

MAINTENANCE

If required, the crystal and electrodes may be cleaned with carbon tetrachloride and a soft cloth. After reassembling the holder and before resealing with duco cement in the case of type 1 series holder, the holder with crystal in position should be heated to drive out any excess moisture. The temperature in the heating process should not exceed 60 degrees C.

It is recommended that crystals should not be examined unless a fault develops, since frequent cleanings and handling will in time change the frequency.

TROUBLE SHOOTING

The most general cause of improper operation of radio equipment is tube failure. A complete set of tested tubes of the same types specified should be kept on hand at all times. If faulty operation of the transmitter is observed and tube failure suspected, each tube may be checked by replacing it with a like tube known to be in good condition. In case an open fuse is found, it is an indication of overload on some circuit in the transmitter. The overload may be caused by a short circuit. The short circuit may be due to a foreign article being dropped into the cabinet, a defective condenser, defective tubes or a high voltage arc. A direct short is most readily found by means of continuity meter. The d-c resistance of the various circuits may be checked in order to locate the fault.

Defective tubes causing an overload in power circuits may usually be located by inspection. It will be found that excessive heating or sputtering within the vacuum tubes is a good indication of a fault in the tube circuit. High voltage arcs may be caused by bent condenser plates, corrosion or dust. It is well known that one of the greatest sources of trouble in equipment located in a salt atmosphere is corrosion. Corrosion resulting from salt spray or salt laden atmosphere may cause failure of the equipment for no apparent reason. In general it will be found that contacts such as tap switches, tube prongs, cable plug connectors and relay contacts are most effected by corrosion. When it is necessary to operate

MAINTENANCE

the equipment in localities subject to such corrosive atmosphere, inspection of wiping contacts, cable plug, relays, etc., should be made more frequently in order to keep the equipment in good condition.

In general trouble encountered in radio apparatus may be isolated by means of various tests and measurements, and the section of the transmitter determined in which the trouble is located. If this is done, the components of the associated circuit may be checked and the trouble located.

APPENDIX

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TABLE II

TYPICAL METER READINGS FOR 30J

	1.5 to 20 Megacycles				20 Megacycles & Over			
	Switch Position				Switch Position			
	Plate Off			Pl.On	Plate Off			Pl.On
	1	2	3	3	1	2	3	3
Filament (Volts a.c.)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Excitation Plate (ma)	0	30	60	60	20	80	270	270
Amplifier Grid (ma)	0	2	20	15	2	4	20	15
Amplifier Plate (ma)	0	0	0	300	0	0	0	300
Static Mod. Pl. (ma)	0	0	0	90	0	0	0	90
Plate Voltage	0	0	0	1250	0	0	0	1250

Note: Antenna current varies widely due to different antenna circumstances. Typical antenna currents cannot, therefore, be given.

TABLE III
VOLTAGES OCCURRING IN THE 30J

TERMINAL

Line Voltage 110-115 Volts 50/60 c.p.s.		VOLTS					
		AC	DC				
		Fil.	Grid		Plate		Screen
			L.F.	H.F.	L.F.	H.F.	L.F. H.F.*
Oscillator	802	6.3	-22	-32	400	470	180 250
1st R-F Amp	807	6.3	-190	-128	470	420	280 300
2nd R-F Amp.	807	6.3	-300	-190	470	430	200 260
Final R-F Amp.	813	10.0	-100	- 90	1250	1250	400 400
Input Sp. Amp.	6J7	6.3	8		215		-
2nd Sp. Amp.	6J7	6.3	13		330		-
Audio Drivers	6F6	6.3	42		420		-
Modulators	C-120	10.0	0		1250		-
Bias Rectifier	5Z3	5.0	-		420		-
Keying Rectifier	45	2.5	-		190		-
L.V. Supply	866A	2.5	-		560		-
H.V. Supply	866A	2.5	-		1250		-

D8
D1

* L.F. - Frequencies below 20 meters.
H.F. - 20 meters or above.

NOTE: The above d-c voltages were measured with a 1000 ohm-per-volt meter. For more specific information concerning an individual transmitter, consult the Engineering Test Data sheets which accompany the transmitter.

TABLE IV
TYPICAL AUDIO FREQUENCY DATA

FREQUENCY RESPONSE

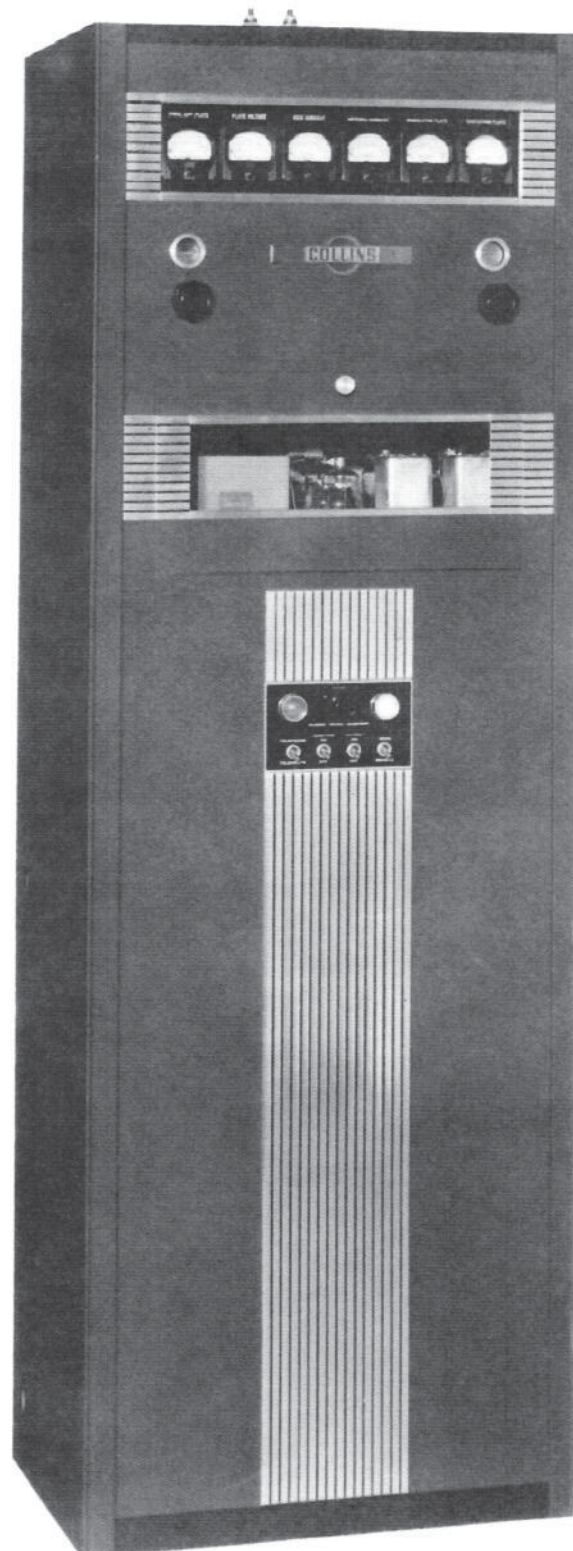
Taken at an input level of -19 db to the modulator unit. Modulation level 95% at 1000 c.p.s.

<u>Frequency</u>	<u>DB</u>	<u>Frequency</u>	<u>DB</u>
60	0	1000	0
120	+ .5	2000	- .2
200	+ .2	3000	-2.0
300	0	5000	-7.5
500	0	6000	-6.0
		8000	-3.0

DISTORTION: Distortion at 95% modulation 5.5% r.m.s. measured at 400 c.p.s.

NOISE LEVEL: Noise level on carrier -40 db below 100% modulation.

CARRIER SHIFT: Carrier shift at 100% modulation -2.0%.



