3A	2½	2 15/16	3	3¼
T-13R12	**3.25**	65	700 Ct.	70	5V—3A	D^6+E^1 6.3V—2.5A Ct.		3A	2½	3⅛	3	3¼
T-13R13	**4.00**	90	700 Ct.	90	5V—3A	D^6+E^2 6.3V—3.5A Ct.		3A	3⅛	3⅜	3¾	5¼
T-13R14	**4.25**	115	700 Ct.	120	5V—4A	$D^{10}+E^2$ 6.3V—4.7A Ct.		3A	3⅛	3½	3¾	5¼
T-13R15	**5.75**	140	750 Ct.	150	5V—4A	$D^{11}+E^2$ 6.3V—5A Ct.		3A	3¾	3⅜	4½	6½
T-13R16	**6.50**	180	800 Ct.	200	5V—4A	$D^{10}+E^3$ 6.3V—5.14A Ct.		3A	3¾	3⅝	4½	7¾
T-13R17	**4.00**	85	600 Ct.	60	5V—3A	D^6+E^1 6.3V—2.5A Ct.	A^3 or B^5+C^1 2.5V—7.5A Ct.	3A	2 13/16	3 5/16	3⅜	4½
T-13R18	**4.75**	115	700 Ct.	90	5V—3A	C^2 or (D^6+E^2) 6.3 & 2.5V—3.5A Ct.	A^5 or B^9 2.5V—9A Ct.	3A	3¾	3¼	4½	5¾

SIX VOLT VIBRATOR TRANSFORMERS

These transformers, while primarily designed for replacements using original mounting brackets, are equipped with mounting feet for use in experimental or original equipment.

Type No.	List Price	Secondary: D.C. Volts to Filter	Secondary: M.A.	Mtg. Fig.	Dimensions: W.	Dimensions: D.	Dimensions: H.	Wt. Lbs.
T-14R33	**$2.75**	225	40	3C	2½	2⅜	3⅛	2
T-14R34	**3.25**	250	50	3C	2½	2½	3⅛	2¼
T-14R35	**3.75**	260	60	3C	2½	2⅝	3⅛	2½
T-14R36	**4.25**	285	75	3C	2½	2⅞	3⅛	3
T-14R37	**4.75**	350	75	3C	2½	3⅛	3⅛	3½
T-14R38	**5.25**	320	100	2G	3¾	3¼	4⅝	5
T-14R39	**2.75**	150	40	2B	2	2	2⅜	1¼
115 V. 50-60 CYCLE OR 6 V. D. C. VIBRATOR TRANSFORMER								
T-14R40	**$5.50**	350 Fil.–6.3 Ct.	135 4.75 Amp.	2G	3¾	4	5	8½

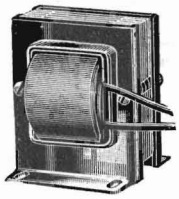

Fig. 3C

OTHER POWER TRANSFORMERS ARE LISTED ON PAGES 4 AND 17

POWER TRANSFORMERS

Receiver and Amplifier

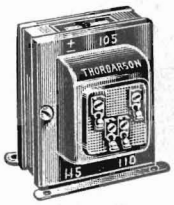

Fig. 2D

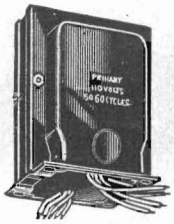

Fig. 2G

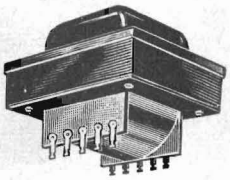

Fig. 2H

AMPLIFIER AND GENERAL PURPOSE POWER TRANSFORMERS

For continuous duty in high quality receivers or amplifiers where a specific style of mounting is desired.

Type No.	List Price	Pri. V.A.	Secondary A.C. Volts	Secondary D.C. Bias M.A. Tap	Rect. Fil.	Fil. No. 1	Fil. No. 2	Fil. No. 3	Mtg. Fig.	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-60R49	$2.25	30	560 Ct.	30	5V—2A	2.5V—3.5A Ct.			2H	3	2½	2⅜	2
T-50R02–	2.75	40	620 Ct.	40	5V—2A	2.5V—5A Ct.			2H	3½	3	3	3¼
T-49R00–	3.25	65	700 Ct.	70	5V—2A	2.5V—8.5A Ct.			2H	3⅞	3¼	3⅜	4½
T-63R62–	3.50	65	700 Ct.	70	5V—2A	2.5V—7A Ct.	2.5V—1.5A Ct.		2H	3⅞	3¼	3⅝	4½
T-50R03–	3.75	75	700 Ct.	80	5V—2A	2.5V—12A Ct.			2H	3⅞	3¼	3⅝	5½
T-63R63–	4.00	75	700 Ct.	80	5V—2A	2.5V—9A Ct.	2.5V—3A Ct.		2H	3⅞	3¼	3⅝	5¼
T-70R21–	3.50	70	700 Ct.	70	5V—2A	2.5V—4A Ct.	6.3V—3A Ct.		2H	3⅞	3¼	3⅜	4½
T-70R20	2.75	45	600 Ct.	50	5V—2A	6.3V—2A Ct.			2H	3⅜	2⅞	3	3
T-75R47	3.75	75	610 Ct.	125	5V—2A	6.3V—2A Ct.			2H	3⅞	3¼	3⅝	6
T-70R78	3.25	50	680 Ct.	55	5V—2A	6.3V—1.5A Ct.			2G	3⅜	3	4⅝	4
T-70R61	4.00	60	770 Ct.	70	5V—2A	6.3V—2.5A Ct.			2G	3¾	3¼	4⅝	4¾
T-56R02–	4.25	70	700 Ct.	70	5V—2A	2.5V—9A Ct.	2.5V—1.5A Ct.		2G	3¾	3¾	4⅝	6
T-56R01*	4.75	60	650 Ct.	70	5V—2A	2.5V—3A Ct.	1.5V—1A 1.5V—4A	5V—.5A Ct.	2G	3¾	3¾	4⅝	5¾
T-56R03	5.50	85	700 Ct.	105	5V—3A	2.5V—3A Ct.	2.5V—1.75 A Ct.	1.5V—5A 1.5V—1A	2G	3¾	3¾	5	7¼
T-56R04*–	5.25	90	700 Ct.	105	5V—3A	2.5V—12A Ct.			2G	3¾	3¾	5	7½
T-70R62	5.50	110	700 Ct.	145	5V—3A	6.3V—4.5A Ct.			2G	3¾	3⅞	5	8½
T-56R05	5.75	115	700 Ct.	110	5V—3A	2.5V—9A Ct.	2.5V—3A Ct.	2.5V—3A Ct.	2G	3¾	3¾	5	7¾
T-89R91–	6.25	140	700 Ct.	150	5V—3A	2.5V—9A Ct.	2.5V—3A Ct.	2.5V—3A Ct.	2G	3¾	4	5	8¼
T-37R70-C	7.50	95	700 Ct.	80	5V—2A Ct.	3V—10A Ct.	5V—2.5A Ct.		2G	4	3¼	4⅝	6¾
T-92R21	7.50	150	800 Ct.	200	5V—3A	6.3V—5A Ct.			2G	4¼	3¾	4⅞	9
T-17R30	7.75	200	740 Ct.	280	5V—3A	6.3V—3.5A Ct.			2G	3¾	3½	4⅝	9½
T-17R31	12.50	300	860 Ct.	325	5V—6A	6.3V—4.25A Ct.			2G	4⅜	5¼	6⅛	13½
T-74R28	6.50	105	880 Ct.	125 38V	5V—3A 2.5V—3A	6.3V—3.3A Ct.			2G	3¾	3¾	5	8
T-87R85	7.00	105	660 Ct.	160 77V	5V—3A 5V—2A	6.3V—2A Ct.	2.5V—5A Ct.		2G	3⅜	3⅞	5	8½
T-68R26	6.75	160	1100 Ct.	150	5V—3A	7.5V—2.5A Ct.	2.5V—5A Ct.		2G	3¾	4⅜	5	10⅛
T-69R35	6.25	135	775 Ct.	200	5V—3A	6.3V—3A Ct.			2G	3¾	4⅜	5	9½
T-67R93–	8.00	135	700 Ct.	200	5V—3A	2.5V—15A Ct.	5V—2A		2G	3¾	4⅜	5	10
T-75R50	7.50	160	870 Ct.	250 80V	5V—3A 2.5V—3A	6.3V—1.5A Ct.	2.5V—10A Ct.		2G	3¾	4⅜	5	10½
T-83R82	10.00	200	1480 Ct.	140 150V	5V—3A 2.5V—3A	7.5V—2.5A Ct.			2G	3¾	4¾	5	11½
T-83R85	12.00	290	1480 Ct.	200 150V	5V—3A 2.5V—3A	7.5V—5A Ct.			2G	3¾	5¼	5	13½
T-89R28	11.00	250	1100 Ct. 650 Ct.	275 75	5V—3A 5V—2A Ct.	Ct. 6.3V—6A Ct.			2G	3¾	5¼	5	15

*Primary 110 volts — all others 115 volts.

SPEAKER-FIELD SUPPLY TRANSFORMERS

T-67R97	4.25	55	115 V. D.C.	50 to 250	5V—3A				2G	3⅞	3¼	3¼	4¾
T-92R53	5.75	120	300 V. D.C.	200	5V—3A				2G	3⅞	3⅞	3¼	6¼

OTHER POWER TRANSFORMERS ARE LISTED ON PAGES 3 AND 17

CHOKES AND AUDIO REACTORS

THORDARSON

AC-DC FILTER CHOKES

Newly designed for circuits where the DC resistance is the important factor. These chokes are rated at actual inductance under operating conditions and will give adequate filtering in any receiver.

Type No.	List Price	Current Rating M.A.	Inductance Henries	D.C. Res. Ohms	Volts Ins.	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-14C61	$1.05	55	7	200	1600	3B	2	1⅝	1⅝	¾
T-14C62	1.05	55	8	250	1600	3B	2	1⅝	1⅝	¾
T-14C63	1.05	55	8	300	1600	3B	2	1⅝	1⅝	¾
T-14C64	1.05	55	10	350	1600	3B	2	1⅝	1⅝	¾

FILTER CHOKES

This listing offers a wide choice of mountings, current rating, inductance and prices for receiver, amplifier and transmitter use. All Thordarson chokes are rated in actual inductance as measured under full rated load.

Type No.	List Price	Current Rating M.A.	Inductance Henries	D.C. Res. Ohms	Volts Ins.	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-13C26	$ .90	40	7	530	1600	3B	1¾	1⅜	1⅜	½
T-13C27	1.10	40	10	475	1600	3B	2	1⅝	1⅝	¾
T-13C28	1.20	65	10	460	1600	3B	2⅜	1¾	2	1
T-43C92	1.65	75	10	266	1600	2C	1⅞	2⅛	2½	1¼
T-47C07	1.65	75	12	410	1600	3B	2	2⅝	2¼	1¼
T-44C02	1.50	80	12	405	1600	3B	1½	2⅜	2	1¼
T-57C51	1.50	80	5	138	1600	2B	2	2	2⅜	1¼
T-57C52	1.75					2F	2	2	2⅜	1½
T-13C29	1.60	85	9	250	1600	3B	2⅜	2	2	1½
T-68C07	2.00	85	15	375	1600	2B	2	2½	3	2
T-16C07	2.25					2F	3⅜	2½	3	2¼
T-14C31-	2.50					2A	2½	2½	3	2¼
T-57C53	2.00	110	10	200	1600	2B	2	2½	3	2¼
T-57C54	2.25					2F	2½	2½	3	2¼
T-49C91-	1.50	120	4.2	160	1600	2F	2	2	2½	1¼
T-75C49	1.50	120	7.2	290	1600	3B	2	2⅜	2	1½
T-53C19	1.50					2B	2	2	2⅜	1¼
T-17C00-B	2.75	150	12	231	1600	2F	2⅞	3	3½	3¾
T-17C00-	3.00					2D	3	3⅝	3⅞	3¾
T-13C30	2.00	150	8	200	1600	2B	2½	2	2 15/16	2¼
T-74C29	3.75	150	15	200	2000	2G	3½	3⅜	4⅝	5¼
T-67C49	2.75	200	5	80	1600	2F	3	2⅞	3½	3¾
T-23C53-A-	3.00					2D	3	2⅞	3½	3½
T-54C50-	5.00	250	13	121	1600	3C	3	3¾	4⅝	7¼
T-75C51	5.00					2G	3⅞	3¾	5	8

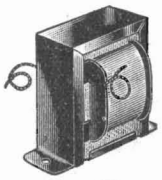

Fig. 2B

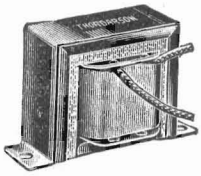

Fig. 3B

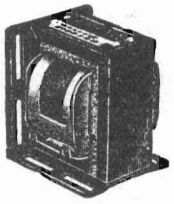

Fig. 2C

AUDIO REACTORS

For use in interstage coupling systems where the voltage drop caused by resistor coupling is objectionable, also for isolating plate current from transformer primaries.

Types T-81C15 and T-93C20 are for use in tuned circuits to accentuate a pre-determined band of frequencies, as described in the Thordarson Amplifier Guide, No. 346-B.

Type No.	List Price	Application	Type Tubes	Induct. Henries	At M.A.	Max. M.A.	D.C. Ohms	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-37C36	$2.00	Plate Impedance	56-30-76-6C5-55-85, etc.	510	5	10	6470	2F	2	2⅛	2⅜	1½
T-67C46	1.75							2B	2	2	2⅜	1¼
T-52C98	1.75	Plate Impedance for Detector tubes or grid impedance	24-57-56-76-6C5-6F5-6J7	1080	.5	8	6150	2F	2	1⅞	2⅜	1¼
T-29C27	1.50							2B	2⅜	1½	2	1
T-68C08	2.00	Plate Impedance or Filter	45-46-10, etc.	22	35	35	405	2F	2	2⅛	2⅜	1½
T-18C92	1.75							2B	2⅝	2	2¼	1½
T-74A31	3.25	Center tapped impedance		2220	0	8	12210	2F	2½	2½	3	2¼
T-81C15	2.50	Tuned Audio Circuits		.75	.5	100	30	2B	1⅝	1⅝	2	¾
T-93C20	3.00	Tuned Audio Circuits		250	.5	8.0	6400	2B	2	2	2⅜	1¼
T-74C30	1.50	Tuned Audio Circuits or Filter		42	15	15	2100	2B	1½	2⅜	2	1
T-14C70	2.50	Tone Control, Hum Bucking Type		22	0	5	220	3Y	1½	1½	2½	½

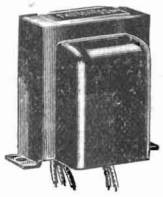

Fig. 2F

POWER TRANSFORMERS FOR CATHODE RAY TUBES

Type No.	List Price	Volts D.C.	M.A.	Rect. Fil.	Fil. No. 1	Fil. No. 2	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-92R25- For 913 tube	$2.25	500 tap—430	3	6.3V—.9A*			2F	2	2⅛	2⅜	1½
T-92R33 For 913 tube	4.00	400 **500	15 3	6.3V—.9A	6.3V—.6A No. 3 (2.5V—1.4A)	6.3V—.6A	2G	3¼	4⅝	3¾	3¼
T-14R32	5.50	400	15	5V—2A 5V—2A Ct.	6.3V—.6A	2.5V—2A No. 3 (6.3V—.6A)	2G	2 3/16	3⅜	3 1/16	4

For Dumont 24-XH; RCA 902, 913; National 2002 Tubes.

