

STATION SYSTEMS
EQUIPMENT UNITS

0. CHANGES

0.1 CHANGED AND ADDED FUNCTIONS

None.

0.2 CHANGES IN APPARATUS

Added:

ED-91929-01, G33 Equipment Unit (189D Repeating Coil), Fig. 55

Apparatus Superseded Superseded by

Repeating Coil 94G 189D

0.3 CHANGES IN CIRCUIT REQUIREMENTS
(Not Associated with 0.2 Above)

None.

0.4 DESCRIPTION OF CIRCUIT CHANGES

- (a) Fig. 37 had G10 designation added to ED number.
- (b) Mechanical requirements of UA46 relay, G7, changed to show changes in armature travel and current flow. Armature travel is now 35 mils (reduced from 41 mils), and test value for operation is changed from 26.5 ma to 25.0 ma, and readjust values from 25 ma to 23.5 ma. The test value of the P/S winding is changed from 17 ma to 16 ma with the readjust value deleted.
- (c) Fig. 55 is added to equipment units chart for ED-91929-01, G33 to show 189D repeating coil which supersedes 94G repeating coil of Fig. 45 now rated Mfr Disc.

1. PURPOSE OF CIRCUIT

This circuit provides internal wiring information for the standard equipment units which are covered on ED-91929-01 and ED-91938-01.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5113-GEB-LHA

STATION SYSTEMS
EQUIPMENT UNITS

Drawings for SD-69160-01 have been converted to 8-1/2 by
11 inch handbook size.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5335-WFBW-PBF

STATION SYSTEMS
EQUIPMENT UNITS

CHANGES

D. Description of Changes

D.1 This circuit is reissued to bring the figure numbers into agreement with figure numbers on prior issues of this drawing and related drawings.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5335-GRT-PBF

SHEET INDEX

FIG.	CONTENTS	SHEET NO.	ISSUE NO.																																				OLD SHEET NO.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
			19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
	SHEET INDEX	A1	19	20																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											

SHEET INDEX NOTES

1. WHEN CHANGES ARE MADE IN THIS DRAWING, ONLY THOSE SHEETS AFFECTED WILL BE REISSUED.
2. THIS SHEET INDEX WILL BE REISSUED AND BROUGHT UP TO DATE EACH TIME ANY SHEET OF THE DRAWING IS REISSUED, OR A NEW SHEET IS ADDED.
3. THE ISSUE NUMBER ASSIGNED TO A CHANGED OR NEW SHEET WILL BE THE SAME ISSUE NUMBER AS THAT OF THE SHEET INDEX.
4. SHEETS THAT ARE NOT CHANGED WILL RETAIN THEIR EXISTING ISSUE NUMBER.
5. THE LAST ISSUE NUMBER OF THE SHEET INDEX IS RECOGNIZED AS THE LATEST ISSUE NUMBER OF THE DRAWING AS A WHOLE.
6. "OLD SHEET NO." REFERS TO SHEET NO. PRIOR TO ISSUE: 19D

SUPPORTING INFORMATION

CATEGORY	NO.
EQUIPMENT DWGS	ED-91929-01 ED-91938-01

SD- 69160-01

STATION SYSTEMS
EQUIPMENT UNITS

AT&TCO
STANDARD

SD- 69160-01-A1
SHEET INDEX
11 SHEETS

BELL TELEPHONE LABORATORIES
INCORPORATED

3S

PRINTED IN U. S. A.