30J-18 TRANSMITTER
FIG. 1

UNIT B
80Z-5

UNIT C
122C-7

UNIT D
10Y-12

UNIT E
9RD-7

UNIT G
40IN-4

UNIT H

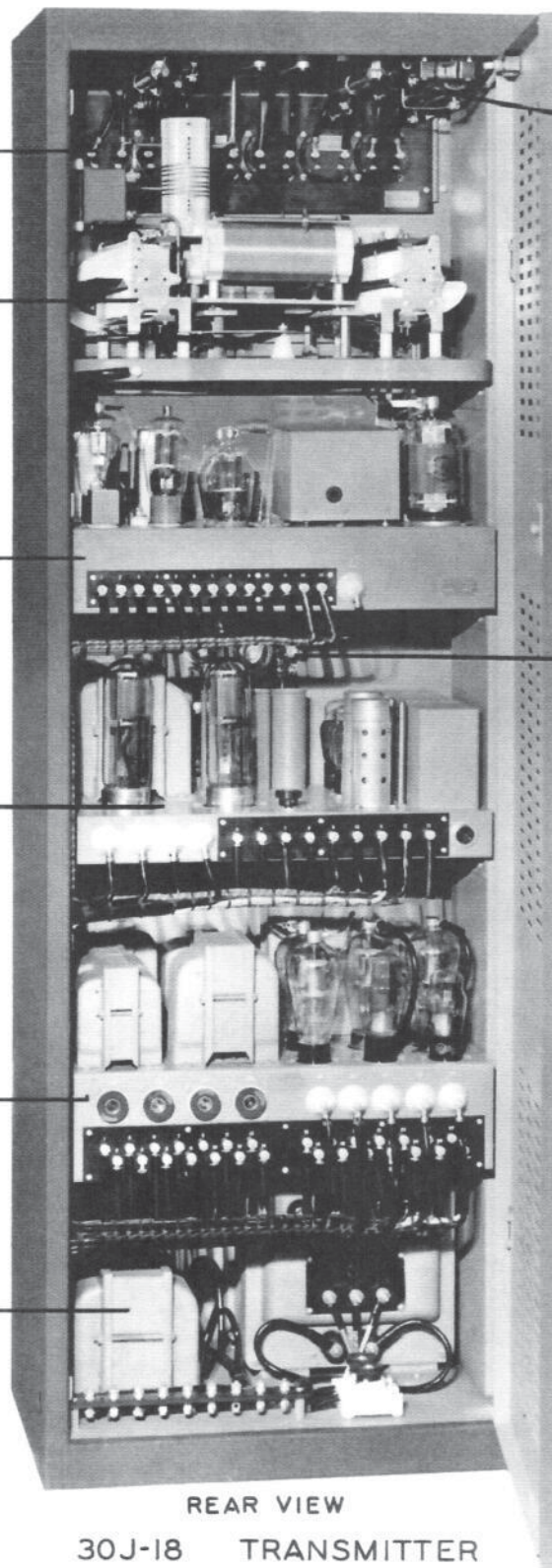
UNIT A

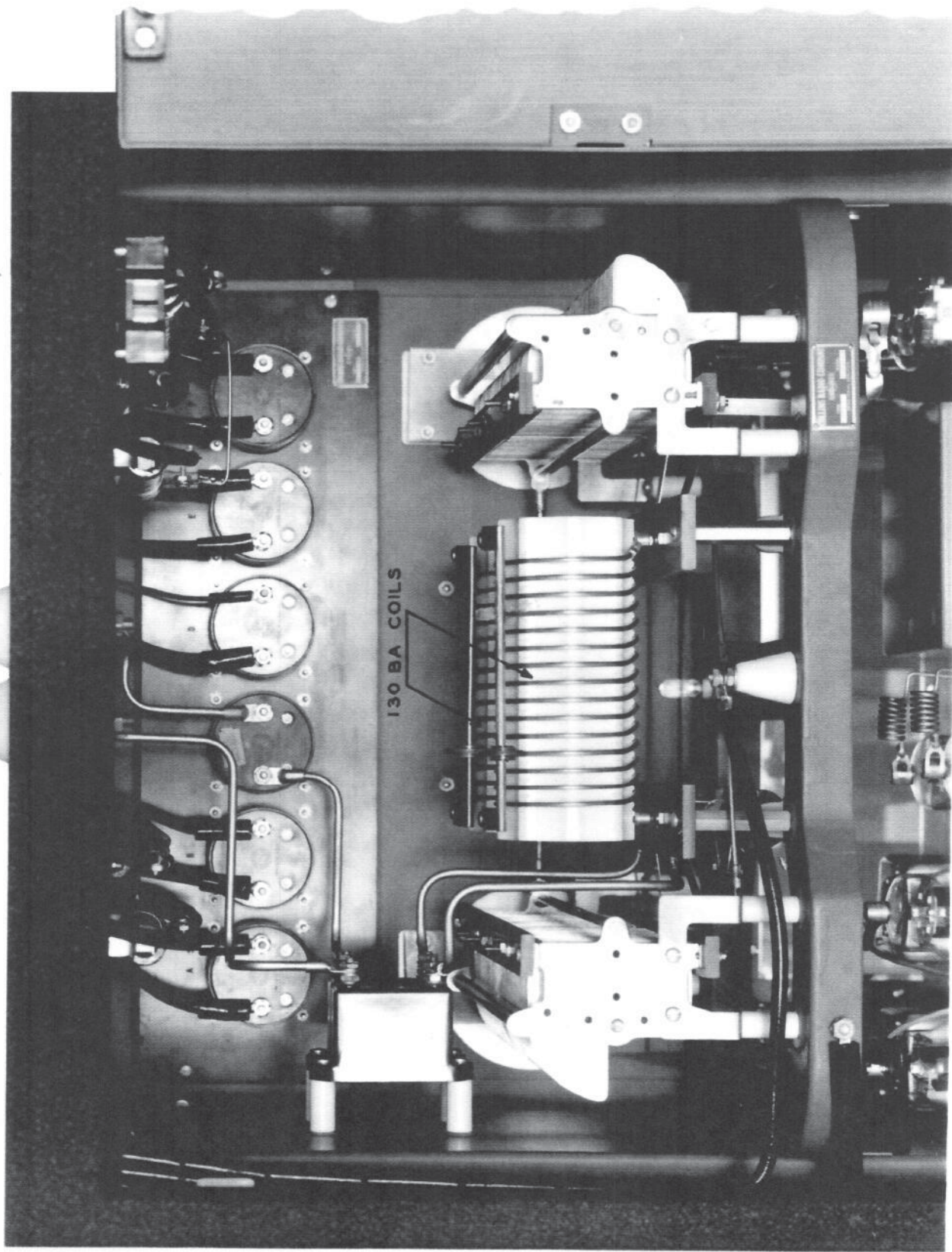
UNIT F

REAR VIEW

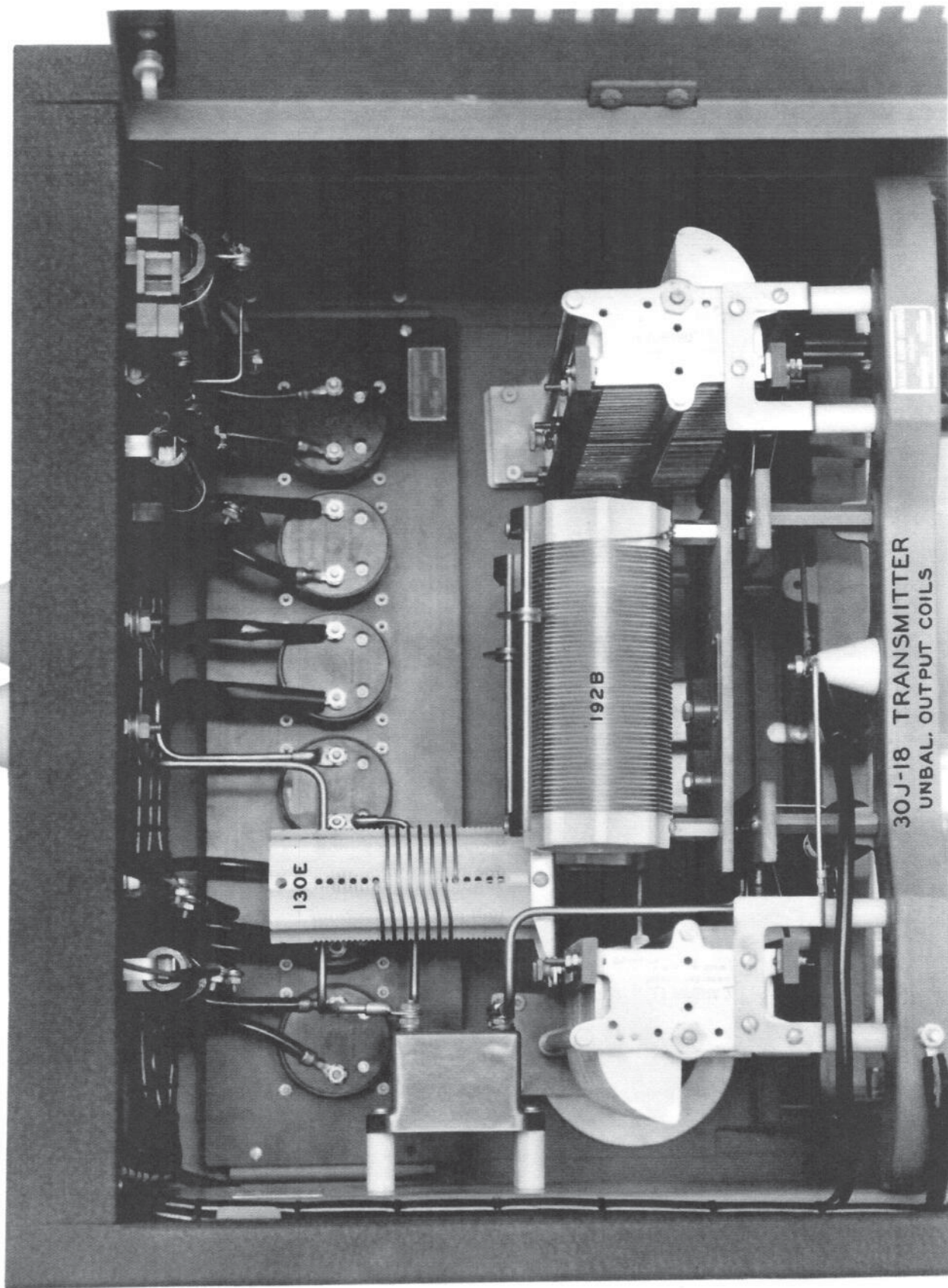
30J-18 TRANSMITTER

FIG. 2



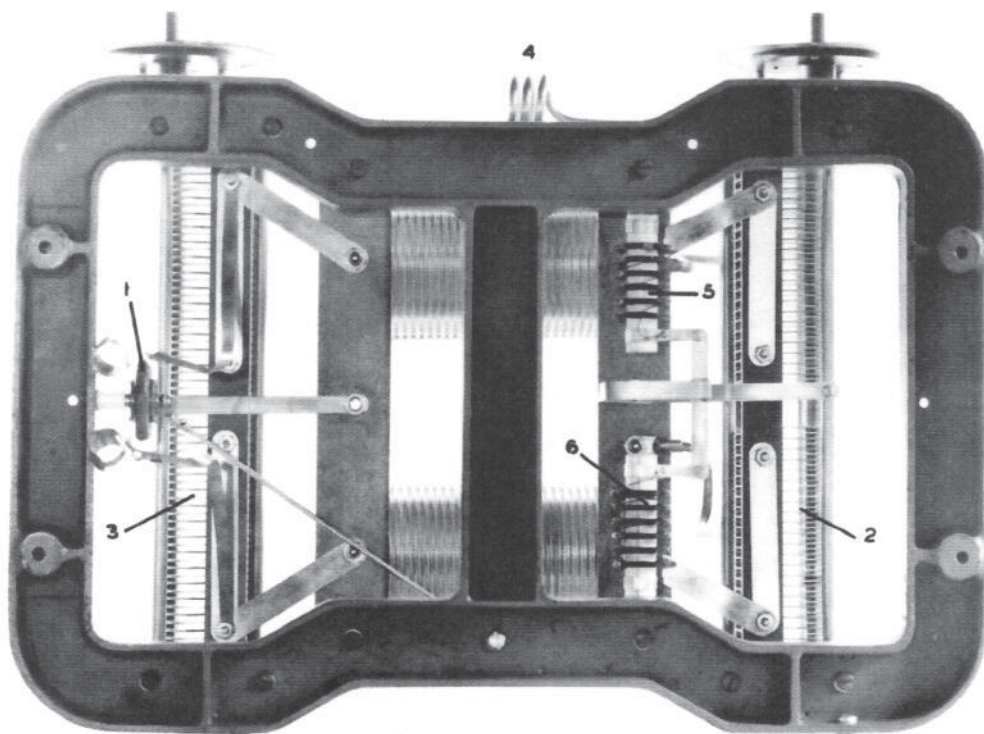
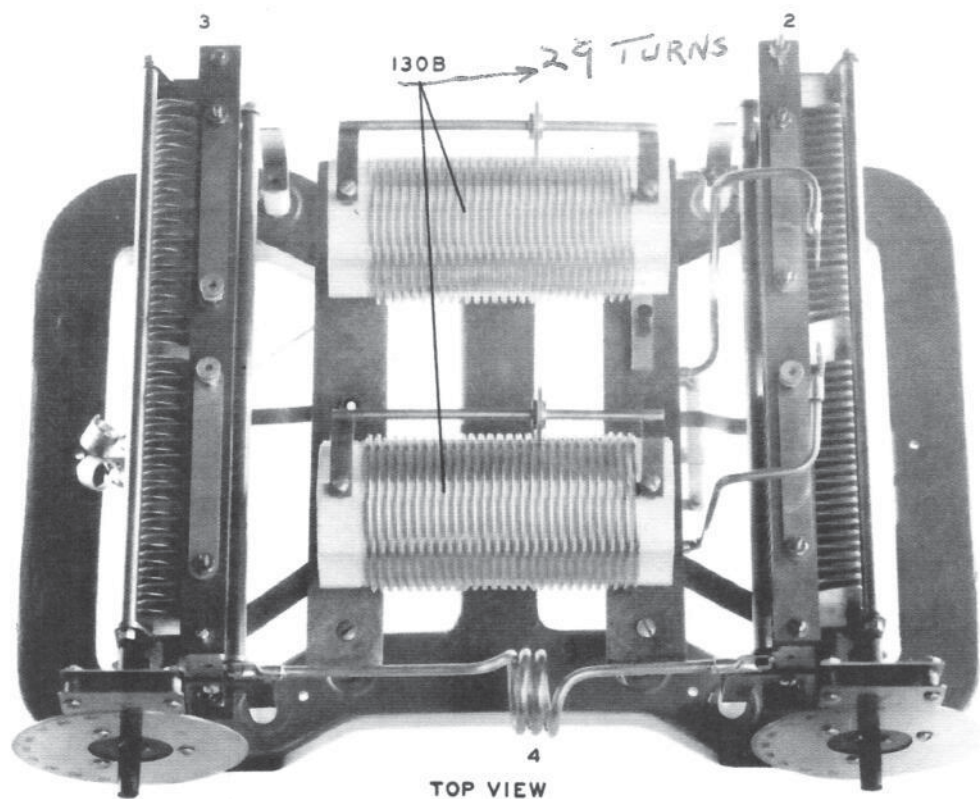


