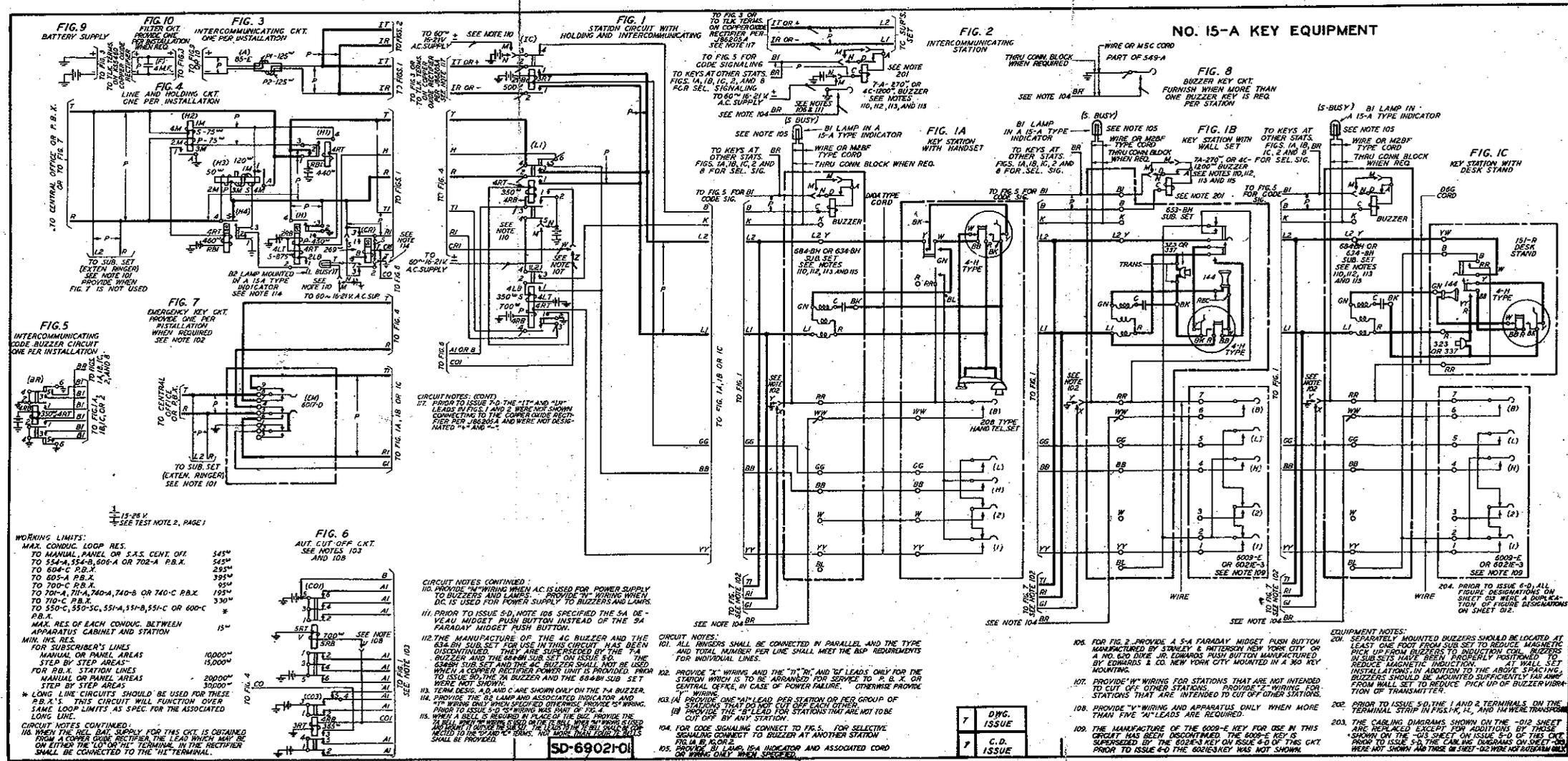


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NO. 15-A KEY EQUIPMENT



WORKING LIMITS:
 MAX. CONDUC. LOOP RES. 545'
 TO 55-A, 55-B, 600-A OR 702-A P.B.X. 545'
 TO 604-C P.B.X. 295'
 TO 605-A P.B.X. 395'
 TO 700-C P.B.X. 95'
 TO 701-A, 711-A, 740-A, 740-B OR 740-C P.B.X. 195'
 TO 710-C P.B.X. 330'
 TO 550-C, 550-SC, 551-A, 551-B, 551-C OR 600-C P.B.X. 330'
 MAX. RES. OF EACH CONDUC. BETWEEN APPARATUS CABINET AND TERMINAL 15"
 MIN. INS. RES. FOR SUBSCRIBER'S LINES 10000"
 MANUAL OR PANEL AREAS STEP BY STEP AREAS 15000"
 FOR P.B.X. STATION LINES 20000"
 MANUAL OR PANEL AREAS STEP BY STEP AREAS 30000"
 * LONG LINE CIRCUITS SHOULD BE USED FOR THESE P.B.X.'S. THIS CIRCUIT WILL FUNCTION OVER SAME LOOP LIMITS AS SPEC. FOR THE ASSOCIATED LONG LINE.
CIRCUIT NOTES CONTINUED:
 106. WHEN THE REL. SUPPLY FOR THIS CKT. IS OBTAINED FROM A COPPER OXIDE RECTIFIER THE LEAD WHICH MAY BE ON EITHER THE "L" OR "N" TERMINAL IN THE RECTIFIER SHALL BE CONNECTED TO THE "N" TERMINAL.