Scanned Steve Cichorsky

DWG ISS	CD ISS	DWG ISS	CD ISS	DWG ISS	CD ISS
1	1	2D	2D	3D	3D
4A	4A	5D	5D	6D	6D
7A	7A	8A	8A	9D	9D
10D	10D	11D	11D	12D	12D
13D	13D	14D	14D	15D	15D
16D	16D	17D	17D	18D	18D
DWG ISS	CD ISS	DATE ISSUED	DESIGN APPD	REVIEW APPD	ARM
19D	18D	4-28-64	DHC	ARM	ARM
20D	18D	8-28-64	DHC	ARM	ARM

SHEET INDEX (CONT)

FIG.	CONTENTS	SHEET NO.	ISSUE NO.																OLD SHEET NO.
			19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
26 37 38 39 40 41 42 44 45 48 50	ED-91938-01	C5	19	20															01
52 53 54	ED-91938-01	C6	19	20															
	CIRCUIT REQUIREMENTS TABLE	D1	19	20															

DRAWING
ISSUE

19D DHC
BEM

20D DHC
BEM

STATION SYSTEMS
EQUIPMENT UNITS

BELL TELEPHONE LABORATORIES
INCORPORATED

3S

SD-69160-01-A2

scanned steve cichorsky

APPARATUS INDEX

DRAWING

ISSUE

19D DMC

20D DMC

EQUIPMENT UNITS		
FIG NO.	GRP NO.	APPARATUS USED
		ED-91929-01
1	1	307P OR 274AH INDUCTOR
2	2	178B INDUCTION COIL (MD)
3	3	139C OR 439C CAPACITOR 33A OR 33L VARISTOR
4	4	161A OR 189A REP COIL
5	5	MTG ONLY WITH 9 TERMINALS DRILLED FOR FOUR 19-TYPE RESISTORS
6	6	18AE RESISTOR
7	7	UA46 RELAY
8	8	D-159797 INDUCTION COIL (MD)
9	9	MALLORY FPS122 CAPACITOR 40UF (MD)
10	10	18HP OR 18KM RESISTOR TWO 19SH RESISTORS
11	11	137A CAPACITOR (MD)
12	12	B1129 RELAY
13	13	85G INDUCTOR
14	14	U1023 RELAY
15	15	33A VARISTOR (MD)
16	16	U815 RELAY
21	17	U6107 OR UA129 RELAY
23	18	178F INDUCTION COIL (MD)
25	19	KS-13486 CAPACITOR 18DJ RESISTOR
29	20	18CN RESISTOR TWO 18BA RESISTORS
30	21	13N RESISTANCE LAMP (MD)
31	22	18CN RESISTOR 18G RESISTOR TWO 18DS RESISTORS
32	23	TWO 19PJ RESISTORS
33	24	441A CAPACITOR
34	25	271A RELAY (MD)
35	26	33L VARISTOR
36	27	439A CAPACITOR
43	28	1C PAD
46	29	TWO 439A CAPACITORS
47	30	439C CAPACITOR
51	31	TWO 19AM RESISTORS
49	32	181B INDUCTION COIL
55	33	189D REP COIL

EQUIPMENT UNITS		
FIG NO.	GRP NO.	APPARATUS USED
		ED-91938-01
17	1	U235 RELAY
18	2	U6107 OR UA129 RELAY TWO 139A OR 439A CAPACITOR 111A RESISTOR
19	3	U112 RELAY
20	4	D-159797 INDUCTION COIL 307N INDUCTOR (MD) 18AJ RESISTOR
22	5	178F INDUCTION COIL 307N INDUCTOR (MD) 18CK RESISTOR
24	6	UA13 RELAY 18DA RESISTOR 33D VARISTOR
27	7	UA46 RELAY
28	8	94F REP COIL
26	9	8B THERMISTOR TWO 13P RESISTANCE LAMPS 19CB RESISTOR 19LA RESISTOR
37	10	120H OR 120HS REP COIL
38	11	120K OR 120KS REP COIL
39	12	120L OR 120LS REP COIL
40	13	U902 RELAY
41	14	149E INDUCTOR
42	15	U612 RELAY
44	16	94E REP COIL
45	17	94G REP COIL (MD)
48	18	120P REP COIL
50	19	19HP RESISTOR 19JB RESISTOR 19GC RESISTOR 19SM RESISTOR 439A CAPACITOR
52	20	181B INDUCTION COIL 274L INDUCTOR
53	21	425B NETWORK
54	22	U1078 RELAY