30J-18 TRANSMITTER - BALANCED OUTPUT COILS
15 TURNS

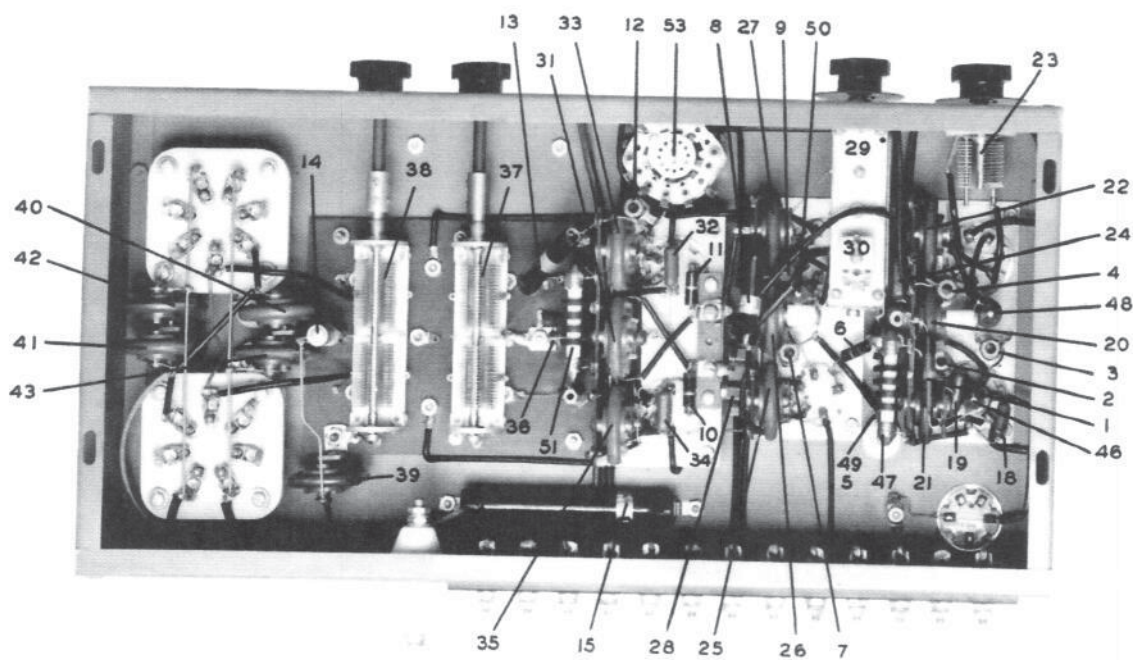
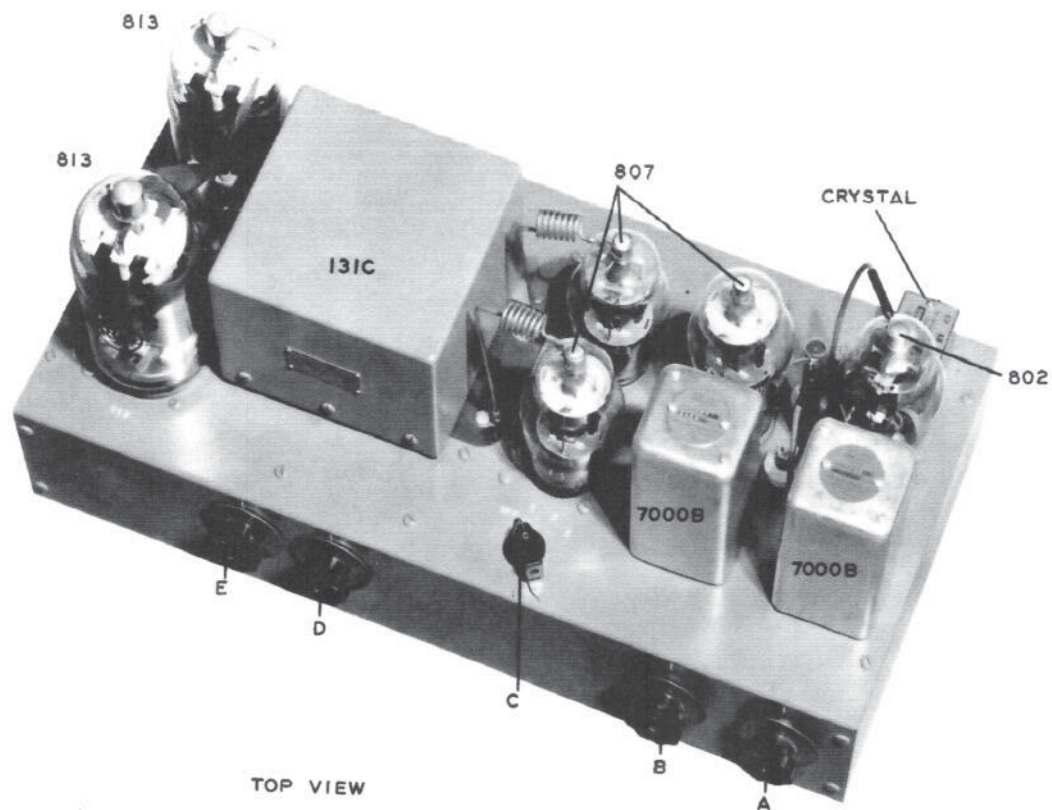


30J-18 TRANSMITTER
UNBAL. OUTPUT COILS

FIG. 4 15 TURNS

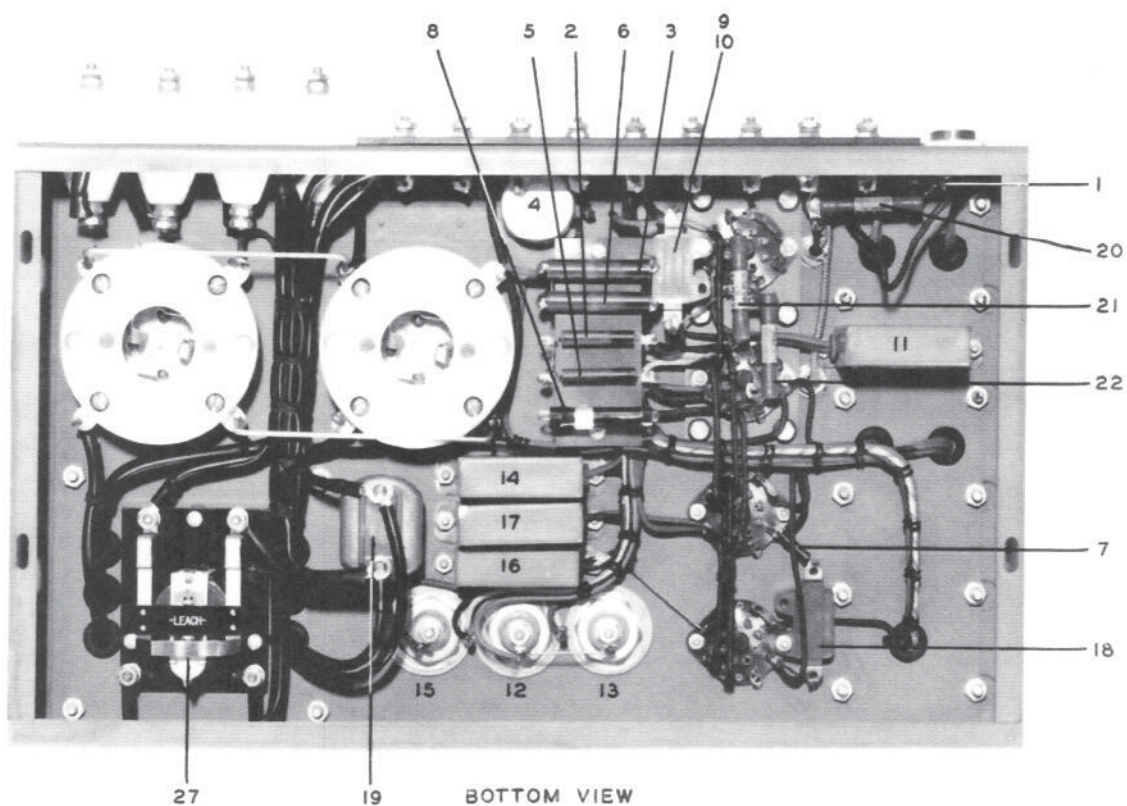
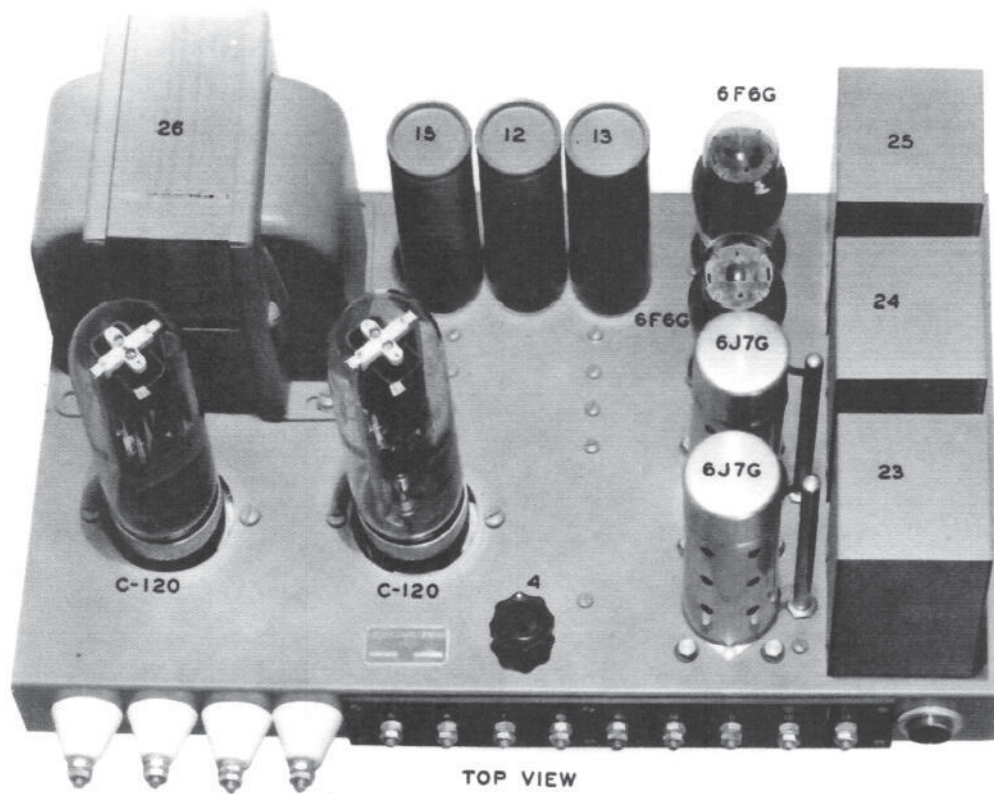


