

225752

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| SD-65721-01 3 PAGES CIRCUIT REQUIREMENTS |       |                   |          |        |        |           |                        |                   |                                    |                    |                   |                          |           |           |
|------------------------------------------|-------|-------------------|----------|--------|--------|-----------|------------------------|-------------------|------------------------------------|--------------------|-------------------|--------------------------|-----------|-----------|
| 740E MTG. SEL. CONN. (SEL. CONN.)        |       |                   |          |        |        |           |                        |                   |                                    |                    |                   |                          |           |           |
| DESIG.                                   | CODE  | FEATURE OR OPTION | CT. FIG. | RATING | RESID. | BSP. FIG. | CONT. ARM. PRES. TRVL. | BLOCK OR INSULATE | TEST CLIP DATA                     | TEST SET PREP.     | SEE TEST NOTE NO. | DIRECT CURRENT FLOW REQ. | TIME REQ. | REMARKS   |
| A                                        | 221ND |                   | I        | 7-11   | II     |           |                        | (B) NO            | TST. JK. 1<br>TST. JK. 2           | M                  | P/S               | O                        | FS        | 15.1 14.8 |
| B                                        | 248F  |                   | I        | 15-4   | 516    | 27        |                        | (A)               | 3(A) GRD. 2<br>3(A) GRD. 2         | O                  | FS                | 10.5 10                  |           |           |
|                                          |       |                   |          |        |        |           |                        |                   | TST. JK. 1<br>TST. JK. 2           | Y-BR 3/4<br>Y-BR 3 | H                 | FS                       | 8.5 9     | .333      |
|                                          |       |                   |          |        |        |           |                        |                   | TST. JK. 1<br>TST. JK. 2           | Y-BR 3/4<br>Y-BR 3 | H                 | FS                       | 8.5 9     | .750 .500 |
| C                                        | 221FL |                   | I        | S-4    | 191    | 13        | (VERT) NO              |                   | 9(D) GRD. 2<br>9(D) GRD. 2         | O                  | 500               | 90 85                    |           |           |
|                                          |       |                   |          |        |        |           | (VERT) NO              |                   | TST. JK. 1<br>TST. JK. 2           | V-M 6/3<br>V-M 3   | H                 | NO                       | 65 69     | .100      |
|                                          |       |                   |          |        |        |           | (VERT) NO              |                   | TST. JK. 1<br>TST. JK. 2           | V-M 3<br>V-M 3     | R                 | NO                       | 500 65 69 | .155 .140 |
| D                                        | 222EE |                   | I        | S-4    | 109    | 13        | (VERT) NO              |                   | 2(B) GRD. 7/8/9<br>2(B) GRD. 7/8/9 | O                  | FS                | 9 8.5                    |           |           |
|                                          |       |                   |          |        |        |           | (VERT) NO              |                   |                                    |                    |                   | 6.6 7                    |           |           |