CIRCUIT NOTES CONTINUED:
 107. PRIOR TO ISSUE 5-D, THE "L" AND "N" LEADS IN FIGS. 1 AND 2 WERE NOT SHOWN. CONNECTING TO THE CORRESPONDING RECT. LEAD PER J86202-A AND WERE NOT DESIGNATED "L" AND "N".
 108. PRIOR TO ISSUE 5-D, NOTE 106 SPECIFIED THE 5A DE-5A FARADAY MIDGET PUSH BUTTON.
 109. THE MANUFACTURE OF THE AC BUZZER AND THE 6000-E SUB SET FOR USE IN THIS CIRCUIT HAS BEEN DISCONTINUED. THEY ARE SUPERSEDED BY THE "A" BUZZER AND THE 6000-E SUB SET ON ISSUE 5-D. THE 6000-E SUB SET WHEN A COPPER RECTIFIER POWER UNIT IS PROVIDED, PRIOR TO ISSUE 5-D, THE BUZZER AND THE 6000-E SUB SET WERE NOT SHOWN.
 110. TERM. DESIG. "A" AND "C" ARE SHOWN ONLY ON THE "A" BUZZER.
 111. PROVIDE THE 6000-E LAMP AND ASSOCIATED INDICATOR AND "A" WIRE ONLY WHEN SPECIFIED OTHERWISE PROVIDE "A" WIRE.
 112. WHEN A BELL IS REQUIRED IN PLACE OF THE BUZ. PROVIDE THE 5000-E BELL WHICH IS OF THE BELL WITH WINDINGS DESIGNED TO OPERATE IN THE 110V. THE BELL WHICH WINDINGS ARE NOT 110V. IS NOT TO BE USED.
 113. SHALL BE PROVIDED.

CIRCUIT NOTES:
 101. ALL WIRINGS SHALL BE CONNECTED BY PARALLEL AND THE TYPE AND TOTAL NUMBER PER LINE SHALL MEET THE B.S.P. REQUIREMENTS FOR INDIVIDUAL LINES.
 102. PROVIDE "X" WIRING AND THE "N", "R", AND "W" LEADS ONLY FOR THE STATION WHICH IS TO BE ARRANGED FOR SERVICE TO P.B.X. OR CENTRAL OFFICE IN CASE OF POWER FAILURE. OTHERWISE PROVIDE "X" WIRING.
 103. (A) PROVIDE ONE "A" LEAD PER STATION OR PER GROUP OF STATIONS THAT DO NOT CUT OFF EACH OTHER.
 (B) PROVIDE THE "L" LEAD FOR STATIONS THAT ARE NOT TO BE CUT OFF BY ANY STATION.
 104. FOR CODE SIGNALING CONNECT TO FIG. 5. FOR SELECTIVE SIGNALING CONNECT TO BUZZER AT ANOTHER STATION FIG. 1A, 1B, OR 2.
 105. PROVIDE "L" LEAD FOR INDICATOR AND ASSOCIATED COND. WIRE ONLY. P.B.X. STATION.

7	DWG.
7	ISSUE
7	C.D.
7	ISSUE

EQUIPMENT NOTES:
 106. FOR FIG. 2 PROVIDE A 5-A FARADAY MIDGET PUSH BUTTON MANUFACTURED BY STANLEY & PATTERSON NEW YORK CITY OR A NO. 600 DINE JR. EDWARDS PUSH BUTTON MANUFACTURED BY EDWARDS & CO. NEW YORK CITY MOUNTED IN A 30 KEY MOUNTING.
 107. PROVIDE "W" WIRING FOR STATIONS THAT ARE NOT INTENDED TO CUT OFF OTHER STATIONS. PROVIDE "Z" WIRING FOR STATIONS THAT ARE INTENDED TO CUT OFF OTHER STATIONS.
 108. PROVIDE "V" WIRING AND APPARATUS ONLY WHEN MORE THAN FIVE "A" LEADS ARE REQUIRED.
 109. THE MANUFACTURE OF THE 6000-E KEY FOR USE IN THIS CIRCUIT HAS BEEN DISCONTINUED. THE 6000-E KEY IS SUPERSEDED BY THE 6000-E KEY ON ISSUE 4-D OF THIS CKT. PRIOR TO ISSUE 4-D THE 6000-E KEY WAS NOT SHOWN.
 201. SEPARATELY MOUNTED BUZZERS SHOULD BE LOCATED AT LEAST ONE FOOT FROM SUB SET TO REDUCE MAGNETIC PICK UP FROM BUZZER TO INDICATOR CIL. BUZZERS IN SUB SETS HAVE BEEN PROPERLY POSITIONED TO REDUCE MAGNETIC INDUCTION. AT WALL SET INSTALLATIONS, IN ADDITION TO THE ABOVE SPACING, BUZZERS SHOULD BE MOUNTED SUFFICIENTLY FAR AWAY FROM WALL SET TO REDUCE PICK UP OF BUZZER VIBRATION OF TRANSMITTER.
 202. PRIOR TO ISSUE 5-D, THE "L" AND "N" TERMINALS ON THE TERMINAL STRIP IN FIGS. 1, 2, AND 10 IN THIS DRAWING WERE NOT SHOWN AND THREE ON SHEET 02 WERE NOT SUBSTANTIALLY.