I22C-7 OUTPUT NETWORK
FIG. 5

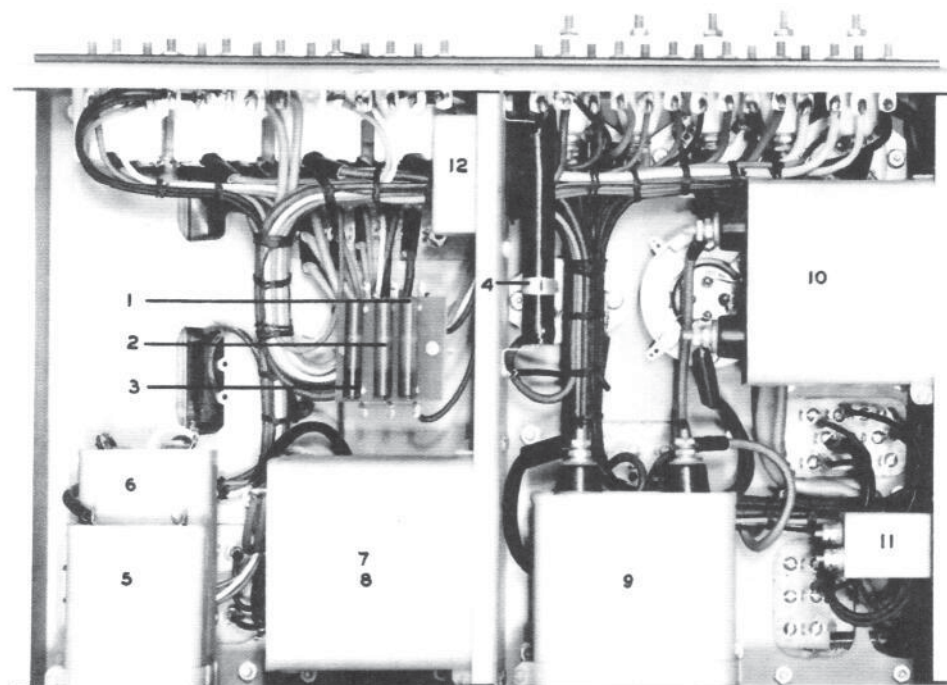
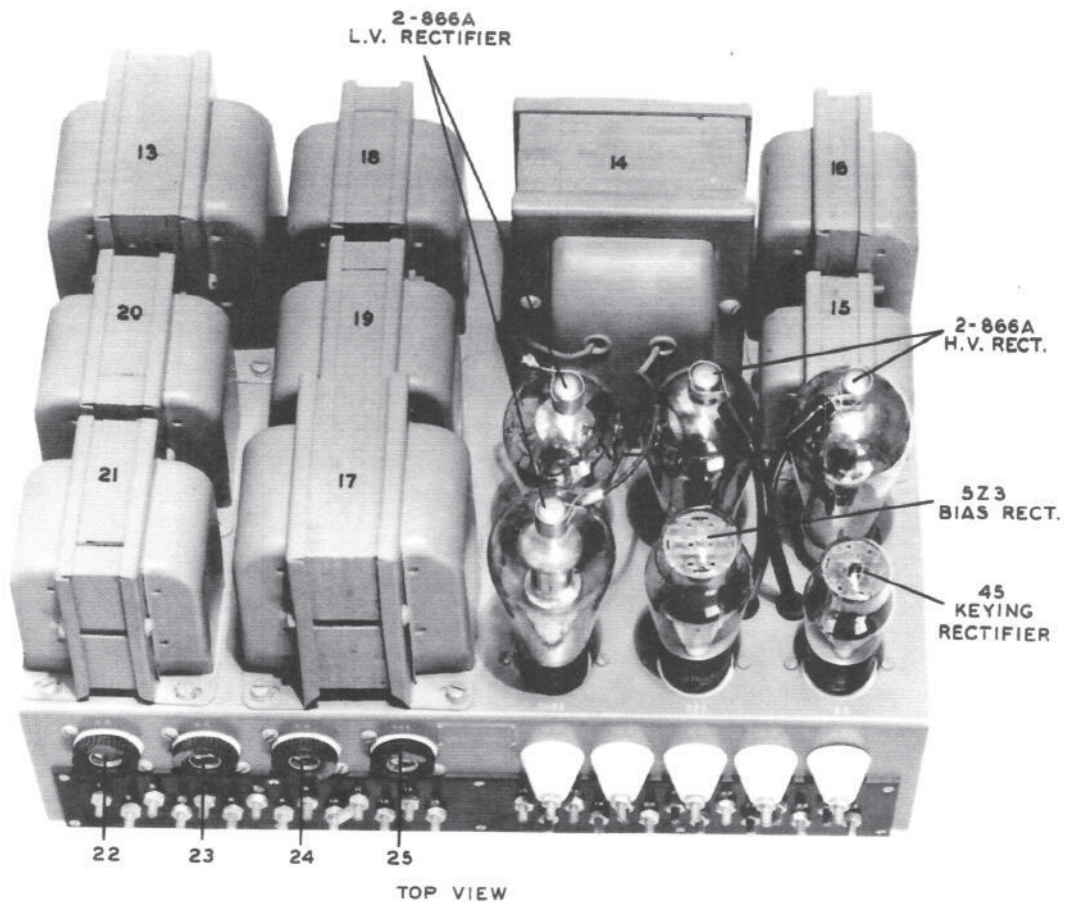


10Y-12 R.F. UNIT

FIG. 6



9RD-7 MODULATOR
FIG. 7



BOTTOM VIEW
40IN-4 POWER UNIT
FIG. 8

PARTS LIST
29H-7 CABINET ASSEMBLY

UNIT A: BLEEDER SECTION

<u>Item</u>	<u>Function</u>	<u>Specification</u>	<u>Part No.</u>
1	Bias Voltage Divider	500 ohm 100 w. $\pm 10\%$	710NE500
2	Bias Voltage Divider	2000 ohm 100 w. $\pm 10\%$	710NE2M
3	H.V. Bleeder Resistor	50,000 ohm 160 w. $\pm 10\%$	710NF50M
4	V.M. Multiplier Resistor	100,000 ohm 50 w. $\pm 1\%$	728N100M
5	V.M. Multiplier Resistor	100,000 ohm 50 w. $\pm 1\%$	728N100M
6A	Male Section Rear Door Sw.		260N404
6B	Female Section Rear Door Sw.		260N405

UNIT F: SWITCH PANEL

7	Filament Rheostat	8 ohm 50 watt	736N8
8	Filament Voltmeter	15 v. A.C. Vane Type	452NJ15
9A	Fil. Pwr. Pilot Socket		262N136
9B	Fil. Pilot Green Filter		262N237
9C	Pilot Lamp Bulb	125 v. 3 watt	262N331
10A	Plate Pwr. Pilot Socket		262N136
10B	Plate Pilot Red Filter		262N236
10C	Pilot Lamp Bulb	125 v. 3 watt	262N331
11A	Male Section Access Door Sw.		260N404
11B	Female Section Access Door Sw.		260N405
12	Filament Power Switch	DPST Toggle	260N101
13	Send-Receive Switch	DPST Toggle	260N101
14	Plate Power Switch	DPST Toggle	260N101
15	Telephone-Telegraph Sw.	DPST Toggle	260N101

UNIT H: POWER COMPONENTS

16	Plate Power Transformer		662S448
17	H.V. Filter Choke		668S456A
18	H.V. Filter Choke		668S456A
19	A.C. Line Fuse	20 amp. Plug Type	264N120
20	A.C. Line Fuse	20 amp. Plug Type	264N120

PARTS LIST
80Z-5 METER PANEL

UNIT B

<u>Item</u>	<u>Function</u>	<u>Specification</u>	<u>Part No.</u>
1	Final Amp. Plate Meter	500 ma. d.c.	450NJ500
2	Plate Voltage Meter	2000 v. d.c. (10 ma.)	458N016J
3	Grid Current Meter	50 ma. d.c.	450NJ50
4	Antenna Current Meter	3 amp. R.F.	451NJ3
5	Modulator Plate Meter	500 ma. d.c.	450NJ500
6	Excitation Plate Meter	500 ma. d.c.	450NJ500

122C-7 OUTPUT NETWORK

UNIT C

1	H.V. Bypass Condenser	.001 mfd. 5000 v.	950N210A
2	Antenna Loading Cond.	440 mmfd. Dual Variable	920N35
3	Plate Tank Condenser	240 mmfd. Dual Variable	920N37
4	Isolation Choke	2.5 mh. 0.5 amp.	240N25
5	Plate Choke	2.5 mh. 0.5 amp.	240N25
6	Plate Choke	2.5 mh. 0.5 amp.	240N25
7*	Ant. Blocking Cond.	.002 mfd. 6000 v. $\pm 5\%$	906N220H
8*	Ant. Blocking Cond.	.002 mfd. 6000 v. $\pm 5\%$	906N220H

* Mounted on side of cabinet.

PARTS LIST
10Y-12 R.F. UNIT

UNIT D

<u>Item</u>	<u>Function</u>	<u>Specification</u>	<u>Part No.</u>
1	Osc. Grid Resistor	100,000 ohm 1 w.	704N100M
2	Osc. Cathode Resistor	1,000 ohm 10 w.	710NA1M
3	Osc. Screen Resistor	15,000 ohm 10 w.	710NA15M
4	Osc. Plate Resistor	2,500 ohm 10 w.	710NA2500
5	First Buffer Grid Resistor	100,000 ohm 2 w.	706N100M
6	First Buffer Parasitic Res.	27 ohm 1 w.	703N27
7	First Buffer Screen Res.	25,000 ohm 10 w.	710NA25M
8	First Buffer Plate Res.	1,000 ohm 10 w.	710NA1M
9	Second Buff. Grid Res.	100,000 ohm 2 w.	706N100M
10	Second Buff. Parasitic Res.	10 ohm 1 w.	703N10
11	Second Buff. Parasitic Res.	10 ohm 1 w.	703N10
12	Second Buff. Screen Res.	20,000 ohm 10 w.	710NA20M
13	Second Buff. Screen Res.	20,000 ohm 10 w.	710NA20M
14	Amplifier Grid Res.	5,000 ohm 10 w.	710NA5M
15	Amplifier Screen Resistor	3,000 ohm 50 w.	710ND3M
16			
17			
18	Osc. Grid Condenser	.000025 mfd. 900 v.	909N425D
19	Osc. Cathode Cond.	.0001 mfd. 900 v.	909N310C
20	Osc. Screen Cond.	.006 mfd. 1000 v.	910N260A
21	Osc. Suppressor Cond.	.006 mfd. 1000 v.	910N260A
22	Osc. Plate Cond.	.0005 mfd. 1000 v.	910N350A
23	Osc. Plate Tuning Cond.	100 mmfd. Var.	922N2
24	First Buff. Grid Cond.	.0001 mfd. 900 v.	909N310C
25	First Buff. Cathode Cond.	.006 mfd. 1000 v.	910N260A
26	First Buff. Screen Cond.	.006 mfd. 1000 v.	910N260A
27	First Buff. Plate Cond.	.0005 mfd. 1000 v.	910N350A
28	First Buff. Pl. Res. Bypass	.006 mfd. 1000 v.	910N260E
29	First Buff. Tank Cond.	140 mmfd. Dual	922N6
30	First Buff. Equalizing Cond.	30 mmfd. Var.	918N1
31	Second Buff. Cathode Cond.	.006 mfd. 1000 v.	910N260A
32	Second Buff. Screen Cond.	.004 mfd. 900 v.	909N240C
33	Second Buff. Screen Cond.	.006 mfd. 1000 v.	910N260A
34	Second Buff. Screen Cond.	.004 mfd. 900 v.	909N240C
35	Second Buff. Screen Cond.	.006 mfd. 1000 v.	910N260A
36	Second Buff. H.V. Bypass	.006 mfd. 1000 v.	910N260A
37	Second Buff. Plate Tank Cond.	140 mmfd. Dual	922N6
38	Amp. Grid Tank Cond.	140 mmfd. Dual	922N6
39	Amp. Grid Bias Cond	.006 mfd. 1000 v.	910N260A
40	Amp. Screen Condenser	.002 mfd. 5000 v.	950N220A

PARTS LIST
10Y-12 R.F. UNIT

<u>Item</u>	<u>Function</u>	<u>Specification</u>	<u>Part No.</u>
41	Amp. Screen Condenser	.002 mfd. 5000 v.	950N220A
42	Amp Fil. Bypass Cond.	.006 mfd. 1000 v.	910N260A
43	Amp Fil Bypass Cond.	.006 mfd. 1000 v.	910N260A
44			
45			
46	Osc. Grid Choke	2.5 mh. 125 ma.	240N2
47	Osc. Cathode Choke	2.5 mh. 125 ma.	240N2
48	Osc. Plate Choke	2.5 mh. 125 ma.	240N2
49	First Buffer Grid Choke	2.5 mh. 125 ma.	240N2
50	First Buffer Plate Choke	2.5 mh. 125 ma.	240N2
51	Second Buffer Cathode Choke	2.5 mh. 125 ma.	240N2
52			
53	Tuning-Stage Selector Sw.	4 pos. 2 Section	259W100