**With half wave rectification.
*For IV rectifier and 913 filament.

TRANSMITTING TYPE CHOKES ARE LISTED ON PAGES 13 AND 18

AUDIO TRANSFORMERS

Receiver and Amplifier

Fig. 2A

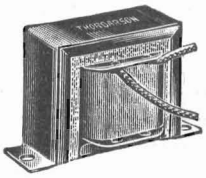
Fig. 3B

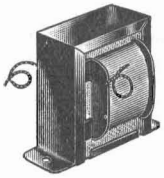
Fig. 2B

Fig. 2C

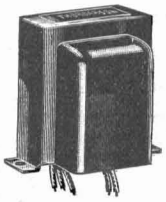
Fig. 2F

PLATE TO GRID INTERSTAGE TRANSFORMERS

Here is a variety of units designed for the same general application but varying in size and style of mounting. Type T-75A74 will couple a super-regenerative detector to an audio stage; any tendency toward outside noise is reduced by the static shield between windings.

Type No.	List Price	Application	Ratio	Imped. in ohms Pri.	Imped. in ohms Sec.	Pri. M.A.	Mtg. Fig.	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-13A34	$1.35	10,000 ohm plate to grid	3:1	10,000	90,000	8	3B	2	1⅝	1⅝	¾
T-29A99	1.75	10,000 ohm plate to grid	3.26:1	10,000	106,300	8	2B	2	2	2⅜	1¼
T-86A04–	1.75						3B	2⅜	2	2	1½
T-57A36	2.00						2F	2	2⅛	2⅜	1½
T-47A25	1.75		3:1	10,000	90,000	8	2C	2	1⅝	2⅜	1
T-57A37–	2.50	Similar to above	3:1	10,000	90,000	8	2B	2½	2	3	2
T-57A38	2.75	but larger					2F	2½	2½	3	2¼
T-29A56–	3.00						2A	2½	2½	3	2¼
T-75A74	2.50	10,000 ohm plate to grid Static Shield between primary and secondary.	2:1	10,000	40,000	8	2F	2	2⅛	2⅜	1½

PUSH-PULL INPUT TRANSFORMERS

This group serve similar applications, varying in size and frequency response. T-74A31, ordinarily a push pull input transformer, may also be used as a tapped push pull grid impedance with ratios of 1 to 1, 1 to 2 or 1 to 4 by connecting the primary and secondary in series, according to instructions furnished.

T-13A35	$1.50	10,000 ohm plate to P.P. grids	3:1	10,000	90,000	8	3B	1⅝	2	1⅝	¾
T-33A91	2.00	10,000 ohm plate to P.P.	3.26:1	10,000	106,300	8	2B	2	2	2⅜	1¼
T-86A03	2.00	grids					3B	2⅜	2	2	1½
T-14A29	2.25						2C	2⅛	1⅞	2½	1¼
T-57A39	2.25						2F	2	2⅛	2⅜	1½
T-57A40	2.75	Similar to above but	3:1	10,000	90,000	8	2B	2½	2	3	2
T-57A41	3.00	larger					2F	2½	2½	3	2¼
T-43A04–	3.25						2A	2½	2½	3	2¼
T-74A31	3.25	10,000 ohm plate to P.P. grids	1:1	10,000	10,000	8	2F	2½	2½	3	2¼
T-57A42	3.25	10,000 ohm plate to P.P.	3:1	10,000	90,000	8	2B	2½	2	3	2
T-57A43–	3.50	grids					2F	2½	2½	3	2¼
T-71A97–**	5.00	8,000 ohm plate to P.P. grids	2.7:1	8,000	44,000	40	2D	2⅞	3	3½	3¼

**Single 6F6 Triodes to P.P. 845 grids

PUSH-PULL INTERSTAGE TRANSFORMERS

For connecting push-pull plates to push-pull grids, these types offer a choice of size and ratio. Suitable for replacement or amplifier circuits.

T-13A36	$1.75	P.P. 10,000 ohm plates to P.P. power tube grids	1:1	20,000	20,000	8*	3B	2	2⅜	1¾	1
T-67A91†–	3.00	P.P. 10,000 ohm plates	1.5:1	20,000	45,000	10*	2B	2½	2½	3	2
T-58A70†	3.25	to P.P. or P.P. par. power tube grids					2F	2½	2½	3	2¼
T-75D57–	5.00	P.P. 6F6 Triodes to 845's P.P.	2.35:1	16,000	117,000	40*	2D	2⅞	3	3½	3¾

*Per side. †Split sec.

UNIVERSAL AUDIO REPLACEMENT TRANSFORMERS

To couple single plate to single grid; single plate to push-pull grids; push-pull plates to push-pull grids. Has split secondary.

T-17A02	$2.25	Universal	3:1	Universal		10	2F	2	2⅛	2⅜	1½

DRIVER TRANSFORMERS

Especially designed for replacement use.

Type No.	List Price	Driver Tubes	Output Tubes	Class	Ratio Pri. to ½ Sec.	Ohms Imped. Pri.	Ohms Imped. ½ Sec.	Pri. M.A.	Mtg. Fig.	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-78D46	$1.50	1-30	1-1J6G, 19	B	2.4:1	20,000	3,500	7	2B	1⅝	1⅝	2	¾
			2-30	B									
T-17D01	2.25	1-6F6 Triode	2-6F6, 6L6, etc.	AB	1.7:1	10,000	3,300	31	3B	2⅜	2	2	1½
		1-42 Triode			1.5:1		4,500						
		1-2A5 Triode			1.3:1		5,800						

OTHER AUDIO TRANSFORMERS ARE LISTED ON PAGES 19 AND 23

DRIVER TRANSFORMERS

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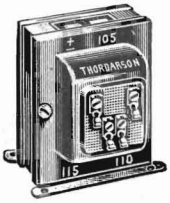

Fig. 2D

Fig. 2T

Fig. 2R

Fig. 4D

UNIVERSAL DRIVER TRANSFORMERS—"19" SERIES

Five usable ratios, very helpful for circuit changes, make these driver transformers companion units to the Universal Modulation Series. A complete table of Driver and Modulator Combinations appears on pages 20 and 21.

Type No.	List Price	Cap. Watts	Max. Pri. M.A. Per Side	Ratio Pri. to ½ Sec.	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-19D01	**$6.00**	15	60	1:1, 1.2:1, 1.4:1, 1.6:1, 1.8:1	4D	2⅞	3	3½	3½
T-19D02	**6.00**	15	60	2:1, 2.2:1, 2.4:1, 2.6:1, 2.8:1	4D	2⅞	3	3½	3½
T-19D03	**6.00**	15	60	3:1, 3.2:1, 3.4:1, 3.6:1, 3.8:1	4D	2⅞	3	3½	3½
T-19D04	**6.00**	15	60	4:1, 4.5:1, 5:1, 5.5:1, 6:1	4D	2⅞	3	3½	3½
T-19D05	**6.00**	15	Primary for 500 ohm line	1:3.15, 1:2.75, 1:2.5, 1:2.25, 1:2, 1:1.75, 1:1.4, 1:1.25, 1:.85, 1:.75	4D	2⅞	3	3½	3½

DRIVER TRANSFORMERS (FOR SPECIFIC APPLICATIONS)

The driver transformer is an important link in a Class AB or Class B amplifier system. The flow of current in the power tube grid circuit requires exceedingly good regulation of drive tubes and coupling transformer. Thordarson driver transformers have the correct primary to secondary ratio for the tubes specified, insuring minimum driver distortion on the positive grid peaks.

Type No.	List Price	Driver Tubes	Output Tubes	Class	Ratio Pri. to ½ Sec.	Pri. M.A.	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-54D63	**$2.50**	1-30 1-49 1-6C5	1-1J6G, 19 2-49 2-6V6	B B AB2	2.4:1	7	2F	2	1⅞	2⅜	1¼
T-67D50	**2.75**	1-89 Triode	1-79	B	2:1	32	2F	2	2⅛	2⅜	1½
T-67D89–	**3.25**	1-89 Triode	2-79	B	3:1	32	2F	2½	2½	3	2¼
T-67D47	**2.50**	1-6N7, 6A6, 53	1-6N7, 6A6, 53	B	5.25:1	10	2F	2	2⅛	2⅜	1½
T-81D52	**3.50**	1-6C5, 76 1-56	2-6F6 Triode 2-42, 2A5 Triode	AB AB	1.82:1 1.67:1	8	2F	2½	2½	3	2¼
T-84D59*	**3.50**	2-6C5, 6N7 2-6A6, 53	2-6L6, 6V6 2-6N7, 6A6, 53	AB2 B	5:1	10	2F	2½	2½	3	2¼
T-72D01–	**3.75**	2-6C5, 76, 56	2-45	AB	2.7:1	10	2F	2½	2½	3	2¼
T-74D32	**3.50**	2-6C5, 76, 56	2-6F6, 42, 2A5 4-2A3, 6B4G	AB2 AB	3:1	10	2F	2½	2½	3	2¼
T-65D78–	**4.00**	1-6F6 Triode 1-42 Triode 1-2A5 Triode	2-6F6 Triode 2-42 Triode 2-2A5 Triode	AB2 AB2 AB2	2:1	40	2F	2⅞	3	3½	3¾
T-81D42	**3.25**	1-6F6 Triode 1-42 Triode 1-2A5 Triode	2-6F6 Triode 2-42 or 2-2A5 Pentode	AB2 AB2 AB2	1.7:1 1.5:1 1.3:1	31	2F	2½	2½	3	2¼
T-67D78 **T-52D89–**	**3.00** **3.75**	1-46, 59, 6F6, 42, 2A5 Triode	2-46, 59	B	2.2:1	32	2F 2A	2½ 2½	2½ 2½	3 3	2¼ 2¼
T-66D98–	**5.25**	2-46, 6F6, 42, 45, 59, 2A5 P-P Triodes	4-46 4-59	B B	4:1	32	2R	2¾	4⅛	3⅛	4¼
T-83D83–	**3.75**	2-45 P-P, 6F6 Triodes	2-250	AB2	1.6:1	40	2F	2½	2½	3	2¼
T-51D00–*	**4.50**	2-6F6, 42, 45, 2A5 P-P	2-210, 801, 35T	B	2:1	40	2A	2⅞	3	3½	3¼
T-64D22–*	**5.00**	2-45, 2A3	2-800, 830B, etc.	B	1.55:1	40	2T	2¾	3⅛	4⅛	4¼
T-80D54–*	**5.50**	2-6F6 P-P Triodes 2-42 P-P Triodes	2-838 2-830B, 800	B B	4:1	40	2G	3⅜	3½	4⅝	5½
T-83D86–	**3.75**	2-2A3 P-P	4-250	AB2	1.47:1	40	2F	2½	2½	3	3½
T-61D40–*	**5.50**	2-2A3 P-P	2-50T, 150T 2-203A, 801	B B	1.67:1	130	2D	3⅜	3⅝	4	5
T-75D10*	**5.50**	2-2A3 P-P	2-838 2-805, TZ-40	B B	3.2:1	130	2D	3⅜	3⅝	4	5

*Split-Secondary

MULTI-MATCH DRIVER TRANSFORMERS ARE LISTED ON PAGE 19

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OUTPUT TRANSFORMERS

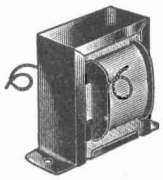


Fig. 2B

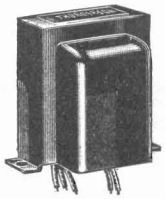


Fig. 2F

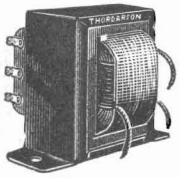


Fig. 2E

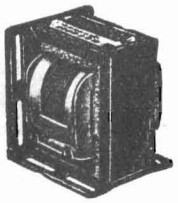


Fig. 2C

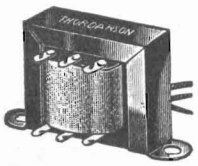


Fig. 3E

OUTPUT TRANSFORMERS TO LINE OR SPEAKER (HIGH LEVEL)

Power tubes require the correct plate load for maximum power output with a minimum of distortion. Thordarson output transformers will satisfy the plate requirements of tubes as used in amplifiers, radio receivers, and amateur equipment. Several secondary impedances are incorporated to accommodate various speaker combinations.

Type No.	List Price	Tube Type	Class	Ohms Impedance Pri.	Ohms Impedance Sec.	Pri. M.A. Max. Per Side	Pri. M.A. Max. Watts	Mtg. Fig.	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-14S81	1.25	1-42, 2A5, 6F6 or P-P45, 71	A	7,000	3 to 6	40	5	3B	1¾	1⅜	1⅜	½
T-14S82	1.25	1-25L6	A	1,500	3 to 6	55	5	3B	1¾	1⅜	1⅜	½
T-13S37	$1.25	1-6F6, 42, 2A5, 47	A	7,000	1-2-4	36	5	3E	1¾	1⅜	1⅜	½
T-13S39	1.25	1-45, 12A5 1-31, 43, 71A	A	4,000	1-2-4	36	5	3E	1¾	1⅜	1⅜	½
T-13S43	1.35	1-1F4, 1D4, 1F5G	A	16,000	1-2-4	10	5	3E	1¾	1⅜	1⅜	½
T-33S99	1.50	2-45, 71, 43, 25A6 P-P 1-6N7, 6A6, 1C5G, 53 P-P	A B	8,000	6 to 12	36	10	2B	2	2	2⅜	1¼
T-13S40	1.75	2-6F6, 42 P-P 2-2A5, 47 P-P	A A	14,000	1-2-4	40	10	3E	2	1⅝	1⅝	¾
T-81S01	1.65	1-19, 1J6G P-P 2-30, 49 P-P 2-31 P-P	B B A	10,000	2-4-8	15	8	2B	1⅝	1⅝	2	¾
T-17S10	3.50	1-6L6	A	2,500	2-4-8-500	80	8	2F	2½	2½	3	2¼
T-17S11	4.00	2-6V6 P-P	AB1	8,000*	4-8-15-250-500	52	15	2F	2⅞	3	3½	3½
T-17S12	4.00	2-6L6 P-P	AB1 (with 300 V. on plate and screen)	4,300*	4-8-15-250-500	95	25	2F	2⅞	3	3½	3½
T-17S13	6.50	2-6L6 P-P	AB1	6,600*	4-8-15-250-500	80	34	2G	3⅜	3⅝	4⅝	5½
T-17S14	6.50	2-6L6 P-P	AB2	5,500*	4-8-15-250-500	90	40	2G	3⅜	3⅝	4⅝	5¼
T-17S15	7.00	4-6L6 P-P Par.	AB1	3,300*	4-8-15-250-500	155	60	2G	3⅜	3⅞	4⅝	5¾
T-68S06	2.50	1-6F6, 42, 2A5 1-47, 31, 33	A A	7,000	10 or 2,000	36	5	2F	2	1⅞	2⅜	1
T-67S51	3.50	2-6F6, 42, 2A5, 47 P-P 1-79 P-P	A B	14,000	4-8-15-500	40	20	2F	2½	2½	3	2¼
T-67S48	3.50	2-45, 71, 43, 25A6 P-P 1-6N7, 6A6, 53 P-P	A B	8,000	4-8-15-500	36	25	2F	2½	2½	3	2¼
T-67S60–	2.50	1-19, 1J6G P-P 2-30, 49 P-P 2-31 P-P	B B A	10,000	4-8-2000	15	10	2F	2	2⅛	2⅜	1½
T-67S52	4.00	2-46, 59 P-P 2-6F6, 42, 2A5 P-P 2-6N7, 6A6, 53 P-P Par.	B AB2 B	5,800	4-8-15-500	60	30	2F	2⅞	3	3½	3½
T-58S72	3.75	2-2A3, 6B4G P-P 2-48, 25L6 P-P	AB A	3,000	4-8-15-500	60	30	2F	2⅞	3	3½	3¼
T-67S54	4.00	2-6L6 P-P 2-2A3, 6B4G, 45 P-P 2-19 P-P Par.	A AB B	5,000	4-8-15-500	60	30	2F	2⅞	3	3½	3½
T-67S92	4.00	4-2A3, 6B4G, 45 P-P Par. 4-48, 25L6 P-P Par.	AB A	1,500	4-8-15-500	80	40	2F	2⅞	3	3½	3½
T-65S94	4.00	2-50 P-P 2-6F6, 42, 2A5 P-P 1-79 P-P	A AB2 B	8,000	4-8-15-500	55	40	2F	2⅞	3	3½	3½
T-75S75	4.00	2-6F6, 42 or 2A5 1-6N7, 6A6, 53 P-P 2-6N6G, 6B5, 2B6, 6AC5 P-P	AB2 B A	10,000	4-8-15-500	45	40	2F	2⅞	3	3½	3½
T-84S58	6.00	2-6L6 P-P	AB2	3,800	4-8-15-500	115	60	2G	3⅜	3¾	4⅝	6
T-89S75	4.00	2-6L6 P-P	AB1	6,600	4-8-15-500	80	40	2F	2⅞	3	3½	3½
T-89S74	3.75	1-6L6	A	4,000	4-8-15-500	70	15	2F	2½	2½	3	2¼
T-89S68	6.50	4-6L6 P-P Par.	AB1	3,300	50-125-200 250-333-500	150	75	2G	3⅜	3⅝	4⅝	5¾
T-83S84–	6.00	2-50 P-P	AB2	5,000	4-8-15-500	80	45	2G	3⅜	3½	4⅝	5¼
T-83S87	8.00	4-50 P-P Par.	AB2	3,000	4-8-15-500	160	90	2G	3⅞	3⅝	5	7¾
T-61S67–	12.00	2-845 P-P	AB	8,000	500	150	110	2L	4¼	4½	6¼	12¾
T-67S55–	12.00	2-800 P-P	B	12,500	500	150	110	2L	4¼	4½	6¼	12½

*10% feed back winding.