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FIGS. 1-K, 1-AK, 4-K, & 7-K (A. & M. ONLY)
KEY STATION (KEYS IN HAND SET MTG) CODE SIGNALING

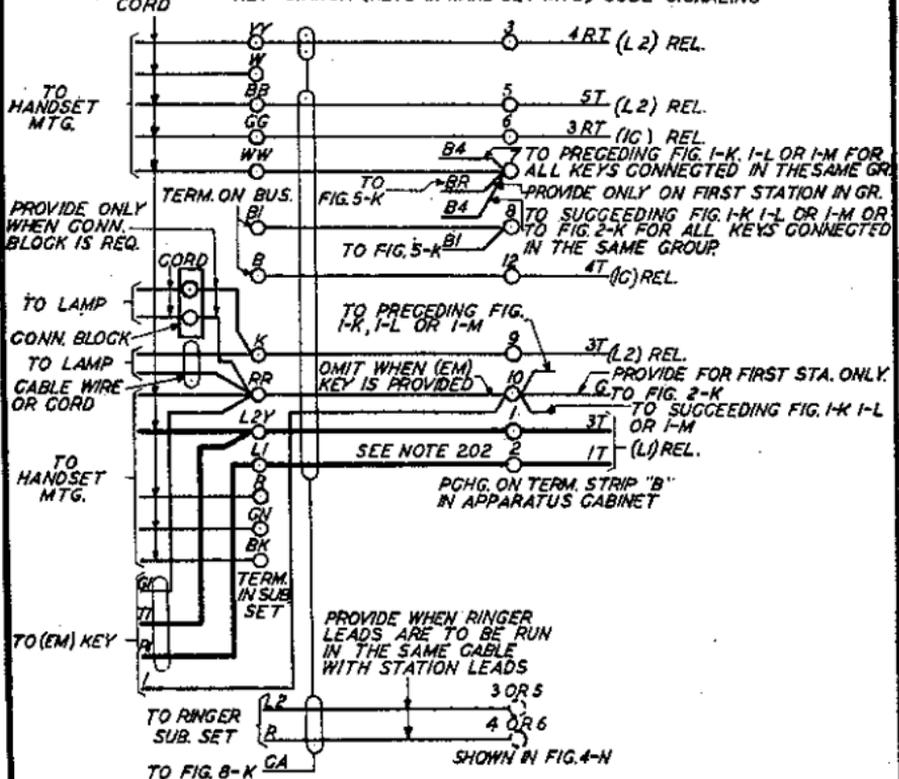


FIG. 3-L (A. & M. ONLY)
BAT. & GRD. SUPPLY WITH EXPOSED FEED
OMIT WITH METALLIC RETURN

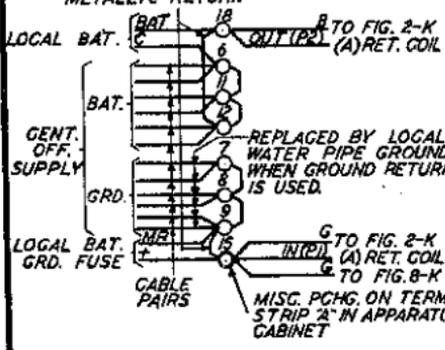
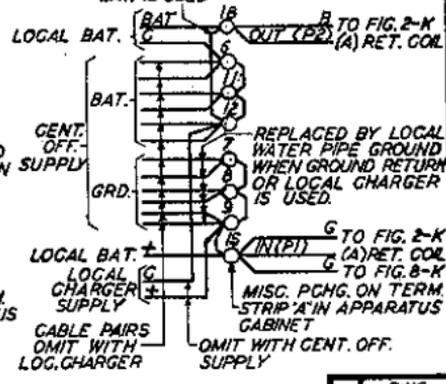