PARTS LIST
9RD-7 MODULATOR UNIT

UNIT E

<u>Item</u>	<u>Function</u>	<u>Specification</u>	<u>Part No.</u>
1	Input Grid Resistor	5 megohm 1/2 w.	702N5meg.
2	First 6J7 Cathode Res.	2000 ohm 1 w.	704N2M
3	Audio Decoupling Res.	50,000 ohm 2 w.	706N5OM
4	Speech Amp. Gain Control	200,000 ohm Pot.	376N102
5	Second 6J7 Cathode Res.	2000 ohm 1 w.	704N2M
6	Audio Decoupling Res.	10,000 ohm 2 w.	706N10M
7	Equalizing Resistor	50,000 ohm 1/2 w.	702N5OM
8	6F6 Cathode Resistor	750 ohm 10 w.	710NA750
9	First 6J7 R.F. Filter Cond.	.002 mfd. 1000 v.	910N220E
10	First 6J7 R.F. Filter Cond.	.002 mfd. 1000 v.	910N220E
11	First 6J7 Cathode Condenser	20 mfd. 100 v.	183N5
12	Audio Decoupling Cond.	4 mfd. 600 v.	930N3
13	Audio Decoupling Cond.	4 mfd. 600 v.	930N3
14	Second 6J7 Cathode Cond.	20 mfd. 100 v.	183N5
15	Audio Decoupling Cond.	4 mfd. 600 v.	930N3
16	Audio Coupling Cond.	0.1 mfd. 600 v.	931N12
17	6F6 Cathode Cond.	20 mfd. 100 v.	183N5
18	Equalizing Condenser	.00025 mfd. 1000 v.	910N325E
19	Mod. Phasing Condenser	.006 mfd. 5000 v.	950N260A
20	Input R.F. Choke	5.4 μ h 0.85 ohm	240N34
21	6J7 Filament Choke	5.4 μ h 0.85 ohm	240N34
22	6J7 Filament Choke	5.4 μ h 0.85 ohm	240N34
23	Audio Interstage Transformer		667S228E
24	Audio Coupling Unit		667S460A
25	Class "B" Driver Trans.		667S138C
26	Modulation Transformer		667S606A
27	Telephone Telegraph Relay	SPST N.C. Contacts	407N74

PARTS LIST
401N-4 POWER SUPPLY

UNIT G

<u>Item</u>	<u>Function</u>	<u>Specification</u>	<u>Part No.</u>
1	Keying Rectifier Load	25,000 ohm 2 w.	706N25M
2	Keying Rectifier Load	25,000 ohm 2 w.	706N25M
3	Keying Resistor	50,000 ohm 2 w.	706N50M
4	L.V. Bleeder Resistor	25,000 ohm 50 w.	710ND25M
5	Bias Supply Filter Cond.	4 mfd. 600 v.	930N8
6	Bias Output Filter Cond.	6 mfd. 600 v.	930N9
7	L.V. Supply Filter Cond.	8 mfd. 800 v.	930N18
8	L.V. Output Filter Cond.	8 mfd. 800 v.	930N18
9	H.V. Filter Condenser	4 mfd. 2000 v.	930N40
10	H.V. Filter Condenser	4 mfd. 2000 v.	930N40
11	Bias Voltage Bypass Cond.	2 mfd. 600 v.	930N61
12	Keying Voltage Filter Cond.	0.25 mfd. 600 v.	931N10
13	Bias Power Transformer		662S458A
14	L.V. Power Transformer		662S573A
15	5Z3 Fil. Transformer	5 v. 3 a. C.T.	662S509C
16	866A Fil. Transformer	2 Sec. 2.5 v. 10A	662S539
17	Filament Transformer	2.5 v. 5A. 6.3 v. 4A. 6.3 v. 2A. 10 v. 14A	662S638
18	L.V. Input Filter Choke	4 hy. 0.4 A	668S75B
19	L.V. Output Filter Choke	4 hy. 0.4 A	668S75B
20	Bias Input Filter Choke	6 hy. 0.3 A	668S467
21	Bias Output Filter Choke	6 hy. 0.3 A	668S467
22	866 Fil. Pri. Fuse	3 A. Plug Type	264N103
23	Fil. Pri. Fuse	6A. Plug Type	264N106
24	L.V. Pri. Fuse	6A. Plug Type	264N106
25	H.V. Pri. Fuse	15A. Plug Type	264N115

STANDARD CABLE WIRE CODE

Numerals refer to RMA Color Code
Letters refer to wire size & type

ALL WIRE RUBBER INSULATED WITH BRAID COVERING

NEW Color Code	OLD Color Code	COLOR	CONSTRUCTION RATINGS
A0 *A1 A2 A3 *A4 A5 A6 A9 A02 A32 A52 A62 A92	B N R O Y G L W	Black Brown Red Orange Yellow Green Blue White Black - Red Tracer Orange - Red Tracer Green - Red Tracer Blue - Red Tracer White - Red Tracer	16 Strands No. 30 Tinned 0.0156" Rubber Comp. Wall Glazed Cotton Braid 3 Amp. 500 Volts D.C.
B0 B2 B3 *B4 B5 B6 B9	RB RR RY RG RL RW	Black Red Orange Yellow Green Blue White	26 Strands No. 30 Tinned 0.0313" Rubber Comp. Wall Glazed Cotton Braid 6 Amp. 750 Volts D.C.
C0 C2 C3 C5 C6 C9 C09 C29 C39 C59 C69 *C10 *C40 *C90	 CF CC CB CA CE CD	Black Red Orange Green Blue White Black - White Tracer Red - White Tracer Orange - White Tracer Green - White Tracer Blue - White Tracer Brown - Black Tracer Yellow - Black Tracer White - Black Tracer	65 Strands No. 30 Tinned 0.031" Rubber Comp. Wall Glazed Cotton Braid 20 Amp. 750 Volts D.C.
D0	H	Black	19 Strands No. 27 Tinned 3/64" Live Rubber Wall Lacquered Double Braid - 5KV

Standard Cable Wire Code

NEW Color Code	OLD Color Code	COLOR	CONSTRUCTION RATINGS
E0 E2 E3 E5 E6 E9 E03 E23 E53 E63 E93 E05 E25 E35 E95 E06 E26 E36 E96		Black Red Orange Green Blue White Black - Orange Tracer Red-Orange Tracer Green-Orange Tracer Blue - Orange Tracer White - Orange Tracer Black - Green Tracer Red - Green Tracer Orange - Green Tracer White - Green Tracer Black - Blue Tracer Red - Blue Tracer Orange - Blue Tracer White - Blue Tracer	7 Strands No. 30 Tinned 0.01" Unvulcanized Rubber Wall Glazed Cotton Braid 1.5 Amp. 300 V. D.C.
F0 F2 F9		Black Red White	52 Strands No. 25 Tinned 0.094" Rubber Comp. Wall Glazed Cotton Braid 35 Amp. 500 Volts
G0		Black	No. 4 Stranded Double Braid Rubber Insulated Indoor House Wire
H0	HH	Black	19 Strands No. 27 Tinned 1/16" Live Rubber Wall Lacquered Double Braid - 10KV
J0	HHH	Black	19 Strands No. 27 Tinned 1/8" Live Rubber Wall Lacquered Double Braid - 15KV
K0 K2 K3 K5 K6		Black Red Orange Green Blue	10 Strands No. 30 Tinned 0.0156" Rubber Comp. Wall Glazed Cotton Braid Tinned Copper Braid Shielding 3 Amp. 300 Volts D.C.

SERVICE REPORT
REPLACEABLE COMPONENTS

Please fill out this form and submit it by mail to the COLLINS RADIO COMPANY, CEDAR RAPIDS, IOWA, USA, when reporting failure of component parts. A properly completed report must be submitted for each part before any accounts will be adjusted. An accurate report will assure the correct replacement part.

IDENTIFICATION OF COMPONENT

Owner _____
Equipment Type No. _____ Serial No. _____
Unit Type No. _____ Serial No. _____
Component Item No. _____ Stock No. _____
Description of Component _____

SERVICE DATA

Date Equipment Received _____ Date in Service _____
Date of Failure _____ Hours of Service _____

NATURE OF FAILURE

OPERATING DATA AND CONDITIONS (At time of failure)

Line Voltage _____ Abnormal Meter Readings _____
Ambient Temperature _____ °F. Electrical Storm? _____
Associated Fuse Failure _____
Additional Comments _____

PRESENT STATUS OF EQUIPMENT

Out of Service _____ Component Replaced _____
Temporary Repair (state nature) _____
Date of Report _____ Signed _____

-O-

THESE ENTRIES TO BE MADE BY THE COLLINS RADIO COMPANY

Received _____ R.T. No. _____ Replacement Order No. _____

Results of Factory Test: _____

Disposition _____

SERVICE REPORT
REPLACEABLE COMPONENTS

Please fill out this form and submit it by mail to the COLLINS RADIO COMPANY, CEDAR RAPIDS, IOWA, USA, when reporting failure of component parts. A properly completed report must be submitted for each part before any accounts will be adjusted. An accurate report will assure the correct replacement part.

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Owner _____
Equipment Type No. _____ Serial No. _____
Unit Type No. _____ Serial No. _____
Component Item No. _____ Stock No. _____
Description of Component _____

SERVICE DATA

Date Equipment Received _____ Date in Service _____
Date of Failure _____ Hours of Service _____

NATURE OF FAILURE

OPERATING DATA AND CONDITIONS (At time of failure)

Line Voltage _____ Abnormal Meter Readings _____
Ambient Temperature _____ °F. Electrical Storm? _____
Associated Fuse Failure _____
Additional Comments _____

PRESENT STATUS OF EQUIPMENT

Out of Service _____ Component Replaced _____
Temporary Repair (state nature) _____
Date of Report _____ Signed _____

-O-

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Received _____ R.T. No. _____ Replacement Order No. _____

Results of Factory Test: _____

Disposition _____

DRAWINGS

Dwg.

GROUP I - DRAWINGS BOUND IN BOOK

Installation Layout	1920A
Simplified Schematic	1751B
Remote Control Connections	1922A

GROUP II - DRAWINGS PLACED IN COVER ENVELOPE

30J-18 Complete Schematic	1750D
---------------------------	-------

MAT.

GRADE

DRAW. BY: M.S.S.

