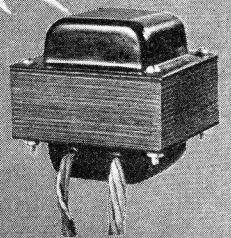
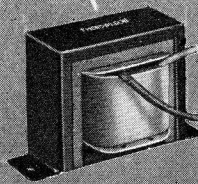
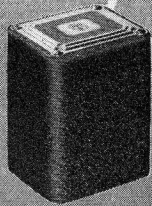
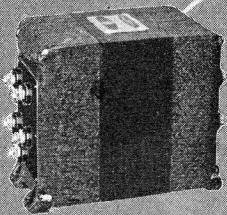


Scanned and Prepared
by Dale H. Cook

THORDARSON

Complete Transformer Catalog No. 400-D

1939 • FALL - WINTER • 1940



THORDARSON ELECTRIC MFG. CO.

500 W. HURON ST., CHICAGO, ILL.

Demand "Power by Thordarson"



INDEX — WITH LIST PRICES (EFFECTIVE AUG. 1, 1939)

(SEE BACK COVER FOR CLASSIFIED INDEX)

Catalog prices are list, subject to trade discount. Add 60% for 25 cycle 115 v. primary; 30% for 230 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,

Type No.	Page No.	List Price	Type No.	Page No.	List Price	Type No.	Page No.	List Price	Type No.	Page No.	List Price	Type No.	Page No.	List Price	Type No.	Page No.	List Price
T-9V30	15	\$40.00	T-14R50	9	\$15.00	T-15D84	16	\$11.50	T-19C44	12	\$10.00	T-55A16	15	\$ 2.75	T-72S58	9	1.65
T-9V31	15	65.00	T-14C51	9	8.00	T-15D85	16	7.50	T-19C45	12	14.00	T-56R01	3	5.50	T-72A59	9	1.65
T-9V32	15	100.00	T-14C61	6	1.05	T-15D86	16	7.50	T-19C46	12	3.25	T-56R03	3	5.50	T-73M52	11	\$18.00
T-9V33	15	175.00	T-14C62	6	1.05	T-15D87	16	11.00	T-19P54	12	5.75	T-56R05	3	5.75	T-73F60	13	3.75
R-1068	6-23	2.50	T-14C63	6	1.05	T-15S90	18	9.25	T-19P55	12	7.50	T-57S01	9	2.00	T-74F23	13	5.00
T-11K16	24	3.00	T-14C64	6	1.05	T-15S91	18	11.50	T-19P56	12	8.00	T-57S02	9	2.00	T-74F24	13	7.00
T-11K17	24	2.00	T-14C70	6	2.50	T-15S92	18	13.75	T-19P57	12	10.00	T-57A36	7	2.00	T-74R28	4	6.50
T-11K19	24	2.25	T-14S80	9	2.00	T-15S93	18	15.00	T-19P58	12	13.00	T-57A38	7	2.75	T-74C29	6	3.75
T-11K20	24	2.00	T-14S81	8	1.25	T-15S94	18	17.50	T-19P59	12	16.00	T-57A39	7	2.25	T-74C30	6-24	1.50
T-11F50	17	9.00	T-14S82	8	1.25	T-15S96	18	11.00	T-19P60	12	18.50	T-57A40	7	2.75	T-74A31	6-7	3.25
T-11F51	17	9.50	T-14S83	8	1.25	T-15S97	18	14.50	T-19P61	12	20.00	T-57A41	7	3.00	T-74D32	10	3.50
T-11F52	17	13.25	T-14S84	8	1.25	T-16C07	6	2.25	T-19P62	12	22.50	T-57A42	7	3.25	T-75D10	10	5.50
T-11F53	17	8.00	T-14A90	15	2.50	T-16R50	16	16.00	T-19P63	12	23.00	T-57C51	6	1.50	T-75M11	11	20.00
T-11F54	17	16.00	T-14A91	15	2.50	T-16R51	16	18.50	T-19P64	12	28.50	T-57C52	6	1.75	T-75R47	4	3.75
T-11F55	17	11.50	T-14A92	7	1.25	T-16F55	16	11.00	T-19P65	12	29.50	T-57C53	6	2.00	T-75C49	6	1.50
T-11F56	17	7.75	T-14D93	7	1.75	T-16S58	16	16.00	T-19P66	12	35.00	T-57C54	6	2.25	T-75R50	4	7.50
T-11F57	17	13.75	T-15R00	18	10.50	T-17C00-B	6	2.75	T-19P67	12	42.50	T-58A37	15	2.25	T-75C51	6	5.00
T-11F58	17	15.00	T-15R01	18	15.00	T-17D01	7	2.00	T-19P68	12	50.00	T-58A70	7	3.25	T-75A74	7	2.50
T-11F59	17	5.75	T-15R02	18	13.25	T-17A02	7	2.25	T-19P69	12	13.00	T-58S72	8	3.75	T-75S75	8	4.00
T-11F60	17	6.25	T-15R03	18	13.75	T-17D03	10	4.50	T-19F76	13	4.75	T-60S48	9	3.00	T-76S74	9	3.00
T-11F61	17	18.50	T-15R04	19	4.75	T-17D04	10	4.50	T-19F77	13	7.00	T-60R49	3	2.25	T-77R63-A	4	3.75
T-11F62	17	6.75	T-15R05	19	10.50	T-17S10	8	3.00	T-19F78	13	5.25	T-61V07	14	5.00	T-78D46	7	1.50
T-11F63	17	8.00	T-15R06	19	9.75	T-17S11	8	4.50	T-19F79	13	6.75	T-61S25	9	3.25	T-79F84	13	4.75
T-11F64	17	9.50	T-15R07	19	10.50	T-17S12	8	4.50	T-19F80	13	1.25	T-61S26	9	3.50	T-80R92-C	4	7.50
T-11M74	16	9.00	T-15R08	19	13.75	T-17S13	8	6.00	T-19F81	13	1.50	T-61D40	10	5.50	T-81S01	8	1.50
T-11M75	16	12.50	T-15P11	18	12.50	T-17S14	8	6.00	T-19F82	13	5.75	T-61F85	13	2.00	T-81C15	6	2.50
T-11M76	16	19.50	T-15P12	18	15.00	T-17S15	8	6.50	T-19F83	13	2.25	T-61A94	15	3.25	T-81D42	10	3.25
T-11M77	16	30.00	T-15P13	18	20.00	T-17S16	8	12.00	T-19F84	13	2.75	T-62D65	15	6.00	T-81D52	10	3.50
T-11M78	16	60.00	T-15P14	18	25.00	T-17S17	9	6.50	T-19F85	13	3.50	T-63C15	12	7.50	T-82M09	11	20.00
T-13R00	3	4.00	T-15P15	18	30.00	T-17R30	4	8.50	T-19F86	13	6.00	T-63R63	3	3.50	T-82V11	14	12.50
T-13R01	3	2.50	T-15P16	18	45.00	T-17R31	4	12.50	T-19F87	13	6.25	T-63A71	15	3.75	T-82V12	14	17.50
T-13R02	3	3.25	T-15P17	18	32.50	T-17R32	10	10.00	T-19F88	13	1.75	T-63A72	15	3.75	T-82V13	14	22.50
T-13R03	3	3.50	T-15P18	18	60.00	T-17R33	10	12.50	T-19F89	13	2.25	T-63A73	15	3.25	T-82M25	11	40.00
T-13R04	3	4.25	T-15P19	18	50.00	T-17C40	10	4.75	T-19F90	13	3.00	T-63F99	13	3.25	T-83D21	15	3.50
T-13R05	3	4.00	T-15P20	18	85.00	T-17S57	9	2.25	T-19F91	13	2.25	T-64C06	12	10.00	T-83M22	11	9.00
T-13R06	3	5.25	T-15P21	18	80.00	T-17M59	11	3.00	T-19F92	13	3.25	T-64C07	12	12.50	T-83R77-A	4	3.25
T-13R07	3	5.50	T-15P22	18	50.00	T-18V00	14	10.50	T-19F93	13	2.25	T-64F13	13	2.75	T-83A78	15	2.00
T-13R08	3	4.50	T-15C36	17	8.00	T-18V01	14	19.50	T-19F94	13	3.00	T-64F14	13	4.75	T-83R82	4	10.00
T-13R09	3	6.50	T-15C37	17	10.00	T-18V02	14	27.50	T-19F95	13	2.75	T-64M25	11	6.00	T-83D83	10	3.75
T-13R11	3	2.50	T-15C38	17	12.00	T-18V03	14	6.25	T-19F96	13	3.50	T-64M26	11	6.00	T-83S84	8	6.00
T-13R12	3	3.25	T-15C39	17	22.00	T-18V04	14	7.75	T-19F97	13	1.75	T-64F33	13	4.50	T-83R85	4	12.00
T-13R13	3	4.00	T-15C41	17	26.50	T-18V05	14	10.50	T-19F98	13	2.75	T-64F37	13	6.00	T-83S87	8	9.00
T-13R14	3	4.25	T-15C45	17	8.00	T-18V06	14	6.00	T-19F99	13	3.50	T-64F38	13	4.00	T-84S58	8	6.00
T-13R15	3	5.75	T-15C46	17	10.00	T-18V07	14	13.50	T-23A57	15	2.25	T-65A73	15	2.75	T-84D59	10	3.50
T-13R16	3	6.50	T-15C47	17	12.00	T-18V10	14	3.00	T-26V04	14	4.50	T-65S94	8	4.00	T-84P60	12	7.75
T-13R17	3	4.00	T-15C48	17	22.00	T-18D19	16	18.00	T-29C27	6	1.50	T-67C46	6	1.75	T-84M70	11	10.00
T-13R18	3	4.50	T-15C50	17	26.50	T-18V20	14	5.00	T-29A99	7	1.75	T-67D47	10	2.50	T-84R81-C	4	3.50
T-13R19	3	2.35	T-15C52	19	5.00	T-18V21	14	6.00	T-30A20	15	3.00	T-67S48	8	3.50	T-85F14	13	17.50
T-13C26	6	.90	T-15C53	19	5.50	T-18V22	14	7.50	T-33A91	7	2.00	T-67C49	6	2.75	T-86A02	15	1.75
T-13C27	6	1.10	T-15C54	19	5.50	T-18V23	14	12.00	T-33S99	8	1.50	T-67D50	10	2.75	T-86A03	7	2.00
T-13C28	6	1.20	T-15C55	19	7.00	T-18C92	6	1.50	T-37C36	6	2.00	T-67S51	8	3.50	T-87R85	4	7.00
T-13C29	6	1.60	T-15C56	19	9.00	T-19D01	10	6.00	T-37R70-C	3	7.50	T-67S52	8	4.00	T-89R28	4	11.00
T-13C30	6	2.00	T-15R60	18	9.50	T-19D02	10	6.00	T-40V15	14	6.50	T-67S54	8	4.00	T-89S68	8	6.50
T-13A34	7	1.35	T-15R61	18	10.50	T-19D03	10	6.00	T-43C92	6	1.65	T-67M69	11	2.75	T-89S74	8	3.75
T-13A35	7	1.50	T-15R62	18	12.50	T-19D04	10	6.00	T-44C02	6	1.50	T-67M73	11	3.50	T-89S75	8	4.00
T-13A36	7	1.75	T-15A65	16	10.50	T-19D05	10	6.00	T-47V01	14	6.00	T-67M74	11	4.50	T-90A00	22	17.00
T-13S37	8	1.25	T-15A66	19	7.25	T-19D06	10	3.00	T-47V02	14	9.75	T-67D78	10	3.00	T-90A01	22	16.50
T-13S38	9	1.50	T-15A67	19	8.00	T-19M13	11	4.00	T-47V03	14	21.75	T-67D89	10	3.00	T-90A02	22	17.50
T-13S39	8	1.25	T-15A68	19	8.00	T-19M14	11	7.00	T-47V04	14	35.00	T-67A91	7	3.00	T-90A03	22	15.00
T-13S40	8	1.50	T-15A69	19	7.25	T-19M15	11	10.00	T-47C07	6	1.65	T-67S92	8	4.00	T-90A04	2	15.00
T-13S41	9	2.75	T-15A70	19	7.50	T-19M16	11	15.00	T-47A25	7	1.75	T-67R97	4	4.25	T-90A05	22	16.50
T-13S42	9	1.50	T-15A71	19	7.25	T-19M17	11	24.00	T-49R00	3	3.00	T-68S06	8	2.50	T-90A06	22	18.00
T-13S43	8	1.35	T-15A72	19	7.25	T-19M21	11	7.00	T-49C91	6	1.50	T-68C07	6	2.00	T-90S07	22	18.00
T-14A29	7	2.25	T-15A73	19	6.50	T-19M22	11	10.00	T-50R03	3	3.50	T-68C08	6	1.75	T-90S08	22	17.50
T-14R32	24	6.50	T-15A74	19	6.50	T-19R30	12	7.75	T-50V10	14	5.50	T-68R26	4	6.75	T-90C09	22	12.50
T-14R33	4	2.75	T-15A75	19	7.00	T-19R31	10	5.50	T-50V11	14	7.50	T-69R35	4	6.50	T-90A10	22	16.00
T-14R34	4	3.25	T-15D76	16	8.25	T-19R32	10	7.25	T-50F61	13	1.50	T-70R20	3	2.75	T-90A11	22	20.00
T-14R35	4	3.75	T-15D77	16	8.25	T-19C35	12	4.00	T-51D00	10	4.50	T-70R21	3	3.50	T-90S12	22	14.00
T-14R36	4	4.25	T-15D78	16	8.25	T-19C36	12	6.50	T-52C98	6	1.75	T-70F46	13	7.75	T-90S13	22	20.00
T-14R37	4	4.75	T-15D79	16	8.25	T-19C37	12	10.00	T-53C19	6	1.50	T-70R61	3	4.00	T-92F20	13	4.75
T-14R38	4	5.25	T-15D80	16	11.50	T-19C38	12	14.00	T-53S81	9	4.00	T-70R62	3	5.50	T-92R21	4	7.50
T-14R39	4	2															

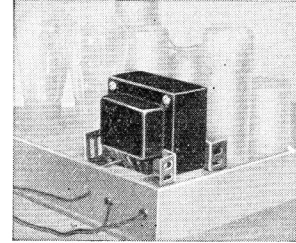
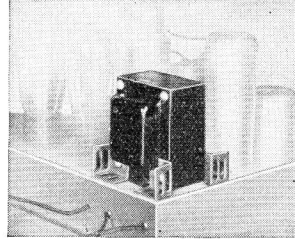
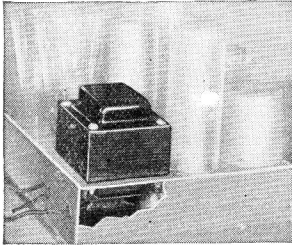


REPLACEMENT POWER TRANSFORMERS



UNIVERSAL DUPLICATE POWER TRANSFORMERS — "13R" Series

Thordarson "13R" Series Power Transformers are favored by servicemen in all parts of the world. There is a type for practically every receiver listed in Riders Manuals. Specific recommendations are shown in Thordarson Replacement Transformer Encyclopedia No. 243 and supplements, as described on the following page.



MOUNTING FIGURE 3A permits mounting in flush, vertical or horizontal position as shown in these photographs. Adjustable mounting brackets are furnished.

Other quality features include: Electrostatic shields between primary and secondary windings; Double shells to protect the coil from mechanical injury and to provide magnetic shielding; 10-inch RMA Color Coded Leads. Primary 110-120 volts 50-60 cycles.

