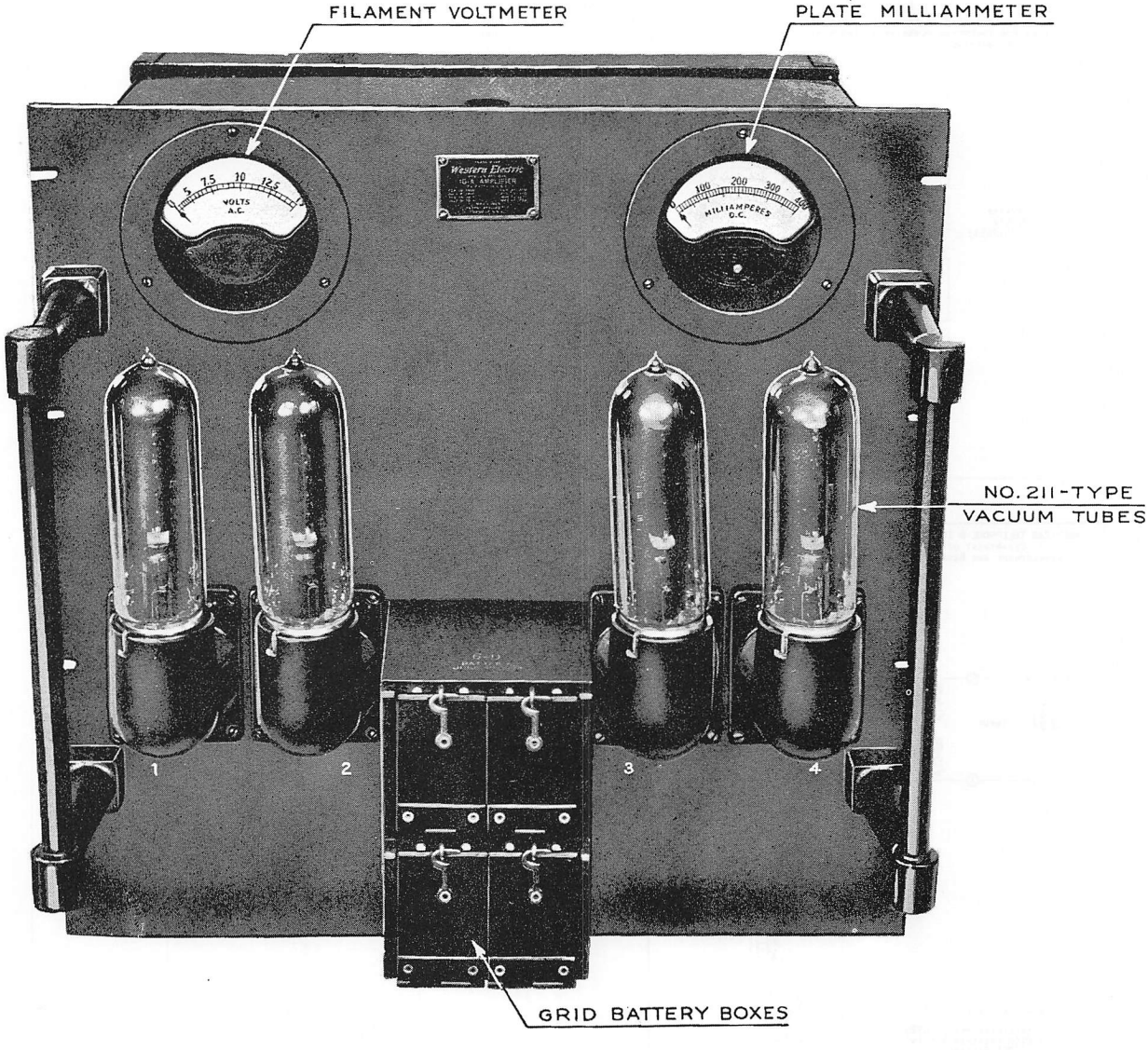
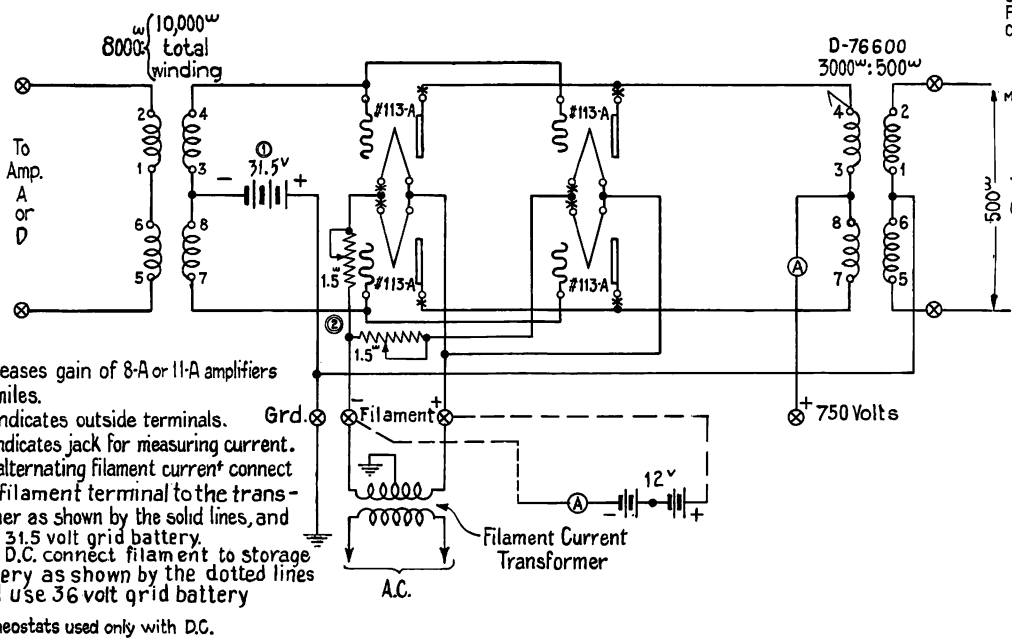

FILAMENT VOLTMETER
PLATE MILLIAMMETER
Western Electric
VOLTS A.C.
MILLIAMPERES D.C.
NO. 211-TYPE VACUUM TUBES
1
2
3
4
GRID BATTERY BOXES

A.T.&T.Co.
Dept.of
Dev.and Res.