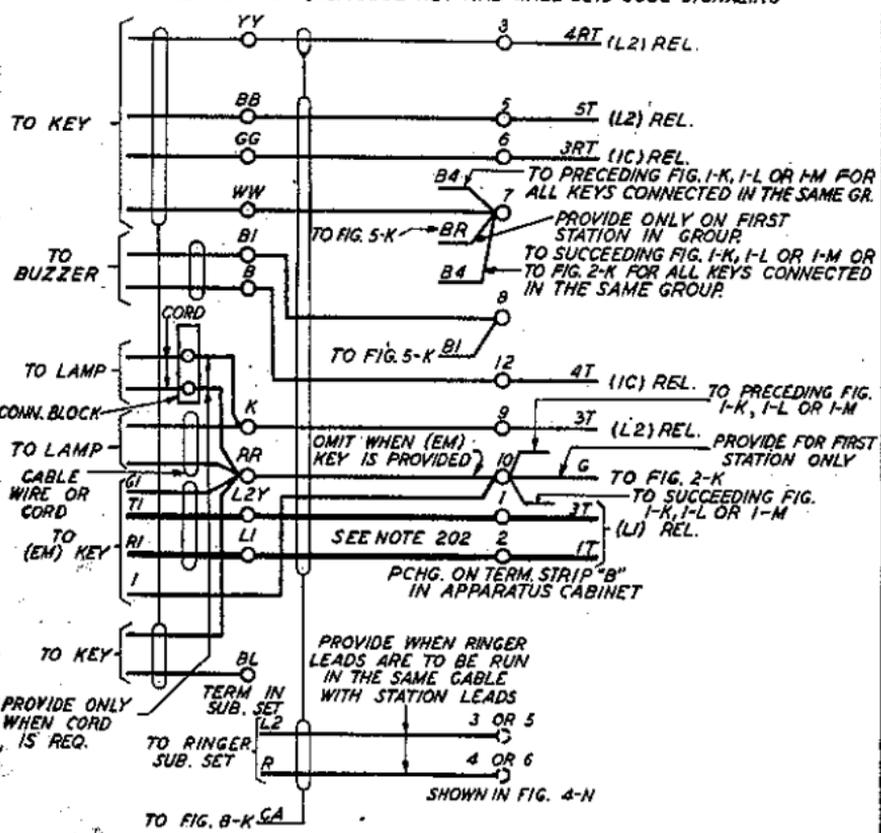
FIG. 3-M (A. & M. ONLY)
BAT. & GRD. SUPPLY WITH UNEXPOSED FEED OR LOC. CHARGER
OMIT WHEN LOCAL BAT. IS USED



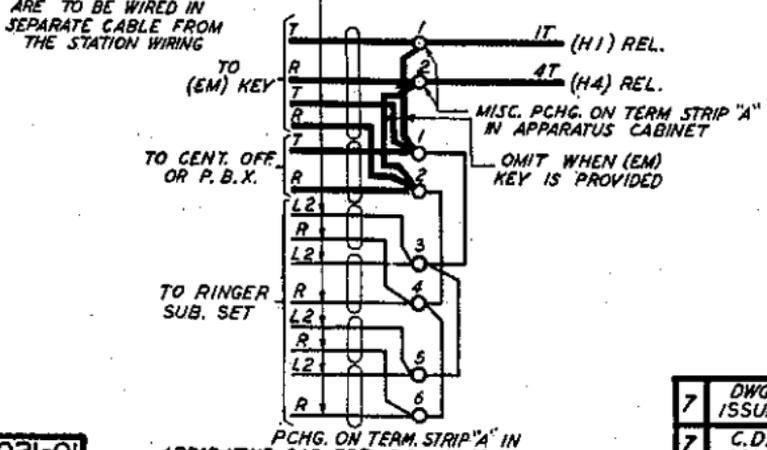
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7	DWG. ISSUE
7	C.D. ISSUE