Type No.	List Price	Pri. V.A.	Secondary		Filament Windings			Dimensions			Wt. Lbs.
			A.C. Volts	D.C. M.A.	Rect. Fil.	Fil. No. 1	Fil. No. 2	W.	D.	H.	
T-13R19	\$2.35	45	480 Ct.	40	5V-2A	6.3V-2A Ct.		2 1/2	2 5/8	2 3/8	2 1/4
T-13R11	2.50	60	580 Ct.	50	5V-3A	6.3V-2A Ct.		2 1/2	2 5/8	3	3 1/4
T-13R12	3.25	65	700 Ct.	70	5V-3A	6.3V-2.5A Ct.		2 1/2	3 1/8	3	3 1/4
T-13R13	4.00	90	700 Ct.	90	5V-3A	6.3V-3.5A Ct.		3 1/8	3 3/8	3 3/4	5 1/4
T-13R14	4.25	115	700 Ct.	120	5V-4A	6.3V-4.7A Ct.		3 1/8	3 1/2	3 3/4	5 1/4
T-13R15	5.75	140	750 Ct.	150	5V-4A	6.3V-5A Ct.		3 3/4	3 3/8	4 1/2	6 1/2
T-13R16	6.50	180	800 Ct.	200	5V-4A	6.3V-5.14A Ct.		3 3/4	3 5/8	4 1/2	7 3/4
T-13R17	4.00	85	600 Ct.	60	5V-3A	6.3V-2.5A Ct.	2.5V-7.5A Ct.	2 5/8	3 5/8	3 3/8	4 1/2
T-13R18	4.50	115	700 Ct.	90	5V-3A	6.3 tapped at 2.5V-3.5A Ct.	2.5V-9A Ct.	3 3/4	3 1/4	4 1/2	5 3/4
T-13R08	4.50	105	700 Ct.	90	5V-3A	6.3V-3.3A Ct.	2.5V-6A Ct.	3 1/8	3 1/2	3 3/4	5 1/4
T-13R09	6.50	160	750 Ct.	180	5V-3A	6.3V-3.3A Ct.	2.5V-6A Ct.	3 3/4	3 5/8	4 1/2	7 1/2
T-13R00	4.00	70	550 Ct.	70	5V-3A	5V-.5A Ct.	2.5V-10.5A Ct.	2 5/8	3 3/8	3 3/8	4
T-13R01	2.50	60	650 Ct.	40	5V-3A	2.5V-4A Ct.		2 1/2	2 5/8	3	3 1/4
T-13R02	3.25	60	700 Ct.	50	5V-3A	2.5V-7.25A Ct.		2 1/2	2 5/8	3	3 1/4
T-13R03	3.50	75	700 Ct.	70	5V-3A	2.5V-9A Ct.		2 5/8	3 3/8	3 3/8	4
T-13R04	4.25	115	700 Ct.	100	5V-3A	2.5V-12.5A Ct.		3 1/8	3 1/2	3 3/4	5 1/4
T-13R05	4.00	110	700 Ct.	70	5V-3A	2.5V-9A Ct.	2.5V-3.5A Ct.	3 1/8	3 1/2	3 3/4	5 1/4
T-13R06	5.25	130	700 Ct.	120	5V-3A	2.5V-12.5A Ct.	2.5V-3.5A Ct.	3 3/4	3 3/8	4 1/2	6 1/2
T-13R07	5.50	140	800 Ct.	110	5V-3A	2.5V-15A Ct.	2.5V-3.5A Ct.	3 3/4	3 1/2	4 1/2	6 3/4

OTHER REPLACEMENT POWER TRANSFORMERS

Case style 2H — Half shell or flush mounting. Terminal lug identification printed on coil label.

T-60R49	\$2.25	30	560 Ct.	30	5V-2A	2.5V-3.5A Ct.		3	2 1/2	2 3/8	2
T-49R00-	3.00	65	700 Ct.	70	5V-2A	2.5V-8.5A Ct.		3 7/8	3 1/4	3 3/8	4 1/2
T-50R03-	3.50	75	700 Ct.	80	5V-2A	2.5V-12A Ct.		3 7/8	3 1/4	3 5/8	5 1/2
T-63R63-	3.50	75	700 Ct.	80	5V-2A	2.5V-9A Ct.	2.5V-3A Ct.	3 7/8	3 1/4	3 5/8	5 1/4
T-70R20	2.75	45	600 Ct.	50	5V-2A	6.3V-2A Ct.		3 3/8	2 7/8	3	3
T-70R21	3.50	70	700 Ct.	70	5V-2A	2.5V-4A Ct.	6.3V-3A Ct.	3 7/8	3 1/4	3 3/8	4 1/4

Case style 2G — Fully shielded upright mounting with leads brought out through base. Knock out holes provide optional above panel connection.

T-56R01	\$5.50	60	650 Ct.	70	5V-2A	2.5V-3A Ct.	1.5V-1A 1.5V-4A	5V-.5A Ct.	3 3/8	3 3/4	4 5/8	5 3/4
T-56R03	5.50	85	700 Ct.	105	5V-3A	2.5V-3A Ct.	2.5V-1.75A Ct.	1.5V-5A 1.5V-1A	3 3/4	3 3/4	4 7/8	7 1/4
T-56R05	5.75	115	700 Ct.	110	5V-3A	2.5V-9A Ct.	2.5V-3A Ct.	2.5V-3A Ct.	3 3/4	3 3/4	4 7/8	7 3/4
T-37R70-C	7.50	95	700 Ct.	80	5V-2A Ct.	3V-10A Ct.	5V-2.5A Ct.		3 3/8	4	4 5/8	6 3/4
<i>For Sparton Models 235, 589, 593, 600 Series, 737, 931.</i>												
T-70R78	3.25	60	680 Ct.	55	5V-2A	6.3V-1.5A Ct.			3 3/8	3	4 5/8	4
T-70R61	4.00	60	770 Ct.	70	5V-2A	6.3V-2.5A Ct.			3 3/8	3 1/4	4 5/8	4 3/4
T-70R62	5.50	110	700 Ct.	145	5V-3A	6.3V-4.5A Ct.			3 3/4	3 7/8	4 7/8	8 1/2

Other Power Transformers are listed on pages 4 and 19.



POWER TRANSFORMERS — AMPLIFIER, TRANSMITTER AND GENERAL PURPOSE

For continuous duty applications in high quality receivers, amplifiers or for low power stages of transmitters and many similar applications. Primary 115 volts 50-60 cycles.

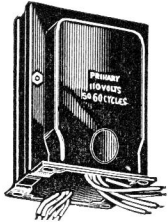


Fig. 2G

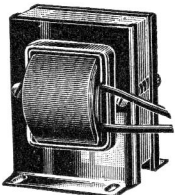


Fig. 3C

Type No.	List Price	Pri. V.A.	Secondary			Rect. Fil.	Fil. No. 1	Fil. No. 2	Mtg. Fig.	Dimensions			Wt. Lbs.
			A.C. Volts	D.C. M.A.	Bias Tap					W.	D.	H.	
T-75R47	\$3.75	75	610 Ct.	125		5V-2A	6.3V-2A Ct.		2H	3 7/8	3 1/4	3 5/8	6
T-84R81-C	3.50	70	720 Ct.	70		5V-2A	6.3V at 2.65A		2G	3 1/4	3 1/4	3 7/8	4 3/8
T-77R63-A	3.75	75	750 Ct.	75		5V-2A	6.3V at 2.2A		2G	3 1/4	3 1/2	4 5/8	4 7/8
T-83R77-A	3.25	65	660 Ct.	70		5V-2A Ct.	6.3V at 2.2A		2G	2 3/4	3 1/2	3 1/2	4
T-80R92-C	7.50	160	840 Ct.	200		5V-3A	2.5V at 3A Ct.	2.5V at 1.5A	2G	3 3/4	4 5/8	4 3/4	9 1/4
T-92R21	7.50	150	800 Ct.	200		5V-3A	6.3V-5A Ct.		2G	3 3/4	4 1/4	4 7/8	9
T-17R30	8.50	200	740 Ct.	280		5V-3A	6.3V-6A Ct.		2G	3 3/4	3 1/2	4 7/8	9 1/2
T-17R31	12.50	300	860 Ct.	325		5V-6A	6.3V-7A Ct.		2G	3 3/4	5 1/4	4 7/8	13 1/2
T-74R28	6.50	105	880 Ct.	125	38V	5V-3A 2.5V-3A	6.3V-3.3A Ct.		2G	3 3/4	3 3/4	4 7/8	8
T-87R85	7.00	105	660 Ct.	160	77V	5V-3A 5V-2A	6.3V-2A Ct.	2.5V-5A Ct.	2G	3 3/4	3 7/8	4 7/8	8 1/2
T-68R26	6.75	160	1100 Ct.	150		5V-3A	7.5V-2.5A Ct.	2.5V-5A Ct.	2G	3 3/4	4 3/8	4 7/8	10 1/8
T-69R35	6.50	135	775 Ct.	200		5V-3A	6.3V-3A Ct.		2G	3 3/4	4 3/8	4 7/8	9 1/2
T-75R50	7.50	160	870 Ct.	250	80V	5V-3A 2.5V-3A	6.3V-1.5A Ct.	2.5V-10A Ct.	2G	3 3/4	4 3/8	4 7/8	10 1/2
T-83R82	10.00	200	1480 Ct.	140	150V	5V-3A 2.5V-3A	7.5V-2.5A Ct.		2G	3 3/4	4 3/4	4 7/8	11 1/2
T-83R85	12.00	290	1480 Ct.	200	150V	5V-3A 2.5V-3A	7.5V-5A Ct.		2G	3 3/4	5 1/4	4 7/8	13 1/2
T-89R28	11.00	250	1100 Ct.	275		5V-3A Ct. 5V-2A Ct.	6.3V-6A Ct.		2G	3 3/4	5 1/4	4 7/8	15

SPEAKER-FIELD SUPPLY TRANSFORMERS

T-67R97	4.25	55	115 V.D.C.	50 to 250	5V-3A				2G	3 7/8	3 1/4	3 1/4	4 3/4
T-92R53	5.75	120	300 V.D.C.	200	5V-3A				2G	3 7/8	3 7/8	3 1/4	6 1/4

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		Mtg. Fig.	Dimensions			Wt. Lbs.
		D.C. Volts to Filter	M.A.		W.	D.	H.	
T-14R33	\$2.75	225	40	3C	2 1/2	2 3/8	3 1/8	2
T-14R34	3.25	250	50	3C	2 1/2	2 1/2	3 1/8	2 1/4
T-14R35	3.75	260	60	3C	2 1/2	2 5/8	3 1/8	2 1/2
T-14R36	4.25	285	75	3C	2 1/2	2 7/8	3 1/8	3
T-14R37	4.75	350	75	3C	2 1/2	3 1/8	3 1/8	3 1/2
T-14R38	5.25	320	100	2G	3 3/4	3 1/4	4 5/8	5
T-14R39	2.75	150	40	2B	2	2	2 3/8	1 1/4

115 V. 50-60 CYCLE OR 6 V. D. C. VIBRATOR TRANSFORMER

T-14R40	6.50	350	135	2G	3 3/4	4	5	8 1/2
		File-6.3 Ct.	4.75 Amp.					

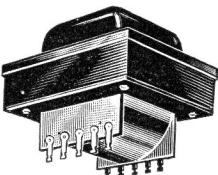


Fig. 2H

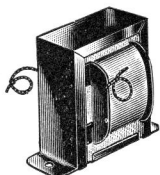
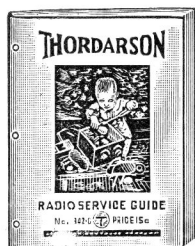
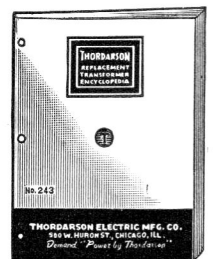


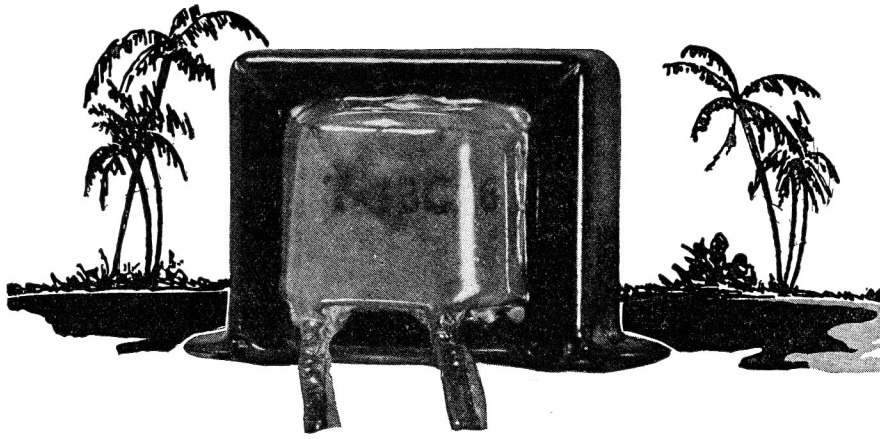
Fig. 2B



Thordarson Radio Service Guide—No. 342-C, 15c List—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 shortcuts that are needed every day in the year. Written for Servicemen by Servicemen.

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.





THORDARSON TROPEX TRANSFORMERS

Protected Against Excessive Moisture, Salt Air, Tropical Climates

IN THE new Thordarson TROPEX Transformers Thordarson engineers have won the battle against the corrosive and destructive effects of moisture, high humidity and salt air as found in tropical or coastal countries and regions with heavy rainfall. The Tropex process encloses the entire transformer, fully protecting the fine wire windings against the elements that shorten the life of a transformer through electrolysis.

Tropex finish is practically colorless, neat appearing and clean to handle. It is the answer to the transformer problems of servicemen in territories affected by adverse climatic conditions, especially excessive moisture.

The Tropex process can be applied to practically any open mounting type transformer. Listed on this page are the popular replacement audios and chokes in Tropex finish. You will recognize the type numbers as being standard Thordarson items with the suffix "X" which designates Tropex finish. When ordering, be sure to include this suffix "X" on each item where you desire Tropex finish. Write factory for information and prices on types not shown in this listing.

The additional cost for Thordarson Tropex Transformers is surprisingly small, averaging 20c to 25c added to the list price of the corresponding regular type as listed.

For more complete data see duplicate listings on other pages.

