

STATION EQUIPMENT
MANUAL SELECTIVE EXCLUSION KEY
ASSOCIATED WITH TWO OR MORE LINES
(DRAWING K-4098)
1A OR 1A1 KEY TELEPHONE SYSTEMS

1. INTRODUCTION

1.01 This section covers the combination of apparatus, circuit diagrams and connections for stations of 1A or 1A1 Key Telephone Systems that are to be excluded from a particular line by a "master" station.

2. GENERAL

2.01 The line circuits and stations equipped for selective exclusion will exclude any line, that is in use at a multi-line station, by manual operation of a single exclusion key. This feature can be furnished at more than one "master" station but the "master" stations cannot exclude each other. Excluded stations will be restored to the line when the "master" station releases the exclusion feature by hanging up the telephone.

3. EQUIPMENT

3.01 Each line arranged for exclusion requires one or more of the following figures of equipment.

Exclusion Equipment

1A1 - KTS - Fig. 1 & 8

1A - KTS - Fig. 2 & 9

Exclusion Control Keys

External Exclusion Control Key Fig. 3

Push button or

Converted Pick-up Key 600 Type
Telephone Set Fig. 4

Manual Exclusion Key Fig. 5 or 5A

Exclusion Lamp when specified

Lamp Associated with Fig. 4 - Fig. 6
Lamp Mounted Externally - Fig. 7

3.02 The features and options associated with these figures are shown in Circuit Note 101.

3.03 To convert a 500-type telephone set with internal exclusion key refer to Table "A".

3.04 When a 600-type telephone set is used for manual exclusion, convert pick-up key to non-locking operation. Refer to B.S.P. "C" Section. "Telephone Sets (600 Type) Common Battery - Connections".

4. MATERIAL LIST

4.01 Material listed is for the installation and maintenance of the exclusion equipment. It does not include items which are common to station work. Information on telephone sets, apparatus cabinets, etc., will be found in the sections covering such specific items.

(a) Manual Exclusion Circuit: 1A1 Key Telephone System Fig. 1

* - Unit, Equipment, ED-91938-32 G1

* - 1 per line per master station

(b) Manual Exclusion Circuit: 1A Key Telephone System Fig. 2

* - Unit, Telephone, Key, 10A

* - 1 per line (For 1st master station)

(c) External Exclusion Control Key Fig. 3

1 - Key 6017B

SECTION C71.911.01

(d) Manual Exclusion Circuit: 600 Type Telephone Set etc. Fig. 4

* - Unit, Telephone, Key - 17B

* - 1 per master station

(e) External Exclusion Lamp Fig. 7

1 - Indicator, 15D3

1 - Lamp, A3

(f) Supplementary Exclusion Circuit: 1A Key Telephone System Fig. 7

* - Unit, Telephone, Key, 5A

* - 1 per line (For Supplementary master stations)