FIGS. 1-L, 1-BK & 4-L (A. & M. ONLY)
KEY STATION (SEPARATE KEY AND WALL SET) CODE SIGNALING



FIGS. 4-N & 7-L (A. & M. ONLY)
HOLDING AND EXTENSION BELL CIRCUITS



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7	DWG. ISSUE
7	C.D. ISSUE

FIGS. 1-M, 1-CK & 4-M (A. & M. ONLY)
KEY STATION (SEPARATE KEY AND DESK STAND) CODE SIGNALING

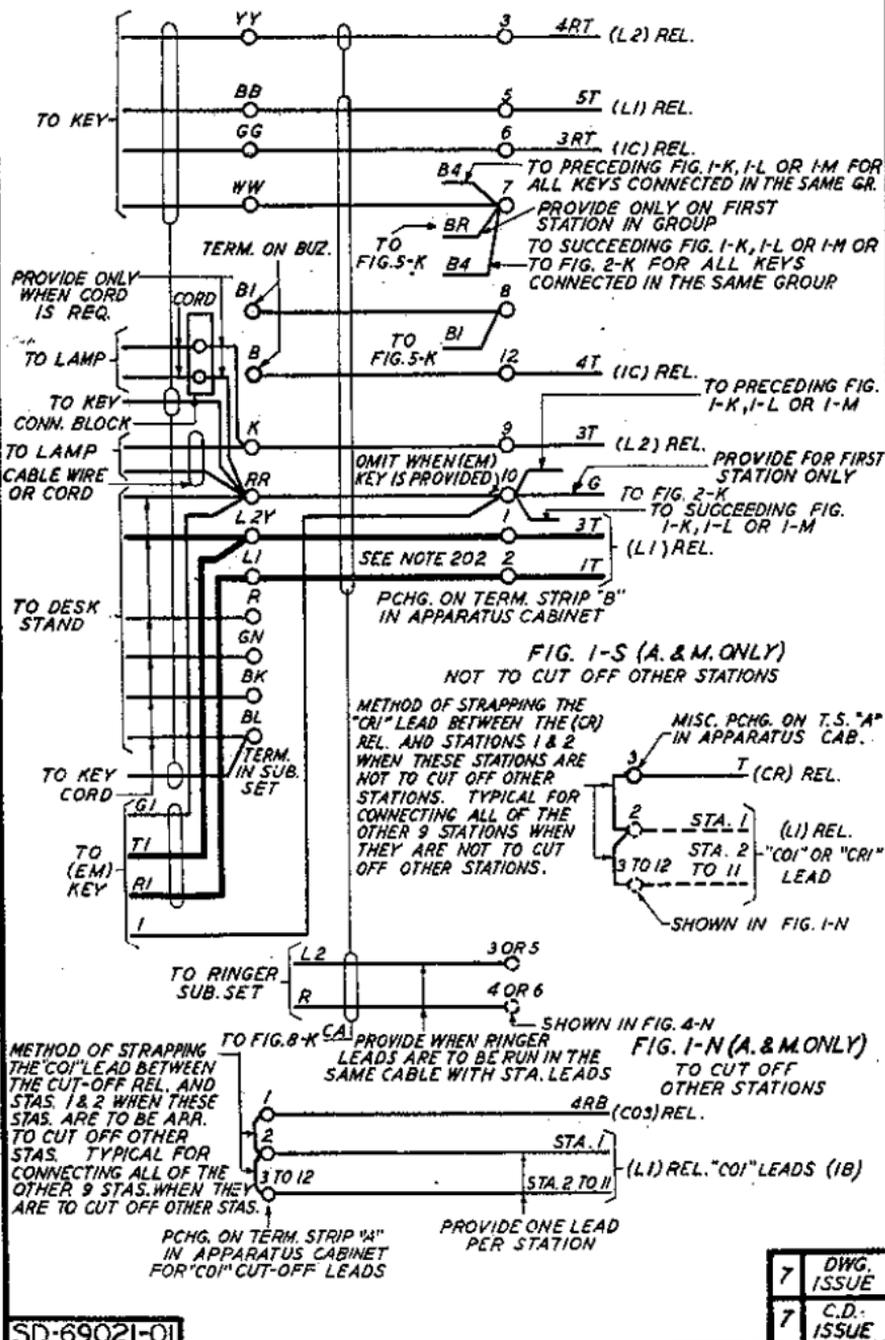
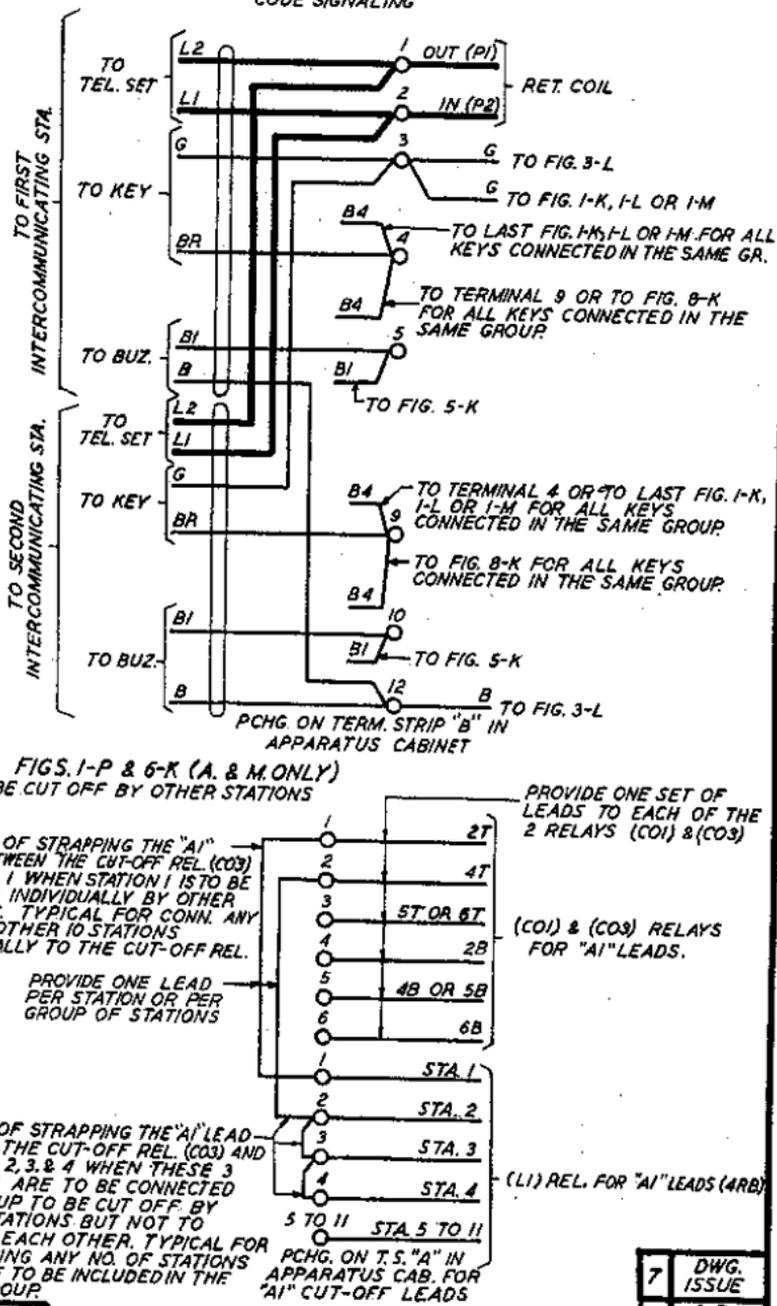


FIG. 2-K & 3-K (A. & M. ONLY)
INTERCOMMUNICATING STATION CODE SIGNALING



FIGS. 1-P & 6-K (A. & M. ONLY)
TO BE CUT OFF BY OTHER STATIONS

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FIG. 5-K (A. & M. ONLY)
CODE SIGNALING