DATE 6-1-1940

COLLINS RADIO COMPANY

FINISH:

TRACED BY:

DATE: 6-14-1940

CEDAR RAPIDS, IOWA

CHECKED BY:

DATE: 6-14-1940

UNIT 30J INSTALLATION LAYOUT - PLAN VIEW

DRAWING NO 1920A-1

SCALE

WALL

INSTRUCTIONS

APR 13 1942

RECOMMENDED MINIMUM DISTANCE

RECEPTACLES AT BOTTOM OF
CABINET FOR CONTROL CABLES

HOLES AT BOTTOM OF
CABINET FOR POWER
INPUT LEADS

CABINET DOOR

19"

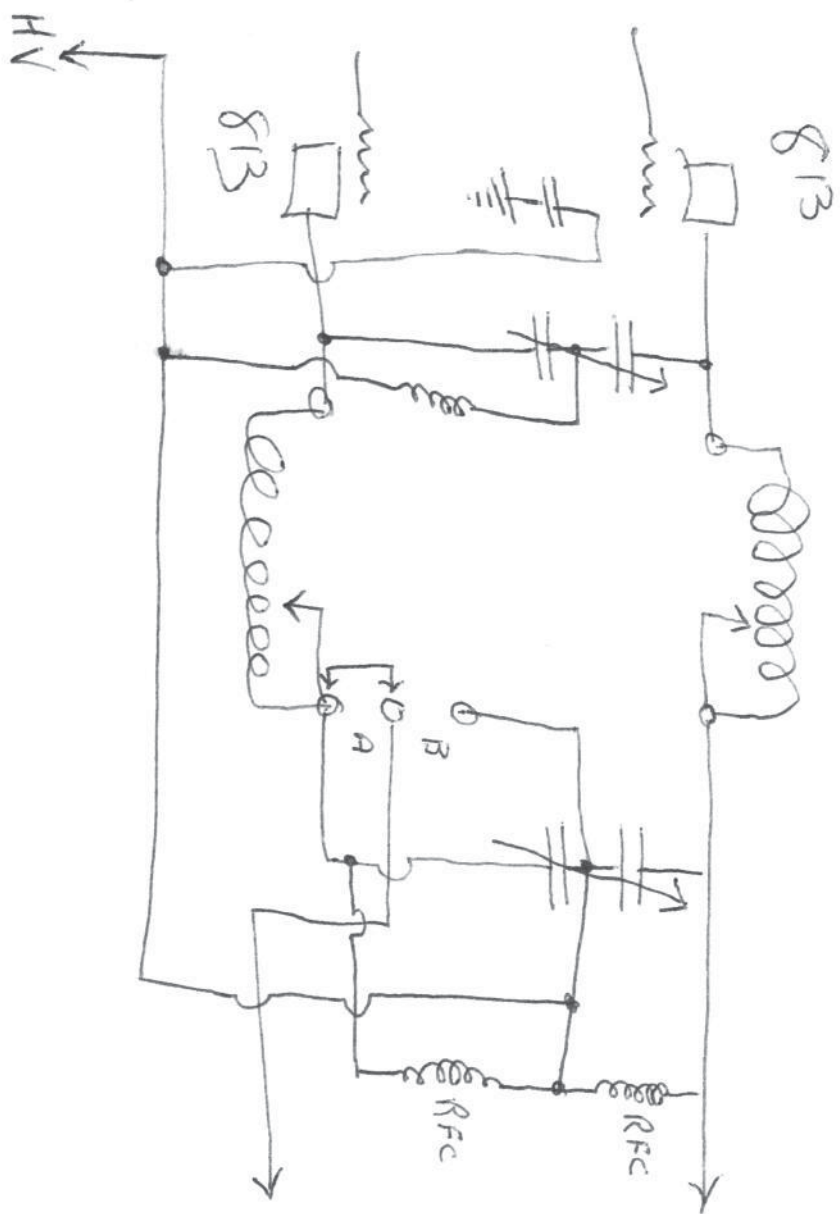
RECOMMENDED MINIMUM DISTANCE

ANTENNA AND GROUND
TERMINALS. TOP OF
CABINET. SEE TEXT.

20"

14"

20"



UNIT: 30J-18 SIMPLIF



MAT:

GRADE:

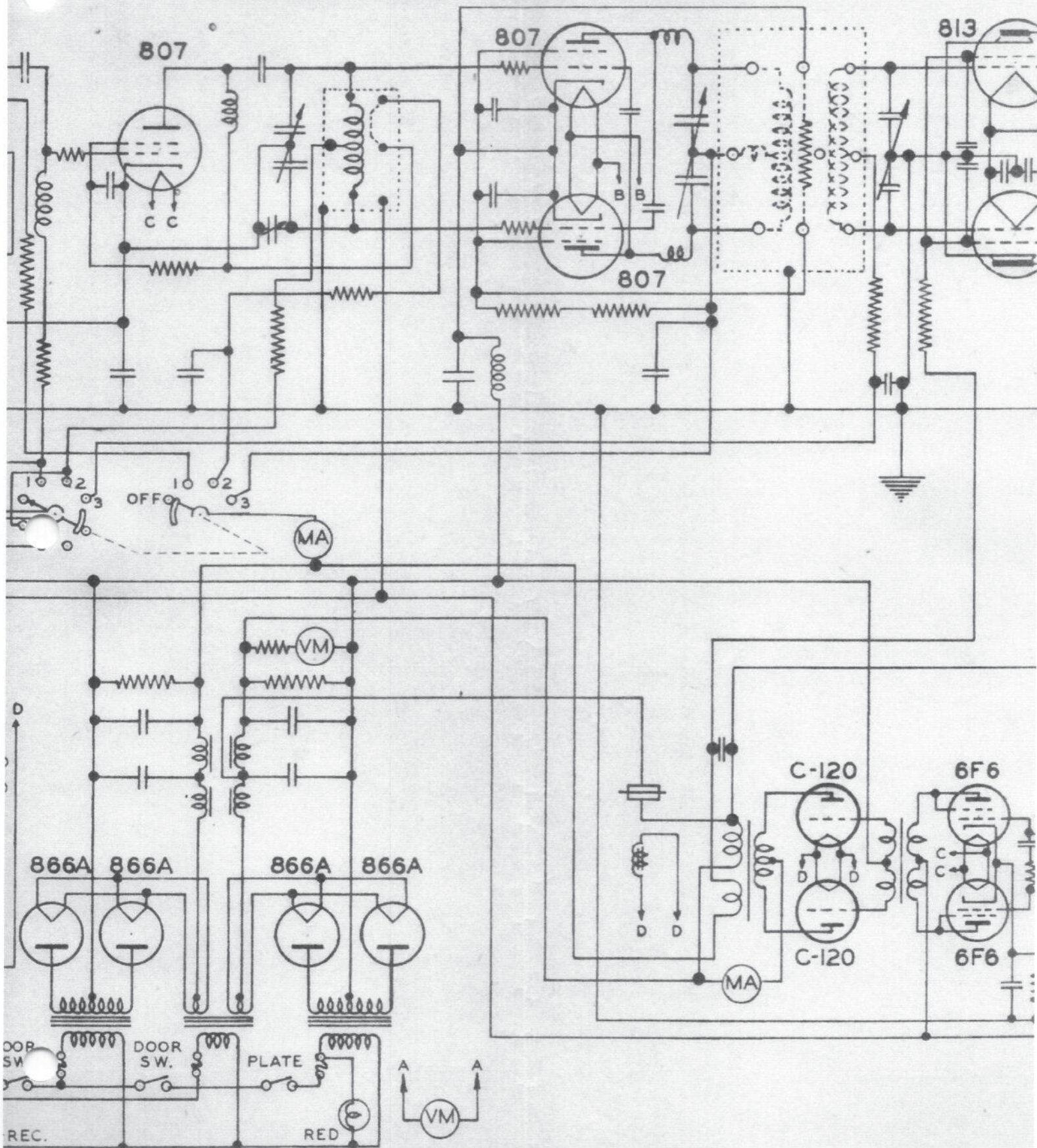
DRAWN BY: M.S.S. DA

TRACED BY: W.M.H. DA

CHECKED BY: *W.M.H.* DA

FINISH:

UNIT: 30J-18 SIMPLIFIED SCHEMATIC



GRADE:

DRAWN BY: M.S.S.

DATE: 4-11-1939

TRACED BY: W.M.H.