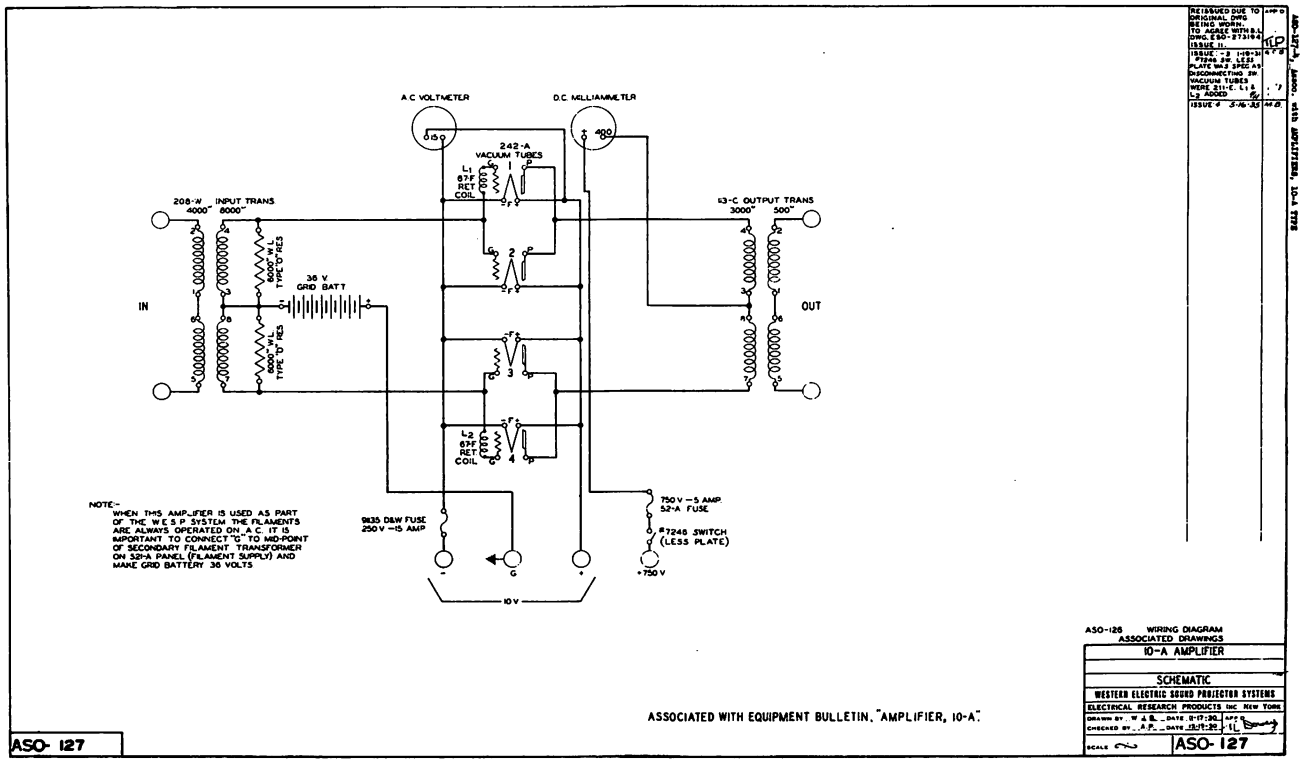
PUBLIC ADDRESS SYSTEM

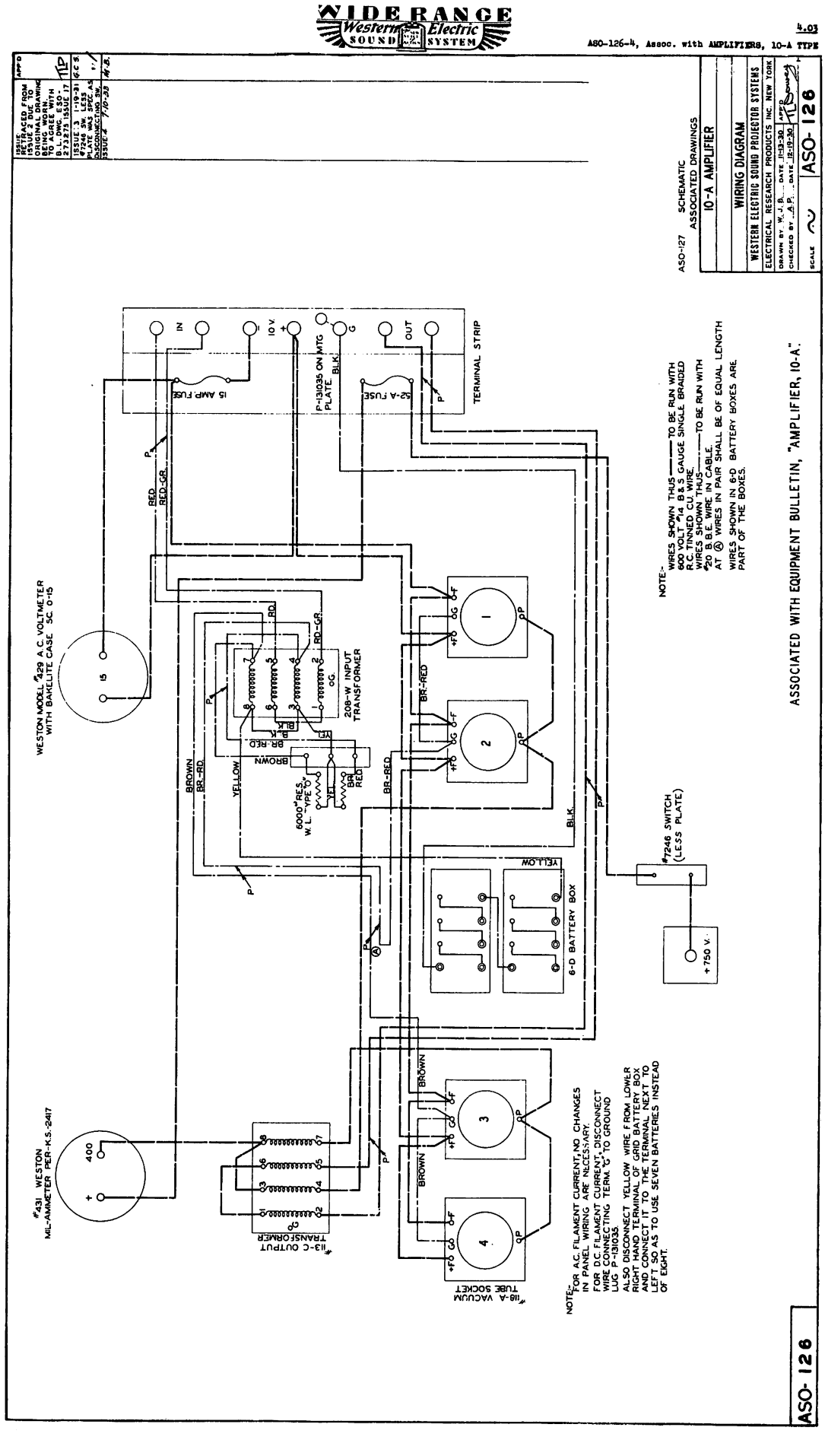
Power Stage for use where Maximum Energy is Required
No.10-A Amplifier
Arranged for either alternating or direct current in the filament.

906-585
Engineer H.S.H
Dec.12,1921
ISSUE 1
6000ω input res. removed, Imped. ratio of input transformer changed 4-A Filament circuit changed to A.C.
Feb.1,1922.
ISSUE 2.
Minor Changes.
July 7,1922
ISSUE 3 H.S.H



Increases gain of 8-A or 11-A amplifiers 25 miles.
⊗ Indicates outside terminals.
× Indicates jack for measuring current.
① For alternating filament current connect the filament terminal to the transformer as shown by the solid lines, and use 31.5 volt grid battery.
For D.C. connect filament to storage battery as shown by the dotted lines and use 36 volt grid battery
② Rheostats used only with D.C.