STATION SYSTEMS

EQUIPMENT UNITS

SD-69160-01-A3

BELL TELEPHONE LABORATORIES
INCORPORATED

35

PRINTED INCORPORATED steve cichorsky

CIRCUIT NOTES:

DESIG	FUSE AMP	POTENTIAL	ONE PER
BATTERY SYMBOL		VOLTAGE RANGE	

FEATURE OR OPTION	PROVIDE		
	FIG.	APP OR WRG	QUANTITY

RECORD OF FIGURES, WIRING, AND APPARATUS CHANGES						
CHANGED ON ISS	IF JOB RECORDS DO NOT SPECIFY	THIS OPTION WAS FURN	SEE NOTE	USE IN CIRCUIT		
				STD	A&M	MD
30						FIG.9
50				FIG.14		
60				FIG.15, 16, 17, 18, 19, 20		
90				FIG.21		
100				FIG.22		FIG.20
				FIG.23		FIG.8
110				FIG.24		
120				FIG.25, 26, 27, 28		
130				FIG.29, 30, 31, 32		
	Y OR Z	Z		Y		Z
140				FIG.33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43		
				FIG.44, 45, 46, 47		
150						FIG.11,30
	W OR X	X		W		X
	U OR V	V		U		V
				FIG.48, 49, 50, 51, 52, 53		
						FIG.2, 15, 22, 23, 34
160	T OR S	S		T		S
	Q OR R	R		Q		R
	N OR P	P	104	N, P		
	K OR M	M	104	K, M		
	H OR J	J	104	H, J		
	F OR G	G		F		G
	D OR E	E		D		E
170				FIG.54		
180				FIG.55		FIG.45

104. USE OPTIONS N, K, AND H ONLY IF REQUIRED BY GOVERNMENT MATERIAL RESTRICTIONS ON OPTIONS P, M, AND J RESPECTIVELY.

CIRCUIT NOTES: (CONT)

NETWORK VALUES			
NETWORK		RESISTANCE IN OHMS	CAPACITANCE IN UF
NO.	CODE		

INFORMATION NOTES:

301. UNLESS OTHERWISE SPECIFIED:
RESISTANCE VALUES ARE IN OHMS,
CAPACITANCE VALUES ARE IN MICROFARADS,
VALUES PRECEDED BY THE SYMBOL + (PLUS)
OR - (MINUS) ARE IN VOLTS..

OPTION INDEX

APP OR WRG	LOCATION
Z	C1
Y	
X	C4
W	C4
V	C2, C4
U	C2, C4
T	C1
S	C1
R	
Q	
P	C5
N	
M	
K	
J	
H	
G	
F	
E	C1
D	
C	
B	
A	

STATION SYSTEMS
EQUIPMENT UNITS

SD-69160-01-B1

BELL TELEPHONE LABORATORIES
INCORPORATED

3S

PRINTED IN STANNED STEVE CICHORSKY

DRAWING

ISSUE

19D

DHC

ARM

20D

DHC

ARM

FIG. 1

ED-91929-01, G1

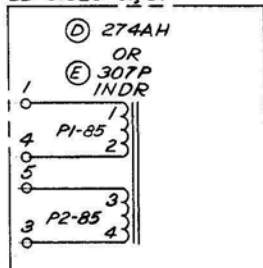


FIG. 2 (MFR DISC)