TROPEX REPLACEMENT AUDIO TRANSFORMERS

Type No.	Application	List Price
T-13A34-X	10,000 ohm plate to single grid	\$1.55
T-29A99-X	10,000 ohm plate to single grid	2.00
T-13A35-X	10,000 ohm plate to P.P. grids	1.70
T-33A91-X	10,000 ohm plate to P.P. grids	2.25
T-13A36-X	P.P. 10,000 ohm plates to P.P. grids	1.95
T-78D46-X	Single 30 to class B 19, 1J6G, or 30's	1.70
T-17D01-X	Single 6F6 etc., to 2-6F6, etc.	2.25

TROPEX OUTPUT TRANSFORMERS

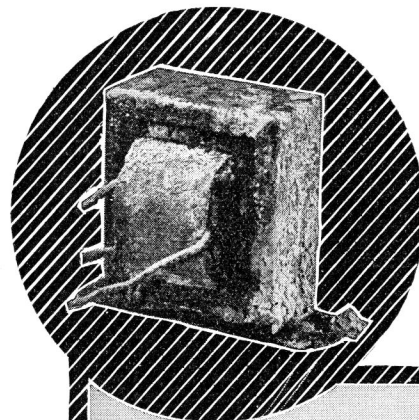
Type No.	Application	List Price
T-13S37-X	Single 6F6, 42, 2A5 etc. to voice coil	\$1.45
T-13S39-X	Single 45, 1-2A5 etc. to voice coil	1.45
T-13S40-X	P.P. 6F6, 42, 2A5 etc. to voice coil	1.70
T-33S99-X	P.P. 45, 71A, 43 etc. to voice coil	1.75
T-81S01-X	Class B 19, 1J6G, 30's etc. to voice coil	1.70
T-13S43-X	Single 1F4, 1D4, 1F5G etc. to voice coil	1.55
T-14S81-X	Single 6F6, 2A5 etc. or P.P. 45, 71A etc. to voice coil	1.45
T-14S82-X	Single 25L6 etc. to voice coil	1.45

TROPEX UNIVERSAL OUTPUT TRANSFORMERS

Type No.	Application	List Price
T-13S38-X	Any single or P.P. tubes to voice coil	\$1.70
T-57S01-X		2.25
T-57S02-X		2.25
T-13S41-X		3.25
T-13S42-X		1.70

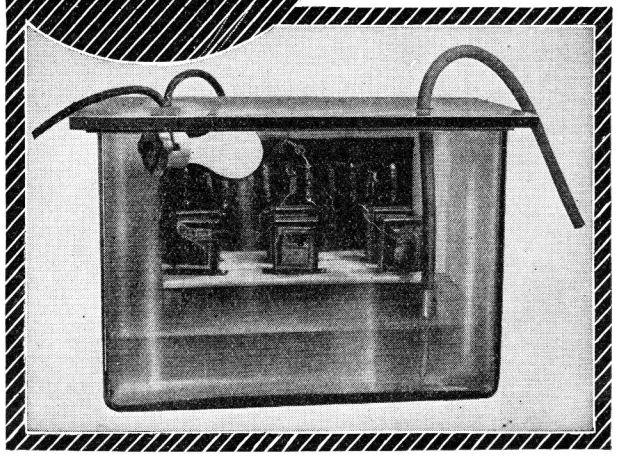
TROPEX FILTER CHOKES

Type No.	Application	List Price
T-13C26-X	8 Hy at 40 MA 530 ohms DC	\$1.10
T-13C27-X	10 Hy at 40 MA 475 ohms DC	1.30
T-13C28-X	10 Hy at 65 MA 460 ohms DC	1.45
T-13C29-X	9 Hy at 85 MA 250 ohms DC	1.85
T-13C30-X	8 Hy at 150 MA 200 ohms DC	2.50
T-18C92-X	22 Hy at 35 MA 405 ohms DC	1.75
T-14C61-X	7 Hy at 55 MA 200 ohms DC	1.25
T-14C62-X	8 Hy at 55 MA 250 ohms DC	1.25
T-14C63-X	8 Hy at 55 MA 300 ohms DC	1.25
T-14C64-X	10 Hy at 55 MA 350 ohms DC	1.25



Grueling test applied to TROPEX Transformers — three months... and still O. K.! Another Proof of Thordarson Stamina.

Test Conditions: 120 F., 85% Humidity; Saturated salt solution constantly agitated; 300V @ 5MA through primary and 300V between primary and ground.



See Page 2 for numerical index — page 24 for classified index.



REPLACEMENT FILTER CHOKES

Inductance and current ratings suitable for any receiver. Black enamel strap mounting. Inductance ratings given for high inductance no current as well as actual operating conditions. The A.C. D.C. Chokes are designed for use in circuits where the D.C. resistance of the winding is the important factor.

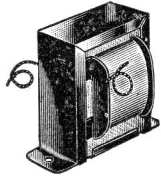


Fig. 2B

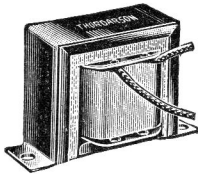


Fig. 3B

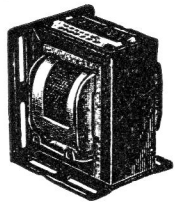


Fig. 2C

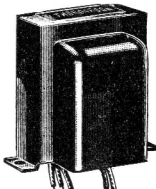


Fig. 2F

Type No.	List Price	Inductance		Current Rating M.A.	D.C. Res. Ohms	Volts Ins.	Mtg. Fig.	Dimensions			Wt. Lbs.
		At Zero D.C.	At Rated D.C.					W.	D.	H.	
T-13C26	\$.90	21	8	40	530	1600	3B	1 3/4	1 3/8	1 3/8	1 1/2
T-13C27	1.10	22	10	40	475	1600	3B	2	1 5/8	1 5/8	3/4
T-13C28	1.20	20	10	65	460	1600	3B	2 3/8	1 3/4	2	1
T-43C92	1.65	24	10	75	260	1600	2C	1 7/8	2 1/8	2 1/2	1 1/4
T-47C07	1.65	20	12	75	410	1600	3B	2	2 5/8	2 1/4	1 1/4
T-44C02	1.50	31	12	80	405	1600	3B	1 1/2	2 3/8	2	1 1/4
T-57C51	1.50	15	6	80	138	1600	2B	2	2	2 3/8	1 1/4
T-13C29	1.60	20	9	85	250	1600	3B	2 3/8	2	2	1 1/2
T-68C07	2.00	32	15	85	375	1600	2B	2	2 1/2	3	2
T-57C53	2.00	27	10	110	200	1600	2B	2	2 1/2	3	2 1/4
T-75C49	1.50	22	8	120	290	1600	3B	2	2 3/8	2	1 1/2
T-53C19	1.50	..	..	..	..	..	2B	2	2	2 3/8	1 1/4
T-13C30	2.00	25	8	150	200	1600	2B	2 1/2	2	2 5/8	2 1/4

Chokes for A.C.-D.C. Sets

T-14C61	\$1.05	14	7	55	200	1600	3B	2	1 5/8	1 5/8	3/4
T-14C62	1.05	16	8	55	250	1600	3B	2	1 5/8	1 5/8	3/4
T-14C63	1.05	19	8	55	300	1600	3B	2	1 5/8	1 5/8	3/4
T-14C64	1.05	21	10	55	350	1600	3B	2	1 5/8	1 5/8	3/4

FILTER CHOKES (General Purpose)

For use in amplifiers, transmitters, etc. These 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			Wt. Lbs.
							W.	D.	H.	
T-57C52	\$1.75	80	5	138	1600	2F	2	2	2 3/8	1 1/2
T-16C07	2.25	85	15	375	1600	2F	3 3/8	2 1/2	3	2 1/4
T-57C54	2.25	110	10	200	1600	2F	2 1/2	2 1/2	3	2 1/4
T-49C91	1.50	120	4	160	1600	2F	2	2	2 1/2	1 1/4
T-17C00-B	2.75	150	12	231	1600	2F	2 7/8	3	3 1/2	3 3/4
T-74C29	3.75	150	15	200	2000	2G	3 1/2	3 3/8	4 5/8	5 1/4
T-67C49	2.75	200	5	80	1600	2F	3	2 7/8	3 1/2	3 3/4
T-75C51	5.00	250	13	121	1600	2G	3 7/8	3 3/4	5	8

AUDIO REACTORS

For use in circuits where the voltage drop caused by a resistor load 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. (Amplifier Guide No. 346-B). †T-14C70 is designed primarily for use with two special Thordarson Tone Control dual potentiometers R-1068 @ \$2.50 list. (Amplifier Guide No. 364-D).

Type No.	List Price	Application	Type Tubes	Induct. Hen.	At M.A.	Max. M.A.	D.C. Ohms	Mtg. Fig.	Dimensions			Wt. Lbs.
									W.	D.	H.	
T-37C36	\$2.00	Plate Impedance	{56-30-76-6C5-55-85, etc.	300	5	10	6470	2F	2	2 1/8	2 3/8	1 1/2
T-67C46	1.75							2B	2	2	2 3/8	1 1/4
T-52C98	1.75	{Plate Impedance for S.G. Detector or grid impedance	24-57-56-76-6C5-6F5-6J7	700	.5	8	6150	2F	2	1 7/8	2 3/8	1 1/4
T-29C27	1.50							2B	2	1 1/2	2 3/8	1
T-68C08	1.75	Plate Impedance or Filter	45-46-10, etc.	22	35	35	405	2F	2	2 1/8	2 3/8	1 1/2
T-18C92	1.50							2B	2	1 3/4	2 3/8	1 1/2
T-74A31	3.25	Center tapped impedance		2220	0	8	12210	2F	2 1/2	2 1/2	3	2 1/4
T-81C15*	2.50	Tuned Audio Circuits		.75	.5	100	30	2B	1 5/8	1 5/8	2	3/4
T-93C20*	3.00	Tuned Audio Circuits		250	.5	8.0	6400	2B	2	2	2 3/8	1 1/4
T-74C30	1.50	Tuned Audio Circuits or Filter		42	15	15	2100	2B	2	1 1/2	2 3/8	1
T-14C70†	2.50	Tone Control, Hum Bucking Type		22	0	5	220	3Y	1 1/2	1 1/2	2 1/2	1/2

Amplifier and transmitting type chokes are listed on pages 12, 17 and 19.



AUDIO TRANSFORMERS

Receiver and Amplifier

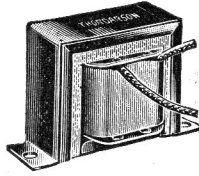


Fig. 3B

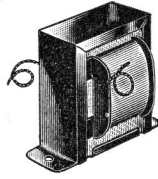


Fig. 2B

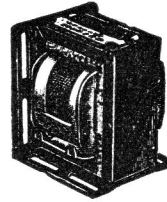


Fig. 2C

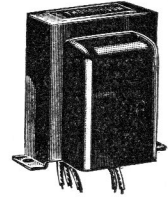


Fig. 2F

PLATE TO GRID INTERSTAGE TRANSFORMERS

Here is a variety of units designed for the same general application but varying in size, frequency response 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. M.A.	Mtg. Fig.	Dimensions			Wt. Lbs.
				Pri.	Sec.			W.	D.	H.	
T-13A34	\$1.35	Midget 10,000 ohm plate to grid	3:1	10,000	90,000	8	3B	2	1 ⁵ / ₈	1 ⁵ / ₈	³ / ₄
T-29A99	1.75	Medium 10,000 ohm plate to grid	3.26:1	10,000	106,300	8	2B	2	2	2 ³ / ₈	1 ¹ / ₄
T-57A36	2.00						2F	2	2 ¹ / ₈	2 ³ / ₈	1 ¹ / ₂
T-47A25	1.75	Large 10,000 ohm plate to grid	3:1	10,000	90,000	8	2C	2	1 ⁵ / ₈	2 ³ / ₈	1
T-57A38	2.75						2F	2 ¹ / ₂	2 ¹ / ₂	3	2 ¹ / ₄
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	2 ¹ / ₈	2 ³ / ₈	1 ¹ / ₂

PUSH-PULL INPUT TRANSFORMERS

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

T-14A92	\$1.25	Midget 10,000 ohm plate to P.P. grids	3:1	10,000	90,000	8	3B	1 ³ / ₄	1 ³ / ₈	1 ³ / ₈	¹ / ₂
T-13A35	1.50	Midget 10,000 ohm plate to P.P. grids	3:1	10,000	90,000	8	3B	1 ⁵ / ₈	2	1 ⁵ / ₈	³ / ₄
T-33A91	2.00	Medium 10,000 ohm plate to P.P. grids	3.26:1	10,000	106,300	8	2B	2	2	2 ³ / ₈	1 ¹ / ₄
T-86A03	2.00						3B	2 ³ / ₈	2	2	1 ¹ / ₂
T-14A29	2.25	Large 10,000 ohm plate to P.P. grids	3:1	10,000	90,000	8	2C	2 ¹ / ₈	1 ⁷ / ₈	2 ¹ / ₂	1 ¹ / ₄
T-57A39	2.25						2F	2	2 ¹ / ₈	2 ³ / ₈	1 ¹ / ₂
T-57A40	2.75	10,000 ohm plate to P.P. grids	1:1	10,000	10,000	8	2B	2 ¹ / ₂	2	3	2
T-57A41	3.00						2F	2 ¹ / ₂	2 ¹ / ₂	3	2 ¹ / ₄
T-74A31*	3.25	10,000 ohm plate to P.P. grids	1:1	10,000	10,000	8	2F	2 ¹ / ₂	2 ¹ / ₂	3	2 ¹ / ₄
T-57A42	3.25	10,000 ohm plate to P.P. grids	3:1	10,000	90,000	8	2B	2 ¹ / ₂	2	3	2

For Coupling screen grid or power detector to P.P. output — Clarion AC60, etc.

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	Midget P.P. 10,000 ohm plates to P.P. power tube grids	1:1	20,000	20,000	8*	3B	2	2 ³ / ₈	1 ³ / ₄	1
T-58A70	3.25	Large P.P. 10,000 ohm plates to P.P. or P.P. par. power tube grids.	1.5:1 Split sec.	20,000	45,000	10*	2F	2 ¹ / ₂	2 ¹ / ₂	3	2 ¹ / ₄
T-67A91	3.00						2B	2 ¹ / ₂	2 ¹ / ₂	3	2

*Per side.

UNIVERSAL AUDIO REPLACEMENT TRANSFORMER

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	2 ¹ / ₈	2 ³ / ₈	1 ¹ / ₂
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REPLACEMENT DRIVER TRANSFORMERS

Their compact open mounting style facilitates installation.

Type No.	List Price	Driver Tubes	Output Tubes	Class	Ratio Pri. to 1/2 Sec.	Ohms Imped.		Pri. M.A.	Mtg. Fig.	Dimensions			Wt. Lbs.
						Pri.	1/2 Sec.			W.	D.	H.	
T-78D46	\$1.50	1-30	1-1J6G, 19 2-30	B B	2.4:1	20,000	3,500	7	2B	1 ⁵ / ₈	1 ⁵ / ₈	2	³ / ₄
T-17D01	2.00	1-6F6 Triode 1-42 Triode 1-2A5 Triode	2-6F6, 6L6, etc.	AB	1.7:1 1.5:1 1.3:1	10,000	3,300 4,500 5,800	31	3B	2 ³ / ₈	2	2	1 ¹ / ₂
T-14D93	1.75	1-76 Triode	1-6A6, 6N7	B	4:1	20,000	1,250	8	3B	1 ⁵ / ₈	2	1 ⁵ / ₈	³ / ₄

Other audio Transformers are listed on pages 15, 19 and 22.



REPLACEMENT OUTPUT TRANSFORMERS

Small strap mounting types easily attached to the speaker or mounted on the chassis. Plate load and voice coil combinations for all popular receivers.