WIDE RANGE
Western Electric SOUND SYSTEM
4.03
A80-126-4, Assoc. with AMPLIFIERS, 10-A TYPE
ISSUE 4 RETRACED FROM ISSUE 3 DUE TO ORIGINAL DRAWING BEING WORN. TO AGREE WITH B.L. LONG E.O. 273275 ISSUE 17
ISSUE 3 1-19-31 #7246 SW. LESS PLATE ADDED AS DISCONNECTING SW. ISSUE 2 7-10-30
ASO-127 SCHEMATIC
ASSOCIATED DRAWINGS
10-A AMPLIFIER
WIRING DIAGRAM
WESTERN ELECTRIC SOUND PROJECTOR SYSTEMS
ELECTRICAL RESEARCH PRODUCTS INC. NEW YORK
DRAWN BY W.J.B. DATE 11-13-30
CHECKED BY A.P. DATE 12-19-30
SCALE
ASO-126
TERMINAL STRIP
IN
15 AMP FUSE
10 V.
P-13035 ON MTG PLATE
BLK.
G
OUT
2-A FUSE
WESTON MODEL 429 A.C. VOLTMETER WITH BAKELITE CASE SC. 0-15
15
208-W INPUT TRANSFORMER
6000Ω RES. W.L. TYPE 10
#7246 SWITCH (LESS PLATE)
6-D BATTERY BOX
+ 750 V.
#431 WESTON MIL-AMMETER PER-K.S.-2417
400
#113-C OUTPUT TRANSFORMER
#118-A VACUUM TUBE SOCKET
NOTE:- WIRES SHOWN THUS ——— TO BE RUN WITH 600 VOLT #14 B&S GAUGE SINGLE BRAIDED R.C. TINNED CU. WIRE.
WIRES SHOWN THUS ——— TO BE RUN WITH #20 B.E. WIRE IN CABLE.
AT Ⓐ WIRES IN PAIR SHALL BE OF EQUAL LENGTH
WIRES SHOWN IN 6-D BATTERY BOXES ARE PART OF THE BOXES.
NOTE:- FOR A.C. FILAMENT CURRENT, NO CHANGES IN PANEL WIRING ARE NECESSARY.
FOR D.C. FILAMENT CURRENT, DISCONNECT WIRE CONNECTING TERM. "G" TO GROUND LUG P-13035.
ALSO DISCONNECT YELLOW WIRE FROM LOWER RIGHT HAND TERMINAL OF GRID BATTERY BOX AND CONNECT TO THE TERMINAL NEXT TO LEFT SO AS TO USE SEVEN BATTERIES INSTEAD OF EIGHT.
ASSOCIATED WITH EQUIPMENT BULLETIN, "AMPLIFIER, 10-A."
ASO-126

1. Reason for Reissue

1.1 To include instructions for modifying this amplifier for the use of 242-A Vacuum Tubes.

2. Associated Drawings and Photographs

2.1 ASO-126, Wiring Diagram
ASO-127, Schematic
Photo #9001

3. Description

3.1 General Information

Systems Used	A, B, 1-S and 1-D
Panel Size	19½" high x 19" wide
Power Supply	(a) 10V AC, (b) 750V DC (c) 36V DC
Amplifier Type	Parallel Pushpull - 1 Stage
Input Imp.	4000 ohms
Output Imp.	500 ohms
Tubes	Four 211-E; or four 242-A, after modification of amplifier as shown in Section 7.
Fil. I (total)	12 amps. (approx.)
Plate I (total)	175-275 mils.
Output Cap	35 db
Gain	20.6 db
"C" Batteries	Eight #703 Eveready
Fusing	15 Amp. Cart. Fuse in Fil. Cct. 0.5 Amp. 52-A Fuse in Plate Cct.

3.2 This amplifier consists of a single stage of amplification employing four 211-E (or 242-A; see Section 7 below) Vacuum Tubes in push-pull arrangement. An external source of 10 volts AC or DC having a capacity of 12.6 amperes is required to supply the filament and an external source of 750 volts having a capacity of .3 ampere is required for plate potential. The required negative grid potential is 31.5 volts for DC filament supply and 36 volts for AC filament supply and is furnished by #703 Eveready Batteries which are held in the two battery boxes mounted on the front of the panel. Meters are permanently connected in the filament and plate circuits for measuring the filament voltage and the total plate current. The filament circuit is protected by a 15 ampere cartridge fuse and the plate circuit by a .5 ampere (52-A) fuse.

A quick break switch is provided to automatically cut off the high plate voltage in case the cover is removed. The apparatus making up this amplifier is mounted on a steel panel arranged for relay rack mounting. The apparatus mounted on the back of the panel and the high voltage wiring are protected by a metal cover.

4. Installation

4.1 Mount the amplifier on the 101 type Rack and connect in accordance with the system drawings. Insert eight #703 Eveready Batteries in "C" Battery Boxes, and four 211-E (or 242-A; See Section 7 below) Vacuum Tubes in sockets. Insert one 15 amp. Cartridge Fuse and one 52-A Fuse (.5 amp.) in receptacle.

5. Maintenance

5.1 In replacing grid batteries, see that the brass contact springs are clean and if necessary, scrape or sandpaper them. Carefully bend the springs over the top of the battery making certain that a 1/4" clearance exists between springs, cutting the longer one, if necessary, to obtain this clearance. Insert the battery in the battery box spring end first, and short spring up. Check the voltages, periodically, connecting the voltmeter between the contact points above the doors of each Battery Box. Commencing at the right of each box, the voltage between contacts 1 and 2 should be 9 volts, and between 2 and 3 and 4 should be 4½ volts. When the voltage drops below 8 and 4 volts, respectively, the batteries should be replaced.

6. Replaceable Parts

6.1 All of the component parts of the 10-A Amplifier are replaceable in the field. Order them as specified on ASO-126 and ASO-127.

6.2 Any part or sub-assembly replaced on a fire, repair or no charge basis should be returned to the Stores Division. If replaced on a full price basis, all parts should be junked in the fields.

7. Modification for use of 242-A Vacuum Tubes

7.1 In view of the generally satisfactory life of 211-E Vacuum Tubes when used in the 10-A Amplifier, it is not expected that 242-A Vacuum Tubes will be used therein to any considerable extent. However, in any case where the 242-A Vacuum Tubes are to be so used, and only if the customer specifically requests it, the 10-A Amplifier must first be modified as follows:

7.11 The modification consists in installing a Western Electric Type 67-F Retardation Coil in series with the lead which straps the grids of V1 and V2, and another 67-F Coil in series with the lead which straps V4 and V3.

7.12 Interpose one 67-F Retardation Coil between grid terminals of V1 and V2, making grid terminal of V1 means of support for the coil. Interpose the other 67-F Coil between grid terminals of V4 and V3, making the grid terminal of V4 means of support for the coil.

7.2 Without the above modification, the amplifier tends to oscillate using the 242-A Vacuum Tubes, due to the fact that the internal plate and grid leads are not coiled in the new tubes. After such modification, 211-E Vacuum Tubes should not be used, (except as an emergency expedient) unless the amplifier is first restored to its original condition by removal of the coils from the circuit.