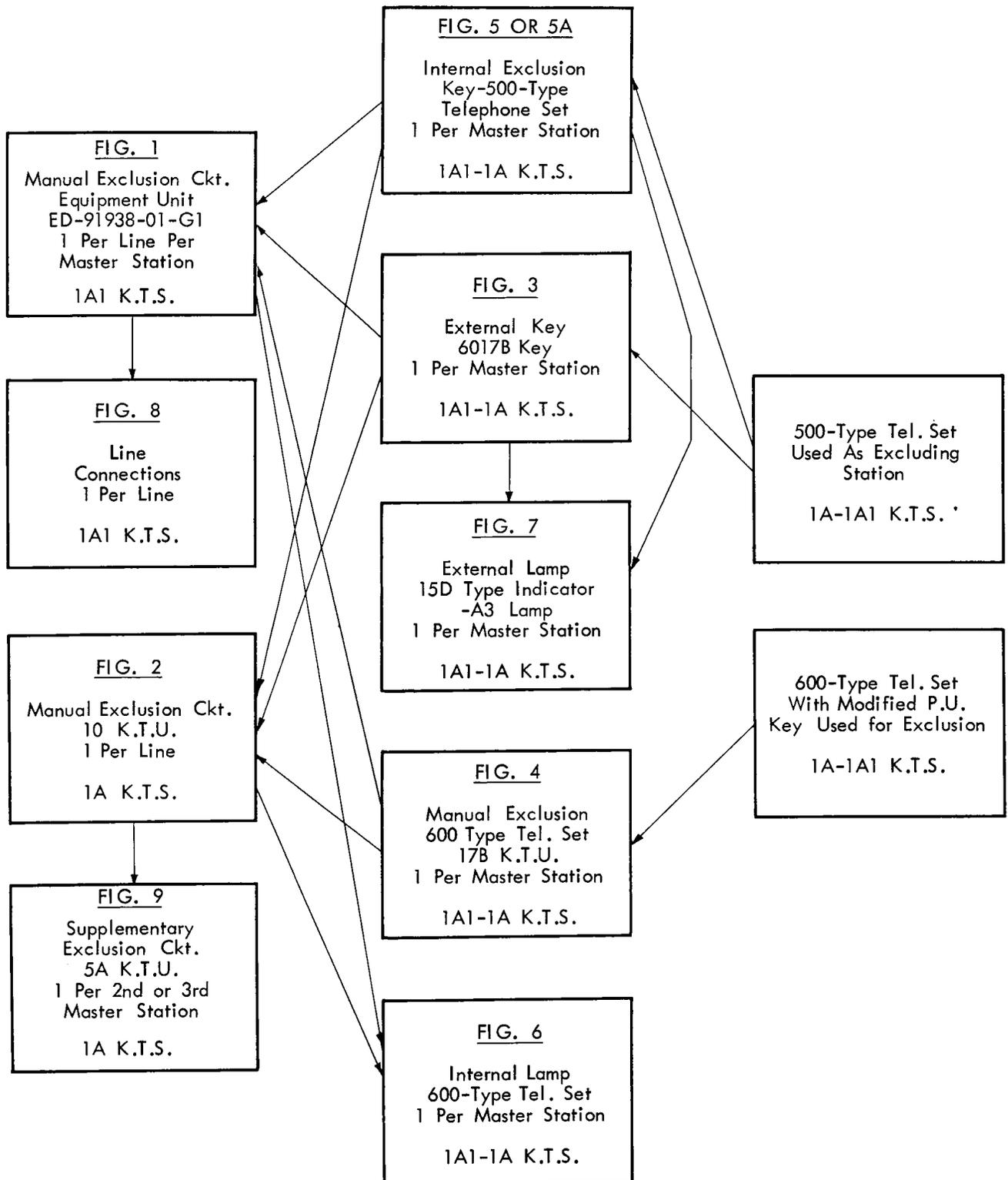
5. CIRCUIT DESCRIPTION

5.01 Table "C" shows the Circuit Requirement Table for apparatus referred to in this section.

6. BLOCK DIAGRAM

6.01 Table "B" shows in block diagram form the different figures used in this section and on Drawing K-4098.

TABLE B
CIRCUIT ARRANGEMENTS (DRAWING K-4098)
 (SEE CIRCUIT NOTES)