ED-91929-01, G2

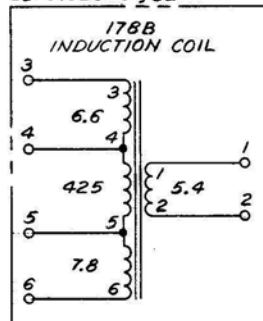


FIG. 3

ED-91929-01, G3

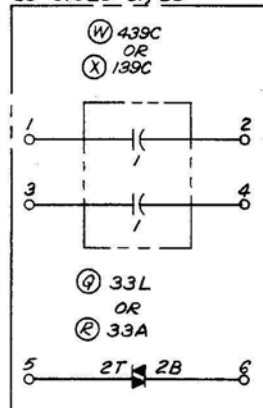


FIG. 4

ED-91929-01, G4

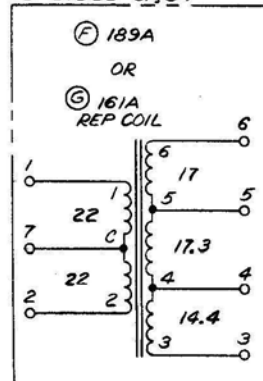


FIG. 5

ED-91929-01, G5

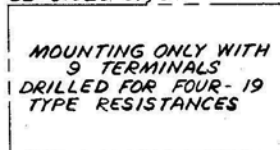


FIG. 6

ED-91929-01, G6

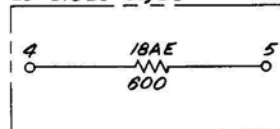


FIG. 7

ED-91929-01, G7

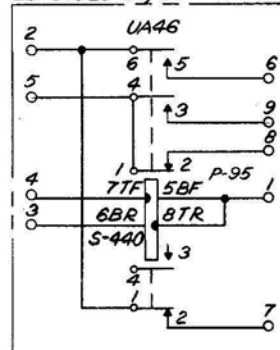


FIG. 8 (MFR DISC)

ED-91929-01, G8

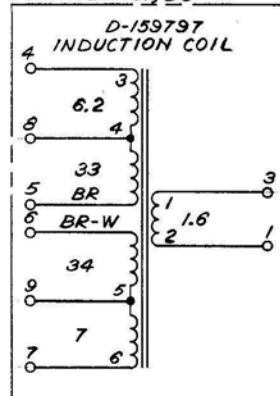


FIG. 9 (MFR DISC)

ED-91929-01, G9

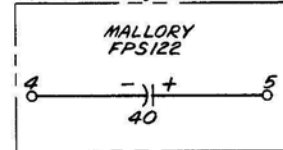


FIG. 10

ED-91929-01, G10

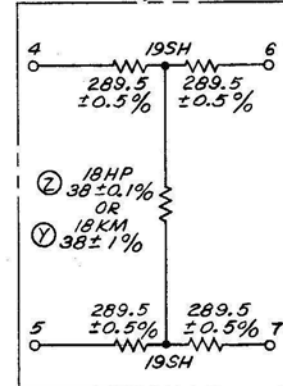


FIG. 11 (MFR DISC)

ED-91929-01, G11

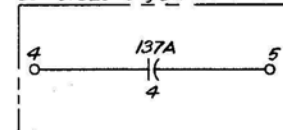
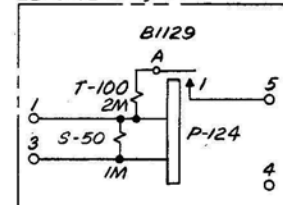
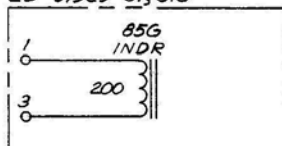