8. Merchandising

8.1 The 10-A Amplifier is available at the Warehouse for replacement purposes only. Order it as: -

"One 10-A Amplifier"

8.2 10-A Amplifiers are to be modified per Section 7 above, only upon the specific request of the customer to use 242-A Vacuum Tubes. The modification will then be made at no charge for material or supervision. The 67-F Retardation Coils will be available in the Stores Division the latter part of this month. Two of them will be required for each amplifier so modified, and they should be ordered against Classification Charge #1046, as -

"Two 67-F Retardation Coils"

Replacing E.B. Amplifier, 10-A and Addendum #1, 12/1/31

1. Associated Drawings & Photograph

ASO-126, 10-A Amplifier, Wiring
ASO-127, 10-A Amplifier, Schematic
ASL-2610, C-10-A Amplifier, Schematic
ASO-3875, C-10-A Amplifier, Wiring
ASL-2612, B-10-A Amplifier, Schematic
ASO-3877, B-10-A Amplifier, Wiring
ASO-3801, B-10-A and C-10-A Amplifiers, Details
Photo #9001, View of 10-A Amplifier

2. General Information

2.1 10-A Amplifier: Refer to E.B. "Amplifiers, General", F.R. 4.03.

2.2 The B-10-A Amplifier has an input circuit suitable for operation from the 42-A Amplifier and an adjustable low impedance output. The gain is about 27.5 db, and the maximum output is 40 db, with a plate potential of 1000 volts and a plate current of 310 mils. The modification of 10-A Amplifiers to B-10-A will not be made in the field and no modification instructions are included herein. Four 242-A Vacuum Tubes (211-E Vacuum Tubes cannot be used) two #766 Eveready Batteries, and one #771 Eveready Battery are required.

The B-10-A Amplifier is used in conjunction with a modified 6000-A Rectifier consisting of the D-94836 Panel (rectifier), the A-519-A Panel (filter), and the 521-A Panel.

2.3 The C-10-A Amplifier has an input circuit suitable for operation from the 42-A Amplifier and an adjustable low impedance output. The gain is about 20 db. The plate potential remains at 750 volts, and the power output at 35 db. Four 211-E or 242-A Vacuum Tubes, and Eight Eveready #703, or #781 (after modification; see Section 6.) Batteries, are required.

3. Installation

3.1 Modify, if necessary (see Sections 4, 5, and 6 below). Install per systems drawings. Install "C" Batteries in "C" Battery Boxes, four 211-E or 242-A (latter required for B-10-A) Vacuum Tubes in sockets, one 15 amp.cartridge fuse and one 52-A Fuse (.5 amp.) in receptacles.

4. Modification to C-10-A Amplifier - TA-192 (for EW Wide Range Systems)

4.1 Required Material:

1 - Set of ASP-886 Conversion Parts consisting of:
- 1 - 241-A Input Transformer
- 1 - D-95659 Output Transformer
- 2 - 67-F Retard Coils
- 2 - W.L. type "O", 5000 ohm Resistances with type 206 Terminals
- 1 - Set of Details per ASO-3801
- 1 - Copy of Schematic & Circuit Label per ASL-2610
- 1 - Copy of Wiring Diagram & Circuit Label per ASO-3875

For merchandising information on these parts see Section 8.

4.2 Procedure (see ASO-3875):

(a) Remove the 208-F Input Transformer and mount the new 241-A Input Transformer as shown in Det. 1-A, ASO-3801, using the same mounting holes.
(b) Replace the two W.L. type "O", 6000 ohm Resistances by two new W.L.type "O", 5000 ohm Resistances.
(c) Remove the 113-C Output Transformer and mount the new D-95659 Output Transformer as shown in Det. 4-A, ASO-3801, using the same mounting holes.
(d) Mount two 67-F Retard Coils on the back of the 118-A Vacuum Tube Sockets 1 and 4 in the following manner:
  (1) Viewing the amplifier from the rear, remove the screw from the left hand side of the upper terminal block of the vacuum tube socket. In this location mount a bracket assembly per Det. 6-A, ASO-3801, using the screw just removed. The retard coils should be in such a position that its center is about 1/4" above the top of the terminal block.
  NOTE: If the amplifier already includes the two 67-F Retard Coils for 242-A Vacuum Tube operation, they should be remounted on the Det. 6-A, ASO-3801 Brackets to conform with the above.
(e) Change the wiring of the amplifier to agree with Dwg. ASO-3875, Issue #1.
(f) Replace the existing circuit labels which are fastened on the inside of the cover, by new circuit labels per ASO-3875, and ASL-2610.

(g) Marking: Cover the existing coding on the nameplate with black paint, lacquer or enamel and affix immediately below and adjacent to the nameplate, the label on ASL-2579 which bears the coding "C-10-A Amplifier".

4.3 Result: The input circuit is suitable for operation from a 42-A Amplifier while the output (when properly strapped) works directly into the TA-7257 Network in EW Wide Range Systems. Either 211-E or 242-A Vacuum Tubes may be used.

5. Modification of 10-A Amplifier for use of 242-A Vacuum Tubes

5.1 In order to use 242-A Vacuum Tubes in the 10-A Amplifier, the following modification is necessary:

Install a 67-F Retard Coil in series with the lead which straps the grids of V_1 and V_2, and another 67-F Retard Coil in series with the lead which straps V_3 and V_4. Make the grid terminals of these sockets the means of support for the coils. No change in coding is necessary.

Without the above modification, the amplifier tends to oscillate using the 242-A Vacuum Tube, due to the fact that the internal plate and grid leads are not coiled in the new tubes. Either 211-E or 242-A Vacuum Tubes may be used in the modified amplifier.

6. Modification for use of 8 #781 Eveready Batteries

6.1 General: The #781 Eveready Battery which is now the standard replacement "C" Battery for 10-A and C-10-A Amplifiers, is a 4½ volt unit equipped with binding post terminals. It mounts in the 6 type Battery Box with its terminals outward and accordingly slight modifications must be made in the amplifier when the next replacement of the #703 Eveready Batteries becomes necessary.

6.2 Required Material

4 - #2108-S Locking Terminals (see Section 8 for Merchandising).

6.3 Procedure

(a) Disconnect all rear panel wires from the spring contact assembly terminals of the #6 type Battery Box, and detach the box.
(b) Remove spring contacts from battery box by first cutting off the hooked ends of the terminals and then unsoldering the washers on the bottom side of the box.
(c) Remove the small solder contacts (used when taking voltage measurements) embedded in the top side of the box, by means of a hot iron. This operation removes all wiring from the "C" Battery Box.
(d) Splice approximately 10" of #18 motor lead wire (engineer's kit) to the end of each wire disconnected in operation (a). Tape the soldered joints, and pass these wires through the small insulating bushings in the amplifier panel, and through the channels in the battery box from which the soldered contacts referred to in (c) were removed (see Fig.1).

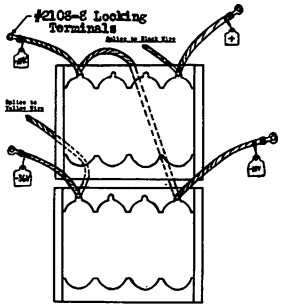


FIG. 1

(e) Remount battery box on amplifier panel.
(f) Pull the motor lead wire extensions tight, and cut off leaving approximately 3" of slack for easy connection to the #781 Battery terminals. Solder to the end of each wire (see Fig. 1), one of the special tinned locking terminal lugs supplied for this purpose (see Section 8.).
(g) To the respective wires, attach tags marked as per Fig. 1.
(h) Insert eight #781 Batteries into the box with their terminals outward and with the positive and negative posts of consecutive batteries adjacent to facilitate strapping together in series. Strap with bare solid copper wire of #18 or #19 Gauge, giving the wire one complete turn around each post, and drawing it tight by means of a pair of long nose pliers. Connect the new battery leads to their proper terminals. Finally, screw the binding post nuts down securely.
(i) No change in amplifier coding is required by this modification.