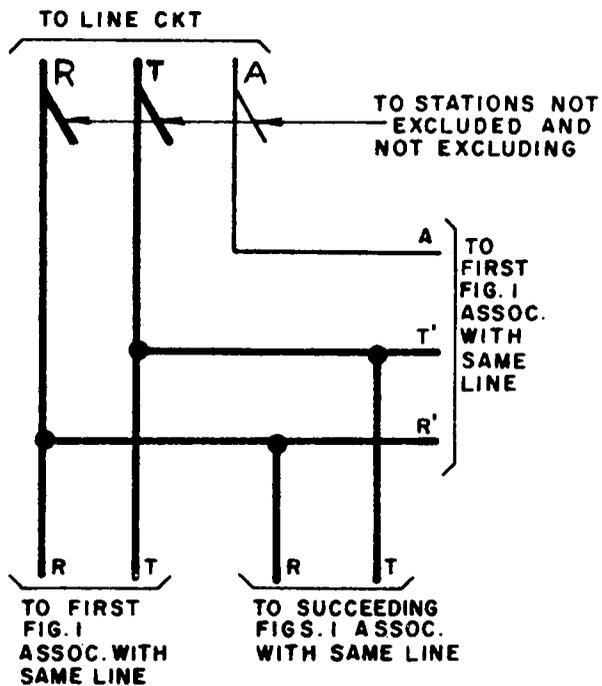


FIG. 8

IAI K.T.S. LINE CONNECTIONS
MANUAL EXCLUSION

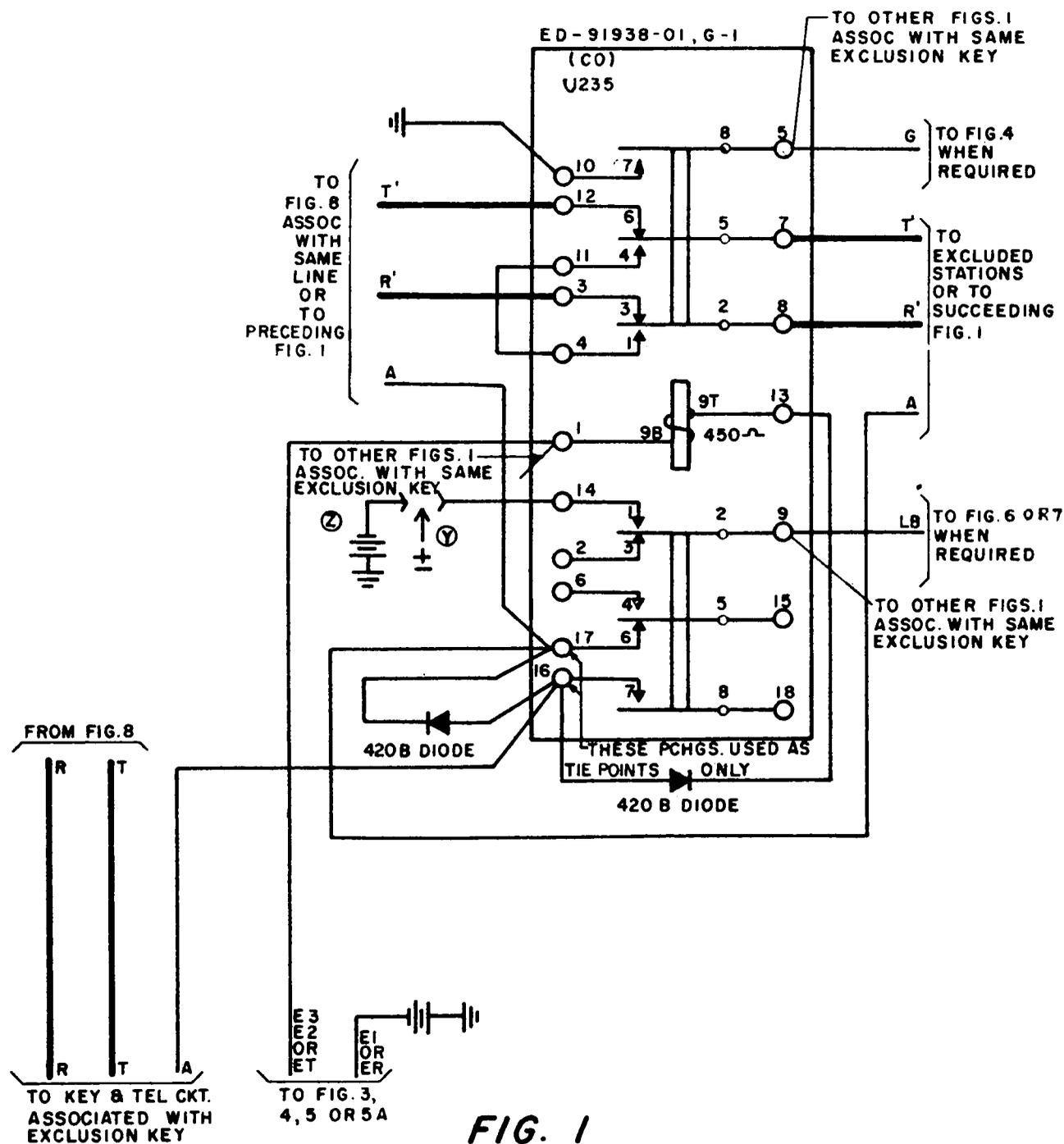