SEE PAGES 10 AND 19 FOR MODULATION AND OTHER OUTPUT TRANSFORMERS

Universal Output and Microphone Transformers

THORDARSON

UNIVERSAL OUTPUT TRANSFORMERS

Preferred by many because of their wide plate impedance and voice coil coverage. Proper matching of load impedances to speaker voice coils is accomplished by using taps as specified in the instructions sheet.

Type No.	List Price	Tube Type	Class	Ohms Impedance Pri.	Ohms Impedance Sec.	Pri. M.A. Per Side	Max. Watts	Mtg. Fig.	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-13S38	$1.50	Univ.	A	4,000/7,000	Adjustable	36	8	3E	2	1⅝	1⅝	¾
T-57S01	2.00	Single	A	8,000/10,000	.1 to			2E	2	2	2⅜	1¼
T-17S57	2.25	or P-P Tubes	A	14,000 Ct.	29			2C	2⅛	1⅞	2½	1¼
T-13S42	1.50	Universal Single Tube	A	1,500/2,000 4,000/5,000 7,000	Adjustable .1 to 29	55	10	3E	2	1⅝	1⅝	¾
T-13S41	3.00	Universal P-P Tubes	A	3,000/5,000 6,600/7,000 8,000/10,000	Adjustable .1 to 29	60	20	2E	2½	2	3	2¼

UNIVERSAL TUBE TO LINE TRANSFORMERS

T-61S25	3.50	Univ. Single Tube		2,500/4,000 5,000/6,000/7,000	500	60	10	2E	2½	2	3	2¼
T-61S26	3.50	Univ. P-P Tubes		8,000/10,000 12,000/14,000 Ct.	500	55	10	2E	2½	2	3	2¼

UNIVERSAL LINE TO SPEAKER TRANSFORMERS

Type No.	List Price	Application	Pri.	Sec.	Max. Watts	Mtg. Fig.	W.	D.	H.	Wt. Lbs.
T-53S81	$4.00	Line to Voice Coil	500/250	4-8-15	35	2D	2⅞	3	3¾	3½
T-60S48	3.00	Line to Voice Coil 1 to 6 may be con. in par. to 500 ohm line	500/1,000 1,500/2,000 2,500/3,000	Pri. as 500 ohm- .06 to 8.; pri. as 1,000 ohm .12 to 16, etc.	10	2E	2½	2	3	2
T-14S80	2.00	Line to Voice Coil	500	2-4-6-8	12	2E	2	2	2⅜	1½
T-76S74	3.00	Line to multiple spkrs. (auto transformer)	500	250/166/125 100/84	30	2E	2½	2	3	2½

LOW IMPEDANCE SOURCE (MICROPHONE, LINE, MIXER) TO GRID TRANSFORMERS

A complete line of low level input, microphone, line, and mixer transformers to fit all applications. Special winding methods result in low leakage reactance so essential to good frequency response. Several styles of mountings are offered for the most popular types.

Type No.	List Price	Application	Impedance in ohms Pri.	Impedance in ohms Sec.	Overall Ratio	Mtg. Fig.	W.	D.	H.	Wt. Lbs.
T-65A73	$2.75	DB mike to grid	200 Ct.	100,000	1:22.2	2F	2½	2½	3	2
T-68A22–	2.50					2B	2½	2	3	2
T-30A20–	3.00					2A	2½	2½	3	2
T-58A37	2.25	DB mike to grid	200 Ct.	100,000		2F	2	2⅛	2⅜	1½
T-83A78	2.00	Single button mike to grid	100	400,000	1:64	2F	2	1⅞	2⅜	1¼
T-86A02	1.75					2B	2	1⅝	2⅜	1
T-23A57–	2.25					2A	2	1⅞	2⅜	1¼
T-55A16	2.75	Dyn. mike, line or mixer to single or P.P. grids	200/50	100,000 Ct.	1:22.3	2F	2	2⅛	2⅜	1½
T-63A72	3.75	1, 2, 3 or 4 circuit mixer to grid	50, 100, 150, 200	100,000	1:22.2	2F	2½	2½	3	2¼
T-63A71	3.75	1, 2, 3 or 4 circuit mixer to grid	200, 400, 600, 800	100,000	1:11	2F	2½	2½	3	2¼
T-61A94	3.25	Line to single or P.P. Cl. A grids	500/125	100,000 Ct.	1:14.1	2F	2½	2½	3	2¼
T-62D65–	6.00	Line to 845 Class AB grids	500	7,220	1:3.8	2D	3⅜	3⅝	4	5
T-93A12–	6.00	Line to P.P. Class A 845's, etc.	500	50,000 Ct.	1:9.85	2D	3⅜	3⅝	4	4¾
T-83D21	3.50	Line to P.P. grids of 6L6's or 50's Class AB	500	5,100 12,500	1:3.2 1:5	2F	2½	2½	3	2¼
T-67D34–	7.50	Line to P.P. Par. 203A, 838, 211 grids, Class B	500	900	1:1.34	2D	3⅜	3⅝	4	5

MICROPHONE OR PICK-UP TO LINE OR MIXER TRANSFORMERS

Type No.	List Price	Application	Impedance in ohms Pri.	Impedance in ohms Sec.	Pri. M.A.	Mtg. Fig.	W.	D.	H.	Wt. Lbs
T-63A73–	$3.25	DB or dynamic mike to	200 Ct.	200/50		2F	2½	2½	3	2¼
T-67A45–	3.50	line or mixer				2A	2½	2½	3	2¼
T-70A82	3.50	DB mike to line	200 Ct.	500/125		2F	2½	2½	3	2¼
T-70A83	3.50	Crystal mike to line or mixer	100,000	200/50		2F	2½	2½	3	2¼
T-61A96–	3.50	Pick-up or line to line or mixer	500/125	200/50		2F	2½	2½	3	2¼
T-63A74–	2.50	Pick-up to line or mixer	5,000/2,000	200/50		2F	2	2⅛	2⅜	1½

TUBE TO LINE OR MIXER TRANSFORMERS (LOW LEVEL)

T-55A15–	$2.25	Plate to line or mixer	15,000/10,000	200/50	8	2F	2	2⅛	2⅜	1½
T-62A26–	2.25	Plate to line or mixer	15,000/10,000	500/125	8	2F	2	2⅛	2⅜	1½
T-72A11–	2.50	P.P. plates to line	20,000 Ct.	500/125	8**	2F	2	2⅛	2⅜	1½
T-75A73–	2.50	P.P. plates to line or mixer	20,000 Ct.	200/50	8**	2F	2	2⅛	2⅜	1½
T-14A90	2.50	Sgl. or P.P. Plates to line or mixer	20,000 Ct.	500/125	8	2F	2	2⅛	2⅜	1½
T-14A91	2.50	Sgl. or P.P. Plates to line or mixer	20,000 Ct.	200/50	8	2F	2	2⅛	2⅜	1½

**Per Side.

SEE PAGES 10 AND 19 FOR MODULATION AND OTHER OUTPUT TRANSFORMERS

MODULATION TRANSFORMERS

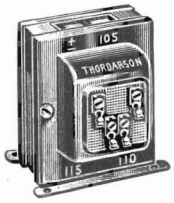


Fig. 2D

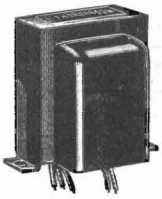


Fig. 2F

Fig. 2Q

Fig. 2N

UNIVERSAL MODULATION TRANSFORMERS

Tapped coils are provided to give this series a wide range of application, an important feature for the experimenter. See pages 20 and 21 for complete table of Driver and Modulator Combinations.

Type No.	List Price	Cap. Watts	Pri. M.A. Per Side	Secondary M.A. Series	Secondary M.A. Par.	Mtg. Fig.	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-19M14	$ 7.00	30	75	75	150	2N	3¾	3¾	4	4½
T-19M15	10.00	60	125	125	250	2N	3¾	4½	4	6½
T-19M16	15.00	100	175	175	350	2N	4½	5	6	12½
T-19M17	24.00	250	225	225	450	2Q	5¾	8½	7¼	30¾

MODULATION TRANSFORMERS (FOR SPECIFIC APPLICATIONS)

This series of modulation transformers meets the need for efficient, quiet, long life units at reasonable costs. Engineered and constructed for specific tube types, their efficiency is high and the frequency characteristics are good.

Type No.	List Price	Tube Type	Class	Ohms Impedance Pri.	Ohms Impedance Sec.	Max. D.C. Sec. M.A.	Max. Audio Pwr. Watts	Mtg. Fig.	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-67M69	$ 2.75	1-19	B	10,000	2,700	50	10	2F	2	2	2⅜	1½
T-17M59	3.50	1-6A6, 6N7	B	10,000	3,000, 3,750, 4,500	100	10	2F	2½	2½	3	2
T-64M26	6.00	2-46 or 59 2-250	B AB	5,800	5,000 10,000	100	40	2D	3⅜	3⅝	4	5
T-19M21	7.00	2-TZ-20	B	10,000	3,750 6,600	200 150	75	2D	3½	4¼	4	7
T-19M22	10.00	2-809 2-RK-12	B B	8,400	5,000 7,850	200 160	100	2D	4½	4½	6	13¼
T-84M70	10.00	2-6L6 2-35T 4-210	AB B B	3,800	2,500 5,000 7,500	250 200 150	75	2D	4⅜	5½	6¼	14¾
T-14M49	16.50	2-TZ-40	B	6,900	2,850 4,500 6,500	350 300 235	175	2Q	5⅞	7¾	6¼	20
T-67M59–	3.00	1-53	B	10,000	3,000	100	20	2F	2½	2½	3	2
T-72M02–	6.00	2-2A3	AB	5,000	3,000, 5,000	125	50	2D	4½	4¾	5	5
T-64M25–	7.50	2-TZ-20, 210	B	8,000	5,000, 10,000	200	40	2D	3⅞	4¼	4⅝	8
T-70M84–	15.00	2-801, TZ-20, 35T	B	10,000	4,500, 6,250, 12,500	200	150	2Q	5⅞	8	6¼	20¾
T-82M08–	15.00	2-800 2-809	B B	6,000	5,000 20,000	200 100	150	2Q	5¾	8	6¼	20¼
T-64M24–	22.00	2-838, 203B 203Z, 203A, T55	B B	8,000	2,500 10,000	400 200	300	2Q	5	8½	7¼	30¼
T-75M11–	22.00	2-ZB-120 HK-154, 838	B B	10,000	2,500 10,000	400 200	300	2Q	5⅞	8½	7¼	30
T-82M09–	24.00	2-50-T	B	20,000	2,500 10,000	400 200	300	2Q	5¾	9½	7¼	29½
T-82M10–	40.00	2-806 2-HK-354E	B B	11,000	4,000 9,000	500 330	650	2Q	7⅝	7⅛	9¾	45
T-82M25	40.00	2-805, HD-203A, 822	B	9,000	4,000, 6,000, 8,000	500	650	2Q	8	6¾	8	47

GRID MODULATION TRANSFORMERS

T-67M73	3.50	1-42, 6F6, 46 Triode	A	6,300	5,400	32	10	2D	2½	2½	3	2¼
T-67M74	4.50	P.P. 45-2A3	AB	5,000	5,000	60	20	2D	2⅞	3	3½	3½

PLATE AND SCREEN MODULATION TRANSFORMER

T-79M94–	5.50	42's or 2A5's To Plate & Screen of 2-802	AB	8,000	5,000 plate 800 screen	100 50	40	2G	3⅜	3½	4⅝	5¼

MODULATION TRANSFORMERS FOR MATCHING LINES TO R. F. LOADS

Primaries of these transformers may be connected directly to the 500 ohm output terminals of any amplifier or receiver. Type T-83M22 is equipped with a tap at 200 ohms for use with "Breting 14" receivers.

Type No.	List Price	Pri. Ohms	Secondary Ohms Load	Max. D.C. Sec. M.A.	Max. Watts	Mtg. Fig.	W.	D.	H.	Wt. Lbs.
T-73M52	$16.00	500	5,000-6,000-7,000-8,000-9,000-10,000	215	80	2Q	5⅞	8	6¼	21
T-83M22	8.00	500-200	5,000-6,000-7,000-8,000-9,000-10,000	150	30	2N	3⅞	4¼	4⅝	8

SEE PAGE 19 FOR MULTI-MATCH MODULATION TRANSFORMERS

PLATE SUPPLY TRANSFORMERS (AMATEUR)
Primary 115 Volts 50-60 Cycles

These plate transformers are rated in D.C. voltages from a two section filter, including the voltage drop through the rectifier tubes. Designed especially for Amateur Short Wave equipment. Ratings are ample for this type of intermittent service. Electrostatic shield between primary and secondary.

Type No.	List Price	Sec. A.C. Load Volts	D.C. Volts	Bias Tap	D.C. M.A.	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-19P55	$ 7.50	660-0-660 550-0-550	500 400	30 V.	250	2G	3⅞	3½	4⅞	8
T-19P56	8.00	900-0-900 800-0-800	750 600		225	2G	3⅞	4	4⅞	10
T-19P57	10.00	1075-0-1075 507-0-507	1000* 400		125 150	2G	3⅞	4¼	4⅞	10½
T-19P58	13.00	1200-0-1200 900-0-900	1000* 750		200 150	2G	4½	5½	6⅛	19
T-19P59	16.00	1560-0-1560 1250-0-1250	1250 1000		300	2K	5⅞	7	7	26½
T-19P60	18.50	1875-0-1875 1560-0-1560	1500 1250		300	2K	6¾	4⅛	7	29¼
T-19P61	20.00	2125-0-2125 1875-0-1875	1750 1500		300	2K	6¾	4½	7	31½
T-19P62	21.50	2420-0-2420 2125-0-2125	2000 1750		300	2K	6¾	5	7	34½
T-19P63	23.00	1560-0-1560 1265-0-1265	1250 1000		500	2K	6¾	5¼	7	38
T-19P64	29.50	1875-0-1875 1560-0-1560	1500 1250		500	2K	6¾	6	7	43¼
T-19P65	29.50	3000-0-3000 2420-0-2420	2500 2000		300	2K	6¾	6	7	44
T-19P66	37.50	2125-0-2125 1875-0-1875	1750 1500		500	2K	6¾	4½	10	45½
T-19P67	42.50	2450-0-2450 2125-0-2125	2000 1750		500	2K	6¾	4¾	10	51
T-19P68	50.00	3000-0-3000 2450-0-2450	2500 2000		500	2K	6¾	5¾	10	61

*These transformers designed for double rectifiers and will deliver both secondary ratings simultaneously.