DATE: 7-18-1940

CHECKED BY: *W.M.H.*

DATE: 7-16-1940

COLLINS RADIO COMPANY

CEDAR RAPIDS, IOWA

ED SCHEMATIC

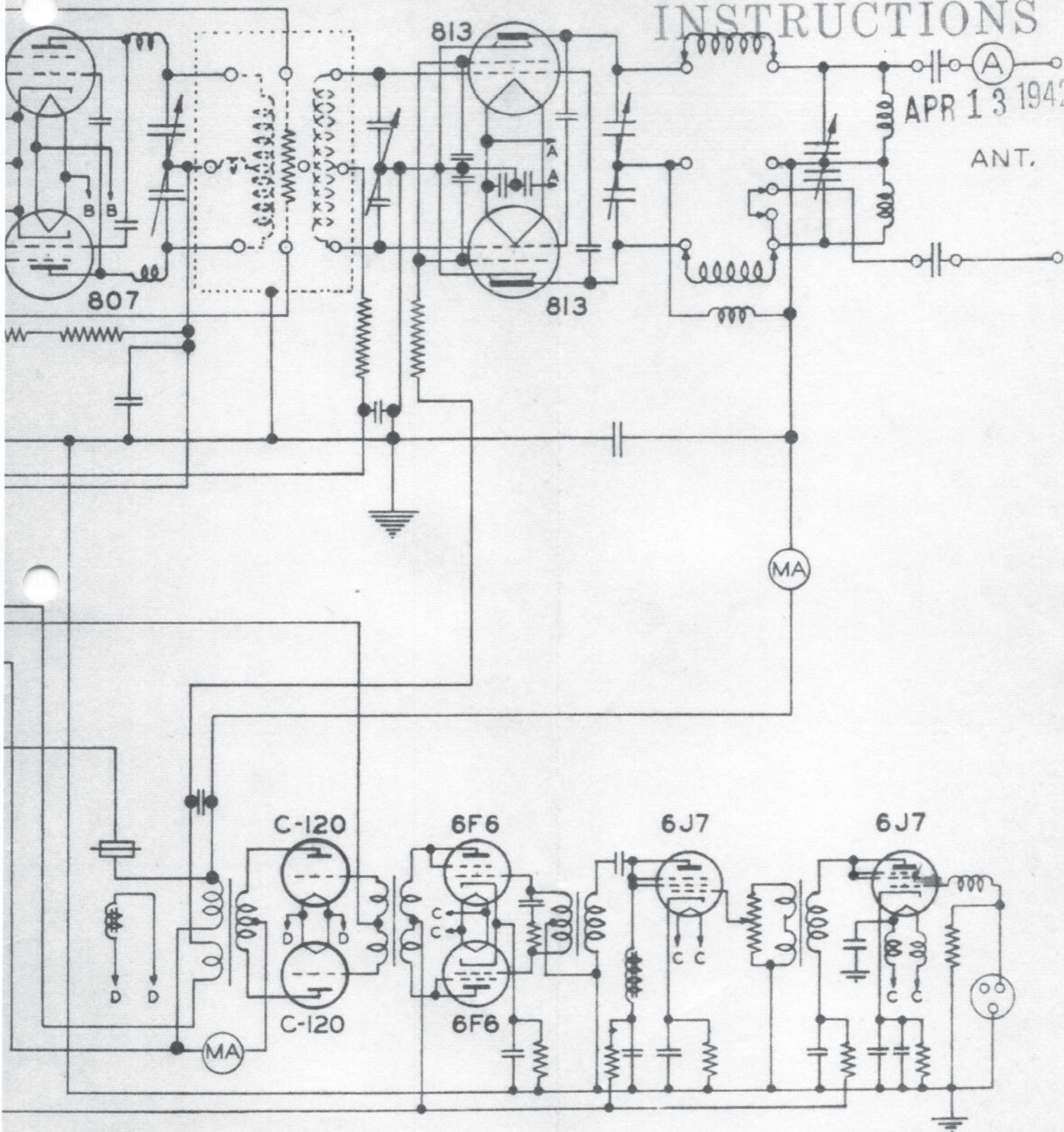
SCALE

DRAWING NO. 1751B-1

INSTRUCTIONS

APR 13 1942

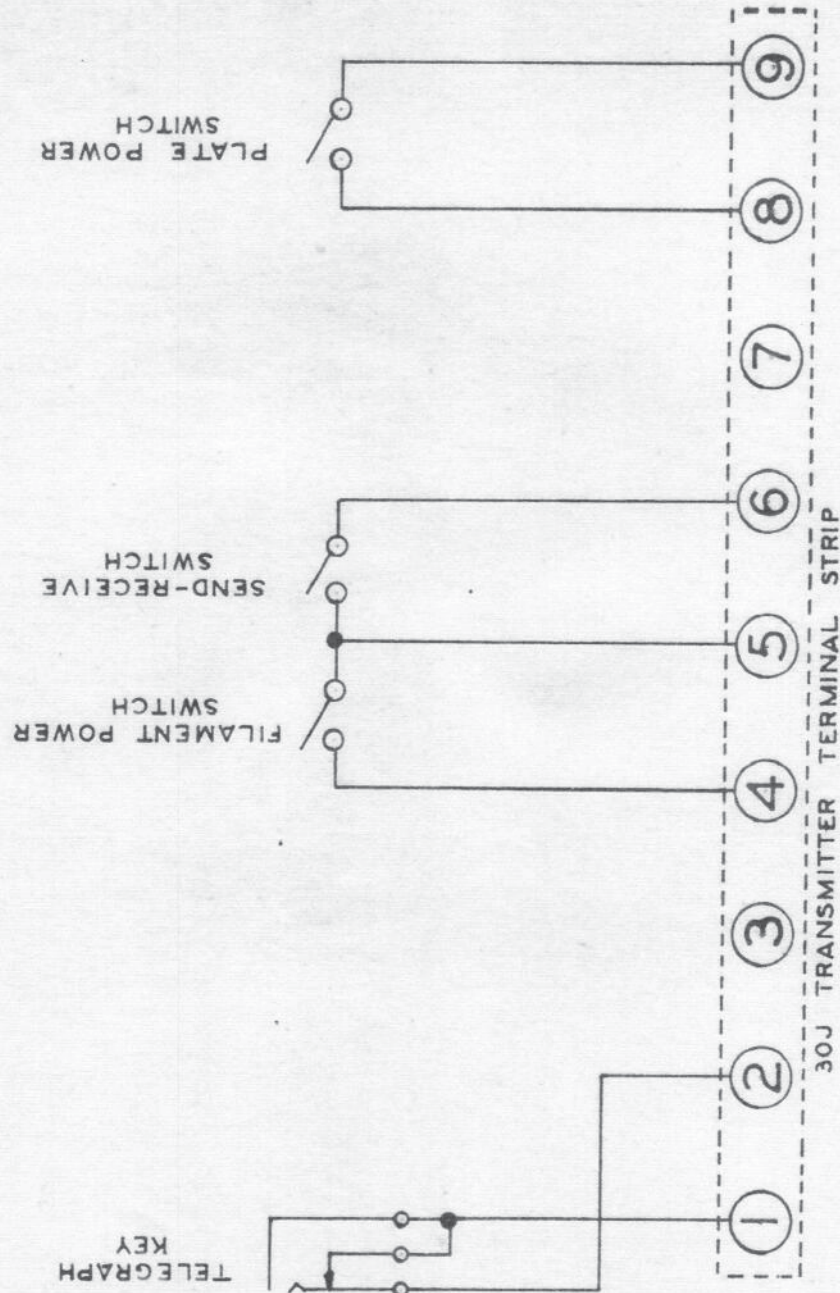
ANT.



MAT:	GRADE:	DRAWN BY: M.S.S.	DATE: 6-1-1940	COLLINS RADIO COMPANY
FINISH:		TRACED BY: R.G.A.	DATE: 6-13-1940	* CEDAR RAPIDS, IOWA
UNIT: 30J REMOTE CONTROL CONNECTIONS		CHECKED BY: M.S.S.	DATE: 6-14-1940	DRAWING NO. 1922A-1
			SCALE	

INSTRUCTIONS

APR 13 1942



MAT.:

GRADE:

FINISH:

UNIT: 192B-9 OUTPUT COIL UNIT SCHEMATIC

DRAWN BY: *ML*
TRACED BY: *ML*
CHECKED BY: *ML*

DATE: 3-31-41
DATE: 3-31-41
DATE: 3-31-41

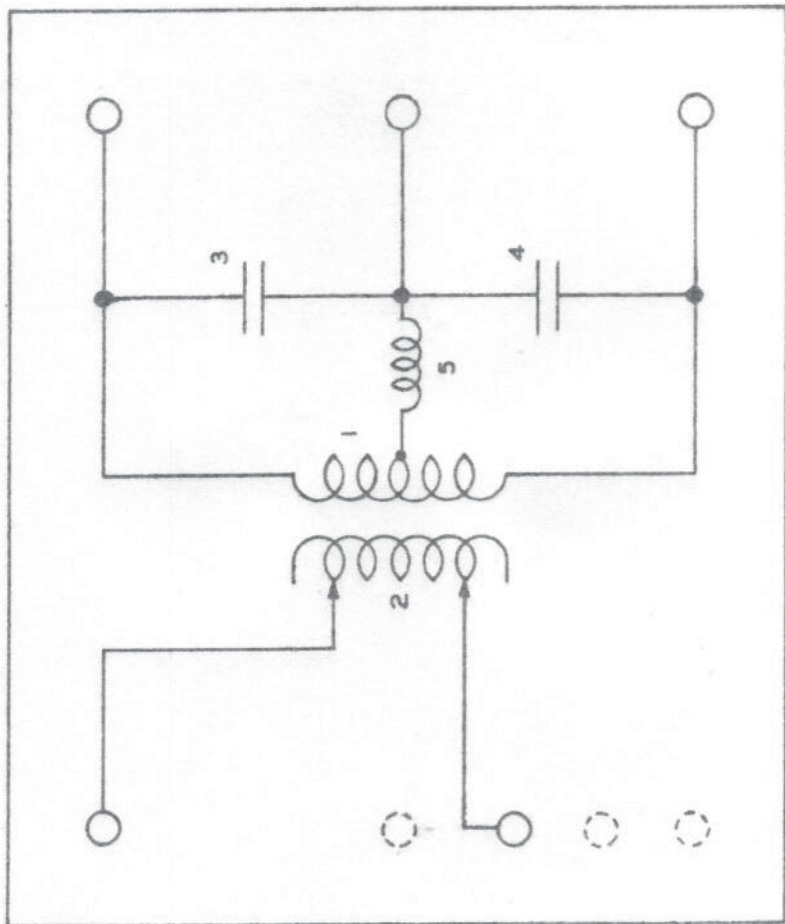
SCALE

COLLINS RADIO COMPANY
CEDAR RAPIDS, IOWA

DRAWING NO. 2832A-1

INSTRUCTIONS

APR 13 1942



TOP VIEW OF BASE PLATE

MAT.:

FINISH:

UNIT:

GRADE:

DRA BY: M.S.S. DATE: 6-6-38
 TRACED BY: M.S.S. DATE: 6-6-38
 CHECKED BY: M.S.S. DATE: 4-1-42

COLLINS RADIO COMPANY
 CEDAR RAPIDS, IOWA

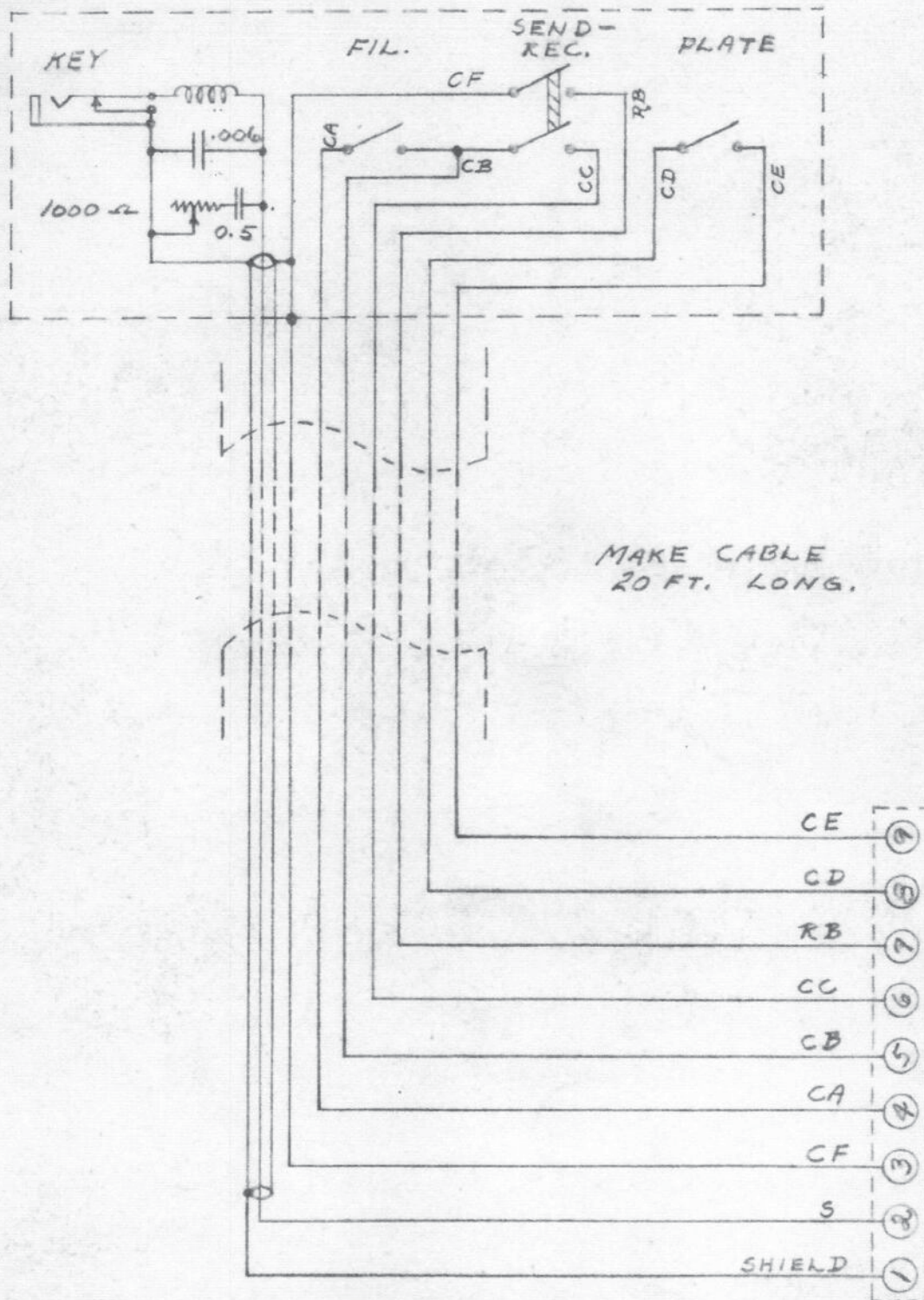
14NA-1 CONTROL UNIT

SCALE

DRAWING NO. 6884-1

INSTRUCTIONS

APR 13 1942



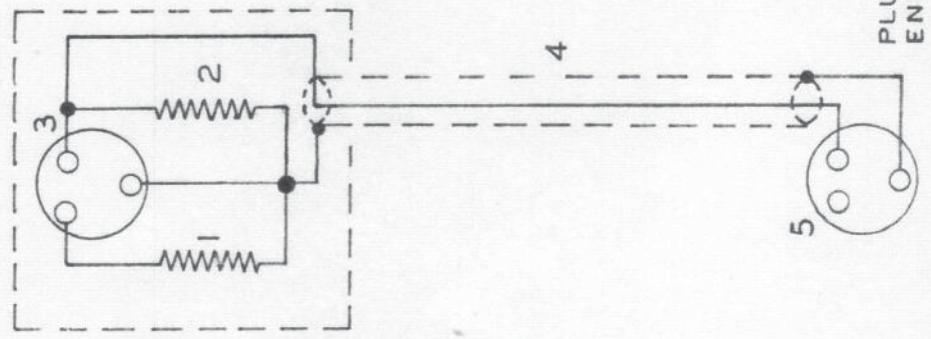
30J TERMINAL STRIP

MAT.:		DRAWN BY: M.S.S.		DATE: 4-19-40		COLLINS RADIO COMPANY	
FINISH:		TRACED BY: W.M.H.		DATE: 4-22-40		CEDAR RAPIDS, IOWA	
UNIT: 66G-I WIRING DIAGRAM & INSTALLATION LAYOUT		CHECKED BY: <i>M.H.</i>		DATE: 4-22-40		DRAWING NO. 1752A-I	
				1/4" = 1"			