FIG. 1

IAI K.T.S.
MANUAL EXCLUSION CIRCUIT

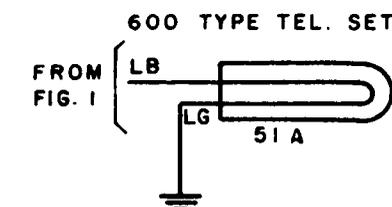


FIG. 6
EXCLUSION
LAMP ASSOCIATED WITH
CONVERTED KEY

SEE NOTE 108

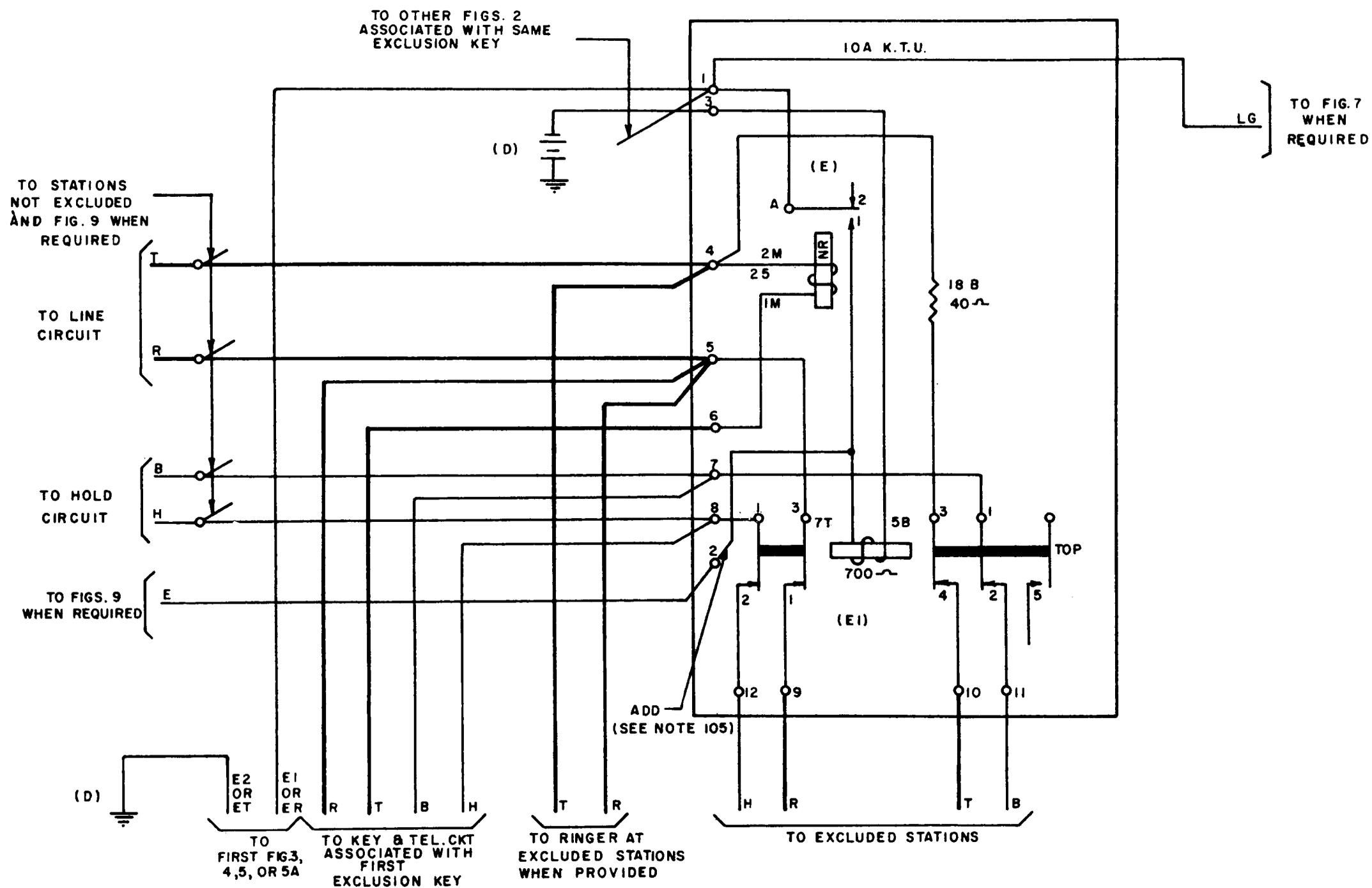


FIG. 2

MANUAL EXCLUSION CIRCUIT
1A KEY TELEPHONE SYSTEM
(SEE NOTE 107)