FIG. 12

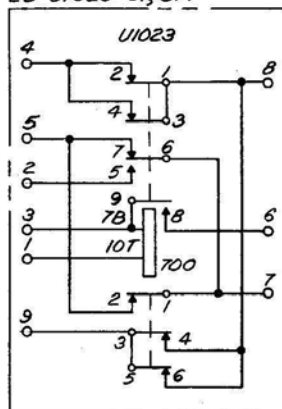
ED-91929-01, G12



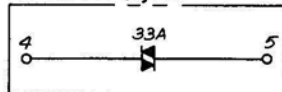
ED-91929-01, G13



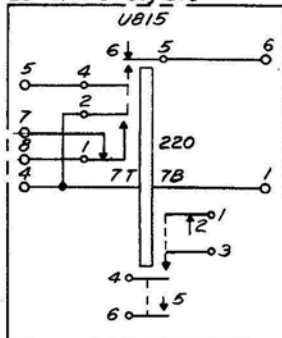
ED-91929-01, G14



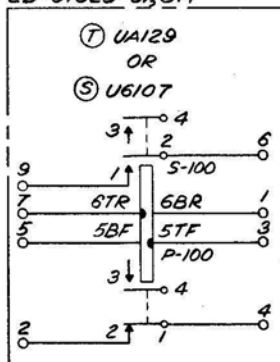
ED-91929-01, G15



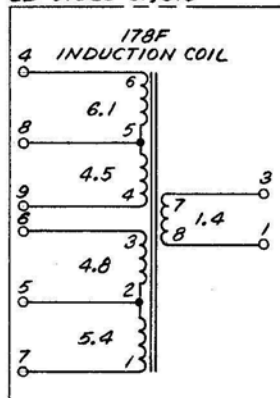
ED-91929-01, G16



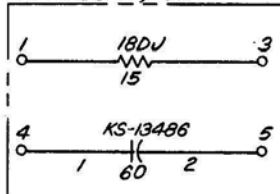
ED-91929-01, G17



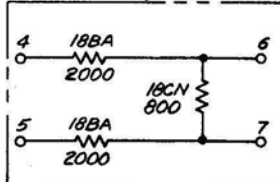
ED-91929-01, G18



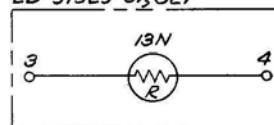
ED-91929-01, G19



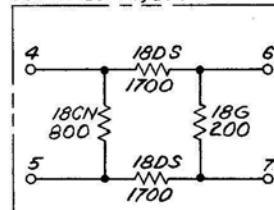
ED-91929-01, G20



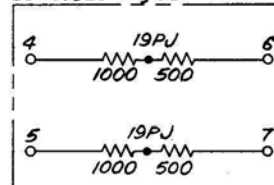
ED-91929-01, G21



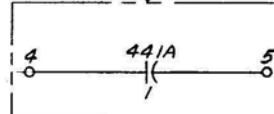
ED-91929-01, G22



ED-91929-01, G23



ED-91929-01, G24



ED-91929-01, G25

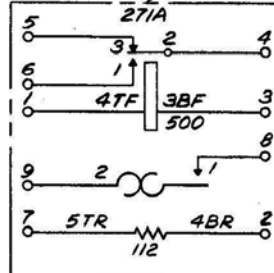


FIG. 35

ED-91929-01, G26