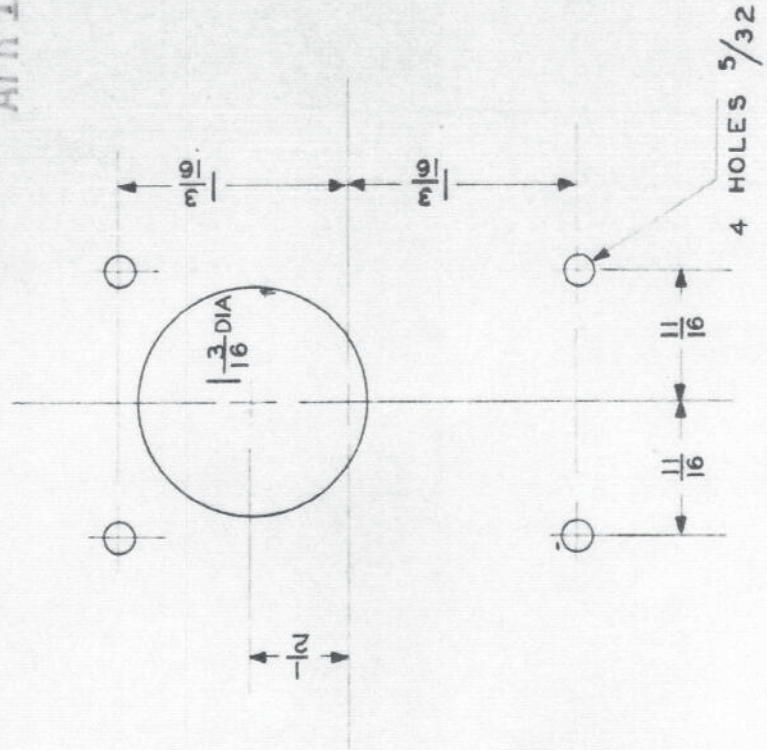
INSTRUCTIONS

INSTALLATION LAYOUT APR 13 1942

WIRING DIAGRAM



PLUG VIEWED FROM
END OF PRONGS



COLLIN RADIO COMPANY

CEDAR RAPIDS, IOWA

DESIGN: MSS DETAIL RE 4/29/41
LAYOUT: MSS CHECK 4/41

DO NOT SCALE DWG.

UNIT: ANTENNA TRANSFER RELAY CONNECTIONS

REVISED:

DATE

SCALE

DWG. NO. 1755A

QUANTITY

G F E D C B A

IT.

PART NO.

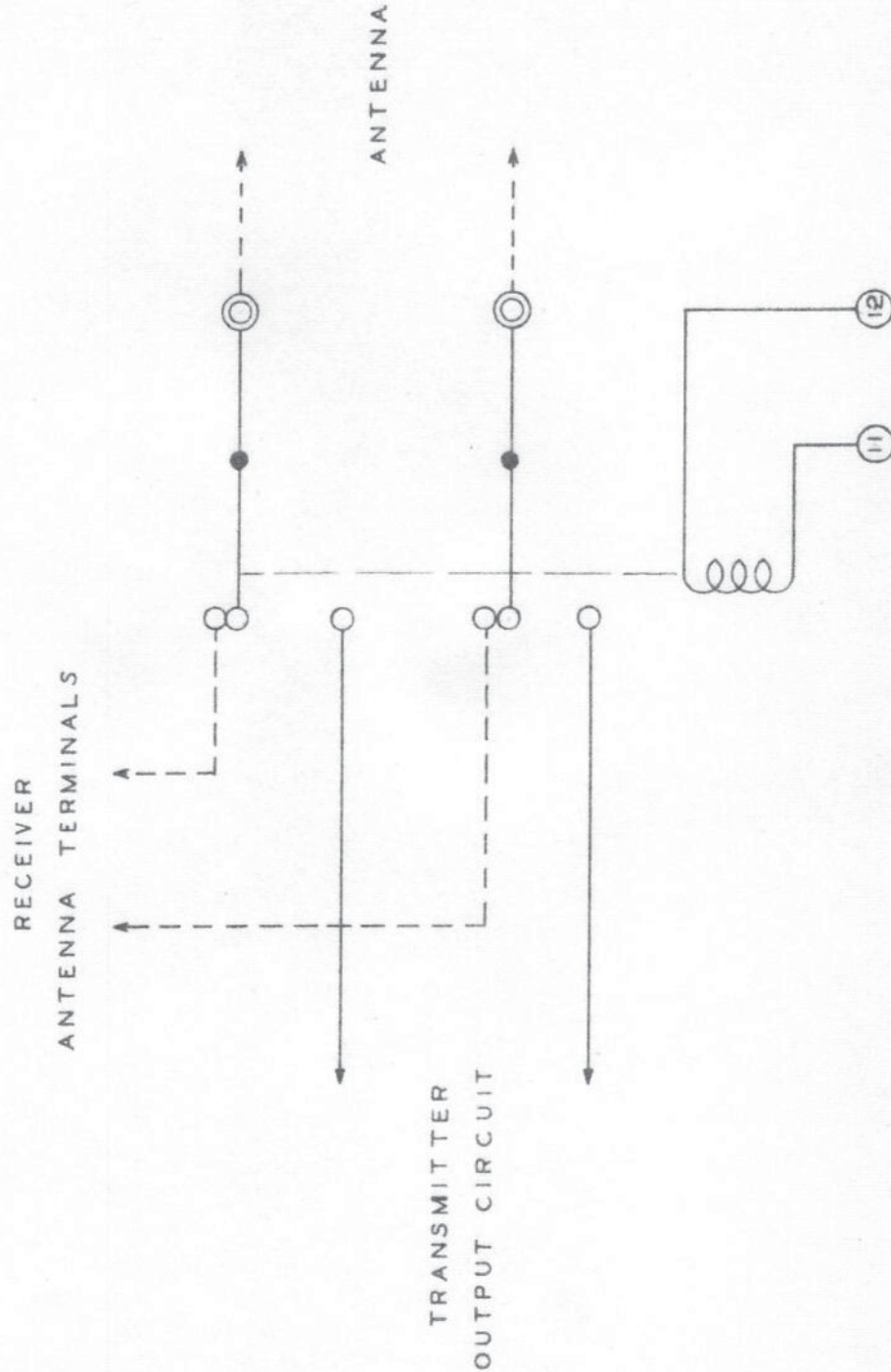
DESCRIPTION

MAT'L

FIN.

INSTRUCTIONS

APR 13 1942



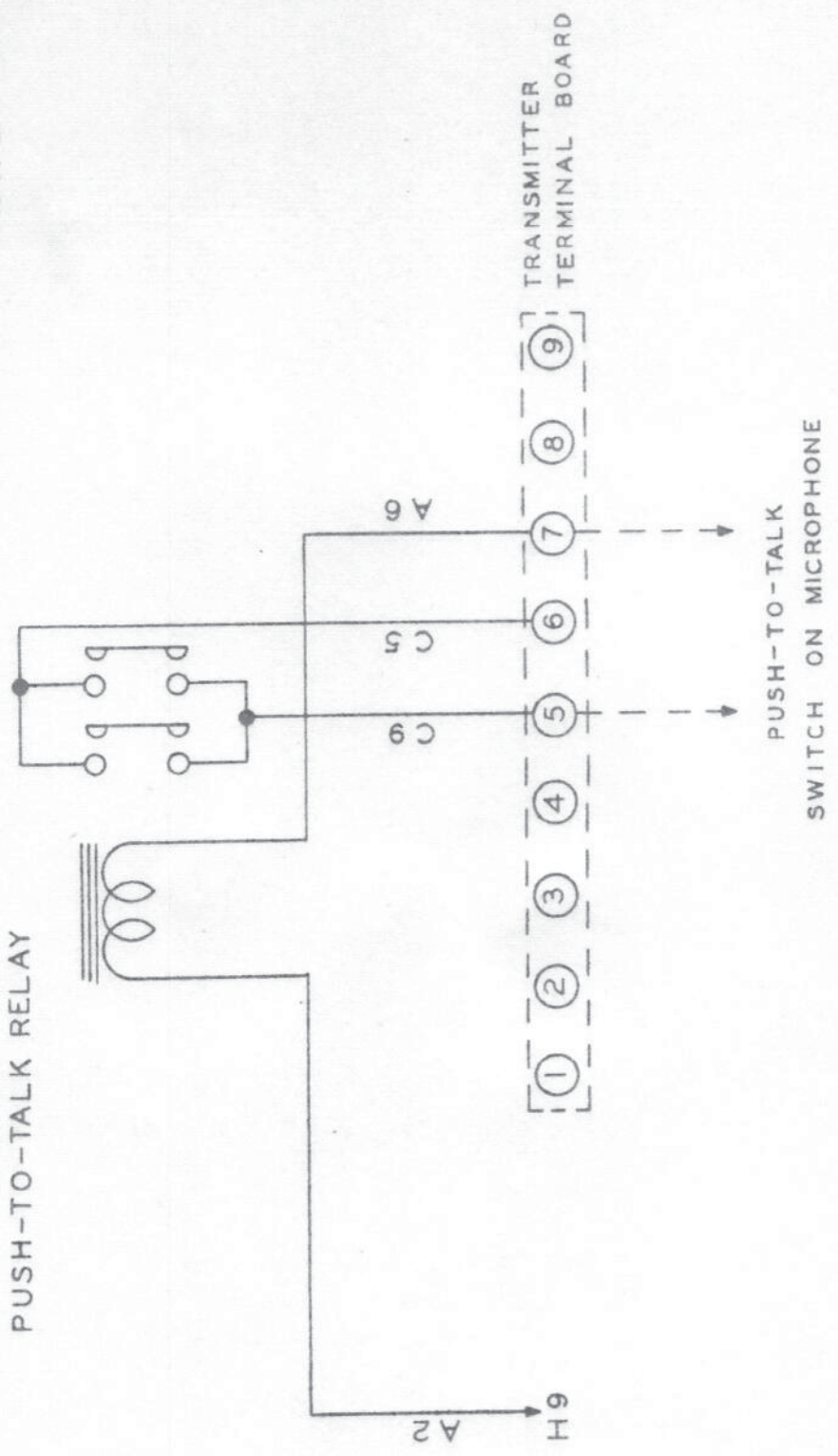
SEE SCHEMATIC DWG. 1750D UNIT A
WIRES INDICATED ARE TIED TO TOP
OF 30J CABLE

MAT.:		GRADE:		DRAW BY: M S S		DATE: 8-3-1940		COLLINS RADIO COMPANY	
FINISH:				TRACED BY: R E G		DATE: 12-6-1940		CEDAR RAPIDS, IOWA	
UNIT: 30J SERIES PUSH-TO-TALK CONNECTIONS		SCALE		CHECKED BY: M S S		DATE: 12-7-1940		DRAWING NO 1756A-1	

INSTRUCTIONS

40IN2
PUSH-TO-TALK RELAY

APR 13 1942



MAT.:		GRADE:		DRAWN BY: M S S		DATE: 12-5-1940		COLLINS RADIO COMPANY	
FINISH:				TRACED BY: R E G		DATE: 12-6-1940		CEDAR RAPIDS, IOWA	
UNIT: 30J - TIME DELAY CONNECTIONS				CHECKED BY: M S S		DATE: 12-7-1940		DRAWING NO 1754A-1	
				SCALE					

INSTRUCTIONS

APR 13 1942

402NI

TIME DELAY RELAY