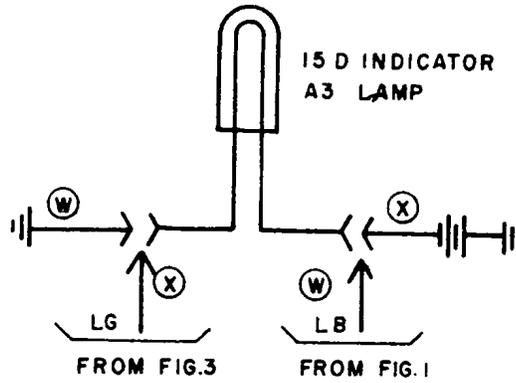


FIG. 7
 EXCLUSION LAMP
 EXTERNAL INDICATOR
 SEE NOTE 108

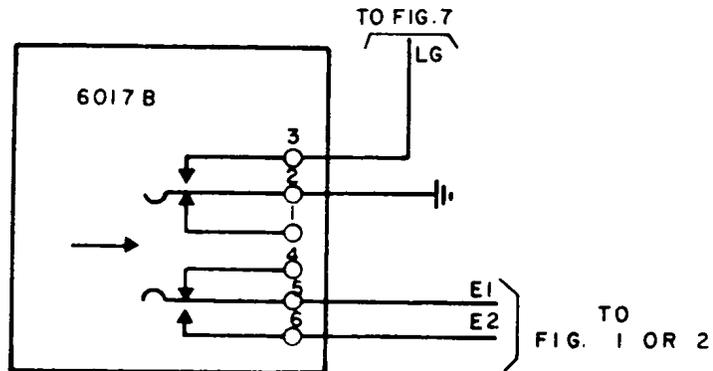


FIG. 3
 EXTERNAL EXCLUSION CONTROL KEY

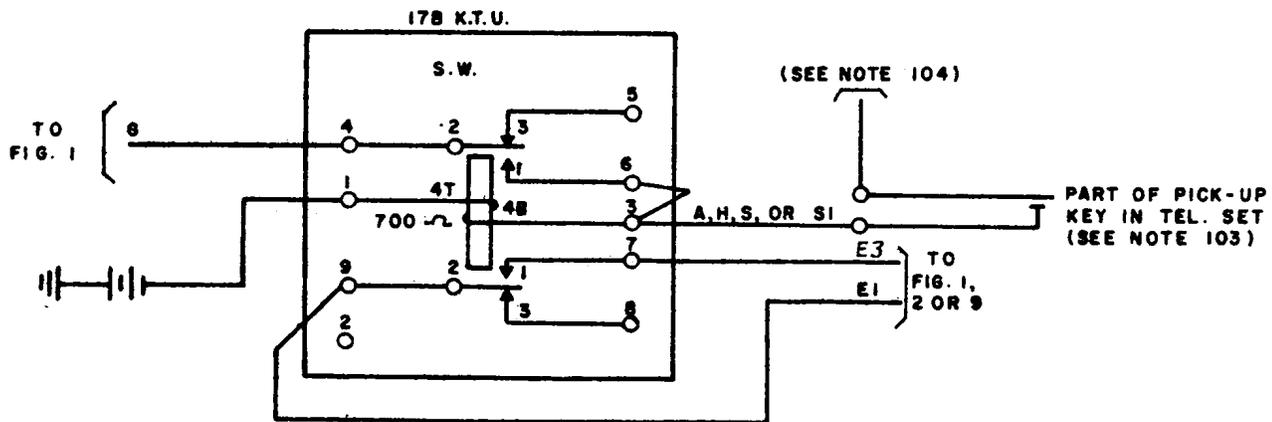
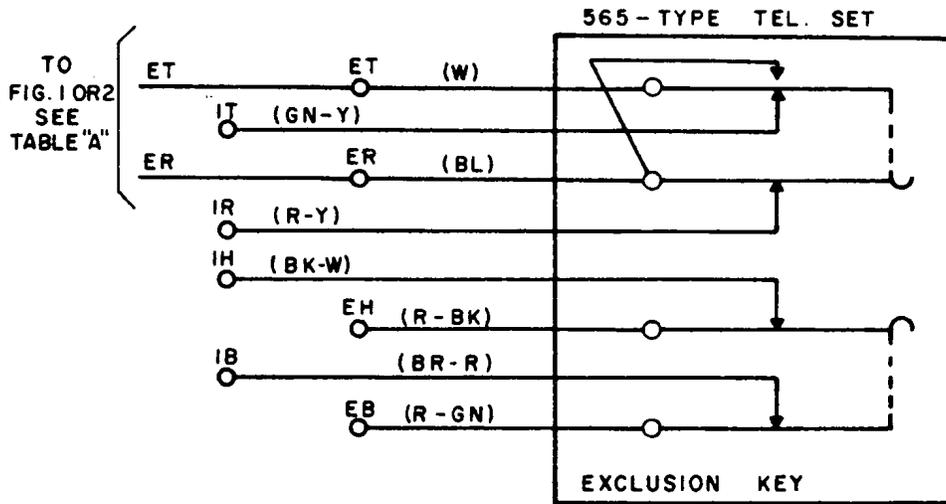