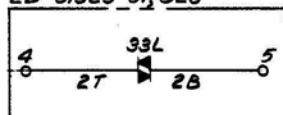


FIG. 36

ED-91929-01, G27

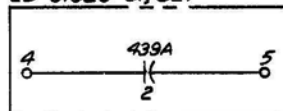


FIG. 43

ED-91929-01, G28

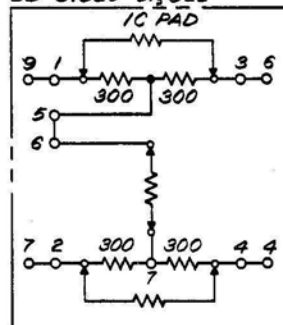


FIG. 46

ED-91929-01, G29

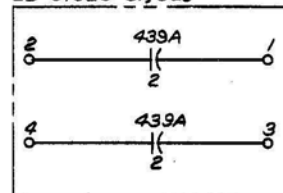


FIG. 47

ED-91929-01, G30

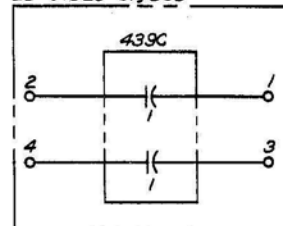


FIG. 51

ED-91929-01, G31

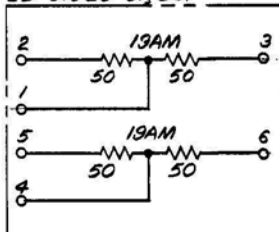


FIG. 49

ED-91929-01, G32

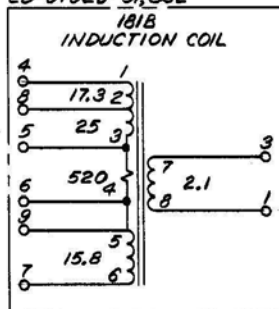
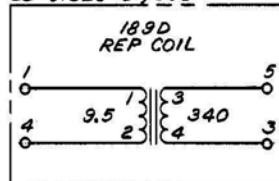


FIG. 55

ED-91929-01, G33



STATION SYSTEMS

EQUIPMENT UNITS

BELL TELEPHONE LABORATORIES
INCORPORATED

3S

SD-69160-01-C3

PRINTED IN U.S. Scanned Steve Cichorsky

FIG. 17

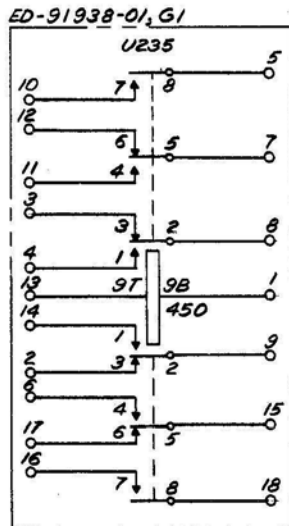


FIG. 20(MFR DISC)

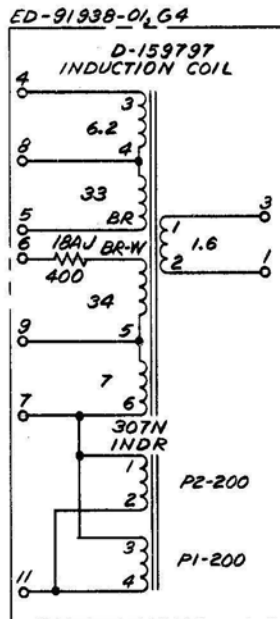


FIG. 22 (MFR DISC)