6.4 Result: This modification makes possible the use of #781 Eveready Batteries with more dependable terminal connections.

7. Maintenance

7.1 Grid voltages should not be allowed to fall more than 10% below normal. Any 4½ volt "C" Battery Unit which falls below 4 volts should be discarded. The "C" Battery routine (see E.B. "Equipment Maintenance, General", F.R. 4.01), is unaffected by the adoption of the #781 Eveready Battery.

8. Merchandising

8.1 The 10-A Amplifier is available in the Stores Division for replacements. Order as: "One 10-A Amplifier". It requires, but does not include, "Four 211-E (or 242-A) Vacuum Tubes", and "Eight #781 Eveready Batteries". It must be modified per Section 6. above, before the #781 Batteries can be installed.

8.2 For modification of a 10-A Amplifier to C-10-A, order: "One Set ASP-886 Conversion Parts". The C-10-A Amplifier requires, but does not include, "Four 211-E (or 242-A) Vacuum Tubes", and "Eight #781 Eveready Batteries." It must also be modified per Section 6. above, before the #781 Batteries can can be installed.

8.3 The B-10-A Amplifier will be modified from 10-A Amplifiers as required, before shipment. It requires, but does not include, "Four 242-A Vacuum Tubes", "Two #766 Eveready Batteries", and "One #771 Eveready Battery".

8.4 The #2108-S Locking Terminals required in the modification of 10-A or C-10-A Amplifiers for use of #781 Eveready Batteries (see Section 6.), are available in the District Offices and are supplied free.

8.5 10-A Amplifiers are to be modified per Section 5. above, only upon the specific request of the customer to use 242-A Vacuum Tubes. The modification will then be made at no charge for material or supervision. The 67-F Retardation Coils are now available in the Stores Division. Two of them will be required for each amplifier so modified, and they should be ordered against Classification Charge #1017 as: "Two 67-F Retardation Coils".

8.6 In ordering "C" Batteries, it is advisable to include the required spares in the order.

Filing: Page 3, Issue #3, replaces Page 3, Issue #2.
*Indicates changes and additions.

(e) Remount the battery box on the amplifier panel.
(f) Pull wires taut; leave 3" of slack; attach #2108 Locking Terminal (obtained from District Office); and tag per Fig. 1.
(g) Insert #781 Batteries with terminals outward and opposite poles adjacent; strap with bare #18 gauge wire, drawn taut, making one complete turn around each post; connect leads and tighten binding post nuts.
(h) Amplifier recoding is not required.

7. REARRANGEMENT OF 10-A AMPLIFIER OUTPUT TO AVOID VOLTAGE OVERLOAD ON ASSOCIATED 7-A AUTO-TRANSFORMER.

7.1 At all installations having one 10-A Amplifier and a loudspeaker load impedance of 10 ohms or less, or two 10-A Amplifiers in parallel and a loudspeaker impedance of 5 ohms or less, proceed as follows:-
(a) Reconnect the 113-C Output Transformer for 125 ohms by disconnecting the strap between terminals #1 and #6, and strapping #2 to #6 and #1 to #5.
*(b) Set switch or strapping, on the horn panel three steps lower. If the lowest switch setting (or "Transformer" terminal connection) is #4 or less, making a three step reduction impossible, this setting should be reduced to "0" (1 or 2 steps) and all other settings (or connections) reduced the same number of steps. This maintains the original load distribution between loudspeaker groups.
The horn panel impedance index revised for 125 ohm amplifier output, follows:

Tap on 7-A Auto-Transf.	Switch Setting on 200-A Panel, or "Transformer" Term. of 209-A Panel	Imped. Index (125 ohm Out.) 1 - 10-A	2 - 10-A's in parallel
2	0	.25	.13
3	2	.16	.08
4	4	.10	.05
5	6	.063	.03
6	8	.04	.02
7	10	.025	.01
8	12	.016	.01
9	14	.010	-
10	16	.0063	-
11	18	.004	-
12	20	.003	-

8. MAINTENANCE

8.1 A grid voltage fall of more than 10% should not be allowed. 4-1/2 volt units falling below 4 volts should be replaced. For "C" Battery routine, see E.B. "Equipment Maintenance, General", File 4.01.

8.2 Switch D1, Replacements: The following drawings which specify the "7246 Switch less Plate" as the replacement for switch D1 in 10-A type Amplifiers, should be marked:

"Switch blade assembly per Det. 16, ESR-271372" (for part attached to cover) and, "Switch contact assembly per Det. 17, ESR-271372" (for part mounted within amplifiers).

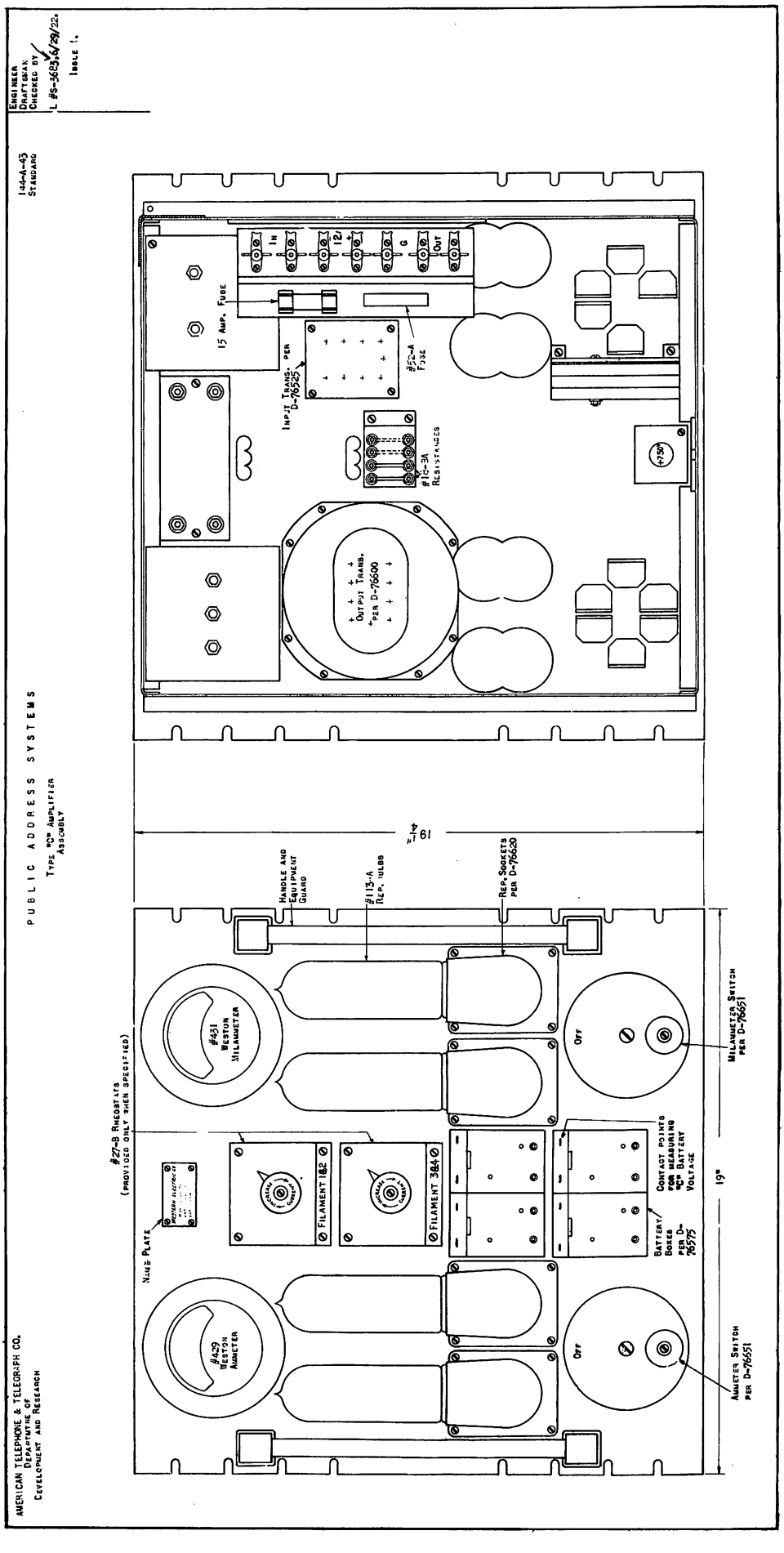
ASO-126 ASO-127 ASL-2610 ASL-2612 ASO-3875 ASO-3877