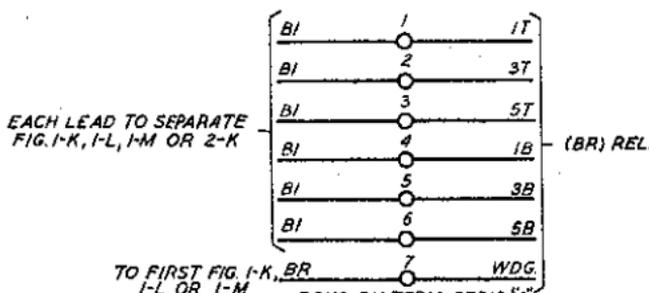
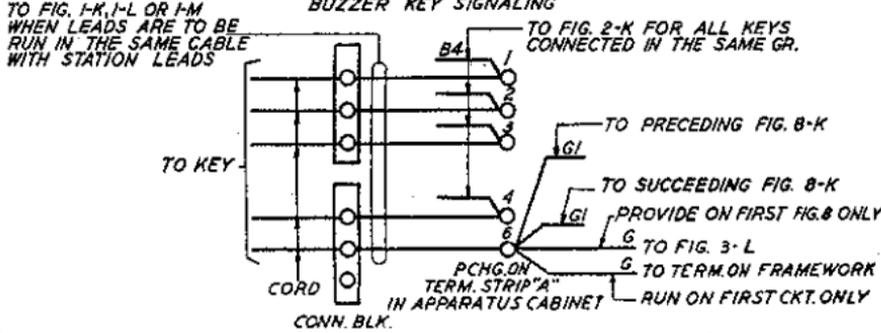
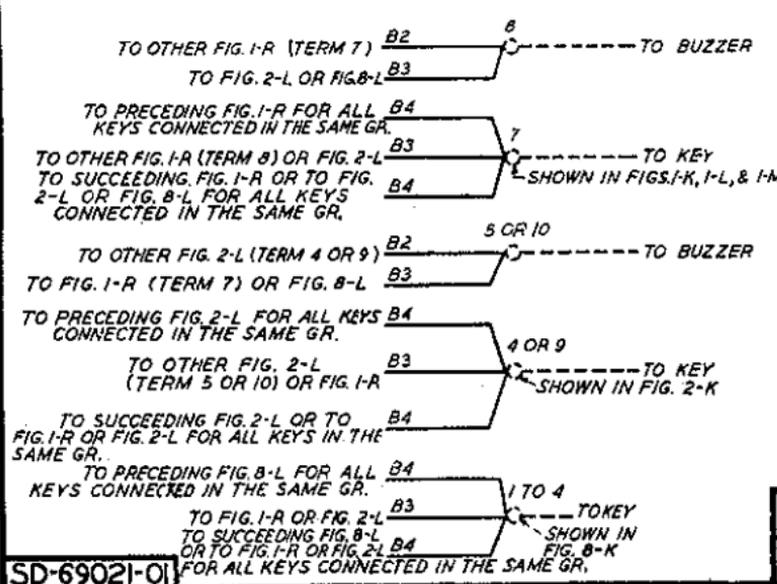


FIG. 8-K (A. & M. ONLY)
BUZZER KEY SIGNALING



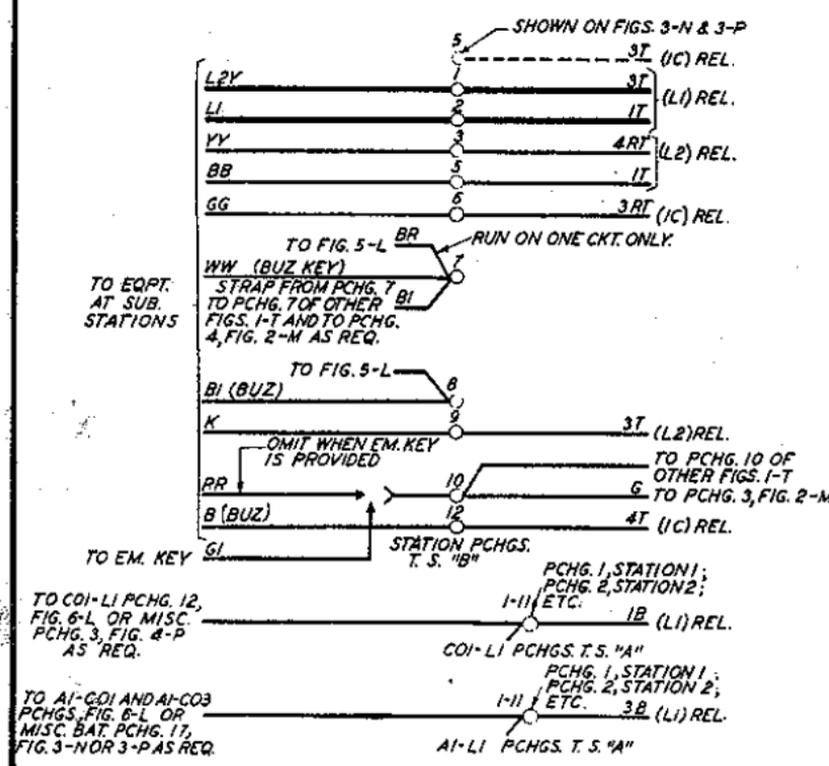
FIGS. 1-R, 2-L, & 8-L (A. & M. ONLY)
SELECTIVE SIGNALING