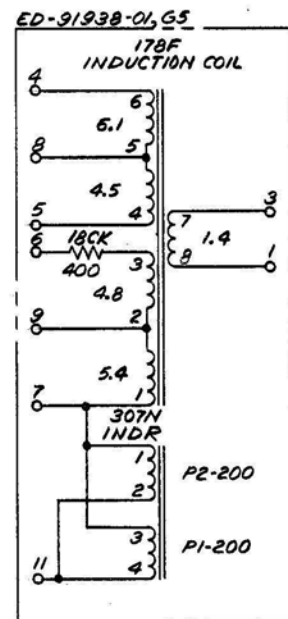


FIG. 18

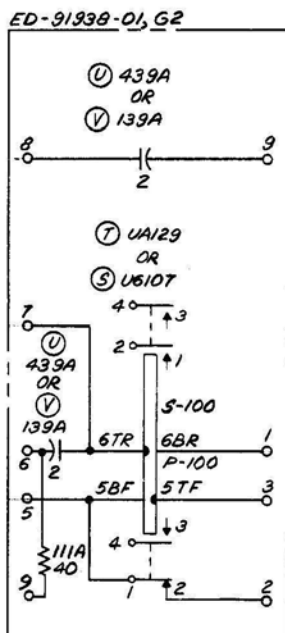


FIG. 24

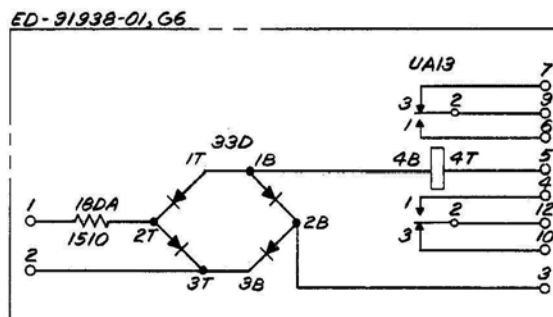


FIG. 27

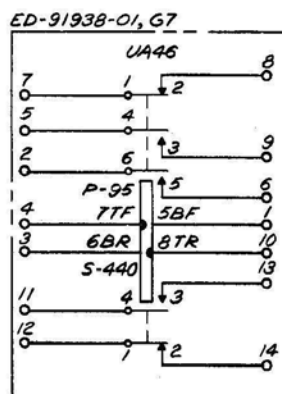


FIG. 28

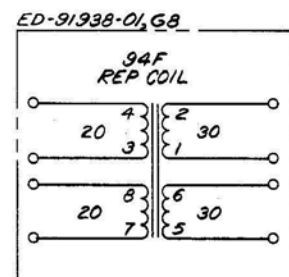
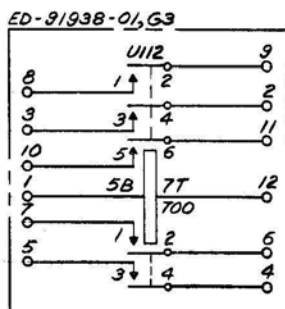


FIG. 19



STATION SYSTEMS
EQUIPMENT UNITS

SD-69160-01-C4

BELL TELEPHONE LABORATORIES
INCORPORATED

3S

PRINTED IN U.S.A. Scanned steve cichorsky

FIG. 26

ED-91938-01,G9

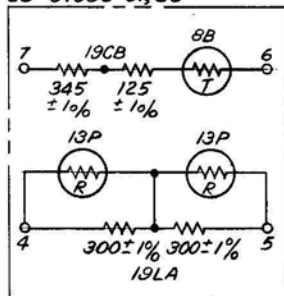


FIG. 37

ED-91938-01,G10
SEE NOTE 104

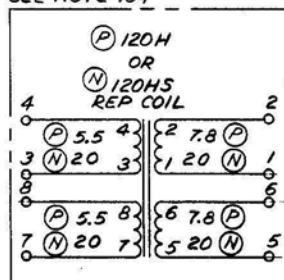


FIG. 38

ED-91938-01,G11
SEE NOTE 104

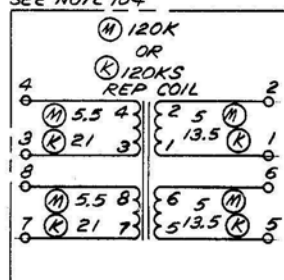


FIG. 39

ED-91938-01,G12
SEE NOTE 104

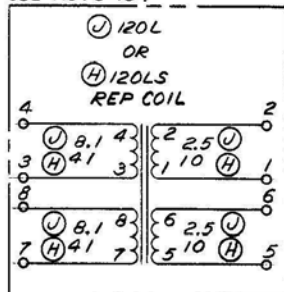


FIG. 40

ED-91938-01,G13

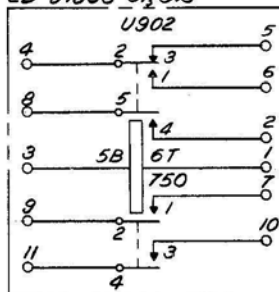


FIG. 41

ED-91938-01,G14

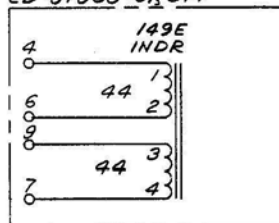


FIG. 42

ED-91938-01,G15

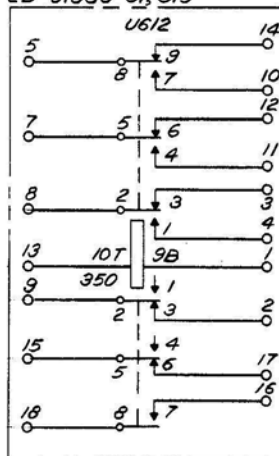


FIG. 44

ED-91938-01,G16

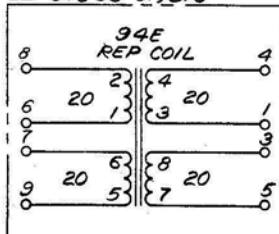


FIG. 45(MFR DISC)