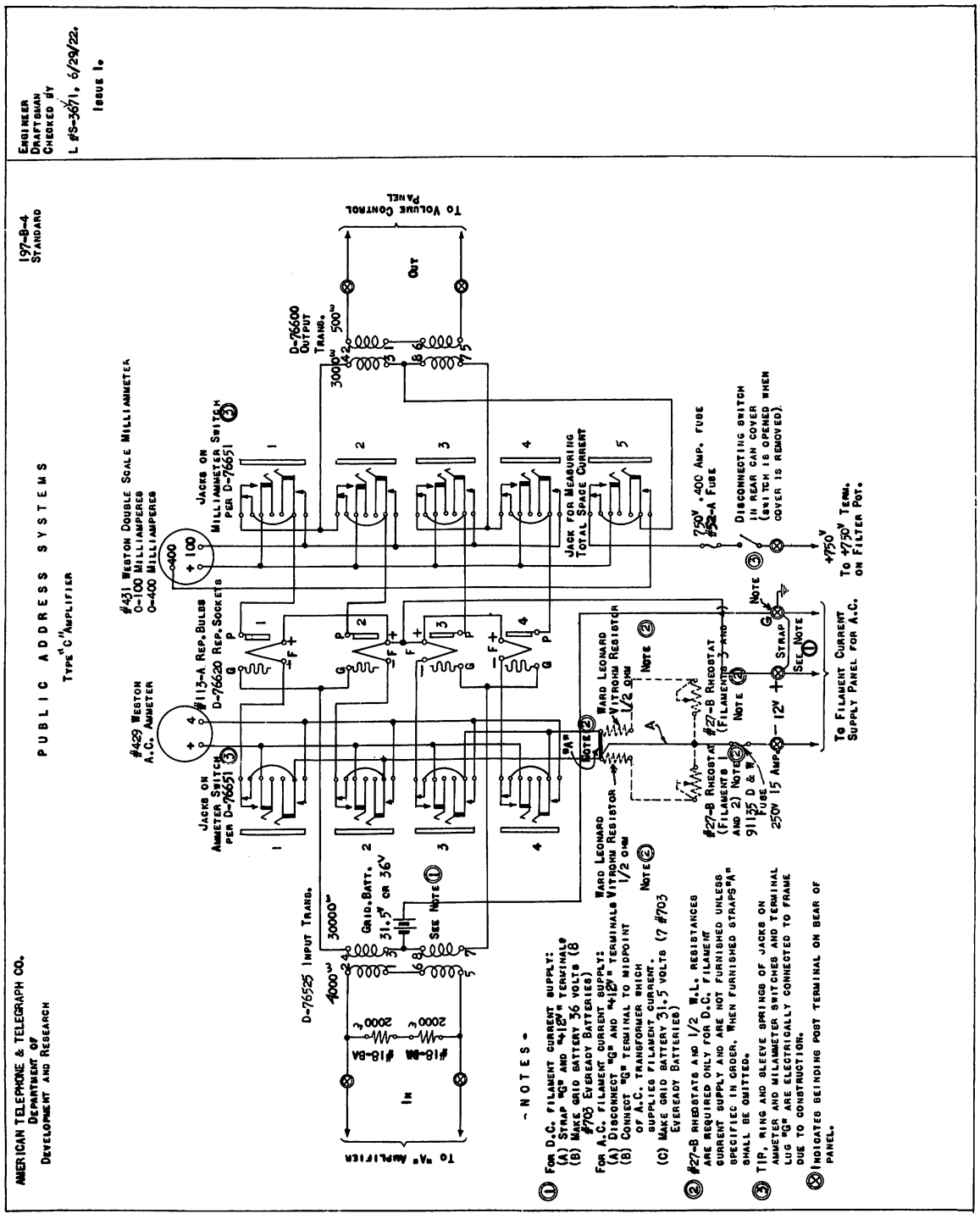
9. MERCHANDISING

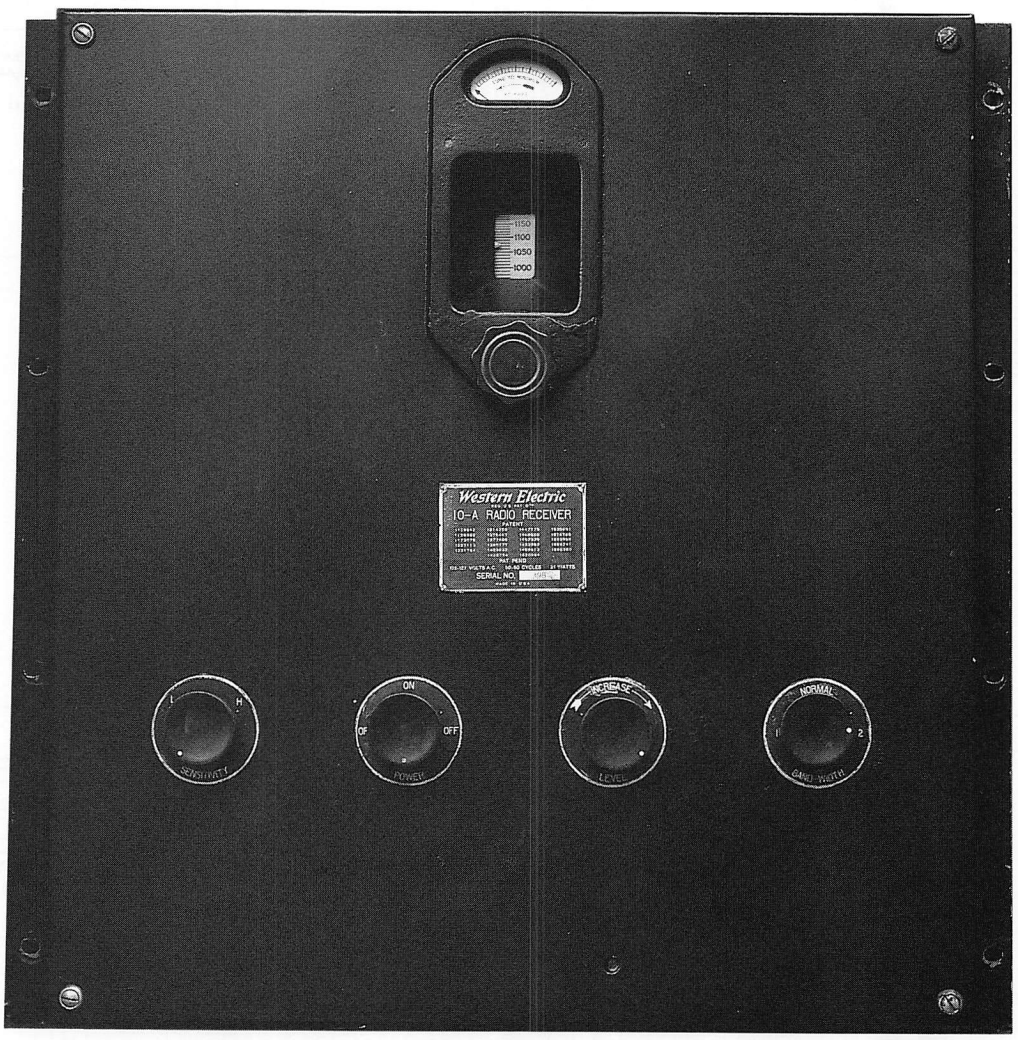
9.1 For replacement of 10-A Amplifier, order: "One 10-A Amplifier". Four 242-A (or 242-C) Vacuum Tubes and eight #781 Eveready Batteries are required.

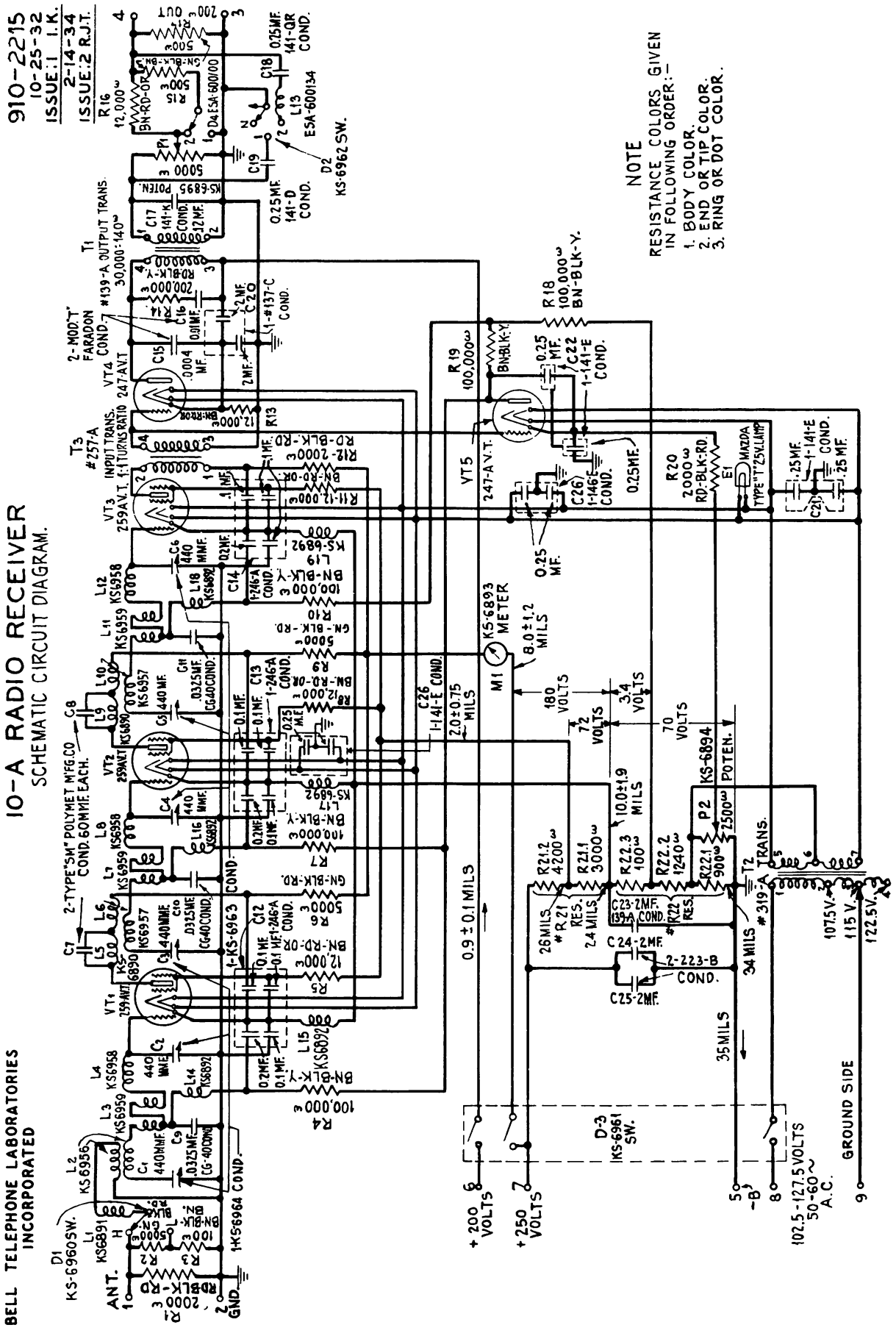
9.2 For modification of 10-A Amplifier to C-10-A, order "One Set of ASP-886 Conversion Parts". Four 242-A (or 242-C) Vacuum Tubes, and eight #781 Eveready Batteries are required.

9.3 B-10-A and D-10-A Amplifiers are modified from 10-A Amplifiers before shipment. Four 242-B or 242-C Vacuum Tubes, two #766 Eveready Batteries, and one #771 Eveready Battery are required.