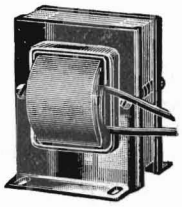


Fig. 3C

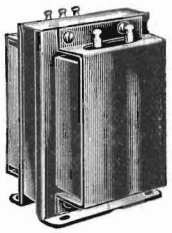


Fig. 2L

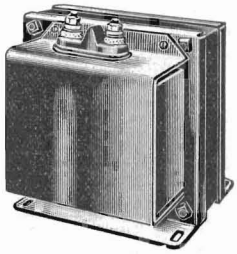


Fig. 2K

PLATE SUPPLY TRANSFORMERS (COMMERCIAL DUTY)
For 50-60 Cycle Supply

These plate transformers are rated in D.C. voltages from a two section filter, including the voltage drop through the rectifier tubes. Designed for continuous duty at full ratings specified and may be safely exceeded by as much as 20% in amateur or intermittent service.

Type No.	List Price	Sec. A.C. Load Volts	D.C. Volts‡	D.C. M.A.	Pri. Volts	Pri. V.A.	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-62P80–	$ 7.75	725-0-725	525	150	110	125	2L	4½	4⅛	6¼	11¼
T-70P41–	9.00	725-0-725	525	250	110	210	2L	4½	5	6¼	15¼
T-53P03–	6.00	465-0-465	400	150	115	90	2G	3⅜	4¼	4⅝	7½
T-84P60	7.75	515-0-515	400§	250	115	190	2G	3⅞	4¾	5	11¾
T-62P57–	9.00	750-0-750	625	200	115	180	3C	4½	3⅝	6¼	12¼
T-54P48–	6.75	800-0-800	680	150	115	130	3C	4½	3½	6¼	10¾
T-71P27–	10.00	800-0-800	600	250	110	240	2L	4½	4⅞	6¼	14¾
T-64P12–	16.50	980-0-980	750	350	110	400	2M	6¾	6⅜	8	32½
T-64P11–*	21.00	1600-0-1600 1290-0-1290	1250 1000	280	110	520	2M	6¾	7½	8	36¾
T-70P33–*	30.00	1620-0-1620 1330-0-1330	1250 1000	500	110	900	2S	6¾	6½	11	43
T-54P89–	21.00	1270-0-1270	1000	400	115	600	2M	6¾	6⅞	8	33
T-62P82–	32.00	1335-0-1335	1000	500	110	750	2S	6¾	6¼	11	42½
T-73P51–*	45.00	2275-0-2275 1950-0-1950	1750 1500	500	110	1300	2S	6¾	7½	11	61¼
T-62P83–	32.00	2350-0-2350	2000	250	110-220†	740	2S	6¾	6½	11	42¼
T-62P84–	65.00	2420-0-2420	2000	500	110-220†	1500	2S	6¾	8¾	11	80¼
T-62P85–	80.00	3630-0-3630	3000	380	110-220†	1750	2S	6¾	10	11	87

§Bias tap at 30 volts. *Variation in secondary voltages obtained by changing primary taps. †Primary for 110 or 220 volts, or 220 volt tap may be used on 110 volts to reduce sec. voltage 50%. ‡D. C. volts measured out of filter with choke input. If transformer is used with bridge rectifier (choke input) current should be reduced to 50% of this rating.

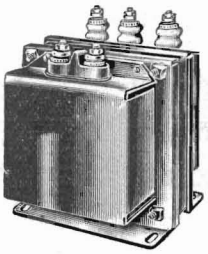


Fig. 2M

Fig. 2S

C. H. T. PLATE TRANSFORMERS ARE LISTED ON PAGE 16

FILAMENT TRANSFORMERS

THORDARSON FILAMENT TRANSFORMERS give improved voltage regulation and minimize heat rise. Many types are furnished with primary taps to compensate for low line voltage or voltage drop in filament leads. All units are rated for continuous operation at full load. All primaries 115 volts 50-60 cycles. Those marked with * have primary taps of 105, 110 and 115 volts.

One Secondary

Type No.	List Price	Sec. Volts	Sec. Amps.	Volts Insulation	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-50F61	$1.50	2.5 Ct.	3.5	1600	2B	2	1⅞	2⅜	1
T-54F69–	1.75	2.5 Ct.	5.0	1600	2E	2	2	2⅜	1¼
T-19F88	1.75	2.5 Ct.	5.25	1600	3C	2	2	2⅜	1¼
T-19F89	2.25	2.5 Ct.	10	1600	3C	2½	2	3	2
T-54F55–	2.50	2.5 Ct.	10	1600	2B	3	2¾	3¾	3
T-19F90	3.00	2.5 Ct.	10	7500	3C	2½	2½	3¼	2¼
T-64F33*	4.50	2.5 Ct.	10	7500	2N	3¾	3⅜	4	4½
T-19F82	5.75	2.5 Ct.	15	10,000	3C	3⅜	2⅜	4	4
T-63F99	3.25	5 Ct.	4	1600	2D	3	2½	3¼	2¼
T-19F83	2.25	5 Ct.	5	1600	3C	2½	2	3	2
T-19F84	2.75	5 Ct.	8	1600	3C	2 9/16	2¾	3¼	2¾
T-19F85	3.50	5 Ct.	13	1600	3C	3⅜	2⅜	4	4
T-19F86	6.00	5 Ct.	21	1600	3C	3⅜	3	4	5½
T-19F91	2.25	5.25 Ct.	4	1600	3C	2½	2⅜	3¼	2¼
T-19F92	3.25	5.25 Ct.	13	1600	3C	3⅜	2½	4	4
T-74F23*	5.00	5.25 Ct.	13	1600	2D	3½	3⅜	4	4¼
T-74F24*	7.00	5.25 Ct.	21	1600	2D	3⅞	3⅞	4⅝	5¼
T-19F80	1.25	6.3 Ct.	1	1600	2B	1 11/16	1⅜	1 15/16	⅝
T-19F81	1.65	6.3 Ct.	2	1600	2B	1⅝	1⅝	2	¾
T-19F97	2.00	6.3 Ct.	3	1600	3C	2	2	2⅜	1½
T-61F85	2.00	6.3, 5, 2.5	2.5	1600	2E	2⅝	2	2¼	1½
T-73F60*	3.75	6.3 Ct.	5	1600	2D	3	2⅞	3¾	3¼
T-19F98	2.75	6.3 Ct.	6	1600	3C	2½	2⅜	3¼	2¾
T-19F99	3.50	6.3 Ct.	10	1600	3C	3¾	2⅜	4	4
T-64F13*–	3.25	7.5 Ct.	2.5	1600	2D	3	2½	3¾	2¼
T-19F93	2.25	7.5 Ct.	4	1600	3C	2½	2¼	3¼	2¼
T-64F35–	4.50	7.5 Ct.	6.5	1600	2D	3⅝	3⅜	4	5
T-19F94	3.00	7.5 Ct.	8	1600	3C	3	2⅞	3¾	4
T-92F20	4.75	7.5 Ct.	8	1600	2D	3⅝	3⅜	4	4¾
T-19F95	2.75	10 Ct.	4	1600	3C	2 9/16	2¾	3¼	2¾
T-19F96	3.50	10 Ct.	8	1600	3C	3	2⅞	3¾	4
T-64F14*	4.75	10 Ct.	8	1600	2D	3⅝	3⅜	4	5
T-19F87	6.25	10 Ct.	12	1600	3C	3⅜	3¼	4	6¾
T-64F15*–	8.50	11 Ct.	10	1600	2D	4¼	3⅞	4⅝	8
T-64F19–	9.00	11 Ct.	15.5	1600	2L	4½	4½	6¼	13

Two Secondaries

Type No.	List Price	Sec. Volts	Sec. Amps.	Volts Insulation	Mtg. Fig.	W.	D.	H.	Wt. Lbs.
T-64F21–	5.50	2.5 Ct. 5 Ct.	10 3	3000	2N	3¾	3⅜	4	4¾
T-75F85–	5.50	5 Ct. 5 Ct.	3 3	3000	2D	3	2⅞	3¼	3¼
T-54F66–	3.25	7.5 Ct. 7.5 Ct.	2.5 2.5	1600	2E	3	2¾	3¾	3¼

Three Secondaries

Type No.	List Price	Sec. Volts	Sec. Amps.	Volts Insulation	Mtg. Fig.	W.	D.	H.	Wt. Lbs.
T-79F84	4.75	2.5 Ct. 5 Ct. 6.3 Ct.	3.5 3 3	1600	2G	3⅜	3¼	4⅝	4¾
T-60F94–	6.00	2.5 Ct. 2.5 Ct. 5 Ct.	3.5 14 6	1600	2G	3½	3⅜	4⅝	5¼
T-85F14*–	17.50	2.5 Ct. 2.5 Ct. 2.5 Ct.	5 5 10	10,000	2Q	7⅝	5½	5½	17
T-70F46–	7.75	5 Ct. 5 Ct. 5 Ct.	3 3 6	5000	2N	4	3⅜	4	3½
T-64F17*–	9.00	2.5 Ct. 7.5 Ct. 7.5 Ct.	4 4.5 6.5	1600	2N	4¼	3⅞	4⅝	8

Four Secondaries

Type No.	List Price	Sec. Volts	Sec. Amps.	Volts Insulation	Mtg. Fig.	W.	D.	H.	Wt. Lbs.
T-64F16*–	11.50	2.5 Ct. 7.5 Ct. 10 Ct. & 10 Ct.	5 1.25 3.25 & 6.5	1600	2N	4½	4½	6¼	13½

C. H. T. FILAMENT TRANSFORMERS ARE LISTED ON PAGE 17

TRANSMITTER INPUT AND FILTER CHOKES

THORDARSON

FILTER CHOKES

All Thordarson filter chokes are listed at measured inductance at rated currents. From the smallest to the largest, all are designed and produced with characteristic Thordarson thoroughness. All are adequately insulated for recommended service.

INPUT OR SWINGING CHOKES

Type No.	List Price	Cap. D.C. M.A.	Inductance Henries	D.C. Res. Ohms	Volts Insulation	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-19C35	**$ 4.75**	200	5-20	130	3000	2D	3½	3⅜	4¼	5½
T-19C36	**6.50**	300	5-20	105	3000	2D	3⅞	3¾	4⅝	9¾
T-19C37	**9.00**	400	5-20	90	4000	2J	4½	5½	6⅛	19
T-19C38	**11.50**	500	5-20	75	4000	2J	5⅛	6	7½	26
T-64C05–	**4.25**	150	10-30	200	2000	2D	3½	3⅜	4⅝	5
T-63C15–	**8.50**	280	12-38	156	5000	2J	4	4¼	6¼	11½
T-64C06–	**12.00**	380	10-19	93	5000	2J	4¾	5	6⅞	18¼
T-63C16–	**14.00**	500	8-17	70	5000	2J	5	5½	6⅞	22¾
T-72C16–	**20.00**	650	8-22	55	5000	2K	6¾	6⅝	7⅝	27¾

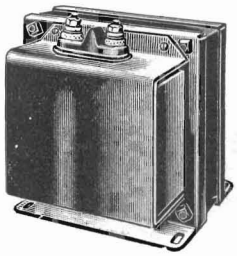


Fig. 2K

Fig. 2J

SMOOTHING CHOKES

T-19C42	**4.75**	200	12	130	3000	2D	3½	3⅜	4¼	5½
T-19C43	**6.50**	300	12	105	3000	2D	3⅞	3¾	4⅝	9¾
T-19C44	**9.00**	400	12	90	4000	2J	4½	5½	6⅛	19
T-19C45	**11.50**	500	12	75	4000	2J	5⅛	6	7½	26
T-64C09–	**5.50**	150	19.7	275	2000	2D	3⅞	4	4½	7
T-64C08–	**10.00**	280	23.6	190	5000	2J	4½	4½	6¾	14
T-64C07–	**16.00**	380	20	160	5000	2K	6	6¾	7⅝	25
T-64C10–	**17.00**	500	16.5	110	5000	2K	6½	6¾	7⅝	27½
T-72C15–	**24.00**	650	17	70	5000	2K	6¾	8½	7⅝	40¾

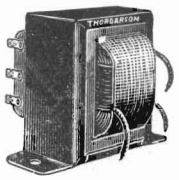


Fig. 2E

Fig. 2N

EXCITER LAMP TRANSFORMERS

Type No.	List Price	Pri. Volts	Secondary Volts	Secondary Amps.	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs
T-64F37—	**$5.00**	110/115/120	10	7.5	2E	3¾	3½	4	5¾
T-64F38—	**4.00**	110/115/120	8.5	4	2E	3	2¾	3¾	3¼

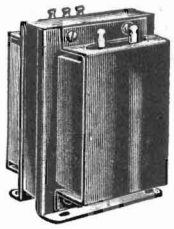


Fig. 2L

TRANSCEIVER TRANSFORMERS

Smallest practical size—Light weight—Easy to mount—Efficient

Type No.	List Price		Ohms Imped. Pri.	Ohms Imped. Sec.	Max. D.C. Pri.	Max. Power Watts	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-72A59	**$1.65**	Pl. and S. B. micro. to grid	5,000 200	100,000	10	5	2B	1⅝	1⅝	2	¾
T-72S58	**1.65**	Pent. Pl. to low or high imp. phones or osc.	10,000	2,000 50	30	5	2B	1⅝	1⅝	2	¾

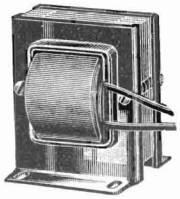


Fig. 3C

OTHER FILTER CHOKES ARE LISTED ON PAGES 5 AND 18

Isolation and Voltage Changer Transformers

FENCE CONTROLLER TRANSFORMER

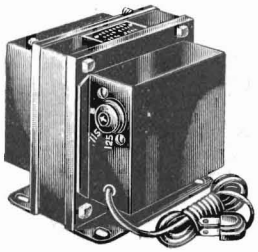


Fig. 4E

Many service men are cashing in on the growing demand for electric farm fences. This Thordarson transformer T-18V10, is recommended for use in the circuit shown in the September 1938 issue of Popular Mechanics.

Taps are provided fo the different secondary voltages, making it possible to compensate for rainy weather, longer fences, or different soil and grounding conditions. Note: For 6 volt DC operation only, with suitable relays. Open horizontal mounting.

Type	List Price	Primary	Sec. (Open Circuit)	Dimensions W.	D.	H.	Wt. Lbs.
T-18V10	$3.00	6 V DC	8,000 V at 37 MA to 9,000 V at 25 MA	3½	2	3¼	1

ISOLATION TRANSFORMERS

Fig. 2W

The fast growing use of electrical therapeutic machines in medicine and surgery; of clippers, hair dryers, permanent wave machines and other electrical equipment in the barber and beauty shop industries has greatly expanded the market for isolation transformers. Their use is also indicated in amateur transmitters for elimination of line noises or to keep RF out of the incoming line. Primary 105-115-125 V. 50-60 cycles; Secondary 115 V. Electrostatic shield between primary and secondary. FEATURES primary voltage adjustment without changing connections.

Type No.	List Price	Capacity V.A.	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-18V00	$ 9.00	100	2V	3¾	3¾	5	8
T-18V01	17.50	250	4E	5⅞	6¼	6	20
T-18V02	27.50	500	4E	6¾	7¼	6¾	35

PRIMARY REGULATING AUTO TRANSFORMERS

For increasing or decreasing line voltage. Taps for 60, 80, 90, 100, 110, 120, and 125 volts. 50-60 cycles. Complete with instructions.