Type No.	List Price	Tube Type	Class	Ohms Impedance		Pri. M.A. Per Side	Max. Watts	Mtg. Fig.	Dimensions			Wt. Lbs.
				Pri.	Sec.				W.	D.	H.	
T-14S81	\$1.25	1-42, 2A5, 6F6 or P-P45, 71	A	7,000	3 to 6	40	5	3B	1 3/4	1 3/8	1 3/8	1/2
T-14S82	1.25	1-25L6	A	1,500	3 to 6	55	5	3B	1 3/4	1 3/8	1 3/8	1/2
T-14S83	1.25	1A5-G, 1E7-G	A	25,000	3 to 6	8	5	3B	1 3/4	1 3/8	1 3/8	1/2
T-14S84	1.25	1-1C5G, 1Q5G	A	8,000	3 to 6	10	5	3B	1 3/4	1 3/8	1 3/8	1/2
T-13S37	1.25	1-6F6, 42, 2A5, 47	A	7,000	1-2-4	36	5	3E	1 3/4	1 3/8	1 3/8	1/2
T-13S39	1.25	1-45, 12A5 1-31, 43, 71A	A	4,000	1-2-4	36	5	3E	1 3/4	1 3/8	1 3/8	1/2
T-13S43	1.35	1-1F4, 1D4, 1F5G	A	16,000	1-2-4	10	5	3E	1 3/4	1 3/8	1 3/8	1/2
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	2 3/8	1 1/4
T-13S40	1.50	2-6F6, 42 P-P 2-2A5, 47 P-P	A A	14,000	1-2-4	40	10	3E	2	1 5/8	1 5/8	3/4
T-81S01	1.50	1-19, 1J6G, 1G6G P-P 2-30, 49 P-P 2-31 P-P	B B A	10,000	2-4-8	15	8	2B	1 5/8	1 5/8	2	3/4

HEAVY DUTY OUTPUT TRANSFORMERS TO LINE OR SPEAKER (High Level)

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. M.A. Per Side	Max. Watts	Mtg. Fig.	Dimensions			Wt. Lbs.
				Pri.	Sec.				W.	D.	H.	
T-17S10	\$3.00	1-6L6	A	2,500	2-4-8-500	80	8	2F	2 1/2	2 1/2	3	2 1/4
T-17S11	4.50	2-6V6 P-P	AB1	8,000*	4-8-15-250-500	52	15	2F	2 7/8	3	3 1/2	3 1/2
T-17S12	4.50	2-6L6 P-P	AB1	4,300*	4-8-15-250-500 (with 300 V. on plate and screen)	95	25	2F	2 7/8	3	3 1/2	3 1/2
T-17S13	6.00	2-6L6 P-P	AB1	6,600*	4-8-15-250-500	80	34	2G	3 3/8	3 5/8	4 5/8	5 1/2
T-17S14	6.00	2-6L6 P-P	AB2	5,500*	4-8-15-250-500	90	40	2G	3 3/8	3 5/8	4 5/8	5 1/4
T-17S15	6.50	4-6L6 P-P Par.	AB1	3,300*	4-8-15-250-500	155	60	2G	3 3/8	3 7/8	4 5/8	5 3/4
T-17S16	12.00	4-6L6 P-P Par.	AB2	1,900*	84-100-125- 166-250-500	230	120	2G	3 3/4	5	4 5/8	11 1/2
T-68S06	2.50	1-6F6, 42, 2A5 1-47, 31, 33	A A	7,000	10 or 2,000	36	5	2F	2	1 7/8	2 3/8	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	2 1/2	2 1/2	3	2 1/4
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	2 1/2	2 1/2	3	2 1/4
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	2 7/8	3	3 1/2	3 1/2
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	2 7/8	3	3 1/2	3 1/4
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	2 7/8	3	3 1/2	3 1/2
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	2 7/8	3	3 1/2	3 1/2
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	2 7/8	3	3 1/2	3 1/2
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	2 7/8	3	3 1/2	3 1/2
T-84S58	6.00	2-6L6 P-P	AB2	3,800	4-8-15-500	115	60	2G	3 3/8	3 3/4	4 5/8	6
T-89S75	4.00	2-6L6 P-P	AB1	6,600	4-8-15-500	80	40	2F	2 7/8	3	3 1/2	3 1/2
T-89S74	3.75	1-6L6	A	4,000	4-8-15-500	70	15	2F	2 1/2	2 1/2	3	2 1/4
T-89S68	6.50	4-6L6 P-P Par.	AB1	3,300	50-125-200 250-333-500	150	75	2G	3 3/8	3 5/8	4 5/8	5 3/4
T-83S84-	6.00	2-50 P-P or P-P 2A3	AB2	5,000	4-8-15-500	80	45	2G	3 3/8	3 1/2	4 5/8	5 1/4
T-83S87	9.00	4-50 P-P Par.	AB2	3,000	4-8-15-500	160	90	2G	3 7/8	3 5/8	5	7 3/4

*10% feed back winding.

See pages 11 and 16 for modulation transformers and page 18 for other output transformers.



UNIVERSAL OUTPUT TRANSFORMERS

TRANSCIVER TRANSFORMERS

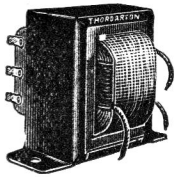


Fig. 2E

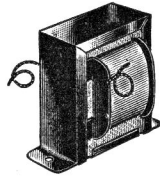


Fig. 2B

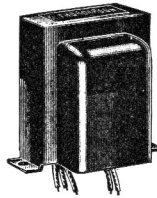


Fig. 2F

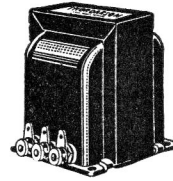


Fig. 2A

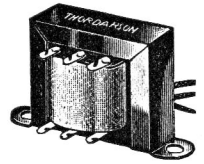


Fig. 3E

UNIVERSAL REPLACEMENT TUBE TO VOICE COIL

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 instruction sheets.

Type No.	List Price	Tube Type	Class	Ohms Impedance		Pri. M.A. Per Side	Max. Watts	Mtg. Fig.	Dimensions			Wt. Lbs.	
				Pri.	Sec.				W.	D.	H.		
T-13S38	\$1.50	Universal Single or P-P Tubes	A	4,000/7,000	Adjustable .1 to 29	36	8	3E	2	1 5/8	1 5/8	3/4	
T-57S01*	2.00			8,000/10,000					2E	2	2	2 3/8	1 1/4
T-57S02†	2.00			14,000 Ct.					2B	2	2	2 3/8	1 1/4
T-17S57	2.25								2C	2 1/8	1 7/8	2 1/2	1 1/4
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	1 5/8	1 5/8	3/4	
T-13S41	2.75	Universal P-P Tubes	A	3,000/5,000 6,600/7,000 8,000/10,000	Adjustable .1 to 29	60	20	2E	2 1/2	2	3	2 1/4	

*Solder terminals for voice coil connections. †Color coded leads for voice coil connections.

UNIVERSAL TUBE TO LINE

T-61S25	3.25	Univ. Single Tube	2,500/4,000 5,000/6,000/7,000	500	60	10	2E	2 1/2	2	3	2 1/4
T-61S26	3.50	Univ. P-P Tubes	8,000/10,000 12,000/14,000 Ct.	500	55	10	2E	2 1/2	2	3	2 1/4

UNIVERSAL LINE TO SPEAKER

Type No.	List Price	Application	Pri.	Sec.	Max. Watts	Mtg. Fig.	Dimensions			Wt. Lbs.
							W.	D.	H.	
T-53S81	\$4.00	Line to Voice Coil	500/250	4-8-15	35	2D	2 7/8	3	3 3/4	3 1/2
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	2 1/2	2	3	2
T-14S80	2.00	Line to Voice Coil	500	2-4-6-8	12	2E	2	2	2 3/8	1 1/2
T-17S17	6.50	Line to Voice Coil	500	4/8/16/25/50	75	2E	3 5/8	4	4	6 1/2
T-76S74	3.00	Line to multiple spkrs. (autotransformer)	500	250/166/125/100/84	30	2E	2 1/2	2	3	2 1/2

TRANSFORMER AND CHOKE FOR 32 VOLT D.C. SUPPLY

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			Wt. Lbs.
					W.	D.	H.	
T-14R50-	\$15.00	32	3	3C	4 7/8	4 1/2	6 5/8	18 1/4
*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	3 1/2	6 1/8	13 1/2

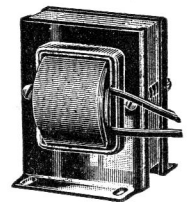


Fig. 3C

TRANSCIVER TRANSFORMERS

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

Type No.	List Price	Application	Ohms Impedance		Max. D.C. Pri.	Max. Power Watts	Mtg. Fig.	Dimensions			Wt. Lbs.
			Pri.	Sec.				W.	D.	H.	
T-72A59	\$1.65	Plate and Single Button micro. to grid	5,000 200	100,000	10	5	2B	1 5/8	1 5/8	2	3/4
T-72S58	1.65	Pent. Plate to low or high imp. phones or osc.	10,000	2,000 50	30	5	2B	1 5/8	1 5/8	2	3/4

See pages 11 and 16 for modulation transformers and page 18 for other output transformers.



UNIVERSAL DRIVER TRANSFORMERS — "19" SERIES

Through the use of five ratios on each transformer, this series will handle all driver transformer requirements usually encountered in amateur transmitter circuits. See pages 20 and 21 for complete table of Driver and Modulator combinations.

Type No.	List Price	Cap. Watts	Max. Pri. M.A. Per Side	Ratio Pri. to 1/2 Sec.	Mtg. Fig.	Dimensions			Wt. Lbs.
						W.	D.	H.	
T-19D01	\$6.00	15	60	1:1, 1.2:1, 1.4:1, 1.6:1, 1.8:1	4D	2 7/8	3	3 1/2	3 1/2
T-19D02	6.00	15	60	2:1, 2.2:1, 2.4:1, 2.6:1, 2.8:1	4D	2 7/8	3	3 1/2	3 1/2
T-19D03	6.00	15	60	3:1, 3.2:1, 3.4:1, 3.6:1, 3.8:1	4D	2 7/8	3	3 1/2	3 1/2
T-19D04	6.00	15	60	4:1, 4.5:1, 5:1, 5.5:1, 6:1	4D	2 7/8	3	3 1/2	3 1/2
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, 1:1.85, 1:1.75	4D	2 7/8	3	3 1/2	3 1/2

DRIVER TRANSFORMERS (FOR SPECIFIC APPLICATIONS)

Thordarson driver transformers have the correct primary to secondary ratio for the tubes specified, insuring good regulation and minimum driver distortion on the positive grid peaks.

Type No.	List Price	Driver Tubes	Output Tubes	Class	Ratio Pri. to 1/2 Sec.	Pri. M.A.	Mtg. Fig.	Dimensions			Wt. Lbs.
								W.	D.	H.	
T-19D06	\$3.00	1-6A6, 1-6N7, 1-6C5	1-6A6, 6N7	B	5:1, 4:1, 3:1, 2.5:1	10	2F	2	2 1/8	2 3/8	1 1/2
T-54D63	2.25	1-30, 1-49, 1-6C5	1-1J6G, 19, 2-49, 2-6V6	B, B, AB2	2.4:1	7	2F	2	1 1/8	2 3/8	1 1/4
T-67D50	2.75	1-89 Triode	1-79	B	2:1	32	2F	2	2 1/8	2 3/8	1 1/2
T-67D89	3.00	1-89, 6F6, 42 Triode	2-79, 6A6, 6N7	B	3:1	32	2F	2 1/2	2 1/2	3	2 1/4
T-67D47	2.50	1-6N7, 6A6, 53	1-6N7, 6A6, 53	B	5.25:1	10	2F	2	2 1/8	2 3/8	1 1/2
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	2 1/2	2 1/2	3	2 1/4
T-84D59*	3.50	2-6C5, 6N7, 2-6A6, 53	2-6L6, 6V6, 2-6N7, 6A6, 53	AB2, B	5:1	10	2F	2 1/2	2 1/2	3	2 1/4
T-74D32	3.50	2-6C5, 76, 56	2-6F6, 42, 2A5, 4-2A3, 6B4G	AB2, AB	3:1	10	2F	2 1/2	2 1/2	3	2 1/4
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	2 1/2	2 1/2	3	2 1/4
T-17D03*	4.50	1-6F6 Triode	2-6L6	AB2	1.4:1	40	2F	2 7/8	3	3 1/2	3 1/2
T-17D04*	4.50	2-6F6	2-6L6	AB2	2.6:1	32	2F	2 7/8	3	3 1/2	3 1/2
T-67D78	3.00	1-46, 59, 6F6, 42, 2A5 Triode	2-46, 59, 2-6L6	B, AB2	2.2:1	32	2F	2 1/2	2 1/2	3	2 1/4
T-83D83-	3.75	2-45 P-P, 6F6 Triodes	2-250	AB2	1.6:1	40	2F	2 1/2	2 1/2	3	2 1/4
T-51D00-*	4.50	2-6F6, 42, 45, 2A5 P-P	2-210, 801, 35T	B	2:1	40	2A	2 7/8	3	3 1/2	3 1/4
T-61D40-*	5.50	2-2A3 P-P	2-50T, 150T, 2-203A, 801	B, B	1.67:1	130	2D	3 3/8	3 5/8	4	5
T-75D10*	5.50	2-2A3 P-P	2-838, 805, TZ-40	B, B	3.2:1	130	2D	3 3/8	3 5/8	4	5

*Split secondary as required for inverse feedback and separate power tube bias.

UNIVERSAL BIAS TRANSFORMERS

Primary 115 Volts, 50-60 Cycles. Mounting Figure 2N — No Filament Winding.

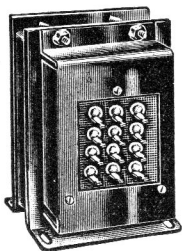


Fig. 2N

Type No.	List Price	Application	Current M.A.	Dimensions			Wt. Lbs.
				W.	D.	H.	
T-19R31	\$5.50	Will supply D.C. voltages of 10 to 100 in app. 5 volt steps	200	3 3/8	3 1/4	4	5 1/2
T-19R32	7.25	Will supply D.C. voltages of 100 to 400 in app. 15 volt steps	200	3 3/4	4	4 5/8	8 3/4

TELEVISION TRANSFORMERS (Plate and Filament)

Electrostatically Shielded. Primary 115 Volts — 60 Cycles. Mounting Figure 2G.

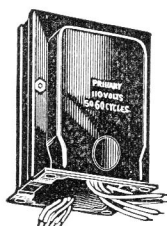


Fig. 2G

Type No.	List Price	Kinescope Tubes	Secondary	Volts Insulation	Dimensions			Wt. Lbs.
					W.	D.	H.	
T-17R32	\$10.00	5"	No. 1 — 2300V. A.C. No. 2 — 2.5V at 2A No. 3 — 2.5V at 2A	7500	3 3/8	3 1/8	4 5/8	3 3/4
T-17R33	12.50	9"	No. 1 — 4500V. A.C. No. 2 — 2.5V at 5A No. 3 — 2.5V at 2A	10,000	3 3/8	3 7/8	4 5/8	6 1/2

Filter Reactor

Type No.	List Price	Filter Reactor			D.C. Res.	Mtg. Fig.	Dimensions			Wt. Lbs.
		Inductance Henrys	Current M.A.	Volts Insulation			W.	D.	H.	
T-17C40	\$4.75	1500	3	10,000	12,000	2F	2 7/8	3	3 1/2	3 3/4

Multi-match driver transformers are listed on page 16.