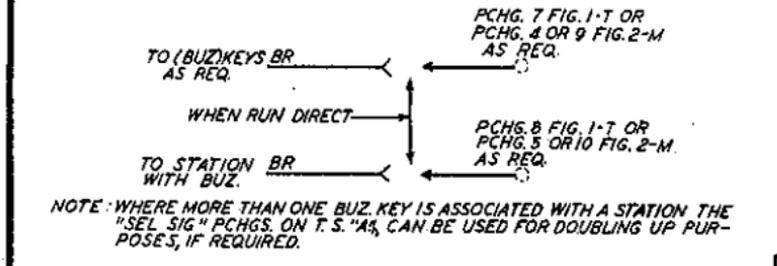
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7	DWG ISSUE
7	C. D. ISSUE

FIG. 1-T
STATION CKT
(SHOWN ARRANGED FOR CODE SIGNALING)



FIGS. 1-U, 2-N, & 8-N
SELECTIVE SIGNALING



NOTE: WHERE MORE THAN ONE BUZ. KEY IS ASSOCIATED WITH A STATION THE "SEL. SIG" PCHGS. ON T. S. "A", CAN BE USED FOR DOUBLING UP PURPOSES, IF REQUIRED.

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7	DWG ISSUE
7	C. D. ISSUE

FIG. 2-M
INTERCOMMUNICATING STATIONS
(SHOWN ARRANGED FOR CODE SIGNALING)

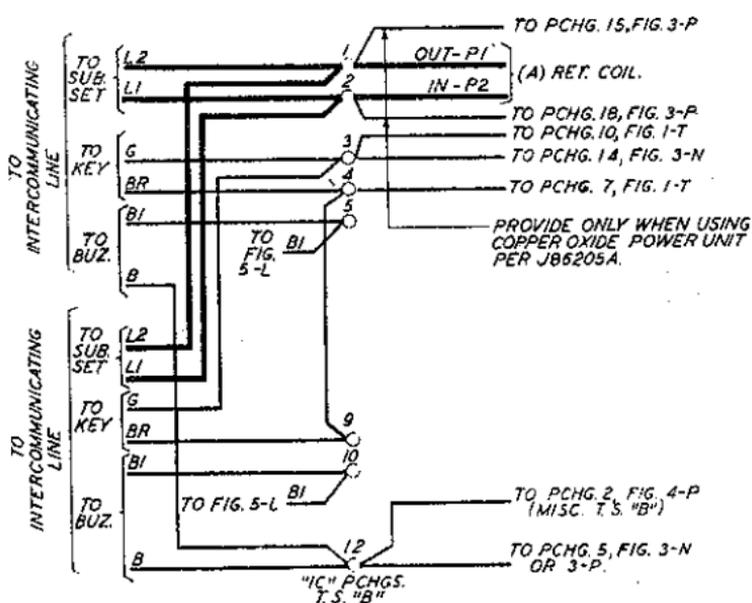


FIG. 3-N
BAT SUPPLY
DIRECT FROM C. O. OR
LOCAL BAT.

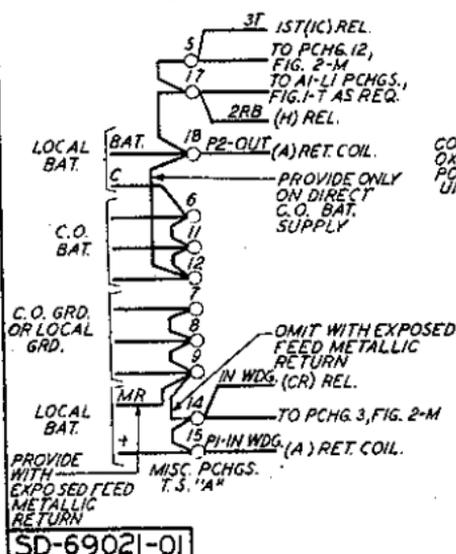
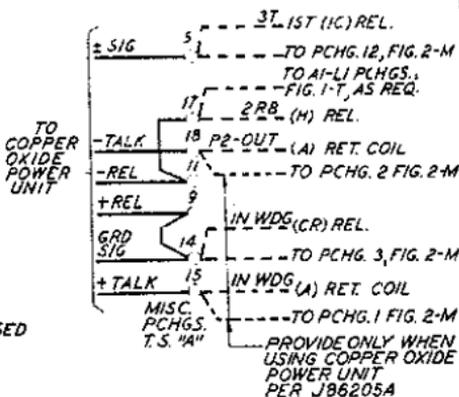


FIG. 3-P
BAT SUPPLY
COPPER OXIDE
POWER UNIT



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7 DWG. ISSUE
7 C. D. ISSUE

FIGS. 4-P & 7-M
HOLDING CKT.