Type No.	List Price	Capacity V.A.	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-82V11	$12.50	500	2W	4½	7	6¼	16¾
T-82V12	17.50	1000	2W	5⅛	7¼	6⅞	22½
T-82V13	22.50	2000	2M	6¾	7½	7½	39½

VOLTAGE CHANGER AND BOOSTER AUTO TRANSFORMERS

Fig. 2V

Input side equipped with cord and plug. Output side has standard receptacles.

Type No.	List Price	Primary	Secondary	Rating Watts	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-26V04	$4.50	220-250 Volts	110-125 Volts	80	2V	3⅜	3	4⅝	4½
T-50V10	5.50	220-250 Volts	110-125 Volts	125	2V	3¾	3¼	5	5¾
T-40V15	6.50	220-250 Volts	110-125 Volts	175	2V	3¾	3⅝	5	8
T-50V11	7.50	220-250 Volts	110-125 Volts	250	2V	3¾	4⅜	5	10¼
T-61V07	5.00	90 or 100 Volts	115 Volts	150	2V	3⅜	3	4⅝	4½

SIGNALING TRANSFORMERS—Listed by Underwriters' Laboratories

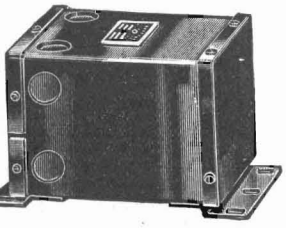


Fig. 3V

While designed primarily for bells, horns, gongs, and other intermittent signal duty, these transformers may be used for many additional applications. Cases are compound filled and have separately enclosed primary and secondary wiring compartments. Knockouts permit attachment of rigid or flexible conduit without exposing the wiring. Primary 115 volts, 50-60 cycles. Four secondary leads provide the following combination of output voltages—4, 8, 12, 16, 20, and 24 volts.

Type No.	List Price	Intermittent Duty Rating	Constant Duty Rating	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-47V01	$ 6.00	50 V. A.	35 V. A.	3V	5⅝	4½	4	6¼
T-47V02	9.75	100 V. A.	85 V. A.	3V	6⅜	4½	4	8
T-47V03	21.75	250 V. A.	190 V. A.	3V	7⅝	4½	4	14¼
T-47V04	35.00	500 V. A.	475 V. A.	3V	8⅜	5¼	5½	22½

TRANSFORMER AND CHOKE FOR 32 VOLT D.C. SUPPLY

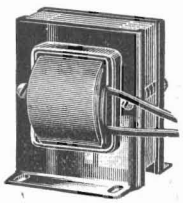


Fig. 3C

These units are specified for the excellent 32 volt D.C. supply presented in Thordarson Service Guide No. 342-C.

Type No.	List Price	D.C.* Volts	Max. D.C. Amps.	Mtg. Fig.	Dimensions W.	D.	H.	Wt Lbs.
T-14R50	$15.00	32	3	3C	4⅞	4½	6⅝	18¼
*Tapped primary. For use with type 83 or Raytheon RX-203 tubes.								
T-14C51	8.00	Choke 18 H @ 3 A. D.C. D.C. Resistance 1.3 ohms		3C	4 7/16	3½	6⅛	13½

SEE PAGE 2 FOR NUMERICAL INDEX

COMPLETE AMPLIFIERS WIRED OR FOUNDATION UNIT FORM

Factory Wired and Tested

These five amplifiers have by their very popularity earned another listing in this catalog. While space limitations prevents full description, your jobber will gladly supply complete details.

Type No.	List Price (less tubes)	Watts Output	Output Tubes
T-11W06-M-	**$59.25**	6 watt	Push Pull 6F6
T-11W18-M-	**80.90**	18 watt	Push Pull 6F6
T-11W30-	**93.25**	30 watt	P.P. Parallel 2A3
T-10W61-	**155.00***	60 watt	P.P. Parallel 6L6
T-10W11	**160.00***	10 watt	Tru-Fidelity 2A3

Fig. 10W61

FOUNDATION UNITS AND ACCESSORIES

The above amplifiers are also available in "Build-it-Yourself" Foundation Units. Includes punched chassis with sockets mounted, photos, diagrams, instructions and list of nationally distributed component parts.

Type No.	List Price	Description
T-10K20	**$5.50**	Metal Screen Cover for T-10W60 and T-10W11 (less handles)
T-10K21	**4.75**	Metal Screen Cover for power supply T-10W60 and T-10W11 (less handles)
T-10K50	**1.90 pair**	Chromium Plated Handles for T-10K20 and T-10K21
T-75K06-M-	**4.50**	Foundation Unit for T-11W06-M
T-75K18-M-	**6.00**	Foundation Unit for T-11W18-M
T-75K30-	**8.00**	Foundation Unit for T-11W30
T-10K60-	**12.00**	Foundation Unit for T-10W61
T-10K10-	**10.00**	Foundation Unit for T-10W11

*Less covers and handles

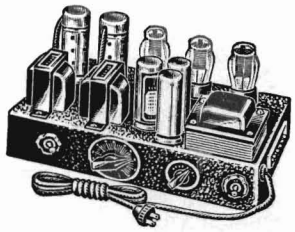


Fig. 11W06

BUILD A THORDARSON AMPLIFIER

Many P.A. engineers and experimenters design as well as build amplifiers. Not a few of them have sought our recommendations on matched transformers and choke components for amplifiers of the more widely used tube combinations. Here are several suggestions for which complete circuit information appears in Thordarson Sound Amplifier Guide No. 346-D. Complete data on the following Thordarson units will be found elsewhere in this catalog.

Single Channel Pre-Amplifier

Tubes: 1-6F5, 1-6J7 and 1-6X5
1 T-15R04 Power Transformer
1 T-15A71 Tube to Line Transformer
2 T-13C26 Chokes

Four Channel Pre-Amplifier

Tubes: 4-6F5, 1-6J7 and 1-6X5
1 T-15R04 Power Transformer
1 T-15A71 Tube to Line Transformer
2 T-13C26 Chokes

8 Watt Amplifier

Tubes: 1-6J7, 1-6F5, 1-6L6G, 1-80
1 T-75R47 Power Transformer
1 T-57C54 Choke
1 T-17S10 Output Transformer

15 Watt Amplifier

Tubes: 2-6J7, 1-6C5, 2-6V6G, 1-5Z3
1 T-70R62 or T-15R06 Power Transformer
1 T-57C54 or T-15C54 First Choke
1 T-67C46 Second Choke
1 T-15A74 Input Transformer
1 T-17S11 or T-15S90 Output Transformer

25 Watt Amplifier

Tubes: 3-6J7, 1-6C5, 2-6L6G, 1-5Z3
1 T-17R30 or T-15R07 Power Transformer
1 T-67C49 or T-15C55 First Choke
1 T-67C46 Second Choke
1 T-15A74 Input Transformer
1 T-17S12 or T-15S91 Output Transformer

40 Watt Amplifier

Tubes: 2-6J7, 1-6F5, 1-6C5, 1-6F6, 2-6L6G, 2-5Z3
1 T-17R31 or T-15R08 Power Transformer
1 T-75C51 or T-15C56 First Choke
1 T-18C92 or T-15C53 Second Choke
1 T-67C46 Third Choke
1 T-15D85 Driver Transformer
1 T-14C70 Tone Control Choke
1 T-17S14 or T-15S92 Output Transformer

60 Watt Amplifier

Tubes: 3-6J7, 2-6C5, 4-6L6G, 1-83 and 1-80
1 T-89R28 or { T-15R08 Power Transformer / T-15R06 Power Transformer }
1 T-75C51 or T-15C56 First Choke
1 T-68C07 or T-15C54 Second Choke
1 T-67C46 Third Choke
1 T-15A74 Input Transformer
1 T-14C70 Tone Control Choke
1 T-17S15 or T-15S93 Output Transformer

120 Watt Booster Amplifier

Tubes: 1-6J7, 2-6C5, 2-6F6, 4-6L6G, 2-83 and 1-80
1 T-15R01 Power Transformer
1 T-15R06 Power Transformer
1 T-15C56 First Choke
1 T-68C07 Second Choke
1 T-15A74 Input Transformer
1 T-15D86 Driver Transformer
1 T-15S94 Output Transformer
1 T-67C46 Choke
1 T-14C70 Choke

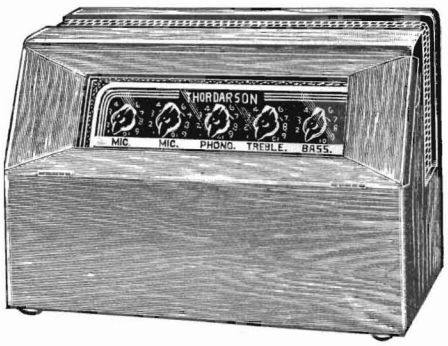
10 Watt Tru-Fidelity Phono Amplifier

Tubes: 4-6C5, 1-6L7, 1-6H6, 2-2A3, 1-5Z3, 1-80
1 T-87R85 or T-15R05 Power Transformer
1 T-90A04 Input Transformer
1 T-15C54 Choke
1 T-74C30 Choke
1 T-67C46 Choke
1 T-18C92 Choke
1 T-74C29 or T-15C54 Filter Choke
1 T-90S13 Output Transformer

NEW AMPLIFIERS BY THORDARSON

"Built for Audio Experts by Audio Experts"

For the first time Thordarson offers amplifiers in beautiful solid walnut cabinets with controls fully illuminated and protected by a covered compartment. Models range from 8 to 60 watt output, suitable for practically every application. See and hear these new amplifiers at your distributor. Ask him for Catalog No. 600-C or write Factory direct.



IF YOU ARE INTERESTED IN SOUND AMPLIFICATION YOU NEED THE NEW THORDARSON SOUND AMPLIFIER GUIDE-346-D

THE C. H. T. SERIES

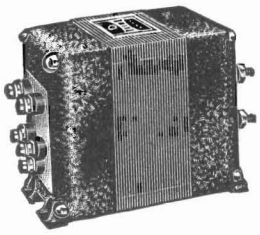


Fig. 3P

The following pages are devoted to a presentation of the C.H.T. Series. The Thordarson engineering and manufacturing divisions have gone to utmost lengths to make this series unexcelled from every angle of appearance, dependability, uniformity, accuracy and adaptability. For the first time in transformer history a definite pattern of case design has been followed from the smallest audio to the largest plate transformer. Each unit has the complete protection of compound filled cases against varying climatic conditions. Mounting templates and complete instructions are furnished to insure a quick, efficient and permanent installation.

MULTI-VOLT PLATE TRANSFORMERS

The value of Thordarson's experience in manufacturing quality transformers is best demonstrated by the C. H. T. Multi-Volt Transformers. These units, engineered for continuous operation, provide extreme flexibility, excellent regulation and quiet operation. The new 3P mounting, used on the larger types consists of two heavy cast cases for full shielding of the coil. Moisture proof compound is used to complete coil protection.

Fig. 3Q

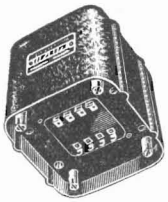


Fig. 3K

Fig. 3N

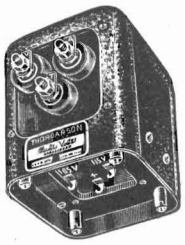


Fig. 3X

Type No.	List Price	Sec. A.C. Load Volts	D.C. Volts	D.C. M.A.	Pri. Volts	Pri. Watts	Mtg. Fig.	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-15P11	**$12.50**	665/665 535/535	500 400	200	115-230	135	3K	5⅛	5½	5⅜	15¾
T-15P12	**15.00**	835/835 655/655	650 500	200	115-230	165	3K	5⅛	5½	6¾	19½
T-15P13	**20.00**	945/945 770/770	750 600	300	115-230	275	3Q	5⅞	7¾	7¼	31¾
T-15P14	**25.00**	1225/1225 945/945	1000 750	300	115-230	355	3Q	5⅞	8¼	8¼	41
T-15P15	**30.00**	1450/1450 1190/1190	1250 1000	300	115-230	445	3Q	7	9	8	51¼
T-15P16	**45.00**	1540/1540 1255/1255	1250 1000	500	115-230	750	3P	6⅜	11¼	9	81
T-15P17	**32.50**	1815/1815 1535/1535	1500 1250	300	115-230	530	3Q	7	9	8	55
T-15P18	**60.00**	2130/2130 1845/1845	1750 1500	500	115-230	1020	3P	6⅜	12½	9	96
T-15P19	**50.00**	2950/2950 2365/2365	2500 2000	300	115-230	900	3P	6⅜	11¾	9	85
T-15P20	**85.00**	2960/2960 2390/2390	2500 2000	650	115-230	1875	3P	7½	14⅝	9⅝	140
T-15P21	**80.00**	3440/3440 2980/2980 2340/2340 1815/1815	3000 2500 2000 1500	500	115-230	1690	3P	7½	13⅞	9⅝	129
T-15P22	**50.00**	2070/2070 1785/1785 1495/1495 1210/1210	1750 1500 1250 1000	300	115-230	625	3P	6⅜	10¾	9	76

MULTI-VOLT BIAS TRANSFORMERS

Rectifier plate and filament terminals on recessed base. Six secondary taps are brought out to plug-in jacks for convenient change of voltage.

Fig. 3W

Type No.	List Price	Pri. Volts	D. C. Volts	M.A.	Filament Volts	Filament Amps.	Mtg. Fig.	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs
T-15R60	**$9.50**	115	150; 135; 120; 110; 100; 90	200	5	3	3N	4	4½	4⅞	6¾
T-15R61	**10.50**	115	275; 250; 225; 200; 175; 150	200	5	3	3N	4	4½	4⅞	8½
T-15R62	**12.50**	115	500; 450; 400; 350; 300; 275	200	5	3	3N	5⅛	5½	5⅜	15¼

SEE PAGE 11 FOR OTHER PLATE TRANSFORMERS

MULTI-VOLT FILAMENT TRANSFORMERS

Terminals are brought out to rugged solder lugs on a recessed base (except mtg. 3X). This permits of mounting on chassis with one hole for lead wiring. Side knock-out holes for bread board wiring.

Single Secondary Transformers

Type No.	List Price	Primary Volts	Secondary Volts	Amps.	Volts Insulation	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-11F59	5.75	105-115	5 Ct.	5	2000	3K	4	4½	3⅞	5
T-11F63	8.00	105-115	5 Ct.	13	2000	3K	4	4½	4⅜	7½
T-11F55	11.50	105-115	5.25 Ct.	22	2000	3K	5⅛	5½	6	14
T-11F60	6.25	105-115	6.3 Ct.	5	2000	3K	4	4½	3⅞	5¾
T-11F62	6.75	105-115	7.5 Ct.	8	2000	3K	4	4½	3⅞	6½
T-11F64	9.50	105-115	10 Ct.	10	2000	3K	4	4½	4⅞	9¾
T-11F53	8.00	105-115	2.5 Ct.	10	7500	3X	4	4½	5⅜	8½
T-11F61	18.50	105-115	2.5 Ct.	20	15,000	3X	5⅛	5½	6	14
T-11F54	16.00	105-115	5 Ct.	20	10,000	3X	5⅛	5½	6	15

Tapped Secondary Transformers

Type No.	List Price	Primary Volts	Secondary Volts	Amps.	Volts Insulation	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-11F50	$9.50	105-115	7.5 tap at 6.3, 5* and 2.5 Ct.	6.5	2000	3K	4	4½	4⅜	6¼
T-11F51	10.00	105-115	10 tap at 7.5 and 6.3 Ct.	8	2000	3K	4	4½	4⅞	7¾
T-11F52	13.25	105-115	11 tap at 10 and 7.5 Ct.	10	2000	3K	5⅛	5½	6	13½

*Not center tapped

Multiple Secondary Transformers

T-11F56	7.75	105-115	No. 1 = 6.3 Ct. No. 2 = 2.5 Ct. No. 3 = 5 Ct.	3 3.5 3	2000	3K	4	4½	3⅞	6
T-11F57	13.75	105-115	No. 1 = 10 Ct. No. 2 = 10 Ct. No. 3 = 6.3 Ct., No. 4 = 5 Ct.	8 4 3	2000	3K	5⅛	5½	6¾	15
T-11F58	15.00	105-115	No. 1 = 7.5 Ct., No. 2 = 7.5 Ct. No. 3 = 6.3 Ct., No. 4 = 5 Ct.	6.5, 3.25 3	2000	3K	5⅛	5½	6	13¼

MULTI-VOLT POWER TRANSFORMERS

Combination plate and filament transformers for such tubes of medium power as 6L6, 807, T-20, RK-23, RK-39, etc. Types T-15R04 to T-15R08 are specified in new amplifiers fully described in Thordarson No. 346-D Sound Amplifier Guide. Primary 115 V. 50-60 cycles.