MODULATION TRANSFORMERS

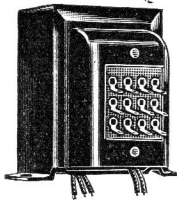


Fig. 4D

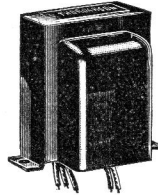


Fig. 2F

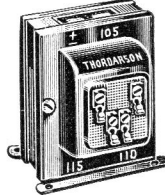


Fig. 2D

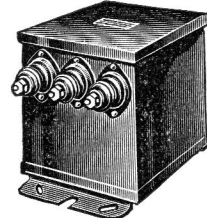


Fig. 2Q

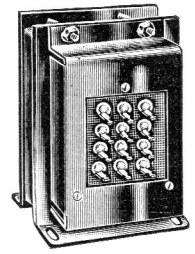


Fig. 2N

UNIVERSAL MODULATION TRANSFORMERS "19" SERIES

Tapped coils enable the experimenter to match any modulator tubes to any class C R.F. load. 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	Mtg. Fig.	Dimensions			Wt. Lbs.
						W.	D.	H.	
T-19M13	\$ 4.00	15	50	50	2N	2 1/2	2 3/4	3	2
T-19M14	7.00	30	75	75	2N	3 3/4	3 3/4	4	4 1/2
T-19M15	10.00	60	125	125	2N	3 3/4	4 1/2	4	6 1/2
T-19M16	15.00	100	175	175	2N	4 1/2	5	6	12 1/2
T-19M17	24.00	250	225	225	2Q	5 3/4	8 1/2	7 1/4	30 3/4

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		Max. D.C. Sec. M.A.	Max. Audio Pwr. Watts	Mtg. Fig.	Dimensions			Wt. Lbs.
				Pri.	Sec.				W.	D.	H.	
T-67M69	\$ 2.75	1-19	B	10,000	2,700	50	10	2F	2	2	2 3/8	1 1/2
T-17M59	3.00	1-6A6, 6N7 or 53	B	10,000	3,000, 3,750, 4,500	100	10	2F	2 1/2	2 1/2	3	2
T-64M26	6.00	2-46 or 59 2-250	B AB	5,800	5,000 10,000	100	40	2D	3 3/8	3 5/8	4	5
T-19M21	7.00	2-TZ-20	B	10,000	3,750 6,600	200 150	75	2D	3 1/2	4 1/4	4	7
T-19M22	10.00	2-809 2-RK-12	B B	8,400	5,000 7,850	200 160	100	2D	4 1/2	4 1/2	6	13 1/4
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	3 3/4	3 3/4	4 7/8	9
T-14M49	16.50	2-TZ-40	B	6,900	2,850 4,500 6,500	350 300 235	175	2Q	5 7/8	7 3/4	6 1/4	20
T-64M25-	6.00	2-TZ-20, 210, 46	B	8,000	5,000, 10,000	200	40	2D	3 7/8	4 1/4	4 5/8	8
T-75M11-	20.00	2-ZB-120, HK-154 838, 35T, RK-52	B	10,000	2,500, 10,000	400 200	300	2Q	5 7/8	8 1/2	7 1/4	30
T-82M09-	20.00	2-35T, RK-52, ZB-120	B	10,000	1,250, 5,000	500 250	300	2Q	5 3/4	9 1/2	7 1/4	29 1/2
T-82M25	40.00	2-805, HD-203A, 822	B	9,000	4,000, 6,000, 8,000	500	650	2Q	8	6 3/4	8	47

GRID MODULATION TRANSFORMERS

T-67M73	3.50	1-42, 6F6, 46 Triode	A	6,300	5,400	32	10	2D	2 1/2	2 1/2	3	2 1/4
T-67M74	4.50	P.P. 45-2A3	AB	5,000	5,000	60	20	2D	2 7/8	3	3 1/2	3 1/2

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.	Dimensions			Wt. Lbs.
							W.	D.	H.	
T-73M52	\$18.00	500	5,000-6,000-7,000-8,000-9,000-10,000	215	80	2Q	5 7/8	8	6 1/4	21
T-83M22*	9.00	500-200	5,000-6,000-7,000-8,000-9,000-10,000	150	30	2N	3 7/8	4 1/4	4 5/8	8

Multi-match modulation transformers are listed on page 16.



PLATE SUPPLY TRANSFORMERS — "19" SERIES

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 or experimental equipment. Electrostatic shield between primary and secondary. Primary 115 volts 50-60 cycles.

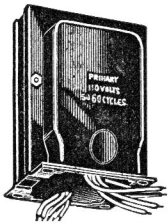


Fig. 2G

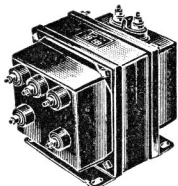


Fig. 2K

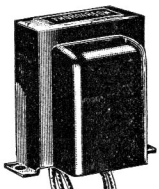


Fig. 2F

Type No.	List Price	Sec. A.C. Load Volts	D.C. Volts	Bias Tap	D.C. M.A.	Pri. V.A.	Mtg. Fig.	Dimensions			Wt. Lbs.
								W.	D.	H.	
T-19P54	\$ 5.75	560-0-560	400		150	115	2G	3 3/4	3 1/2	5	7
T-19P55	7.50	660-0-660 550-0-550	500 400	30 V.	250	200	2G	3 1/8	3 1/2	4 7/8	8
T-84P60	7.75	515-0-515	400	30V.	250	190	2G	3 7/8	4 3/4	4 7/8	11 3/4
T-19P56	8.00	900-0-900 800-0-800	750 600		225	260	2G	3 7/8	4	4 7/8	10
T-19P57	10.00	1075-0-1075 507-0-507	1000* 400		125 150	245	2G	3 7/8	4 1/4	4 7/8	10 1/2
T-19P58	13.00	1200-0-1200 900-0-900	1000* 750		200 150	500	2G	4 1/2	5 1/2	6 1/8	19
T-19P69	13.00	1180-0-1180 900-0-900	1000 750		300	430	2G	4 7/8	6 1/8	6 5/8	20
T-19P59	16.00	1560-0-1560 1250-0-1250	1250 1000		300	550	2K	5 7/8	7	7	26 1/2
T-19P60	18.50	1875-0-1875 1560-0-1560	1500 1250		300	620	2K	6 3/4	4 1/8	7	29 1/4
T-19P61	20.00	2125-0-2125 1875-0-1875	1750 1500		300	745	2K	6 3/4	4 1/2	7	31 1/2
T-19P62	22.50	2420-0-2420 2125-0-2125	2000 1750		300	860	2K	6 3/4	5	7	34 1/2
T-19P63	23.00	1560-0-1560 1265-0-1265	1250 1000		500	925	2K	6 3/4	5 1/4	7	38
T-19P64	28.50	1875-0-1875 1560-0-1560	1500 1250		500	1130	2K	6 3/4	6	7	43 1/4
T-19P65	29.50	3000-0-3000 2420-0-2420	2500 2000		300	1195	2K	6 3/4	6	7	44
T-19P66	35.00	2125-0-2125 1875-0-1875	1750 1500		500	1185	2K	6 3/4	4 1/2	10	45 1/2
T-19P67	42.50	2450-0-2450 2125-0-2125	2000 1750		500	1380	2K	6 3/4	4 3/4	10	51
T-19P68	50.00	3000-0-3000 2450-0-2450	2500 2000		500	1760	2K	6 3/4	5 3/4	10	61

*These transformers designed for double rectifiers and will deliver both secondary ratings simultaneously. If only the lower voltage taps are used the current rating is equal to the current rating of both windings.

COMBINATION PLATE AND FILAMENT — for transmitter applications

T-19R30	\$7.75	560-0-560	400	150	2G	3 3/4	4	4 7/8	8 3/4
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Filament windings: 5V at 3A; 6.3V at 3A Ct.; 7.5V at 2.5A Ct.

TRANSMITTER INPUT AND FILTER CHOKES — "19" SERIES

Matched input and smoothing chokes for amateur, amplifier or experimental applications. Inductance values are measured under full load conditions and adequate insulation is provided for recommended service.

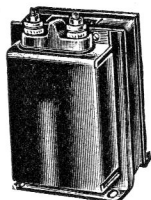


Fig. 2J

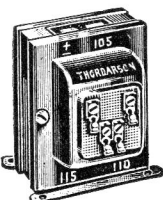


Fig. 2D

Input or Swinging Chokes

Type No.	List Price	Cap. D.C. M.A.	Inductance Henries	D.C. Res. Ohms	Volts Insulation	Mtg. Fig.	Dimensions			Wt. Lbs.
							W.	D.	H.	
T-19C39	\$ 3.25	150	5-20	215	3000	2F	2 7/8	3	3 1/2	3 3/4
T-19C35	4.00	200	5-20	130	3000	2D	3 1/2	3 3/8	4 1/4	5 1/2
T-19C36	6.50	300	5-20	105	5000	2D	3 7/8	4	4 5/8	10 3/4
T-19C37	10.00	400	5-20	90	5000	2J	4 1/2	5 3/4	6 1/8	19 1/2
T-19C38	14.00	500	5-20	75	5000	2J	5 1/8	6	7 1/2	26
T-63C15-	7.50	280	12-38	156	5000	2J	4	4 1/4	6 1/4	11 1/2
T-64C06-	10.00	380	10-19	93	5000	2J	4 3/4	5	6 7/8	18 1/4

Smoothing Chokes

T-19C46	3.25	150	12	215	3000	2F	2 7/8	3	3 1/2	3 1/2
T-19C42	4.00	200	12	130	3000	2D	3 1/2	3 3/8	4 1/4	5 1/2
T-19C43	6.50	300	12	105	5000	2D	3 7/8	4	4 5/8	10 3/4
T-19C44	10.00	400	12	90	5000	2J	4 1/2	5 3/4	6 1/8	19 1/2
T-19C45	14.00	500	12	75	5000	2J	5 1/8	6	7 1/2	26
T-64C07-	12.50	380	20	160	5000	2K	6	6 3/4	7 5/8	25

C.H.T. plate transformers are listed on page 18 — other filter chokes on pages 6 and 17.



FILAMENT TRANSFORMERS

EXCITER LAMP TRANSFORMERS



Improved voltage regulation and minimum heat rise. Rated for continuous operation at full load. Primary 115 volts 50-60 cycles except those marked * which have primary taps of 105, 110 and 115 volts to compensate for low line or voltage drop in filament leads.

One Secondary

Type No.	List Price	Sec. Volts	Sec. Amps.	Pri. V. A.	Volts Insulation	Mtg. Fig.	Dimensions			Wt. Lbs.
							W.	D.	H.	
T-50F61	\$1.50	2.5 Ct.	3.5	10	1600	2B	2	1 1/8	2 3/8	1
T-19F88	1.75	2.5 Ct.	5.25	15	1600	3C	2	2	2 3/8	1 1/4
T-19F89	2.25	2.5 Ct.	10	25	1600	3C	2 1/2	2	3	2
T-19F90	3.00	2.5 Ct.	10	25	7500	3C	2 1/2	2 1/2	3 1/4	2 1/4
T-64F33*	4.50	2.5 Ct.	10	25	7500	2N	3 3/4	3 3/8	4	4 1/2
T-19F82	5.75	2.5 Ct.	15	45	10,000	3C	3 3/8	2 3/8	4	4
T-63F99	3.25	5 Ct.	4	20	1600	2D	3	2 1/2	3 1/4	2 1/4
T-19F83	2.25	5 Ct.	5	30	1600	3C	2 1/2	2	3	2
T-19F84	2.75	5 Ct.	8	45	1600	3C	2 9/16	2 3/4	3 1/4	2 3/4
T-19F85	3.50	5 Ct.	13	75	1600	3C	3 3/8	2 3/8	4	4
T-19F86	6.00	5 Ct.	21	120	1600	3C	3 3/8	3	5	4 1/2
T-19F91	2.25	5.25 Ct.	4	25	1600	3C	2 1/2	2 3/8	3 1/4	2 1/4
T-19F92	3.25	5.25 Ct.	13	75	1600	3C	3 3/8	2 1/2	4	4
T-74F23*	5.00	5.25 Ct.	13	75	1600	2D	3 1/2	3 3/8	4	4 1/4
T-74F24*	7.00	5.25 Ct.	21	125	1600	2D	3 7/8	3 7/8	4 5/8	5 1/4
T-19F80	1.25	6.3 Ct.	1	7	1600	2B	1 1/16	1 3/8	1 5/16	5/8
T-19F81	1.50	6.3 Ct.	2	14	1600	2B	1 5/8	1 5/8	2	3/4
T-19F97	1.75	6.3 Ct.	3	21	1600	2B	2	2	2 3/8	1 1/2
T-61F85	2.00	6.3, 5, 2.5	2.5	18	1600	2E	2 5/8	2	2 1/4	1 1/2
T-73F60*	3.75	6.3 Ct.	5	36	1600	2D	3	2 7/8	3 3/4	3 1/4
T-19F98	2.75	6.3 Ct.	6	47	1600	3C	2 1/2	2 3/8	3 1/4	2 3/4
T-19F99	3.50	6.3 Ct.	10	73	1600	3C	3 3/4	2 3/8	4	4
T-64F13*-	2.75	7.5 Ct.	2.5	21	1600	2D	3	2 1/2	3 3/4	2 1/4
T-19F93	2.25	7.5 Ct.	4	34	1600	3C	2 1/2	2 1/4	3 1/4	2 1/4
T-19F94	3.00	7.5 Ct.	8	67	1600	3C	3	2 7/8	3 3/4	4
T-92F20	4.75	7.5 Ct.	8	68	1600	2D	3 5/8	3 3/8	4	4 3/4
T-19F95	2.75	10 Ct.	4	48	1600	3C	2 9/16	2 3/4	3 1/4	2 3/4
T-19F96	3.50	10 Ct.	8	92	1600	3C	3	2 7/8	3 3/4	4
T-64F14*	4.75	10 Ct.	8	90	1600	2D	3 5/8	3 3/8	4	5
T-19F87	6.25	10 Ct.	12	140	1600	3C	3 3/8	3 1/4	4	6 3/4

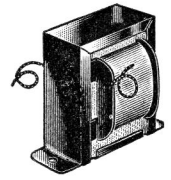


Fig. 2B

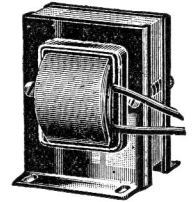


Fig. 3C

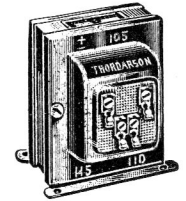


Fig. 2D

Multiple Secondaries

The trend of amateur transmitter design has been carefully studied in planning this series. One transformer from this group will often supply all filament voltages required.

T-19F76	\$4.75	Sec. 1, 5 V. Sec. 2, 7.5 V. tapped at 6.3 and 5	3 6	67	1600 1600	2G	3 3/8	3 1/8	4 5/8	4 3/4
T-19F77	7.00	Sec. 1, 5 V. Sec. 2, 2.5 V. Ct. Sec. 3, 10 V. tapped at 7.5, 6.3 and 5	3 10 8	133	1600 7500 1600	2G	3 3/4	3 5/8	5	7
T-19F78	5.25	Sec. 1, 2.5 V. Ct. Sec. 2, 5 V.	10 3	45	7500 1600	2G	3 3/8	3 3/8	4 5/8	5 1/2
T-19F79	6.75	Sec. 1, 6.3 V. Ct. Sec. 2, 10 V. tapped at 7.5, 6.3 and 5	3 10	133	1600 1600	2G	3 3/8	3 5/8	4 5/8	6
T-54F66-	3.25	Sec. 1, 7.5 V. Ct. Sec. 2, 7.5 V. Ct.	2.5 2.5	42	1600	2E	3	2 3/4	3 3/4	3 1/4
T-79F84	4.75	Sec. 1, 2.5 V. Ct.; #2, 2.5 V. Ct.; #3, 6.3 V. Ct.	3.5, 3, 3	48	1600	2G	3 3/8	3 1/4	4 5/8	4 3/4
T-85F14*-	17.50	Sec. 1, 2.5 V. Ct.; #2, 2.5 V. Ct.; #3, 2.5 V. Ct.	5, 5, 10	55	10,000	2Q	7 5/8	5 1/2	5 1/2	17
T-70F46-	7.75	Sec. 1, 5 V. Ct.; #2, 5 V. Ct.; #3, 5 V. Ct.	3, 3, 6	67	5000	2N	4	3 3/8	4	3 1/2

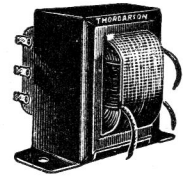


Fig. 2E

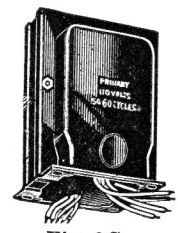


Fig. 2G

EXCITER LAMP TRANSFORMERS

Type No.	List Price	Pri. Volts	Secondary		Mtg. Fig.	Dimensions			Wt. Lbs.
			Volts	Amps.		W.	D.	H.	
T-64F37-	\$6.00	110/115/120	10	7.5	3C	3 3/4	3 1/2	4	5 3/4
T-64F38-	4.00	110/115/120	8.5	4	3C	3	2 3/4	3 3/4	3 1/4

C.H.T. Filament transformers are listed on Page 17.