FIG. 4

MANUAL EXCLUSION CIRCUIT
600 TYPE TEL SET



MANUAL EXCLUSION KEY

FIG. 5A

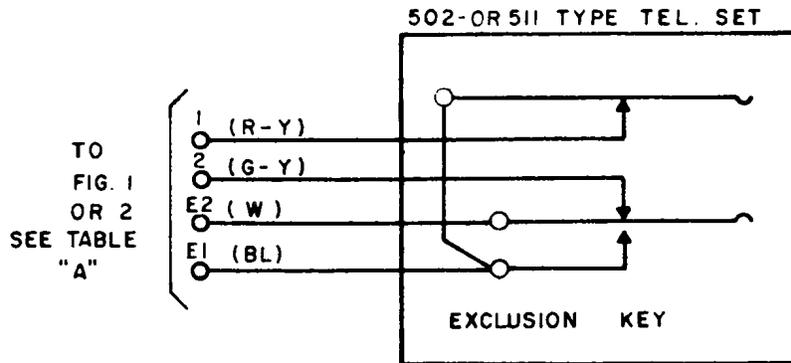


FIG. 5

MANUAL EXCLUSION KEY

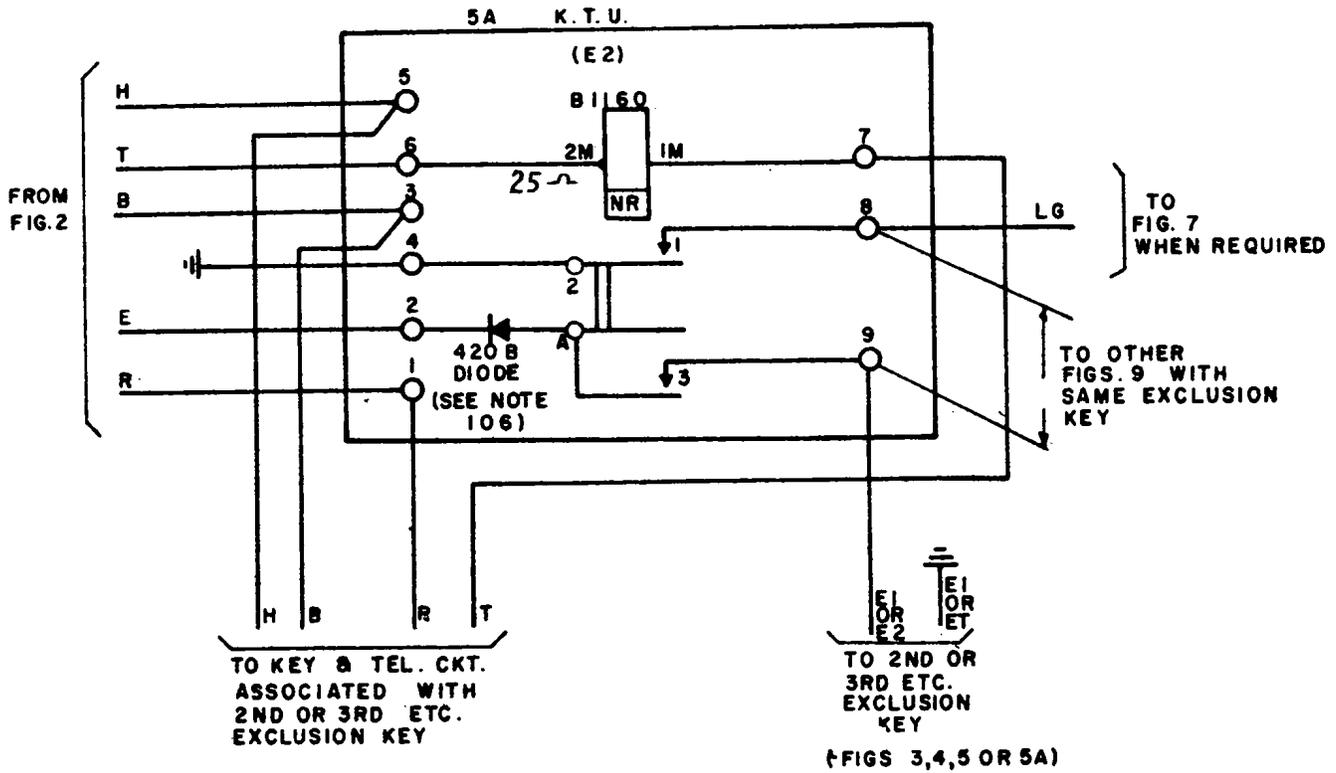


FIG. 9

IA K.T.S.

SUPPLEMENTARY EXCLUSION CIRCUIT
(SEE NOTE 107)

CIRCUIT NOTES

101.

TABLE "A"

| CONVERSION OF TELEPHONE SETS IA OR IA1 KEY TELEPHONE SYSTEMS | | | | | | | | |
|---|---------------------|----|------|-----|-----|-----|------|------|
| | EXCLUSION KEY LEADS | | | | | | | |
| | W | BL | R-BK | R-G | Ø-Y | R-Y | BK-W | BN-R |
| 545 OR 565 TEL. SETS SD-69219-01 | ET | ER | EH | EB | ET | ER | EH | EB |
| 511 TEL. SET. IA KEY TEL. SYS C63,443 AND SD-69208-01 | E2 | E1 | | | E2 | E1 | | |
| 502 TEL. SET. C63,443 | E2 | E1 | | | E2 | E1 | | |