Type No.	List Price	Secondaries No. 1 Volts Ct.	No. 1 M.A.	No. 2 Volts (Rect. Fil.)	No. 2 Amp.	No. 3 Volts Ct.	No. 3 Amp.	No. 4 Volts Ct.	No. 4 Amp.	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-15R00	$10.50	1000	150	5	3	7.5 tap 6.3	5			3K	5⅛	5½	6	15
T-15R01	15.00	1000	400	5	6	6.3	6			3K	5⅞	6¾	6	24½
T-15R02	13.25	1500	200	2.5	10	7.5 tap 6.3	3			3K	5⅛	5½	6	17
T-15R03	13.75	800	200	2.5	4	6.3	3	5	3	3K	5⅛	5½	6	19
T-15R04	4.75	510	25			6.3	2.1			3M	2¾	3	3½	3
T-15R05	10.50	680 77 Bias tap	135	5 5	3 2	6.3 2.5 or	2 5	6.3	2.25	3K	4	4½	5½	10
T-15R06	9.75	725	175	5	3	6.3	2.25			3K	4	4½	5½	12
T-15R07	10.50	760	280	5	3	6.3	3.5			3K	4	4½	5½	11
T-15R08	13.75	900	325	5	6	6.3	4.25			3K	5¼	5½	5⅝	22

TELEVISION TRANSFORMERS

Secondary voltages measured to ground. Electrostatically shielded.

Type No.	List Price	Kinescope Tubes	Pri. Volts	Secondary	Volts Insulation	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-16R50	$16.00	1801	115	No. 1—2.5 V. @ 1.75 A. for RCA-879 No. 2—3000/2000 V. D.C. @ 3 M.A.	7,500	3X	5⅛	5½	6½	14
T-16R51	18.50	1800	115	No. 1—2.5 V. @ 5 A. for RCA-878 No. 2—6000/4500/3000 V. D.C. @ 5 M.A.	10,000	3X	5⅛	5½	7	16½
T-16F55	11.00	1800 1801	105/115	No. 1—2.5 V. @ 2.1 A.	10,000	3X	4⅛	4½	5⅜	7½

HORIZONTAL OUTPUT TRANSFORMER

Type No.	List Price	Overall Ratio	Application	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-16S58	$16.00	5 : 1	To couple output of horizontal deflecting circuit (6F6G etc.) to horizontal deflecting yoke. Designed to pass a 13,200 cycle saw tooth voltage.	3W	2	2	3¼	1½

OTHER POWER TRANSFORMERS ARE LISTED ON PAGES 3 AND 4
OTHER FILAMENT TRANSFORMERS ARE LISTED ON PAGE 12

C. H. T. — CHOKES and AUDIO TRANSFORMERS

INPUT AND SMOOTHING CHOKES

Companion units to the C. H. T. Multi-Volt Plate Transformers, these chokes are accurately rated and the inductance shown is obtained with full rated D.C. applied. Most commercial choke ratings are obtained by tests not comparable to operating values. Thordarson test methods give the ACTUAL inductance as obtained in filter circuits.

Fig. 3L

C. H. T. Input Chokes

Type No.	List Price	Inductance Henries	Current M.A.	Volts Insulation	D.C. Res.	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-15C36	$ 8.00	5-25	200-20	4,000	105	3L	4	4½	4⅞	10
T-15C37	10.00	5-25	300-30	4,000	78	3L	5⅛	5½	6¾	22
T-15C38	12.00	5-25	400-30	4,000	95	3L	5⅛	5½	6¾	24
T-15C39	19.00	5-25	500-30	10,000	86	3L	5⅞	7¼	8¼	38½
T-15C41	23.00	5-25	650-50	10,000	46	3L	7	7½	8	51

Fig. 3M

C. H. T. Smoothing Chokes

Type No.	List Price	Inductance Henries	Current M.A.	Volts Insulation	D.C. Res.	Mtg. Fig.	W.	D.	H.	Wt. Lbs.
T-15C45	$ 8.00	12	200	4,000	105	3L	4	4½	4⅞	10
T-15C46	10.00	12	300	4,000	78	3L	5⅛	5½	6¾	22
T-15C47	12.00	12	400	4,000	95	3L	5⅛	5½	6¾	24
T-15C48	19.00	12	500	10,000	86	3L	5⅞	7¼	8¼	38½
T-15C50	23.00	15	650	10,000	46	3L	7	7½	8	51
T-15C53*	5.50	12 Par. 50 Series	100 50	1,600	272 1090	3L	2¾	3	3½	3¼
T-15C54*	5.50	8 Par. 32 Series	150 75	1,600	184 735	3L	2¾	3	3½	3½
T-15C55*	7.00	2 Par. 8 Series	500 250	1,600	32½ 130	3L	4	4½	4⅜	7½
T-15C56*	9.00	2 Par. 8 Series	700 350	1,600	27 107	3L	4	4½	4⅞	9¾

*These types have two windings each. The first line of description applies when the windings are connected in parallel, the second for series connection.

Fig. 3G

AUDIO COUPLING TRANSFORMERS

Ultra modern design, balanced windings, hum bucking coil construction and moisture-proof compound-filled cases. Frequency response variation ± 1½ db 60 to 8,000 C. P. S.

Low Impedance Source to Grid

Type No.	List Price	Primary Ohms	Secondary Ohms	Max. D.C. per side (M.A.)	Max. D.C. unbalance (M.A.)	Max. Sig. Level (db)	Mtg. Fig.	Dimensions W.	D.	H.	Wt. Lbs.
T-15A66	$7.25	500, 333, 250 200, 125, 50	60,000/15,000 Single Grid	100	2.5	+10	3M	2¾	3	3½	2¼
T-15A67	8.00	500, 333, 250 200, 125, 50	120,000/30,000 P. P. Grids	100	2.5	+20	3M	2¾	3	3½	2¼
T-15A68	7.25	60, 38, 30, 22 15, 10, 5.5, 2.5	60,000/15,000 Single Grid	100	2.5	0	3M	2¾	3	3½	2½

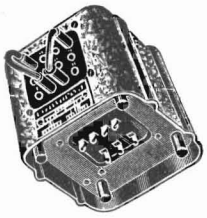


Fig. 3H

Low Impedance Source to Line or Mixer

Type No.	List Price	Primary Ohms	Secondary Ohms	Max. D.C. per side (M.A.)	Max. D.C. unbalance (M.A.)	Max. Sig. Level (db)	Mtg. Fig.	W.	D.	H.	Wt. Lbs.
T-15A69	6.25	500, 333, 250 200, 125, 50	500, 333, 250 200, 125, 50	100	2.5	+20	3M	2¾	3	3½	2
T-15A70	6.25	60, 38, 30, 22 15, 10, 5.5, 2.5	500, 333, 250 200, 125, 50	100	2.5	+20	3M	2¾	3	3½	2

Tube to Line (Low Level)

Type No.	List Price	Primary Ohms	Secondary Ohms	Max. D.C. per side (M.A.)	Max. D.C. unbalance (M.A.)	Max. Sig. Level (db)	Mtg. Fig.	W.	D.	H.	Wt. Lbs.
T-15A71	7.25	20,000/5,000 Single Plate	500, 333, 250 200, 125, 50	8	8	+15	3M	2¾	3	3½	1¾
T-15A72	7.25	20,000/5,000 P.P. Plates	500, 333, 250 200, 125, 50	10	0	+20	3M	2¾	3	3½	1¾

Interstage Coupling Transformers (Class A)

Type No.	List Price	Primary Ohms	Secondary Ohms	Max. D.C. per side (M.A.)	Max. D.C. unbalance (M.A.)	Max. Sig. Level (db)	Mtg. Fig.	W.	D.	H.	Wt. Lbs.
T-15A73	5.00	10,000/2,500 Single Plate	40,000/10,000 Single Grid.	0	0	+15	3M	2¾	3	3½	2¼
T-15A74	5.75	10,000/2,500 Single Plate	40,000/10,000 P.P. Grids	0	0	+15	3M	2¾	3	3½	2½
T-15A75	6.25	20,000/5,000 P.P. Plates	45,000/11,250 P.P. Grids	10	0	+20	3M	2¾	3	3½	2¼

Fig. 3Q

MULTIPLE-TAP LINE TO GRID TRANSFORMERS

Type No.	List Price	Primary Ohms	Secondary Ohms	Mtg. Fig.	W.	D.	H.	Wt. Lbs.
T-15A65	10.50	500, 333, 250, 200, 125, 50	50,000/12,500 P.P. Cl. A 845	3K	4	4½	4⅞	8
T-15D87	11.00	500, 333, 250, 200, 125, 50	7220 P.P. Cl. AB 845	3K	4	4½	4⅞	8

OTHER FILTER CHOKES ARE LISTED ON PAGES 5 AND 13 AND OTHER AUDIO COUPLING TRANSFORMERS ON PAGES 9 AND 23.

C. H. T. — TRANSMITTER TRANSFORMERS

THORDARSON

MULTI-MATCH MODULATION TRANSFORMERS

Plug-in-Jack Terminal Board, the only Modulation Transformer built with this unique feature.

Enables quick and accurate matching of tube loads without soldering. The experimenter is thus assured of peak transformer performance while testing new tubes or circuit changes. See pages 20 and 21 for complete table of Driver and Modulator combinations for all transmitting tubes.

Type No.	List Price	Cap. Watts	Pri. M.A. Per Side	Sec. M.A. Series	Sec. M.A. Par.	Mtg. Fig.	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-11M74	**$9.00**	40	100	80	160	3G	4	4½	4⅜	7¾
T-11M75	**12.50**	75	145	145	290	3G	4	4½	4⅜	9
T-11M76	**19.50**	125	210	160	320	3G	5⅛	5½	6	18
T-11M77	**30.00**	300	250	250	500	3G	6	7½	7¼	30
T-11M78	**60.00**	500	320	320	640	3G	7	8⅝	7½	51

MULTI-MATCH DRIVER TRANFORMERS

Plug-in Connectors and recessed sub-base lugs permit single hole sub-panel wiring. See Table on pages 20 and 21.

Type No.	List Price	Cap. Watts	Max. Pri. M.A. Per Side	Ratio Pri. to ½ Sec.	Mtg. Fig.	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-15D76*	**$8.25**	15	60	1:1, 1.2:1, 1.4:1, 1.6:1, 1.8:1	3H	4	4½	4⅜	7½
T-15D77*	**8.25**	15	60	2:1, 2.2:1, 2.4:1, 2.6:1, 2.8:1	3H	4	4½	4⅜	6
T-15D78*	**8.25**	15	60	3:1, 3.2:1, 3.4:1, 3.6:1, 3.8:1	2H	4	4½	4⅜	6
T-15D79*	**8.25**	15	60	4:1, 4.5:1, 5:1, 5.5:1, 6:1	3H	4	4½	4⅜	6
T-15D80†	**11.50**	30	120	1:1, 1.25:1, 1.5:1, 1.75:1, 2:1	3H	4	4½	4⅞	8¾
T-15D81†	**11.50**	30	120	2.25:1, 2.5:1, 2.75:1, 3:1, 3.25:1	3H	4	4½	4⅞	8
T-15D82‡	**8.25**	15		1:3.15, 1:2.75, 1:2.5, 1:2.25, 1:2, 1:1.75, 1:1.4, 1:1.25, 1:.85, 1:.75	3H	4	4½	4⅜	5¾
T-15D83‡	**11.50**	30		1:3.15, 1:2.75, 1:2.5, 1:2.25, 1:2, 1:1.75, 1:1.4, 1:1.25, 1:.85, 1:.75	3H	4	4½	4⅞	8½
T-15D84§	**11.50**	30	80	1.5:1, 2:1, 2.5:1, 3:1, 3.5:1	3H	4	4½	4⅞	8¾

*P.P. 45's or 2A3's. †P.P. Par. 2A3's. ‡Primary for 500 ohm line. §P.P. 6L6's with inverse feedback.

DRIVER TRANSFORMERS (For Specific Applications)

Type No.	List Price	Driver Tubes	Output Tubes	Class	Ratio Pri. to ½ Sec.	Pri. M.A.	Mtg. Fig.	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-15D85*	**$7.50**	Sgl. 6F6, 42, 2A5 Triode	P.P. 6L6-40W P.P. 6L6-60W	AB_2	1.4:1, 1.3:1 1.2:1	40	3M	2¾	3	3½	2½
T-15D86*	**7.50**	P.P. 6F6, 42, 2A5 Triodes	P.P. Par. 6L6 120 W.	AB_2	2.6:1	32	3M	2¾	3	3½	1¾
T-18D19	**18.00**	P.P. 845	P.P. 849, 204A	B	5:1	100	3Q	5¼	5½	7	18½

*With humbucking coil construction.

MULTIPLE-TAP OUTPUT TRANSFORMERS

Designed especially for amplifiers featured in Thordarson No. 346-C Sound Guide. Exceptional adaptability and frequency response will dictate their use in other quality sound system

Type No.	List Price	Tube Type	Class	Ohm Impedance Pri.	Ohm Impedance Sec.	Pri. M.A. Per Side	Max. Watts	Mtg. Fig.	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-15S90*	**$9.25**	2-6V6 P.P. 2-6L6 P.P. 2-2A3 P.P. (self bias)	AB1 AB1 AB	8000 5000 5000	2/3/4/6 8/16/125 250/500	70	15	3H	4	4½	4⅜	7¼
T-15S91*	**11.50**	2-6L6 P.P. (300 V. Pl. & Sc.) 2-2A3 P.P. (fixed bias)	AB AB	4300 3000	Same as above	95	25	3H	4	4½	4⅞	8
T-15S92*	**13.75**	2-6L6 P.P. 2-6L6 P.P.	AB1 AB2	6600 5500	Same as above	90	40	3H	4	4½	5⅝	8¾
T-15S93*	**15.00**	4-6L6 P.P. Par. 2-6L6 P.P.	AB1 AB2	3300 3800	Same as above	155	60	3H	4	4½	5⅝	15½
T-15S94*	**17.50**	4-6L6 P.P. Par.	AB2	1900	500/250/166 125/100/84	230	120	3H	5⅛	5½	5⅝	18

*Tertiary winding to give a feedback voltage 10% of full primary.