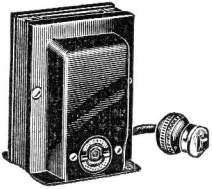


Fig. 2V

STEP DOWN AUTOTRANSFORMERS Convenience Outlet Type

Widely used in the export trade to reduce 220-250 volts to 110-125 volts. Input side equipped with cord and plug. Output side has standard receptacle. Mounting style 2V.

Type No.	List Price	Sec. V.A.	Dimensions			Wt. Lbs.
			W.	D.	H.	
T-26V04	\$ 4.50	80	3 ³ / ₈	3	4 ⁵ / ₈	4 ¹ / ₂
T-50V10-	5.50	125	3 ³ / ₄	3 ¹ / ₄	4 ⁷ / ₈	5 ³ / ₄
T-18V06	6.00	150	3 ³ / ₈	4 ³ / ₄	4 ⁵ / ₈	6 ¹ / ₄
T-40V15-	6.50	175	3 ³ / ₄	3 ⁵ / ₈	4 ⁷ / ₈	8
T-50V11	7.50	250	3 ³ / ₄	4 ³ / ₈	4 ⁷ / ₈	10 ¹ / ₄
T-18V07	13.50	500	3 ³ / ₄	4 ⁷ / ₈	4 ⁷ / ₈	13

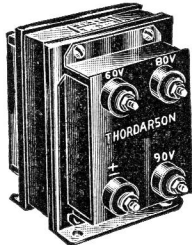


Fig. 2W

LINE VOLTAGE ADJUSTING AUTOTRANSFORMERS Convenience Outlet Type

For boosting or lowering line voltage to care for ordinary line variation. Input taps may be selected by means of a convenient plug arrangement as illustrated (Fig. 4E). Input voltages 95, 105 and 125 — 60 cycles; output 115 volts. Mounting style 2V.

T-18V20	\$ 5.00	100	3 ³ / ₈	3 ¹ / ₂	4 ⁵ / ₈	4 ¹ / ₂
T-18V21	6.00	150	3 ³ / ₈	3 ³ / ₄	4 ⁵ / ₈	5
T-18V22	7.50	250	3 ⁷ / ₈	3 ⁵ / ₈	4 ⁷ / ₈	6 ¹ / ₂
T-18V23	12.00	500	3 ⁷ / ₈	4 ¹ / ₈	4 ⁷ / ₈	9
T-61V07-	5.00	*150	3 ³ / ₈	4	4 ⁵ / ₈	4 ¹ / ₂

*Input 90 or 110 Volts — Separate plug for each.

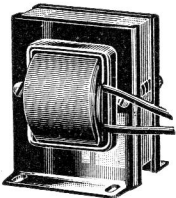


Fig. 3C

PRIMARY REGULATING AUTOTRANSFORMERS

For increasing or decreasing line voltage. Taps for 60, 80, 90, 100, 110, 120, and 125 volts. 50-60 cycles. Complete with instructions. Mounting style 2W except T-82V13, 2M.

T-82V11	\$12.50	500	4 ¹ / ₂	7	6 ¹ / ₄	16 ³ / ₄
T-82V12	17.50	1000	5 ¹ / ₈	7 ¹ / ₄	6 ⁷ / ₈	22 ¹ / ₂
T-82V13-	22.50	2000	6 ³ / ₄	7 ¹ / ₂	7 ¹ / ₂	39 ¹ / ₂

LINE VOLTAGE AUTOTRANSFORMERS

Provide means of increasing or decreasing primary voltages from 0 to 135 volts in 5 volt steps, when operated from 120 volt line. Mounting style 3C (with lugs).

T-18V03	6.25	150	3	2 ⁹ / ₁₆	3 ¹ / ₁₆	4
T-18V04	7.75	250	3 ⁹ / ₁₆	2 ³ / ₄	4	6
T-18V05	10.50	500	4 ¹ / ₄	3 ³ / ₈	6	11

ISOLATION TRANSFORMERS

Electrostatic shield between primary and secondary. Features unique "plug-in" primary voltage adjustment — no changing of connections. Prevent radiation of line noise by electrical therapeutic machines, clippers, dryers, etc., or for use in amateur transmitting stations. Reduce line interference to radio receivers. Mounting style 4E except T-18V00, 2V.

T-18V00	\$10.50	100	3 ³ / ₄	3 ³ / ₄	4 ⁷ / ₈	8
T-18V01	19.50	250	5 ⁷ / ₈	6 ¹ / ₄	6	20
T-18V02-	27.50	500	6 ³ / ₄	7 ¹ / ₄	6 ³ / ₄	35

FENCE CONTROLLER TRANSFORMER

Recommended for use in circuit shown in September, 1938 issue of Popular Mechanics. Note: For 6 volt D.C. operation, with suitable relays. Open horizontal mounting.

Type No.	List Price	Primary	Sec. (Open Circuit)	Dimensions			Wt. Lbs.
				W.	D.	H.	
T-18V10	\$3.00	6 V. D.C.	8,000 V. (37 M.A. Peak) 9,000 V. (25 M.A. Peak)	3 ¹ / ₂	2	3 ¹ / ₄	1

SIGNALING TRANSFORMERS—Listed by Underwriters' Laboratories

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. Mounting figure 3V.

Type No.	List Price	Intermittent Duty Rating	Constant Duty Rating	Dimensions			Wt. Lbs.
				W.	D.	H.	
T-47V01	\$ 6.00	50 V. A.	35 V. A.	5 ⁵ / ₈	4 ¹ / ₂	4	6 ¹ / ₄
T-47V02	9.75	100 V. A.	85 V. A.	6 ³ / ₈	4 ¹ / ₂	4	8
T-47V03	21.75	250 V. A.	190 V. A.	7 ⁵ / ₈	4 ¹ / ₂	4	14 ¹ / ₄
T-47V04	35.00	500 V. A.	475 V. A.	8 ³ / ₈	5 ¹ / ₄	5 ¹ / ₂	22 ¹ / ₂

Automatic Voltage Regulators are listed on opposite page.



MATCHING TRANSFORMERS (Low Level)

AUTOMATIC VOLTAGE REGULATORS



MATCHING TRANSFORMERS (Low Level)

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. Low level audio transformers are susceptible to hum if located too close to power transformers, etc. C.H.T. and Tru-Fidelity units have hum-bucking windings and are recommended for minimum hum pick-up.

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

Type No.	List Price	Application	Impedance in Ohms		Overall Ratio	Mtg. Fig.	Dimensions			Wt. Lbs.
			Pri.	Sec.			W.	D.	H.	
T-65A73	\$2.75	DB mike to grid	200 Ct.	100,000	1:22.2	2F	2 1/2	2 1/2	3	2
T-30A20	3.00					2A	2 1/2	2 1/2	3	2
T-58A37	2.25	DB mike to grid	200 Ct.	100,000		2F	2	2 1/8	2 3/8	1 1/2
T-83A78	2.00	Single button mike to single	100	400,000 Ct.	1:64	2F	2	1 7/8	2 3/8	1 1/4
T-86A02	1.75	or P.P. grids				2B	2	1 5/8	2 3/8	1
T-23A57	2.25	Single button mike to single grid	100	400,000	1:64	2A	2	1 7/8	2 3/8	1 1/4
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	2 1/8	2 3/8	1 1/2
T-63A72	3.75	1, 2, 3 or 4 circuit mixer to grid	50, 100, 150, 200	100,000	1:22.2	2F	2 1/2	2 1/2	3	2 1/4
T-63A71	3.75	1, 2, 3 or 4 circuit mixer to grid	200, 400, 600, 800	100,000	1:11	2F	2 1/2	2 1/2	3	2 1/4
T-61A94	3.25	Line to single or P.P. Cl. A grids	500/125	100,000 Ct.	1:14.1	2F	2 1/2	2 1/2	3	2 1/4
T-62D65-	6.00	Line to 845 Class AB grids	500	7,220	1:3.8	2D	3 3/8	3 3/8	4	5
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	2 1/2	2 1/2	3	2 1/4

MICROPHONE OR LINE TO MIXER OR LINE

Type No.	List Price	Application	Impedance in Ohms		Pri. M.A.	Mtg. Fig.	Dimensions			Wt. Lbs.
			Pri.	Sec.			W.	D.	H.	
T-63A73-	\$3.25	DB mike or line to line or mixer	200 Ct. or 50	200 Ct. or 50		2F	2 1/2	2 1/2	3	2 1/4
T-70A82	3.50	DB mike to line	200 Ct. or 50	500 Ct. or 125		2F	2 1/2	2 1/2	3	2 1/4
T-70A83	3.50	Crystal mike to line or mixer	100,000	200 Ct. or 50		2F	2 1/2	2 1/2	3	2 1/4

TUBE TO LINE OR MIXER (LOW LEVEL)

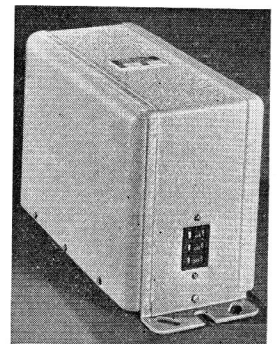
T-14A90	\$2.50	Sgl. or P.P. Plates to line or mixer	20,000 Ct.	500 Ct. or 125	8**	2F	2	2 1/8	2 3/8	1 1/2
T-14A91	2.50	Sgl. or P.P. Plates to line or mixer	20,000 Ct.	200 Ct. or 50	8**	2F	2	2 1/8	2 3/8	1 1/2
T-55A15-	2.25	Plate to line or mixer	15,000/10,000	200 Ct. or 50	8	2F	2	2 1/8	2 3/8	1 1/2

**Per Side.

AUTOMATIC VOLTAGE REGULATORS

Will deliver a constant voltage (within $\pm 1\%$) despite line fluctuations from 90 to 130 volts and/or secondary loads from 1/3 to full load rating. Operation is fully automatic and instantaneous. Once installed no further adjustment is necessary. Supplies optional output voltages of 110, 115 or 120 volts — 60 cycles. Ideal for use with plate, filament or power transformers or for use in technical laboratories. Engineering Bulletin SD422 is available from all Thordarson distributors.

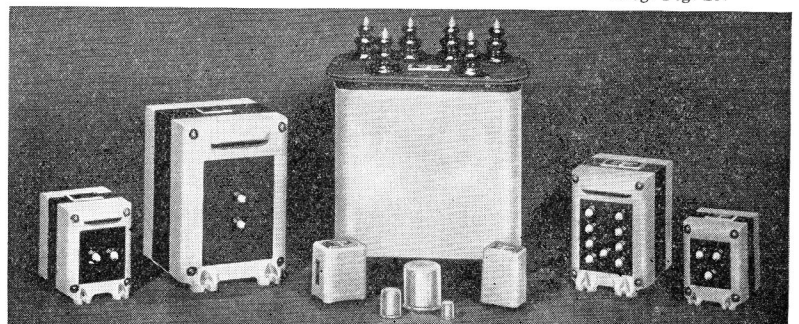
Type No.	List Price	Capacity V.A.	Mtg. Fig.	Dimensions			Wt. Lbs.
				W.	D.	H.	
T-9V30	\$ 40.00	100	SN	5 1/8	10 1/2	6 1/2	43
T-9V31	65.00	250	SN	6	10 1/2	8 1/2	61
T-9V32	100.00	500	2Q	7	13	10	117
T-9V33	175.00	1000	2Q	7	18	10	150



Mtg. Fig. SN

THORDARSON BROADCAST UNITS

The same high quality transformers that have been made to the special requirements of discriminating engineers, broadcast stations and laboratories are now available as stock catalog items. Thordarson offers a complete line of transformers and chokes for broadcast use, each capable of meeting and surpassing the most rigid broadcast tolerances. These transformers are listed and described in the new Broadcast Catalog, No. 500-D. Broadcast stations, experimenters, laboratories or air craft stations are urged to secure a copy of this valuable listing.



The "First Family" in the Broadcast Field

Transformers for complete broadcast service are listed in catalog No. 500-D.



THE C. H. T. SERIES TRANSMITTER TRANSFORMERS



C.H.T. transformer and choke components are made for quality amplifier and amateur transmitter applications. 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 and efficient installation.

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.		Mtg. Fig.	Dimensions			Wt. Lbs.
				Series	Par.		W.	D.	H.	
T-11M74	\$ 9.00	40	100	80	160	3G	4	4½	4¾	7¾
T-11M75	12.50	75	145	145	290	3G	4	4½	4¾	9
T-11M76	19.50	125	210	160	320	3G	5½	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	8½	7½	51

MULTI-MATCH DRIVER TRANSFORMERS

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			Wt. Lbs.
						W.	D.	H.	
T-15D76*	\$ 8.25	15	60	1:1, 1.2:1, 1.4:1, 1.6:1, 1.8:1	3H	4	4½	4¾	7½
T-15D77*	8.25	15	60	2:1, 2.2:1, 2.4:1, 2.6:1, 2.8:1	3H	4	4½	4¾	6
T-15D78*	8.25	15	60	3:1, 3.2:1, 3.4:1, 3.6:1, 3.8:1	3H	4	4½	4¾	6
T-15D79*	8.25	15	60	4:1, 4.5:1, 5:1, 5.5:1, 6:1	3H	4	4½	4¾	6
T-15D80†	11.50	30	120	1:1, 1.25:1, 1.5:1, 1.75:1, 2:1	3H	4	4½	4¾	8¾
T-15D81†	11.50	30	120	2.25:1, 2.5:1, 2.75:1, 3:1, 3.25:1	3H	4	4½	4¾	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, 1:1.85, 1:1.75	3H	4	4½	4¾	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, 1:1.85, 1:1.75	3H	4	4½	4¾	8½
T-15D84§	11.50	30	80	1.5:1, 2:1, 2.5:1, 3:1, 3.5:1	3H	4	4½	4¾	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			Wt. Lbs.
								W.	D.	H.	
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	2½
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 LINE TO GRID TRANSFORMERS (HIGH LEVEL) Mtg. Fig. 3K

Type No.	List Price	Primary Ohms	Secondary Ohms	Dimensions			Wt. Lbs.
				W.	D.	H.	
T-15A65	\$10.50	500, 333, 250, 200, 125, 50	50,000/12,500, P.P. Cl. A 845	4	4½	4¾	8
T-15D87	11.00	500, 333, 250, 200, 125, 50	7220, P.P. Cl. AB 845	4	4½	4¾	8

TELEVISION TRANSFORMERS

Plate and Filament. Electrostatically shielded.

Type No.	List Price	Kinescope Tubes	Pri. Volts	Secondary	Pri. V. A.	Volts Insulation	Mtg. Fig.	Dimensions			Wt. Lbs.
								W.	D.	H.	
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.	40	7,500	3X	5½	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.	105	10,000	3X	5½	5½	7	16½
T-16F55-	11.00	1800 1801	105/115	No. 1—2.5 V. @ 2.1 A.	10	10,000	3X	4½	4½	5¾	7½

HORIZONTAL OUTPUT TRANSFORMER

Type No.	List Price	Overall Ratio	Application	Mtg. Fig.	Dimensions			Wt. Lbs.
					W.	D.	H.	
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

See page 11 for other modulation transformers and page 10 for other driver transformers.