| FEATURE OR OPTION | | PROVIDE | | |
|---|----------------------------------|----------------|--------------------|---|
| | | FIGS | APP. OR WIR. | QUANTITY |
| MANUAL EXTENSION CIRCUIT | IA1 KEY TEL. SYSTEM | 1 8 | Y OR Z | ONE PER LINE PER EXCLUDING STATION ONE PER LINE |
| | IA KEY TEL. SYSTEM | 2 9 | X X | ONE PER LINE ONE PER LINE PER 2ND OR 3RD ETC. EXCLUDING STATION |
| | EXTERNAL WITHOUT LAMP | 3 | | ONE PER EXCLUDING STATION |
| | EXTERNAL WITH LAMP | 3 & 7 | X | |
| INTERNAL | TABLE A | | | |
| MANUAL EXCLUSION CKT. 600 TYPE TEL. SET | IA1 K.T.S. WITH LAMP | 4 & 6 | Y | ONE PER EXCLUDING STATION |
| | IA1 K.T.S. WITHOUT LAMP | 4 | | |
| | IA K.T.S. WITH LAMP | 4 & 6 | X | |
| | IA K.T.S. WITHOUT LAMP | 4 | | |
| MANUAL EXCLUSION CKT. 500 TYPE TEL. SET. | IA1 K.T.S. WITH EXTERNAL LAMP | 5 OR 5A 6 7 | W & Z | ONE PER EXCLUDING STATION |
| | IA1 K.T.S. WITHOUT EXTERNAL LAMP | 5 OR 5A | | |
| | IA K.T.S. WITH EXTERNAL LAMP | 5 OR 5A 6 7 | X | |
| | IA K.T.S. WITHOUT EXTERNAL LAMP | 5 OR 5A | | |

102. FIGURES 1 & 2 SHALL BE USED WITH 511, 545, 565 TYPE TELEPHONE SETS OR FIG. 3
103. CONVERT KEY TO NON-LOCKING OPERATION. SEE B.S.P. C38.651.01.
104. A, B, C, D, E OR F LEADS, CONNECT LEAD ASSOCIATED WITH CONVERTED KEY TO IB TS: IV
105. ADD STRAP FROM PCHG. 2 OF 10A K.T.U. TO 7T OF "EI" RELAY.
106. REMOVE STRAP FROM PCHG. 2 OF 5A K.T.U. TO ARMATURE SPRING OF E2 RELAY. REPLACE WITH 420B DIODE, AS SHOWN IN FIG. 9.
107. ONE FIG. 2 REQUIRED PER LINE FOR FIRST EXCLUDING STATION.
ONE FIG. 9 REQUIRED PER LINE FOR EACH ADDITIONAL EXCLUDING STATION.
108. INTERNAL LAMP IN 600 TYPE SETS (FIG. 6) AND EXTERNAL INDICATOR (FIG. 7) ON OTHER TYPE SETS, INDICATE WHEN EXCLUSION FEATURE IS IN OPERATION.

TABLE C

| CIRCUIT REQUIREMENTS | | | | | | | | | | | | | | | | |
|----------------------|-------|-----------|-----------|----------|----------------------|-------------------|----------------|----------|---------|------------------|-------------------------|------|------|------|--------|---------|
| APPARATUS | | MECH REQ. | | | CIRCUIT PREPARATIONS | | | | TST SET | SEE TST NOTE NO. | DIRECT CURRENT FLOW REQ | | | | | REMARKS |
| DESIG. | CODE | BSMP FIG. | CONT PRES | ARM TRVL | SEQ SW POS | BLOCK OR INSULATE | TEST CLIP DATA | | PREP | TST WDG | TST FOR | M.A. | M.A. | M.A. | READ I | |
| RELAYS | | | | | | | | | | | | | | | | |
| CO | U235 | 10/18 | H | 50 | | | TERM. 1 | TERM. 13 | B/G | | O | | 24 | 22.5 | | |
| E | B1159 | 14 | | 30 | | | TERM. 6 | TERM. 5 | M | | O | | 8.5 | 8.1 | | |
| | | | | | | | TERM. 6 | TERM. 5 | M | | R | | 3.9 | 4.1 | | |
| E1 | U662 | 137/120 | H | 41 | | | T(E1) | | GRD | | O | | 17 | 16 | | |
| SW | U141 | 132/33 | H | 47 | | | 1 | 3 | B/G | | O | | 12.6 | 12 | | |
| | | | | | | | | | | | H | | 9 | 8.5 | | |
| E2 | B1160 | 108 | | | | | TERM. 7 | TERM. 6 | M | | O | | 10.5 | | | |
| | | | | | | | TERM. 7 | TERM. 6 | M | | R | | 8 | | | |
| TEST NOTES: | | | | | | | | | | | | | | | | |