MULTIPLE-TAP LINE TO VOICE COIL TRANSFORMERS

T-15S96	**11.00**	Line to Voice Coil	1000/500	50/24/16/ 8/6/4/3/2		25	3H	4	4½	4	7¼
T-15S97	**14.50**	Line to Voice Coil	1000/500	50/24/16/ 8/6/4/3/2		60	3H	4	4½	4	9

SEE PAGE 10 FOR OTHER MODULATION AND PAGE 7 FOR OTHER DRIVER TRANSFORMERS

DRIVER AND MODULATOR COMBINATIONS

MODULATOR STAGE						DRIVER STAGE				
P-P Class B Tubes	Power Output Watts	Plate Volts	Bias Volts	Pl. to Pl. Load Ohms	Use Mod. Trans. No.	P-P Driver Tubes	Trans. Ratio, Pri. to ½ Sec.	Use Driver Trans. No.	Trans. for 500 Ohm Line	§Ratio 500 Ohm Line to ½ Sec.
R.C.A. TUBES									Where T-15D82 appears T-19D05 may also be used.	
46	28	400	0	5,600	T-11M74 or T-19M14	*45	5:1	T-15D79 or T-19D04	T-15D82	1:.85
46	48	600	0	9,600	T-11M75 or T-19M15	*45	5:1	T-15D79 or T-19D04	T-15D82	1:.85
4-46's	56	400	0	2,800	T-11M75 or T-19M15	*45	5:1	T-15D79 or T-19D04	T-15D82	1:.85
4-46's	96	600	0	4,800	T-11M76 or T-19M16	*45	5:1	T-15D79 or T-19D04	T-15D82	1:.85
203A	200	1000	−35	6,900	T-11M77 or T-19M17	†2A3	2.2:1	T-15D77 or T-19D02	T-15D82	1:1.5
203A	200	1000	−35	6,900	T-11M77 or T-19M17	**6L6	3.5:1	T-15D84	T-15D82	1:1.25
203A	260	1250	−45	9,000	T-11M77 or T-19M17	†2A3	2:1	T-15D77 or T-19D02	T-15D82	1:1.5
203A	260	1250	−45	9,000	T-11M77 or T-19M17	**6L6	3.5:1	T-15D84	T-15D82	1:1.25
4-203A	400	1000	−35	3,450	T-11M78	†4-2A3	2.25:1	T-15D81	T-15D83	1:1.25
4-203A	400	1000	−35	4,500	T-11M78	**6L6	3:1	T-15D84	T-15D83	1:1.25
4-203A	520	1250	−45	3,450	T-11M78	†4-2A3	2:1	T-15D80	T-15D83	1:1.25
4-203A	520	1250	−45	4,500	T-11M78	**6L6	3:1	T-15D84	T-15D83	1:1.25
211	200	1000	−77	6,900	T-11M77 or T-19M17	2A3	2:1	T-15D77 or T-19D02	T-15D82	1:1.75
211	260	1250	−100	9,000	T-11M77 or T-19M17	2A3	1.8:1	T-15D76 or T-19D01	T-15D82	1:2
800	90	750	−40	6,400	T-11M76 or T-19M16	2A3	2.6:1	T-15D77 or T-19D02	T-15D82	1:1.25
800	100	1000	−55	12,500	T-11M76 or T-19M16	2A3	2.8:1	T-15D77 or T-19D02	T-15D82	1:1.25
800	100	1000	−55	12,500	T-11M76 or T-19M16	45	2.2:1	T-15D77 or T-19D02	T-15D82	1:1.2
801	45	600	−75	10,000	T-11M74 or T-19M14	2A3	2.6:1	T-15D77 or T-19D02	T-15D82	1:1.25
801	45	600	−75	10,000	T-11M74 or T-19M14	45	2:1	T-15D77 or T-19D02	T-15D82	1:2.25
801	75	750	−80	11,000	T-11M75 or T-19M16	45	1.8:1	T-15D76 or T-19D01	T-15D82	1:2.25
801	75	750	−80	11,000	T-11M75 or T-19M16	2A3	2.4:1	T-15D77 or T-19D02	T-15D82	1:1.4
805	300	1250	0	6,700	T-11M77	2A3	3.4:1	T-15D78 or T-19D03	T-15D82	1:1.25
805	370	1500	−16	8,200	T-11M78	2A3	3:1	T-15D78 or T-19D03	T-15D82	1:1.25
806	500	2000	−150	11,500	T-11M78	4-2A3	1.25:1	T-15D80	T-15D83	1:2
806	500	2000	−150	11,500	T-11M78	**6L6	1.5:1	T-15D84	T-15D83	1:2.5
808	190	1250	−15	12,700	T-11M77 or T-19M17	2A3	3.4:1	T-15D78 or T-19D03	T-15D82	1:1.25
809	60	500	0	5,200	T-11M75 or T-19M15	2A3	6:1	T-15D79 or T-19D04	T-15D82	1:.75
809	60	500	0	5,200	T-11M75 or T-19M15	45	4:1	T-15D79 or T-19D04	T-15D82	1:1.25
809	100	750	−5	8,400	T-11M76 or T-19M16	2A3	6:1	T-15D79 or T-19D04	T-15D82	1:.75
809	100	750	−5	8,400	T-11M76 or T-19M16	45	4:1	T-15D79 or T-19D04	T-15D82	1:1.25
810	510	1500	−30	6,600	T-11M78	4-2A3	2.25:1	T-15D81	T-15D83	1:1.25
830B	175	1000	−35	7,600	T-11M77 or T-19M17	2A3	3:1	T-15D78 or T-19D03	T-15D82	1:1.25
838	200	1000	0	6,900	T-11M77 or T-19M17	2A3	3.8:1	T-15D78 or T-19D03	T-15D82	1:.85
838	260	1250	0	9,000	T-11M77 or T-19M17	2A3	3.8:1	T-15D78 or T-19D03	T-15D82	1:.85
4-838	400	1000	0	3,450	T-11M78	4-2A3	3.25:1	T-15D81	T-15D83	1:.75
4-838	400	1000	0	3,450	T-11M78	**6L6	3.5:1	T-15D84	T-15D83	1:1.25
4-838	520	1250	0	4,500	T-11M78	4-2A3	3.25:1	T-15D81	T-15D83	1:.75
4-838	520	1250	0	4,500	T-11M78	**6L6	3.5:1	T-15D84	T-15D83	1:1.25
1608	50	425	−15	4,800	T-11M75 or T-19M15	*45	4:1	T-15D79 or T-19D04	T-15D82	1:1.25
TAYLOR TUBES										
T-20	50	600	−30	8,100	T-11M75 or T-19M15	*45	2.2:1	T-15D77 or T-19D02	T-15D82	1:2
T-20	70	800	−40	12,000	T-11M75 or T-19M16	*45	2:1	T-15D77 or T-19D02	T-15D82	1:2.25
TZ-20	70	800	0	12,000	T-11M75 or T-19M16	*45	3.2:1	T-15D78 or T-19D03	T-15D82	1:1.4
T-55	175	1000	−40	6,900	T-11M77 or T-19M17	2A3	2.8:1	T-15D77 or T-19D02	T-15D82	1:1.25
T-55	225	1250	−50	9,400	T-11M77 or T-19M17	2A3	2.6:1	T-15D77 or T-19D02	T-15D82	1:1.4
T-55	275	1500	−60	12,000	T-11M77	2A3	2.4:1	T-15D77 or T-19D02	T-15D82	1:1.4
T-155	Same as HD-203-A									
203-A 4-203A	Same as R.C.A. 203A									
HD-203A	300	1500	−50	9,600	T-11M77	2A3	2.6:1	T-15D77 or T-19D02	T-15D82	1:1.25
HD-203A	300	1750	−67.5	13,000	T-11M77	2A3	2.6:1	T-15D77 or T-19D02	T-15D82	1:1.25
HD-203A	400	1750	−67.5	10,000	T-11M78	2A3	2.2:1	T-15D77 or T-19D02	T-15D82	1:1.75
HD-203A	400	2000	−75	12,500	T-11M78	2A3	2.2:1	T-15D77 or T-19D02	T-15D82	1:1.75
HD-203A	500	2000	−75	10,000	T-11M78	2A3	2:1	T-15D77 or T-19D02	T-15D82	1:1.75
HD-203A	500	1500	−50	6,400	T-11M78	4-2A3	2:1	T-15D80	T-15D83	1:1.25
HD-203A	500	1500	−50	6,400	T-11M78	**6L6	3:1	T-15D84	T-15D83	1:1.4
HD-203A	600	1750	−67.5	7,600	T-11M78	4-2A3	1.75:1	T-15D80	T-15D83	1:1.4
HD-203A	600	1750	−67.5	7,600	T-11M78	**6L6	2.5:1	T-15D84	T-15D83	1:1.75
203B	300	1250	−45	7,900	T-11M77	†2A3	1.8:1	T-15D76 or T-19D01	T-15D82	1:2
4-203B	600	1250	−45	3,900	T-11M78	†4-2A3	1.75:1	T-15D80	T-15D83	1:1.4
4-203B	600	1250	−45	3,900	T-11M78	**6L6	2.5:1	T-15D84	T-15D83	1:1.75
203Z	200	1000	0	6,900	T-11M77 or T-19M17	2A3	4.5:1	T-15D79 or T-19D04	T-15D82	1:.75
203Z	260	1100	0	6,700	T-11M77	†2A3	3.8:1	T-15D78 or T-19D03	T-15D82	1:.85
203Z	300	1250	0	7,900	T-11M77	†2A3	3.8:1	T-15D78 or T-19D03	T-15D82	1:.85
211	Same as R.C.A. 211									
T-756	100	850	−25	9,400	T-11M76 or T-19M16	2A3	3:1	T-15D78 or T-19D03	T-15D82	1:1.25
T-756	125	850	−25	7,500	T-11M76 or T-19M17	2A3	2:1	T-15D77 or T-19D02	T-15D82	1:1.75
T-814	500	2000	−150	11,500	T-11M78	4-2A3	1.25:1	T-15D80	T-15D83	1:2
T-814	500	2000	−150	11,500	T-11M78	**6L6	1.5:1	T-15D80	T-15D82	1:3.15
T-822	Same as HD-203A									
TZ-40	175	1000	0	6,800	T-11M77 or T-19M17	2A3	4:1	T-15D79 or T-19D04	T-15D82	1:.85
TZ-40	175	1000	0	6,800	T-11M77 or T-19M17	45	2.6:1	T-15D77 or T-19D02	T-15D82	1:1.5
TZ-40	100	750	0	6,000	T-11M76 or T-19M16	2A3	4.5:1	T-15D79 or T-19D04	T-15D82	1:.75
TZ-40	100	750	0	6,000	T-11M76 or T-19M16	45	3:1	T-15D78 or T-19D03	T-15D82	1:1.4

SEE PAGES 7 AND 19 FOR DRIVER TRANSFORMERS

DRIVER AND MODULATOR COMBINATIONS

THORDARSON

MODULATOR STAGE						DRIVER STAGE				
P-P Class B Tubes	Power Output Watts	Plate Volts	Bias Volts	Pl. to Pl. Load Ohms	Use Mod. Trans. No.	P-P Driver Tubes	Trans. Ratio, Pri. to ½ Sec.	Use Driver Trans. No.	Trans. for 500 Ohm Line	§Ratio 500. Ohm Line to ½ Sec.
EIMAC TUBES									Where T-15D82 appears T-19D05 may also be used.	
35T	150	1000	-22	7,200	T-11M77 or T-19M17	2A3	2.6:1	T-15D77 or T-19D02	T-15D82	1:1.4
35T	200	1250	-30	9,600	T-11M77 or T-19M17	2A3	2.4:1	T-15D77 or T-19D02	T-15D82	1:1.5
100TH	210	1000	0	5,200	T-11M77 or T-19M17	2A3	3.4:1	T-15D78 or T-19D03	T-15D82	1:1.25
100TH	260	1250	0	7,200	T-11M77	2A3	3.6:1	T-15D78 or T-19D03	T-15D82	1:1.25
100TH	300	1500	-10	9,600	T-11M77	2A3	3.6:1	T-15D78 or T-19D03	T-15D82	1:1.25
100TH	380	2000	-20	16,000	T-11M78	2A3	3.8:1	T-15D78 or T-19D03	T-15D82	1:.85
100TL	170	1000	-90	5,200	T-11M77 or T-19M17	**6L6	2:1	T-15D84	T-15D82	1:2
100TL	230	1250	-112	7,200	T-11M77	**6L6	1.5:1	T-15D84	T-15D82	1:2.5
100TL	270	1500	-140	9,600	T-11M77	**6L6	1.5:1	T-15D84	T-15D82	1:2.5
100TL	350	2000	-185	16,000	T-11M78	**6L6	1.5:1	T-15D84	T-15D82	1:2.5
150T	500	2000	-150	11,500	T-11M78	4-2A3	1.25:1	T-15D80	T-15D83	1:2
150T	600	2500	-195	14,000	T-11M78	4-2A3	1.25:1	T-15D80	T-15D83	1:2
150T	500	2000	-150	11,500	T-11M78	**6L6	1.5:1	T-15D84	T-15D83	1:2.5
150T	600	2500	-195	14,000	T-11M78	**6L6	1.5:1	T-15D84	T-15D83	1:2.5
250TH	300	1000	0	4,000	T-11M77	**6L6	3.5:1	T-15D84	T-15D83	1:1.25
250TH	400	1250	0	5,200	T-11M78	**6L6	3.5:1	T-15D84	T-15D83	1:1.25
250TH	500	1500	-22.5	6,400	T-11M78	**6L6	3:1	T-15D84	T-15D83	1:1.4
RAYTHEON TUBES										
RK-12	100	750	0	8,700	T-11M76 or T-19M16	2A3	6:1	T-15D79 or T-19D04	T-15D82	1:.75
RK-18	100	1000	-50	12,000	T-11M76 or T-19M16	*45	2.4:1	T-15D77 or T-19D02	T-15D82	1:1.75
RK-18	100	1000	-50	12,000	T-11M76 or T-19M16	2A3	4:1	T-15D79 or T-19D04	T-15D82	1:.85
RK-31	110	1000	0	18,600	T-11M76 or T-19M17	*45	4:1	T-15D79 or T-19D04	T-15D82	1:1.25
RK-31	140	1250	0	17,000	T-11M77 or T-19M17	*45	4:1	T-15D79 or T-19D04	T-15D82	1:1.25
RK-31	110	1000	0	13,600	T-11M76 or T-19M17	2A3	6:1	T-15D79 or T-19D04	T-15D82	1:.75
RK-31	140	1250	0	17,000	T-11M77 or T-19M17	2A3	6:1	T-15D79 or T-19D04	T-15D82	1:.75
RK52	200	1000	0	7,200	T-11M77 or T-19M17	2A3	4:1	T-15D79 or T-19D04	T-15D82	1:.85
RK-52	250	1250	0	10,000	T-11M77 or T-19M17	2A3	4:1	T-15D79 or T-19D04	T-15D82	1:.85
RK-57	300	1250	0	6,700	T-11M77	2A3	3.4:1	T-15D78 or T-19D03	T-15D82	1:1.25
RK-57	370	1500	-16	8,200	T-11M78	2A3	3:1	T-15D78 or T-19D03	T-15D82	1:1.25
RK-58	200	1000	0	6,900	T-11M77 or T-19M17	2A3	3.8:1	T-15D78 or T-19D03	T-15D82	1:.85
RK-58	260	1250	0	9,000	T-11M77 or T-19M17	2A3	3.8:1	T-15D78 or T-19D03	T-15D82	1:.85
HYTRON TUBES										
HY-25	75	800	-9	9,000	T-11M75 or T-19M16	2A3	5:1	T-15D79 or T-19D04	T-15D82	1:.75
HY-40	140	800	-28	5,800	T-11M77 or T-19M17	2A3	3:4 to 1	T-15D78 or T-19D03	T-15D82	1:1.25
HY-40	175	1000	-37.5	7,000	T-11M77 or T-19M17	2A3	3:4 to 1	T-15D78 or T-19D03	T-15D82	1:1.25
HY-57	110	800	-9	9,000	T-11M76 or T-19M17	2A3	5:1	T-15D79 or T-19D04	T-15D82	1:.75
HY-51A	180	1000	-35	7,000	T-11M77 or T-19M17	2A3	4:1	T-15D79 or T-19D04	T-15D82	1:.85
HY-51B	180	1000	-35	7,000	T-11M77 or T-19M17	2A3	4:1	T-15D79 or T-19D04	T-15D82	1:.85
AMPEREX TUBES										
HF-100	260	1500	-52	12,000	T-11M77	2A3	3.2:1	T-15D78 or T-19D03	T-15D82	1:1.25
HF-100	350	1750	-62	16,000	T-11M78	2A3	2.4:1	T-15D77 or T-19D02	T-15D82	1:1.4
ZB-120	150	750	0	4,800	T 11M77 or T-19M17	2A3	4:1	T-15D79 or T-19D04	T-15D82	1:.85
ZB-120	200	1000	0	6,900	T-11M77 or T-19M17	2A3	4:1	T-15D79 or T-19D04	T-15D82	1:.85
ZB-120	245	1250	0	9,000	T-11M77 or T-19M17	2A3	4.5:1	T-15D79 or T-19D04	T-15D82	1:.75
ZB-120	300	1500	-9	11,200	T-11M77	2A3	4:1	T-15D79 or T-19D04	T-15D82	1:.85
HF-200	500	2000	-100	11,200	T-11M78	2A3	1.8:1	T-15D76 or T-19D01	T-15D82	1:1.75
HF-200	500	2500	-130	16,000	T-11M78	2A3	2:1	T-15D77 or T-19D02	T-15D82	1:1.75
HF-200	600	2500	-130	16,000	T-11M78	2A3	1.8:1	T-15D76 or T-19D01	T-15D82	1:1.75
HF-200	500	2000	-100	11,200	T-11M78	**6L6	2.5:1	T-15D84	T-15D82	1:1.75
HF-200	600	2500	-130	16,000	T-11M78	**6L6	2.5:1	T-15D84	T-15D82	1:1.75
HEINTZ & KAUFMAN GAMMATRON TUBES										
HK24	45	500	0	6,400	T-11M75 or T-19M15	2A3	4.5:1	T-15D79 or T-19D04	T-15D82	1:.75
HK24	105	1000	-29	15,000	T-11M76 or T-19M16	2A3	3.2:1	T-15D78 or T-19D03	T-15D82	1:1.25
HK-54	170	1250	-35	12,500	T-11M77 or T-19M17	2A3	2.4:1	T-15D77 or T-19D02	T-15D82	1:1.4
HK-54	200	1500	-45	16,800	T-11M77 or T-19M17	2A3	2.4:1	T-15D77 or T-19D02	T-15D82	1:1.4
HK-154	200	1000	-155	7,500	T-11M77 or T-19M17	2A3	1.4:1	T-15D76 or T-19D01	T-15D82	1:2.25
HK-154	223	1250	-210	11,400	T-11M77 or T-19M17	2A3	1.2:1	T-15D76 or T-19D01	T-15D82	1:2.75
HK-254	240	1500	-40	10,000	T-11M77 or T-19M17	2A3	2:1	T-15D77 or T-19D02	T-15D82	1:1.75
HK-254	328	2000	-65	16,000	T-11M78	2A3	2:1	T-15D77 or T-19D02	T-15D82	1:1.75
HK-254	418	2500	-80	22,000	T-11M78	2A3	1.8:1	T-15D76 or T-19D01	T-15D82	1:1.75
HK-354	100	1000	-60	15,000	T-11M76 or T-19M16	2A3	2.6:1	T-15D77 or T-19D02	T-15D82	1:1.25
HK-354	220	1500	-100	15,000	T-11M77 or T-19M17	2A3	2.2:1	T-15D77 or T-19D02	T-15D82	1:1.75
HK-354	400	2000	-150	15,000	T-11M78	2A3	1.4:1	T-15D76 or T-19D01	T-15D82	1:2.25
354E	319	1500	-25	10,000	T-11M77	4-2A3	2.25:1	T-15D81	T-15D83	1:1.25
354E	472	2000	-37.5	11,000	T-11M78	4-2A3	2:1	T-15D80	T-15D83	1:1.25
354E	595	2500	-50	16,000	T-11M78	4-2A3	1.75:1	T-15D80	T-15D83	1:1.4
354F	290	1500	-15	12,000	T-11M77	4-2A3	2.75:1	T-15D81	T-15D83	1:.85
354F	445	2000	-22.5	12,000	T-11M78	4-2A3	2.5:1	T-15D81	T-15D83	1:.85
WESTERN ELECTRIC TUBES										
242A, 261A, 276A		Same as R.C.A. 211								