C. H. T.—Filament Transformers and Chokes



MULTI-VOLT FILAMENT TRANSFORMERS

Terminals are brought out to solder lugs on a recessed base (except Mtg. 3X). This permits of mounting on chassis with one hole for sub-panel wiring. Side knock-out holes for above panel wiring.

Single Secondary Transformers

Type No.	List Price	Primary Volts	Secondary Volts	Amps.	Pri. V.A.	Volts Insulation	Mtg. Fig.	Dimensions			Wt. Lbs.
								W.	D.	H.	
T-11F59	\$5.75	105-115	5 Ct.	5	30	2000	3K	2¾	3	3½	5
T-11F63	8.00	105-115	5 Ct.	13	70	2000	3K	4	4½	4¾	7½
T-11F55	11.50	105-115	5.25 Ct.	22	130	2000	3K	5½	5½	6	14
T-11F60	6.25	105-115	6.3 Ct.	5	35	2000	3K	2¾	3	3½	5¾
T-11F62	6.75	105-115	7.5 Ct.	8	65	2000	3K	4	4½	3¾	6½
T-11F64	9.50	105-115	10 Ct.	10	110	2000	3K	4	4½	4¾	9¾
T-11F53	8.00	105-115	2.5 Ct.	10	25	7500	3K	4	4½	5¾	8½
T-11F61	18.50	105-115	2.5 Ct.	20	55	15,000	3X	5½	5½	6	14
T-11F54	16.00	105-115	5 Ct.	20	110	10,000	3X	5½	5½	6	15

Tapped Secondary Transformers

T-11F50	\$9.00	105-115	7.5 tap at 6.3, 5* and 2.5 Ct.	6.5	55	2000	3K	4	4½	4¾	6½
T-11F51	9.50	105-115	10 tap at 7.5 and 6.3 Ct.	8	90	2000	3K	4	4½	4¾	7¾
T-11F52	13.25	105-115	11 tap at 10 and 7.5 Ct.	10	125	2000	3K	5½	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	50	2000	3K	4	4½	3¾	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 3	170	2000	3K	5½	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 3	120	2000	3K	5½	5½	6	13½

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. Many commercial choke ratings are obtained by tests not comparable to operating values. Thordarson test methods give the ACTUAL inductance as obtained in filter circuits.

C. H. T. Input Chokes

Type No.	List Price	Inductance Henries	Current M.A.	Volts Insulation	D.C. Res.	Mtg. Fig.	Dimensions			Wt. Lbs.
							W.	D.	H.	
T-15C36	\$ 8.00	5-25	200-20	4,000	105	3L	4	4½	4¾	10
T-15C37	10.00	5-25	300-30	4,000	78	3L	5½	5½	6¾	22
T-15C38	12.00	5-25	400-30	4,000	95	3L	5½	5½	6¾	24
T-15C39	22.00	5-25	500-30	10,000	86	3L	5¾	7¼	8¼	38½
T-15C41	26.50	5-25	650-50	10,000	46	3L	7	7½	8	51

C. H. T. Smoothing Chokes

T-15C45	\$ 8.00	12	200	4,000	105	3L	4	4½	4¾	10
T-15C46	10.00	12	300	4,000	78	3L	5½	5½	6¾	22
T-15C47	12.00	12	400	4,000	95	3L	5½	5½	6¾	24
T-15C48	22.00	12	500	10,000	86	3L	5¾	7¼	8¼	38½
T-15C50	26.50	12	650	10,000	46	3L	7	7½	8	51

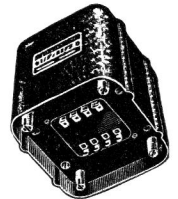


Fig. 3K



Fig. 3L

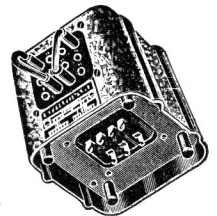


Fig. 3H

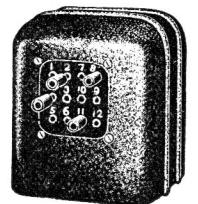


Fig. 3G

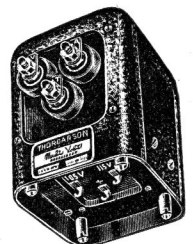
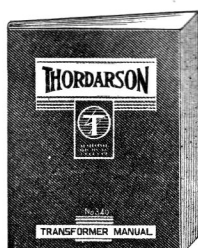


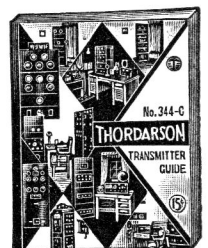
Fig. 3X



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.

For the Amateur

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.





MULTI-VOLT PLATE TRANSFORMERS

The value of Thordarson 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 for complete coil protection. Primary volts, 115-230.

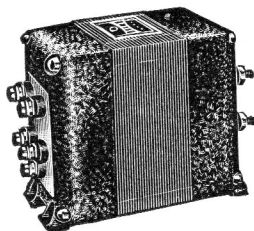


Fig. 3P

Type No.	List Price	Sec. A.C. Load Volts	D.C. Volts	D.C. M.A.	Pri. V. A.	Mtg. Fig.	Dimensions			Wt. Lbs.
							W.	D.	H.	
T-15P11	\$12.50	665/665 or 535/535	500 or 400	200	160	3K	5 1/8	5 1/2	5 3/8	15 3/4
T-15P12	15.00	835/835 or 655/655	650 or 500	200	200	3K	5 1/8	5 1/2	6 3/4	19 1/2
T-15P13	20.00	945/945 or 770/770	750 or 600	300	315	3Q	5 7/8	7 3/4	7 1/4	31 3/4
T-15P14	25.00	1225/1225 or 945/945	1000 or 750	300	427	3Q	5 7/8	8 1/4	8 1/4	41
T-15P15	30.00	1450/1450 or 1190/1190	1250 or 1000	300	520	3Q	7	9	8	51 1/4
T-15P16	45.00	1540/1540 or 1255/1255	1250 or 1000	500	875	3P	6 3/8	11 1/4	9	81
T-15P17	32.50	1815/1815 or 1535/1535	1500 or 1250	300	665	3Q	7	9	8	55
T-15P18	60.00	2130/2130 or 1845/1845	1750 or 1500	500	1210	3P	6 3/8	12 1/2	9	96
T-15P19	50.00	2950/2950 or 2365/2365	2500 or 2000	300	1160	3P	6 3/8	11 3/4	9	85
T-15P20	85.00	2960/2960 or 2390/2390	2500 or 2000	650	2380	3P	7 1/2	13 1/2	9 5/8	140
T-15P21	80.00	3440/3440 or 2980/2980 2340/2340 or 1815/1815	3000 or 2500 2000 or 1500	500	2180	3P	7 1/2	12 3/4	9 5/8	129
T-15P22	50.00	2070/2070 or 1785/1785 1495/1495 or 1210/1210	1750 or 1500 1250 or 1000	300	745	3P	6 3/8	10 3/4	9	76

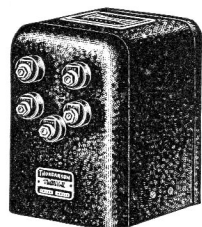


Fig. 3Q

PLATE AND FILAMENT TRANSFORMERS

Combination plate and filament transformers for such tubes of medium power as 6L6, 807, T-20, RK-23, RK-39, etc. Primary 115 volts, 50-60 cycles. Mounting figure 3K.

T-15R00	\$10.50	500/500 (A.C.)		150	140		5 1/8	5 1/2	6	15
Filament Windings: 5V, 3A; 7.5V. tapped at 6.3, 5A.										
T-15R01	15.00	500/500 (A.C.)		400	310		5 7/8	6 3/4	6	24 1/2
Filament Windings: 5V, 6A; 6.3V., 6 A.										
T-15R02	13.25	750/750 (A.C.)		200	220		5 1/8	5 1/2	6	17
Filament Windings: 2.5V, 10A; 7.5V tapped at 6.3, 3A.										
T-15R03	13.75	400/400 (A.C.)		200	205		5 1/8	5 1/2	6	19
Filament Windings: 2.5V, 4A; 6.3V, 3A; 5V, 3A.										

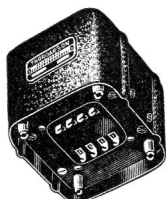


Fig. 3K

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. Mounting figure 3N. Primary 115 volts, 50-60 cycles.

Type No.	List Price	Pri. V. A.	D.C. Volts	M.A.	Filament		Dimensions			Wt. Lbs.
					Volts	Amps.	W.	D.	H.	
T-15R60	\$9.50	65	150; 135; 120; -110; 100; 90	200	5	3	4	4 1/2	4 7/8	6 3/4
T-15R61	10.50	100	275; 250; 225; -200; 175; 150	200	5	3	4	4 1/2	4 7/8	8 1/2
T-15R62	12.50	155	500; 450; 400; -350; 300; 275	200	5	3	5 1/8	5 1/2	5 3/8	15 1/4

MULTIPLE-TAP OUTPUT TRANSFORMERS

Designed especially for amplifiers featured in Thordarson No. 346-D Sound Guide. Exceptional adaptability and frequency response will dictate their use in other quality sound systems. Mounting style 3H.

Type No.	List Price	Tube Type	Class	Ohm Impedance		Pri. M.A.	Max. Per Side Watts	Dimensions			Wt. Lbs.
				Pri.	Sec.			W.	D.	H.	
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	4	4 1/2	4 3/8	7 1/4
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	4	4 1/2	4 7/8	8
T-15S92*	13.75	2-6L6 P.P. 2-6L6 P.P.	AB1 AB2	6600 5500	Same as above	90	40	4	4 1/2	5 5/8	8 3/4
T-15S93*	15.00	4-6L6 P.P. Par. 2-6L6 P.P.	AB1 AB2	3300 3800	Same as above	155	60	4	4 1/2	5 5/8	15 1/2
T-15S94*	17.50	4-6L6 P.P. Par.	AB2	1900	500/250/166 /125/100/84	230	120	5 1/8	5 1/2	5 5/8	18

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

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	4	4 1/2	4	7 1/4
T-15S97	14.50	Line to Voice Coil	1000/500	50/24/16/8/6/4/3/2	60	4	4 1/2	4	9

See page 12 for other plate transformers and pages 8 and 9 for other outputs.

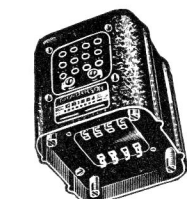


Fig. 3N

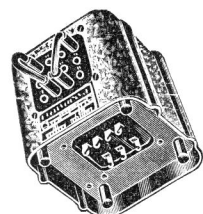


Fig. 3H



C. H. T. AMPLIFIER TRANSFORMERS

AUDIO COUPLING TRANSFORMERS



MULTI-VOLT POWER TRANSFORMERS

Specified for build-it-yourself amplifiers described in Sound Amplifier Guide No. 346-D. Primary 115 volts 50-60 cycles. Mounting style 3K except T-15R04, 3M.

Type No.	List Price	Volts Ct.	M.A.	Volts Amp. (Rect.Fil.)	Volts Ct.	Amp.	Volts Ct.	Amp.	Volts Ct.	Amp.	Dimensions			Wt. Lbs.
											W.	D.	H.	
T-15R04	\$ 4.75	510	25		6.3	2.1			2 3/4	3	3 1/2	3		
T-15R05	10.50	680	135	5	3	6.3	2	6.3	2.25	4	4 1/2	5 1/2	10	
		77 Bias tap		5	2	2.5 or 5								
T-15R06	9.75	725	175	5	3	6.3	5			4	4 1/2	5 1/2	11	
T-15R07	10.50	760	280	5	3	6.3	7			4	4 1/2	5 1/2	12	
T-15R08	13.75	900	325	5	6	6.3	8			5 1/4	5 1/2	5 5/8	22	

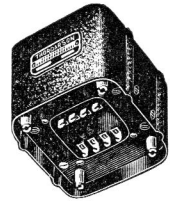


Fig. 3K

C.H.T. AMPLIFIER CHOKES

Specified for build-it-yourself amplifiers fully described in Sound Amplifier Guide No. 346-D. Indicated for other quality receiver and amplifier applications. These types have two windings each. The first line of description applies when the windings are connected in parallel, the second for series connection. Mounting style 3L.

Type No.	List Price	Inductance Henries	Current M.A.	Volts Insulation	D.C. Res.	Dimensions			Wt. Lbs.
						W.	D.	H.	
T-15C52	\$5.00	30 Parallel 120 Series	35 17	1,600	750 3000	2 3/4	3	3 1/2	3 1/4
T-15C53	5.50	12 Parallel 50 Series	100 50	1,600	272 1090	2 3/4	3	3 1/2	3 1/4
T-15C54	5.50	8 Parallel 32 Series	150 75	1,600	184 735	2 3/4	3	3 1/2	3 1/2
T-15C55	7.00	2 Parallel 8 Series	500 250	1,600	32 1/2 130	4	4 1/2	4 3/8	7 1/2
T-15C56	9.00	2 Parallel 8 Series	700 350	1,600	27 107	4	4 1/2	4 1/8	9 3/4



Fig. 3L

AUDIO COUPLING TRANSFORMERS

Ultra modern design, balanced windings, hum bucking coil construction and moisture-proof compound-filled cases. Frequency response variation $\pm 1\frac{1}{2}$ db 60 to 8,000 C.P.S. Mounting style 3M.