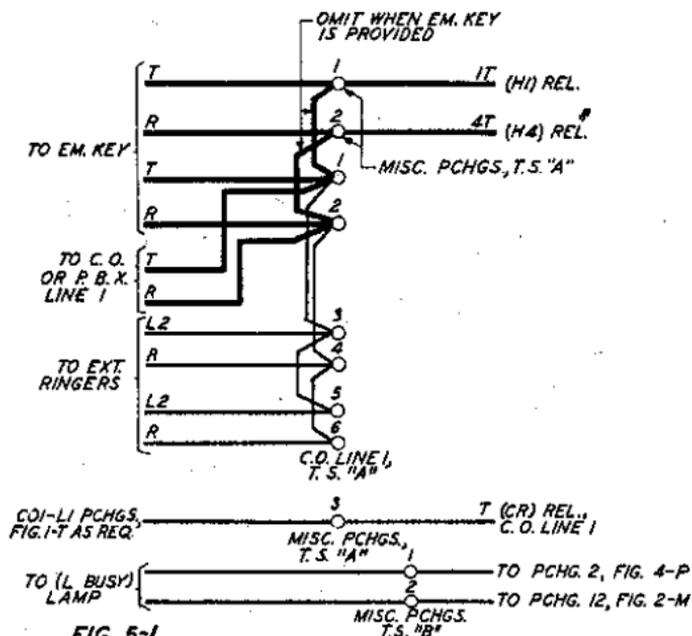


FIG. 5-L
INTERCOMMUNICATING CODE
CALL CKT.

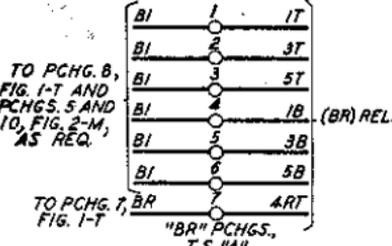
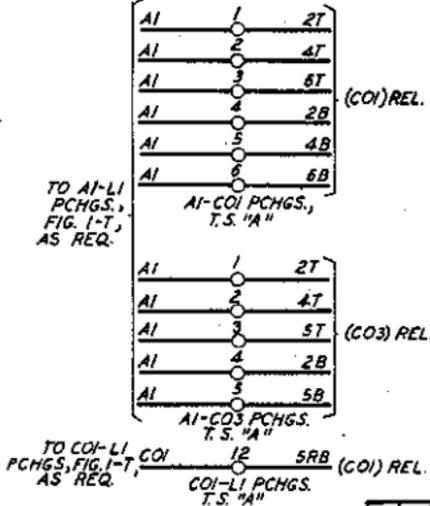


FIG. 6-L
AUT. CUT OFF CKT.



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7 DWG. ISSUE
7 C. D. ISSUE

CIRCUIT REQUIREMENTS

15-A KEY EQUIPMENT

APPARATUS	MECH. REQ.	CIRCUIT PREPARATION	TEST TEST SET TEST AFTER TEST RECAL	REMARKS	ONE /SS
DESIG. CODE	FIG. PRESS. TML	BLOCK TEST CLIP DATA SET NOTE WDG. FOR AMP. AMP.	MSL. CONC. BATT. CONC. GRD.		1
RELAYS					2
FIG. 1	H 015	RT(C) GRD.		023 017	3
FIG. 1	H 030	RT(L) GRD.		0345 0325	4
FIG. 1	H 030	RT(L) GRD.		0131 0138	5
FIG. 1	H 030	RT(L) GRD.		0155 0145	6
FIG. 1	H 030	RT(L) GRD.		031	7
FIG. 4	H 030	RT(L) GRD.		0505 048 ARM. TRAVEL .030" MAX.	
FIG. 4	H 030	RT(L) GRD.		0265 030	
FIG. 4	H 030	RT(L) GRD.		0245 023	
FIG. 4	H 030	RT(L) GRD.		0125 0145	
FIG. 4	H 030	RT(L) GRD.		0165 0155	
FIG. 4	H 030	RT(L) GRD.		009 0085	
FIG. 4	H 030	RT(L) GRD.		0023 0025	
FIG. 4	H 030	RT(L) GRD.		0047	
FIG. 4	H 030	RT(L) GRD.		0059 0056	
FIG. 4	H 030	RT(L) GRD.		0013 0014	
FIG. 4	H 030	RT(L) GRD.		022 0205	

TEST NOTES:

- INSULATE 4T(H4)
- THE NOMINAL VOLTAGES FOR THE KS-5460 AND J8620A RECTIFIERS AT THE RATED AMPERAGE ARE GIVEN BELOW. THESE VOLTAGES ARE NOMINAL ONLY AND WILL VARY CONSIDERABLY WITH THE LOAD ON ANY OF THE TAPS.

D.C. SUPPLY FOR RELAYS - 18 V AT 0.5 AMP.
 D.C. SUPPLY FOR TALKING - 3 V AT 0.1 AMP.
 A.C. SUPPLY FOR BUZZER AND LAMPS - 16 K AT 1 AMP.

15-A KEY EQUIPMENT

APPARATUS	MECH. REQ.	CIRCUIT PREPARATION	TEST TEST SET TEST AFTER TEST RECAL	REMARKS	ONE /SS
DESIG. CODE	FIG. PRESS. TML	BLOCK TEST CLIP DATA SET NOTE WDG. FOR AMP. AMP.	MSL. CONC. BATT. CONC. GRD.		1
RELAYS					2
FIG. 5	H 030	RT(B) GRD.		032 026	3
FIG. 5	H 030	RT(B) GRD.		0175 0165	4
FIG. 5	H 030	RT(B) GRD.		0545 0515	5
FIG. 5	H 030	RT(B) GRD.		035 027	6
FIG. 5	H 030	RT(B) GRD.		057 043	7