AMERICAN TELEPHONE & TELEGRAPH CO.
DEPARTMENT OF
DEVELOPMENT AND RESEARCH
PUBLIC ADDRESS SYSTEMS
TYPE "PC" AMPLIFIER
ASSEMBLY
144-A-43
STANDARD
ENGINEER
DRAFTSMAN
CHECKED BY
ISSUE 1.
IN
12
G
OUT
15 AMP. FUSE
INPUT TRANS. PER D-76525
#52-A FUSE
#16-3A RESISTANCES
+75V
OUTPUT TRANS. PER D-76600
19"
HANDLE AND EQUIPMENT GUARD
#113-A REL., 110 LBS
REP. SOCKETS PER D-76620
#27-B RHEOSTATS
(PROVIDED ONLY WHEN SPECIFIED)
#431 WESTON MILLAMETER
#429 WESTON AMMETER
OFF
MILLAMETER SWITCH PER D-76651
AMMETER SWITCH PER D-76651
NAME PLATE
FILAMENT 182
FILAMENT 384
BATTERY BOXES PER D-76575
CONTACT POINTS FOR MEASURING "C" BATTERY VOLTAGE


AMERICAN TELEPHONE & TELEGRAPH CO.
DEPARTMENT OF DEVELOPMENT AND RESEARCH
PUBLIC ADDRESS SYSTEMS
TYPE "C" AMPLIFIER
197-B-4 STANDARD
ENGINEER
DRAFTSMAN
CHECKED BY
L #S-3671, 6/29/22.
ISSUE 1.
#429 WESTON A.C. AMMETER
#431 WESTON DOUBLE SCALE MILLIAMMETER 0-100 MILLIAMPERES 0-400 MILLIAMPERES
#113-A REP. BULBS
D-76620 REP. SOCKETS
JACKS ON AMMETER SWITCH PER D-76651
JACKS ON MILLIAMMETER SWITCH PER D-76651
JACK FOR MEASURING TOTAL SPACE CURRENT
D-76525 INPUT TRANS.
4000Ω
30000Ω
GRID BATT. 31.5 OR 36 V
SEE NOTE (1)
2000Ω
#18-8A
#18-8B
To "A" AMPLIFIER
D-76600 OUTPUT TRANS.
3000Ω
500Ω
OUT
To VOLUME CONTROL PANEL
WARD LEONARD VITROHM RESISTOR 1/2 OHM
NOTE (2)
#27-B RHEOSTAT (FILAMENTS 1 AND 2) NOTE (2)
#27-B RHEOSTAT (FILAMENTS 3 AND 4) NOTE (2)
91125 D & W FUSE
250V 15 AMP.
12V
STRAP
SEE NOTE (1)
750V 400 AMP. FUSE #32-A FUSE
DISCONNECTING SWITCH IN REAR CAN COVER (SWITCH IS OPENED WHEN COVER IS REMOVED).
+750V
To +750V TERM. ON FILTER POT.
To FILAMENT CURRENT SUPPLY PANEL FOR A.C.
- NOTES -
(1) FOR D.C. FILAMENT CURRENT SUPPLY:
(A) STRAP "G" AND "4" TERMINALS
(B) MAKE GRID BATTERY 36 VOLTS (18 #703 EVEREADY BATTERIES)
FOR A.C. FILAMENT CURRENT SUPPLY:
(A) DISCONNECT "G" AND "4" TERMINALS
(B) CONNECT "G" TERMINAL TO MIDPOINT OF A.C. TRANSFORMER WHICH SUPPLIES FILAMENT CURRENT.
(C) MAKE GRID BATTERY 31.5 VOLTS (7 #703 EVEREADY BATTERIES)
(2) #27-B RHEOSTATS AND 1/2 W.L. RESISTANCES ARE REQUIRED ONLY FOR D.C. FILAMENT CURRENT SUPPLY AND ARE NOT FURNISHED UNLESS SPECIFIED IN ORDER. WHEN FURNISHED STRAPS "A" SHALL BE OMITTED.
(3) TIP, RING AND SLEEVE SPRINGS OF JACKS ON AMMETER AND MILLAMMETER SWITCHES AND TERMINAL LUG "G" ARE ELECTRICALLY CONNECTED TO FRAME DUE TO CONSTRUCTION.
INDICATES BEINDING POST TERMINAL ON REAR OF PANEL.


1150
1100
1050
1000
Western Electric
10-A RADIO RECEIVER
PATENT
PAT PEND
SERIAL NO.
L
H
SENSITIVITY
ON
OFF
POWER
INCREASE
LEVEL
NORMAL
1
2
BAND WIDTH


BELL TELEPHONE LABORATORIES
INCORPORATED
10-A RADIO RECEIVER
SCHEMATIC CIRCUIT DIAGRAM.
910-2215
10-25-32
ISSUE:1 I.K.
2-14-34
ISSUE:2 R.J.T.
NOTE
RESISTANCE COLORS GIVEN
IN FOLLOWING ORDER:-
1. BODY COLOR.
2. END OR TIP COLOR.
3. RING OR DOT COLOR.
ANT.
GND.
+200 VOLTS
+250 VOLTS
-B
102.5-127.5 VOLTS 50-60~ A.C.
GROUND SIDE
D3 KS-6961 SW.
D2 KS-6962 SW.
D1 KS-6960 SW.
M1 KS-6893 METER
P2 KS-6894 POTEN.
T1 #139-A OUTPUT TRANS. 30,000:140Ω
T2 #319-A TRANS.
T3 #257-A INPUT TRANS. 1:1 TURNS RATIO
VT1 VT2 VT3 VT4 VT5 247-A V.T.
2-TYPE "SM" POLYMET M'FG.CO. COND. 60 MMF. EACH.
2-MOD. 'T' FARADON COND.
0.9 ± 0.1 MILS
2.0 ± 0.75 MILS
8.0 ± 1.2 MILS
10.0 ± 1.9 MILS
26 MILS
24 MILS
35 MILS
34 MILS
180 VOLTS
72 VOLTS
34 VOLTS
70 VOLTS
R1 2000Ω RD-BLK-RD
R2 3000Ω BN-BLK-RD
R3 3000Ω BN-BLK-RD
R4 100,000Ω BN-BLK-Y
R5 12,000Ω BN-RD-OR
R6 5000Ω GN-BLK-RD
R7 100,000Ω BN-BLK-Y
R9 5000Ω GN-BLK-RD
R10 150,000Ω BN-BLK-Y
R11 12,000Ω BN-RD-OR
R12 2000Ω RD-BLK-RD
R13 3000Ω RD-BLK-RD
R15 500Ω GN-BLK-BR
R16 12,000Ω BN-RD-OR
R18 100,000Ω BN-BLK-Y
R19 100,000Ω BN-BLK-Y
R20 2000Ω RD-BLK-RD
R21.1 3000Ω
R21.2 4200Ω
R22.1 900Ω 2500Ω
R22.2 1240Ω
R22.3 100Ω
C1 440 MMF.
C2 440 MMF.
C4 440 MMF.
C5 440 MMF.
C6 440 MMF.
C9 .0325 MF. CG-400 COND.
C10 .0325 MF. CG40 COND.
C11 .0325 MF. CG40 COND.
C12 .1 MF. 1-246-A COND.
C13 1-246-A COND.
C14 1-246-A COND.
C15 .0004 MF.
C16 .01 MF.
C17 141-K COND. .2 MF.
C18 .25 MF. 141-QR COND.
C19 .25 MF. 141-D COND.
C20 .2 MF. 1-#137-C COND.
C21 .25 MF. 1-141-E COND.
C22 .25 MF. 1-141-E COND.
C23-2 MF. 1394-A COND.
C24-2 MF.
C25-2 MF.
C26 1-141-E COND.
2-223-B COND.
1-KS-6963 COND.
1-KS-6964 COND.
L1 KS-6891 H
L2 KS-6956
L3 KS-6959
L4 KS-6958
L5 KS-6890
L6 KS-6957
L7 KS-6959
L8 KS-6958
L9 KS-6890
L10 KS-6957
L11 KS-6959
L12 KS-6958
L13 ESA-600134
L14 KS-6892
L15 KS-6892
L16 KS-6892
L17 KS-6892
L18 KS-6892
L19 KS-6892
E1 MAZDA TYPE "T" 25V. LAMP