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)	Dimensions			Wt. Lbs.
							W.	D.	H.	
T-15A66	\$7.25	500, 333, 250, 200, 125, 50	60,000/15,000 Single Grid	100	2.5	+10	2 3/4	3	3 1/2	2 1/4
T-15A67	8.00	500, 333, 250, 200, 125, 50	120,000/30,000 P. P. Grids	100	2.5	+20	2 3/4	3	3 1/2	2 1/4
T-15A68	8.00	60, 38, 30, 22, 15, 10, 5.5, 2.5	60,000/15,000 Single Grid	100	2.5	0	2 3/4	3	3 1/2	2 1/2

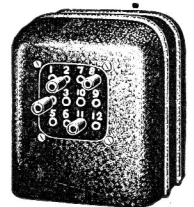


Fig. 3G

Low Impedance Source to Line or Mixer

T-15A69	7.25	500, 333, 250, 200, 125, 50	500, 333, 250, 200, 125, 50	100	2.5	+20	2 3/4	3	3 1/2	2
T-15A70	7.50	60, 38, 30, 22, 15, 10, 5.5, 2.5	500, 333, 250, 200, 125, 50	100	2.5	+20	2 3/4	3	3 1/2	2



Fig. 3W

Tube to Line (Low Level)

T-15A71	7.25	20,000/5,000 Single Plate	500, 333, 250, 200, 125, 50	8	8	+15	2 3/4	3	3 1/2	1 3/4
T-15A72	7.25	20,000/5,000 P.P. Plates	500, 333, 250, 200, 125, 50	10	0	+20	2 3/4	3	3 1/2	1 3/4



Fig. 3M

Interstage Coupling Transformers (Class A)

T-15A73	6.50	10,000/2,500 Single Plate	40,000/10,000 Single Grid.	0	0	+15	2 3/4	3	3 1/2	2 1/4
T-15A74	6.50	10,000/2,500 Single Plate	40,000/10,000 P.P. Grids	0	0	+15	2 3/4	3	3 1/2	2 1/2
T-15A75	7.00	20,000/5,000 P.P. Plates	45,000/11,250 P.P. Grids	10	0	+20	2 3/4	3	3 1/2	2 1/4

See page 18 for other Amplifier Components, pages 3 and 4 for other power transformers, pages 15 and 22 for other audio coupling 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 1/2 Sec.	Use Driver Trans. No.	Trans. for 500 Ohm Line	Ratio 500 Ohm Line to 1/2 Sec.
R.C.A. TUBES										
										Where T-15D82 appears T-19D05 may also be used.
46	30	400	0	5,600	T-11M74 or T-19M14	*45	5:1	T-15D79 or T-19D04	T-15D82	1:85
46	40	500	0	8,000	T-11M75 or T-19M14	*45	5:1	T-15D79 or T-19D04	T-15D82	1:85
46	50	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-15D82	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	1:1.75
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	1:1.75
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	1:1.75
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	1:1.75
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	Same as R.C.A. 203A									
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	1:1.75
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	1:1.75
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 10 and 16 for 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 1/2 Sec.	Use Driver Trans. No.	Trans. for 500 Ohm Line	Ohm Line to 1/2 Sec.
EIMAC TUBES										
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	1:1.85
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	1:1.75
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	1:1.85
RK-31	110	1000	0	13,600	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	1:1.75
RK-31	140	1250	0	17,000	T-11M77 or T-19M17	2A3	6:1	T-15D79 or T-19D04	T-15D82	1:1.75
RK-52	200	1000	0	7,200	T-11M77 or T-19M17	2A3	4:1	T-15D79 or T-19D04	T-15D82	1:1.85
RK-52	250	1250	0	10,000	T-11M77 or T-19M17	2A3	4:1	T-15D79 or T-19D04	T-15D82	1:1.85
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	1:1.85
RK-58	260	1250	0	9,000	T-11M77 or T-19M17	2A3	3.8:1	T-15D78 or T-19D03	T-15D82	1:1.85
HYTRON TUBES										
HY-25	75	800	-9	9,000	T-11M75 or T-19M16	2A3	5:1	T-15D79 or T-19D04	T-15D82	1:1.75
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-11M77 or T-19M17	2A3	5:1	T-15D79 or T-19D04	T-15D82	1:1.75
HY-51A	180	1000	-35	7,000	T-11M77 or T-19M17	2A3	4:1	T-15D79 or T-19D04	T-15D82	1:1.85
HY-51B	180	1000	-35	7,000	T-11M77 or T-19M17	2A3	4:1	T-15D79 or T-19D04	T-15D82	1:1.85
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	1:1.85
ZB-120	200	1000	0	6,900	T-11M77 or T-19M17	2A3	4:1	T-15D79 or T-19D04	T-15D82	1:1.85
ZB-120	245	1250	0	9,000	T-11M77 or T-19M17	2A3	4.5:1	T-15D79 or T-19D04	T-15D82	1:1.75
ZB-120	300	1500	-9	11,200	T-11M77	2A3	4:1	T-15D79 or T-19D04	T-15D82	1:1.85
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										
HK-24	45	500	0	6,400	T-11M75 or T-19M15	2A3	4.5:1	T-15D79 or T-19D04	T-15D82	1:1.75
HK-24	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	1:1.85
354F	445	2000	-22.5	12,000	T-11M78	4-2A3	2.5:1	T-15D81	T-15D83	1:1.85
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.

See Pages 11 and 16 for modulation transformers.



Fig. 3S



Fig. 3T

Thordarson Tru-Fidelity transformers are definitely a high quality group. Such features as balanced "hum bucking" coils, special high permeability cores, heavy cast cases, one hole swivel mounting and extremely wide frequency range recommend them to engineers who demand the best.

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. un-balance (M.A.)	Max. Sig. Level (db)	Mtg. Fig.	Dimensions			Wt. Lbs.
								W.	D.	H.	
T-90A06	\$18.00	250,000/62,500	†500*/333/250/ 200*/125/50	0	0	+10	3T	3 1/8	2 1/2	4 1/8	4 3/4

PLATE TO LINE (LOW LEVEL)

T-90A02	17.50	20,000/5000 Single Plate	†500*/333/250/ 200*/125/50	8	8	+15	3T	3 1/8	2 1/2	4 1/8	5
T-90A01	16.50	20,000/5000 Single† or P-P Plates	†500*/333/250/ 200*/125/50	10	0	+20	3T	3 1/8	2 1/2	4 1/8	4 1/2

†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	3 1/8	2 1/2	4 1/8	4 3/4
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LINE TO GRID

T-90A00	17.00	500*/333/250 200*/125/50	75,000/18,750 Single Grid	100	.5	+10	3T	3 1/8	2 1/2	4 1/8	4
T-90A11	20.00	500*/333/250 200*/125/50	150,000/37,500 P-P Grids	100	.5	+20	3T	3 1/8	2 1/2	4 1/8	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	3 1/8	2 1/2	4 1/8	4 1/2
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	3 1/8	2 1/2	4 1/8	4 3/4
T-90A05	16.50	20,000/5000 P-P Plates	Ratio-overall 1 to 1 1/2 45,000/11,250 P-P Grids	10	0	+20	3T	3 1/8	2 1/2	4 1/8	4 3/4

OUTPUT

T-90S07	18.00	5000/3000/1250/750 P-P 2A3, etc.	†500*/333/250/ 200*/125/50	60	5	+32	3T	3 1/8	2 1/2	4 1/8	4 3/4
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	3 1/8	2 1/2	4 1/8	4 3/4
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	3 7/8	4 7/8	11

LINE TO VOICE COIL

T-90S12	14.00	500*/333/250 200*/125/50	15/10/7.5/ 5/3.75/1.25	0	0	+32	3T	3 1/8	2 1/2	4 1/8	4 3/4
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PLATE REACTOR

Type No.	List Price	Connection	Henries	M.A.	D.C. Ohms	Mtg. Fig.	Dimensions			Wt. Lbs.
							W	D.	H.	
T-90C09	\$12.50	Series Parallel	300 75	8 16	4,000 1,000	3T	3 1/8	2 1/2	4 1/8	4 1/2

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

†Frequency response warranted on 500 and 200 ohm taps.

Other audio transformers are listed on pages 6, 7, 15 and 19.

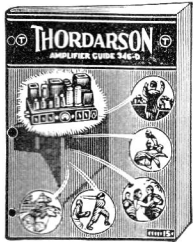


AMPLIFIERS

THORDARSON

"Build a Thordarson Amplifier"

P. A. men and experimenters interested in building high quality amplifiers are finding the Thordarson Amplifier Guide No. 346-D a worthwhile source of information. It contains laboratory designed and tested circuits of amplifiers from 8 to 120 watts output. Complete parts list and mechanical chassis drawings enable the constructor to obtain superior results with matched transformer and choke components. Data is included for pre-amplifiers, dual tone controls, speaker impedance matching and testing. Obtain your copy of the Guide from your supplier or factory. (15 cents postpaid.)



Below is a brief description and transformer-choke complements of popular amplifiers fully covered in the Amplifier Guide. Optional selection of C.H.T. or regular components is indicated.

8 WATT AMPLIFIER

Mic. channel — 111 db.
Phono channel — 66 db.
6 watts speaker field power
Tubes: 1-6J7, 1-6F5, 1-6L6G, 1-80

T-75R47 Power Transformer
T-57C54 Choke
T-17S10 Output Transformer

20 WATT UNIVERSAL AMPLIFIER

6 volt battery operation
115 volt 60 cycle operation
Mic. channel — 114 db.
Phono channel — 75 db.
Tubes: 2-6J7, 1-6C5, 2-6L6G, 2-6W5G

T-14R40 Power Transformer
T-15A74 Input Transformer
T-17S12 or T-15S91 Output Transformer
T-17C00-B First Choke
T-37C36 Second Choke

120 WATT AMPLIFIER

For use with single or four channel pre-amplifiers
500 ohm input — 72.5 db. or
High impedance input — 90 db.
Dual treble and bass tone controls
Tubes: 1-6J7, 2-6C5, 2-6F6, 4-6L6G, 2-83, 1-80

T-15R01 Power Transformer
T-15R06 Power Transformer
T-15C56 First Choke
T-68C07 Second Choke
T-15A74 Input Transformer
T-15D86 Driver Transformer or T-17D04
T-15S94 Output Transformer or T-17S16
T-67C46 Choke
T-14C70 Choke
2-R-1068

15 WATT AMPLIFIER

Mic. channel — 113 db.
Phono channel — 72 db.
10 watts speaker field power
Tubes: 2-6J7, 1-6C5, 2-6V6G, 1-5Z3
T-70R62 or T-15R06 Power Transformer
T-15C74 or T-15C54 First Choke
T-67C46 Second Choke
T-15A74 Input Transformer
T-17S11 or T-15S90 Output Transformer

40 WATT AMPLIFIER

2 Mic. channels — 118.5 db.
2 Phono channels — 74 db.
25 watts speaker field power
Dual treble and bass tone controls
Tubes: 2-6J7, 1-6F5, 1-6C5, 1-6F6, 2-6L6G, 2-5Z3

T-17R31 or T-15R08 Power Transformer
T-75C51 or T-15C56 First Choke
T-18C92 Second Choke
T-67C46 Third Choke
T-15D85 Driver Transformer
T-14C70 Tone Control Choke
T-17S14 or T-15S92 Output Transformer
2-R-1068

10 WATT TRU-FIDELITY PHONO AMPLIFIER

2 Phono channels — 81 db.
Volume expansion
Dual treble and bass tone controls
Tubes: 4-6C5, 1-6L7, 1-6H6, 2-2A3 or 2-6A3, 1-5Z3, 1-80
T-87R85 or T-15R05 Power Transformer
T-90A04 Input Transformer
T-15C54 Choke
T-74C30 Choke
T-67C46 Choke
T-18C92 Choke
T-14C70 Tone Control Choke
T-90S13 Output Transformer
2-R-1068

25 WATT AMPLIFIER

2 Mic. channels — 113 db.
1 Phono channel — 72 db.
18 watts speaker field power
Treble and bass tone controls
Tubes: 3-6J7, 1-6C5, 2-6L6G, 1-5Z3
T-17R30 or T-15R07 Power Transformer
T-67C49 or T-15C55 First Choke
T-67C46 Second Choke
T-15A74 Input Transformer
T-17S12 or T-15S91 Output Transformer

60 WATT AMPLIFIER

2 Mic. channels — 112 db.
2 Phono channels — 73 db.
Dual treble and bass tone controls
Tubes: 3-6J7, 2-6C5, 4-6L6G, 1-83, 1-80
T-89R28 Power Transformer
T-75C51 First Choke
T-68C07 Second Choke
T-67C46 Third Choke
T-15A74 Input Transformer
T-14C70 Tone Control Choke
T-17S15 or T-15S93 Output Transformer
2-R-1068

SINGLE CHANNEL PRE-AMPLIFIER

Any high impedance Mic. to Line
60 db. gain
115 volt 60 cycle operation
Tubes: 1-6F5, 1-6J7 and 1-6X5
T-15R04 Power Transformer
T-15A71 Tube to Line Transformer
2 T-13C26 Chokes

FOUR CHANNEL PRE-AMPLIFIER

Four high impedance Mic. to Line
55 db. gain
Complete mixing
115 Volt 60 cycle operation
Tubes: 4-6F5, 1-6J7 and 1-6X5
T-15R04 Power Transformer
T-15A71 Tube to Line Transformer
2 T-13C26 Chokes
2-R-1068

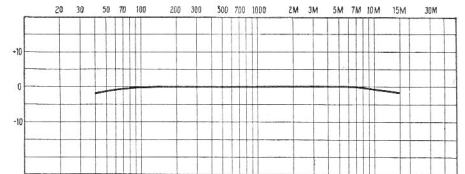
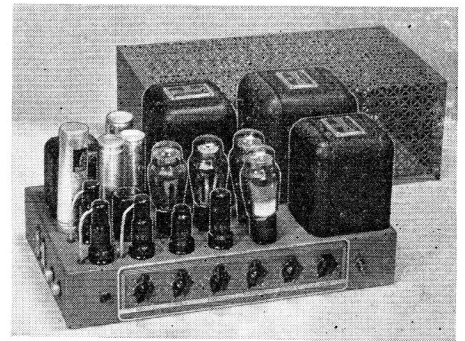
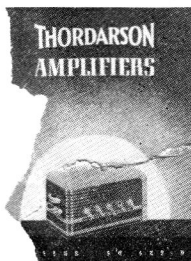


Photo and frequency curve of 40 watt amplifier. Complete constructional data is given in Thordarson Amplifier Guide, No. 346-D.



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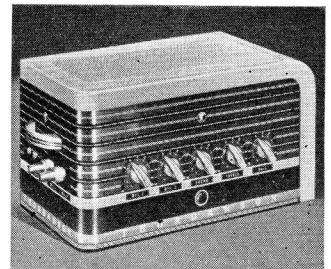
THORDARSON AMPLIFIERS

(Factory Wired and Tested)

"Built for Audio Experts by Audio Experts"

The finest amplifiers are built by Thordarson — pioneers in producing quality audio components. Absolute fidelity is insured by accurate laboratory design and rigid inspection during production. New models from 8 to 75 watts undistorted output satisfy practically every sound requirement. A 28 watt universal amplifier with built in record-player operates from either 6 volt battery or 115 volts a.c.

Catalog 600-D illustrates and describes the beautiful walnut cabinet models and streamlined steel enclosures. Obtain a copy from your distributor or write factory direct.



Model T-25W20

Build or buy a Thordarson Amplifier in 1939.

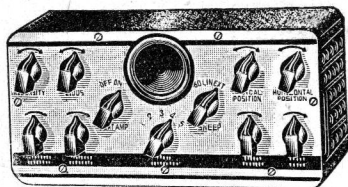
CLASSIFIED INDEX

(SEE PAGE 2 FOR INDEX BY TYPE No.)

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Output Transformers	8-9-16-18-22																																																																					
CLASSIFICATION	PAGE NO.																																																																					
Plate Supply Transformers	12-17																																																																					
Power Transformers	3-4-10-12-18-19-24																																																																					
Television Transformers	10-16																																																																					
Transceiver Transformers	9																																																																					
Tropex Transformers	5																																																																					
Tru-Fidelity Transformers	22																																																																					
Vibrator Transformers	4																																																																					
Voltage Changers	14																																																																					
Literature:																																																																						
Amplifier Guide	23																																																																					
Amplifier Catalog	23																																																																					
Broadcast Catalog	15																																																																					
Complete Transformer Manual	17																																																																					
Replacement Encyclopedia	4																																																																					
Service Guide	4																																																																					
Transmitter Guide	17																																																																					

"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 of 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	10 1/2	6	5 3/8
T-11K17	2.00	Etched panel	10 1/2		5 3/8
T-11K19	2.25	Cover for T-11K16	10 1/2	6 3/4	1/2
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

POWER TRANSFORMERS FOR CATHODE RAY TUBES

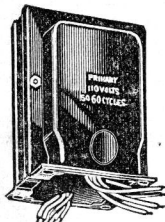


Fig. 2G

Type No.	List Price	Volts D.C.	M.A.	Rect. Fil.	Fil. No. 1	Fil. No. 2	Mtg. Fig.	Dimensions			Wt. Lbs.
								W.	D.	H.	
T-92R25- For 913 tube	\$2.25	500 tap-430	3	6.3V-.9A*			2F 2	2 1/8	2 3/8	1 1/2	
T-92R33 For 913 tube	4.00	**500 tap-400	3	6.3V-.9A	6.3V-.6A	6.3V-.6A (No. 3 2.5V-1.4A)	2G	3 1/4	4 5/8	3 3/4	3 1/4
T-14R32	6.50	400	15	5V-2A 5V-2A Ct.	6.3V-.6A	2.5V-2A (No. 3 6.3V-.6A)	2G	2 1/8	3 3/8	3 1/8	4

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

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

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