ED-91938-01,G17

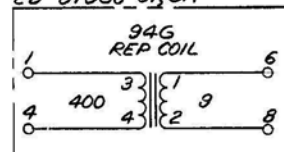


FIG. 48

ED-91938-01,G18

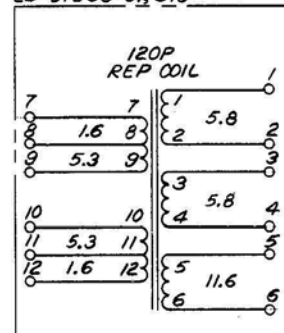


FIG. 50

ED-91938-01,G19

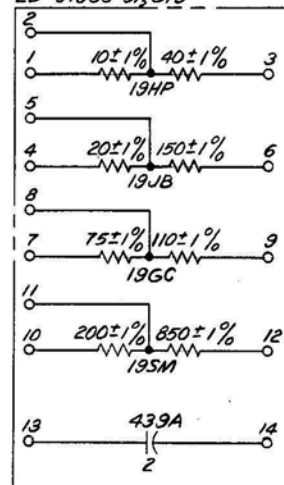


FIG. 52

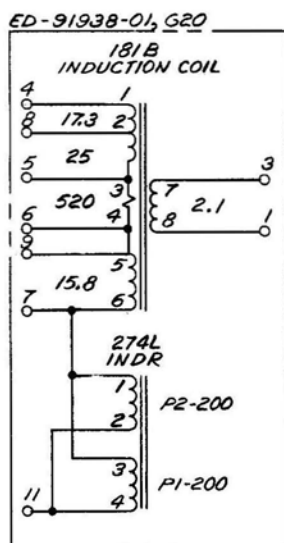


FIG. 53

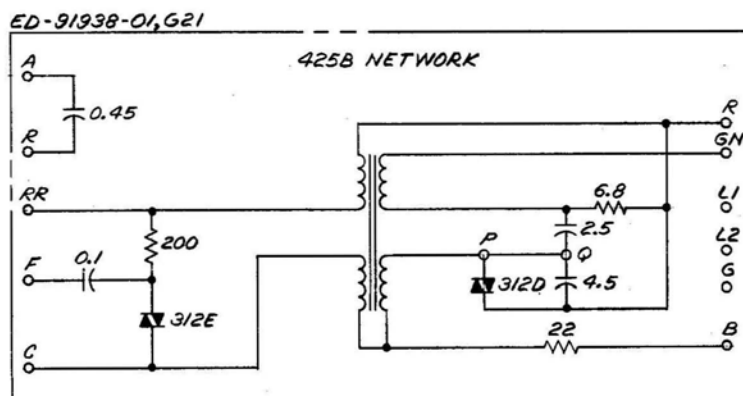
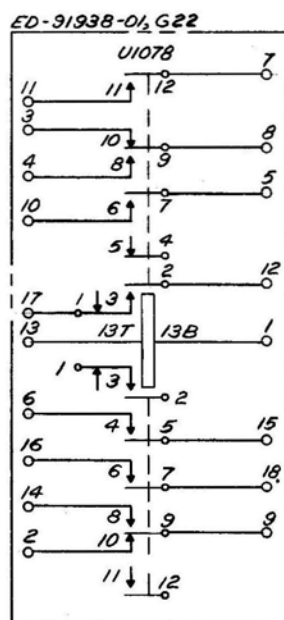


FIG. 54



STATION SYSTEMS
EQUIPMENT UNITS

SD-69160-01-C6

BELL TELEPHONE LABORATORIES
INCORPORATED

3S

PRINTED IN U.S. scanned steve cichorsky