§NOTE: This ratio is correct only when the tubes supplying power to the 500 ohm line are of the same type and operated under the same conditions as the driver tubes listed under "P.P. Driver Tubes." 2A3 driver tubes are operated with 300 plate volts, self biased, unless preceded by †. 45 driver tubes are operated with 275 plate volts, self biased, unless preceded by *. †2A3 driver tubes are operated with 300 plate volts, fixed bias. *45 driver tubes are operated with 250 plate volts, self biased. **6L6's with 16.6N feed-back, 400 volts plate, 300 volts screen.

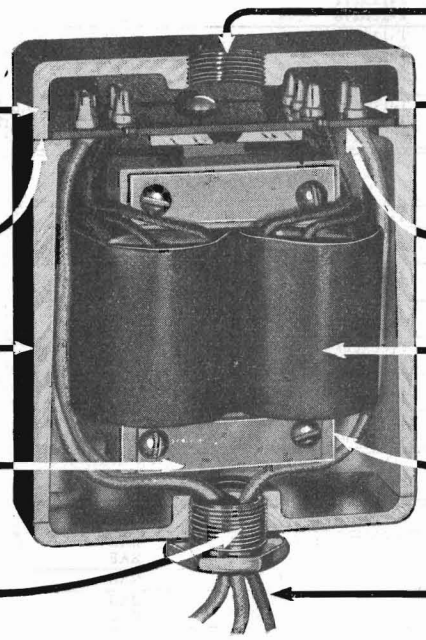
MODULATION TRANSFORMERS ARE LISTED ON PAGES 10 AND 19

THORDARSON

Tru-Fidelity

Tru-Fidelity Transformers by Thordarson have established new standards and conceptions of quality and performance since their introduction from the Thordarson laboratories two years ago. A check of the many distinctive features and performance curves below reveals a few of the reasons for the sincere acceptance of Tru-Fidelity by the most exacting and discriminating engineers.

THORDARSON Tru-Fidelity FEATURES



Reversible Mounting — Threaded mounting hole. Fits microphone fixture—for above or sub-panel mounting.

Shield Cap — No stray pick-up in leads — improves appearance — permits reversible mounting.

Terminal Board — Husky mounting lugs for all connections. Terminals will not loosen when soldering.

Ground Fit — All case joints are ground fit for increased shielding efficiency against outside interference.

Sub-Panel Terminals—Extra row of terminals provides connections for both primary and secondary windings.

Case Body—Special metal, gives maximum transformer shielding and a closed magnetic circuit at all times.

Coils — Dual balanced coils for "hum bucking." Extended frequency range. Capacitive — inductive balance. Low leakage reactance. Distributed capacity

Non-Magnetic Clamps — Brackets and clamps non-magnetic metal. Core and coils held in perfect symmetry.

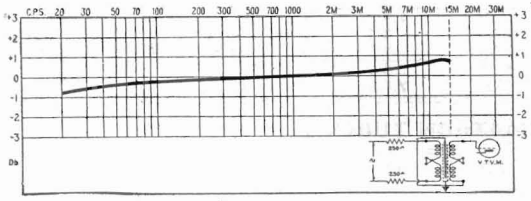
Core — Special lamination. High permeability alloy of perfect uniformity. Extreme low frequency response.

Single Hole Mountings — Drill one hole in chassis. Pass connecting leads through bushing. Rotation of transformer prevents hum pickup. The most efficient mounting ever devised.

Sub-Panel Leads — Pass required leads from sub-terminal board through bushing. Neat — efficient — effective

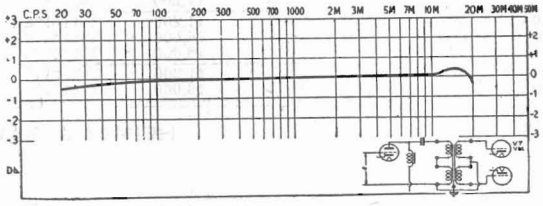
Representative Tru-Fidelity Frequency Response Curves

Actual test conditions shown in circuit diagram.



T-90A00

Maximum variation ¾ db from 20 to 15,000 c. p. s. Measurement made with signal voltage applied to primary through series resistor equal to matching impedance, core and static shield grounded.

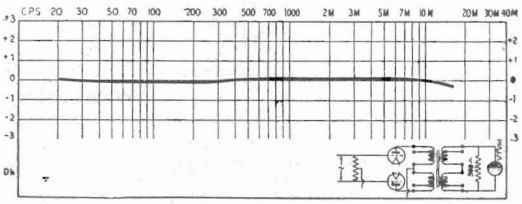


T-90A04

Maximum frequency variation ½ db from 20 to 20,000 c. p. s. Measurement made with primary coupled to parallel fed triode and no resistance load on secondary.

T-90S07

Maximum frequency variation, ½ db from 20 to 15,000 c. p. s. Measurement made with primary coupled to push-pull 2A3's and secondary resistance loaded.



TRU-FIDELITY TRANSFORMERS ARE USED IN T-10W11 AMPLIFIER

Fig. 3T

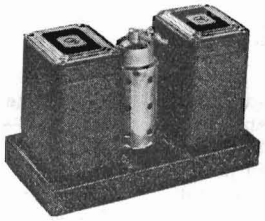


Fig. 3S

CRYSTAL MICROPHONE OR PHOTO CELL TO LINE

Type No.	List Price	Pri. Ohms	Sec. Ohms	Max. D.C. per side (M.A.)	Max. D.C. unbalance (M.A.)	Max. Sig. Level (db)	Mtg. Fig.	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-90A06	$18.00	250,000/62,500	500*/333/250 200*/125/50	0	0	+10	3T	3⅛	2½	4⅛	4¾

PLATE TO LINE (LOW LEVEL)

T-90A02	17.50	20,000/5000 Single Plate	500*/333/250 200*/125/50	8	8	+15	3T	3⅛	2½	4⅛	5
T-90A01	16.50	20,000/5000 Single† or P-P Plates	500*/333/250 200*/125/50	10	0	+20	3T	3⅛	2½	4⅛	4½

†With single tube use parallel feed with resistor or T-90C09.

MIXER

T-90A10	16.00	500*/333/250 200*/125/50	500*/333/250 200*/125/50	100	.5	+10	3T	3⅛	2½	4⅛	4¾

LINE TO GRID

T-90A00	17.00	500*/333/250 200*/125/50	75,000/18,750 Single Grid	100	.5	+10	3T	3⅛	2½	4⅛	4
T-90A11	20.00	500*/333/250 200*/125/50	150,000/37,500 P-P Grids	100	.5	+20	3T	3⅛	2½	4⅛	4

INTERSTAGE

T-90A03	15.00	10,000/2500 Single Plate — Ratio-overall 1 to 2	40,000/10,000 Single Grid	0	0	+15	3T	3⅛	2½	4⅛	4½
T-90A04	15.00	10,000/2500 Single Plate — Ratio-overall 1 to 2	40,000/10,000 P-P Grids	0	0	+15	3T	3⅛	2½	4⅛	4¾
T-90A05	16.50	20,000/5000 P-P Plates — Ratio-overall 1 to 1½	45,000/11,250 P-P Grids	10	0	+20	3T	3⅛	2½	4⅛	4¾

OUTPUT

T-90S07	18.00	5000/3000/1250/750 P-P 2A3, etc.	500*/333/250 200*/125/50	60	5	+32	3T	3⅛	2½	4⅛	4¾
T-90S08	17.50	5000/3000/1250/750 P-P 2A3, etc.	15/10/7.5 5/3.75/1.25	60	5	+32	3T	3⅛	2½	4⅛	4¾
T-90S13	20.00	5000/3000/1250/750 P-P 2A3, etc.	500*/333/250 200*/125/50 or 15/10/7.5 5/3.75/1.25	60	5	+34	3S	4	3⅞	4⅞	11

LINE TO VOICE COIL

T-90S12	18.00	500*/333/250 200*/125/50	15/10/7.5 5/3.75/1.25	0	0	+32	3T	3⅛	2½	4⅛	4¾

PLATE REACTOR

Type No.	List	Connection	Henries	M.A.	D.C. Ohms	Mtg. Fig.	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-90C09	12.50	Series	300	8	4,000	3T	3⅛	2½	4⅛	4½
		Parallel	75	16	1,000					

*Indicates inductive and capacitive balance to center tap for use on balanced transmission lines.

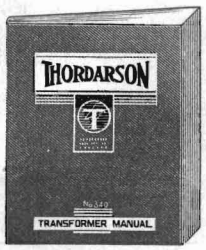
OTHER AUDIO TRANSFORMERS ARE LISTED ON PAGES 6 TO 9 AND ON PAGE 19

THORDARSON

Guides and Manuals

Replacement Transformer Encyclopedia, No. 243, and Supplement, No. 243-D. Free — Complete information regarding correct choke, audio and power transformer replacements. Covers almost 6000 receivers as listed in Rider's Manuals, Volumes I to IX. Includes data on AC, AC-DC and battery models. This is the only complete listing available and will save valuable time for the serviceman. You cannot afford to be without a copy. Ask your distributor for a copy.

Complete Transformer Manual—No. 340, 50c — The Thordarson Transformer Manual is a complete book, containing the Radio Servicing Guide, the Replacement Transformer Encyclopedia, the Transmitter Guide, and the Sound Amplifier Guide, plus Thordarson catalogs and prices. It is bound in an attractive blue and orange cover with looseleaf arrangement, giving the user opportunity to keep the Manual up-to-date by adding the latest Thordarson releases.

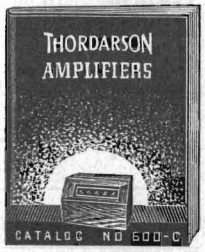


Sound Amplifier Guide — No. 346-D, 15c — Here is a book every sound man needs. It has circuit diagrams, details and parts lists for amplifiers ranging up to 120 watts output; also information on speaker placement, microphones, and a useful db table.

Transmitter Guide — No. 344-C, 15c. Fifty-two pages of up-to-the-minute data on transmitter design and operation. Portable units, beginners transmitters, and larger rigs up to 1000 watts are fully described. Circuit diagrams, parts lists, and photographs illustrate each article.

Radio Service Guide—No. 342-C, 15c. A book full of practical, accurate information for the Serviceman. Gives complete schematics, photos and parts lists for building such needed equipment as a 32 volt DC power supply, an improved condenser analyzer and impedance bridge and details on two high fidelity audio amplifiers. Has charts, tables and short-cuts that are needed every day in the year. Written for Servicemen by Servicemen.

Amplifier Catalog — No. 600-C, Free. Illustrates six models with outputs ranging from 8 to 60 watts. The 15, 25 and 40 watt models are in the new solid walnut cases with illuminated control panels which are recessed and arranged at a convenient operating angle. The catalog contains technical data with regard to each of the models, general information about the line, illustrations and prices of speaker and portable cases, etc. 12 pages.



"BUILD-IT-YOURSELF" OSCILLOSCOPE FOUNDATION UNIT

An accurately planned foundation unit with explicit wiring instructions enables the builder to complete a perfectly engineered instrument at reasonable cost. Small overall size makes it ideal for relay rack or servicemen. Magnifying lens gives clear two-inch image.

Type No.	List Price	Description	Dimensions W.	D.	H.
T-11K16	$3.00	Punched chassis, panel, light shield and instructions	10½	6	5⅝
T-11K17	2.00	Etched panel	10½		5⅝
T-11K19	2.25	Cover for T-11K16	10½	6¾	5⅝
T-11K20	2.00	2" lens with retainer ring			
T-92R33	4.00	Power transformer			
T-74C30	1.50	Filter choke			

Circuit diagram, description and parts list given in catalog bulletin SD266

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