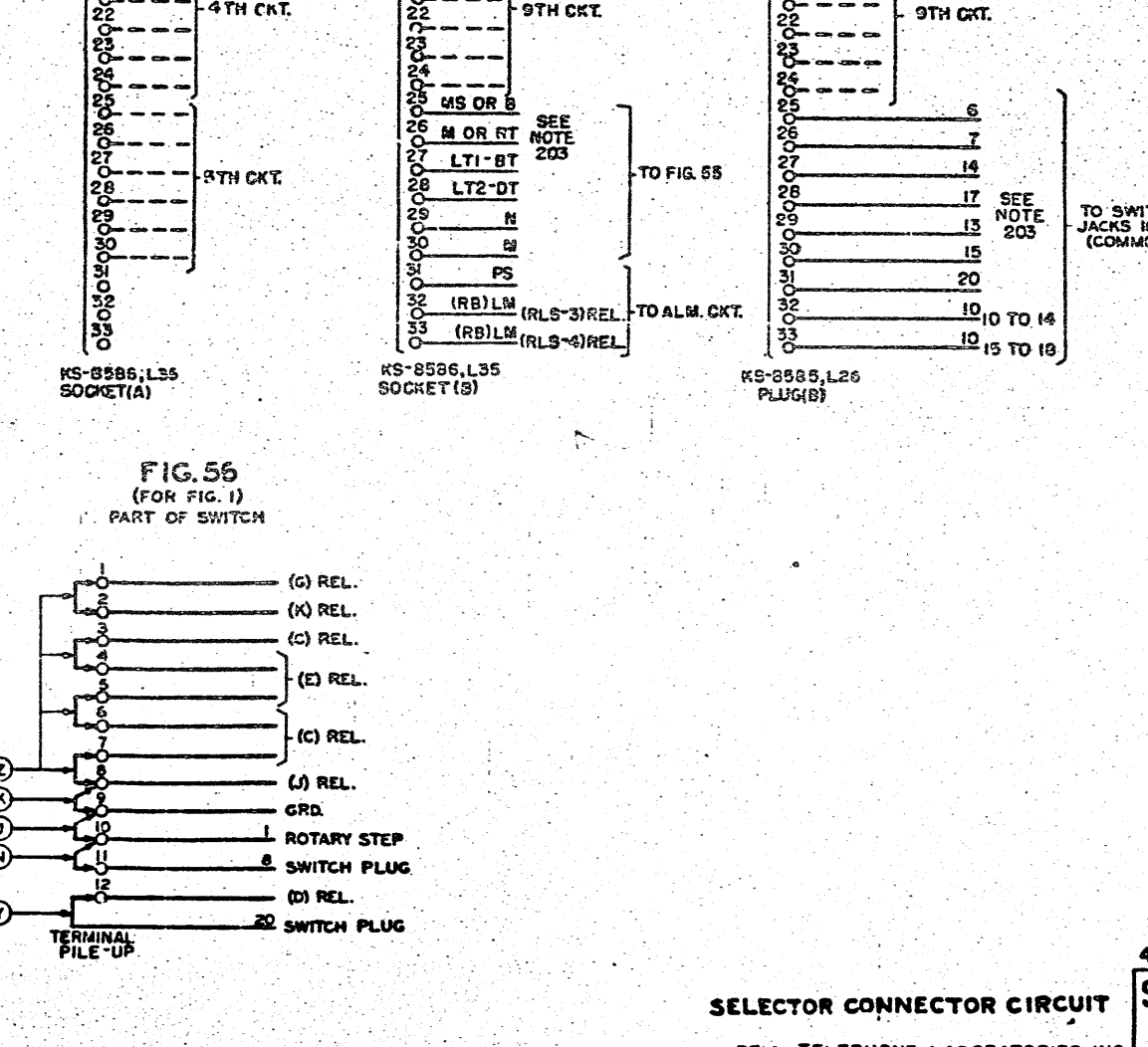
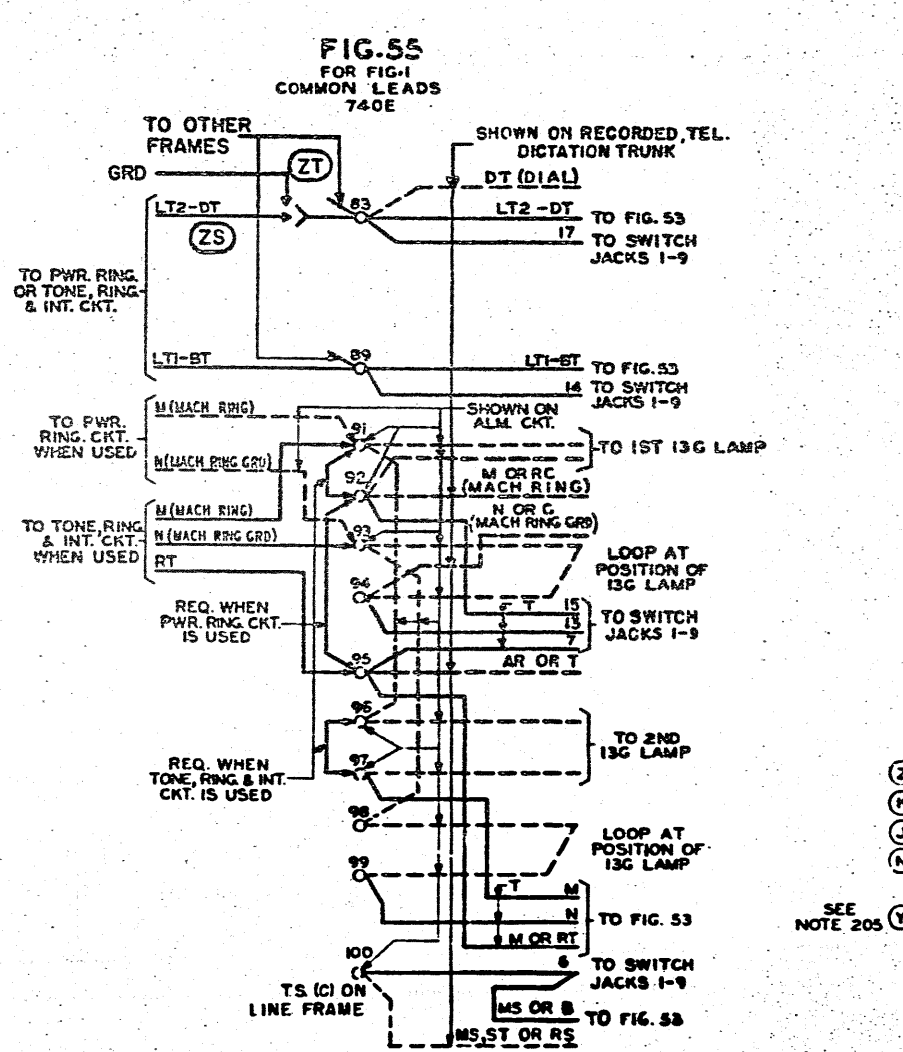
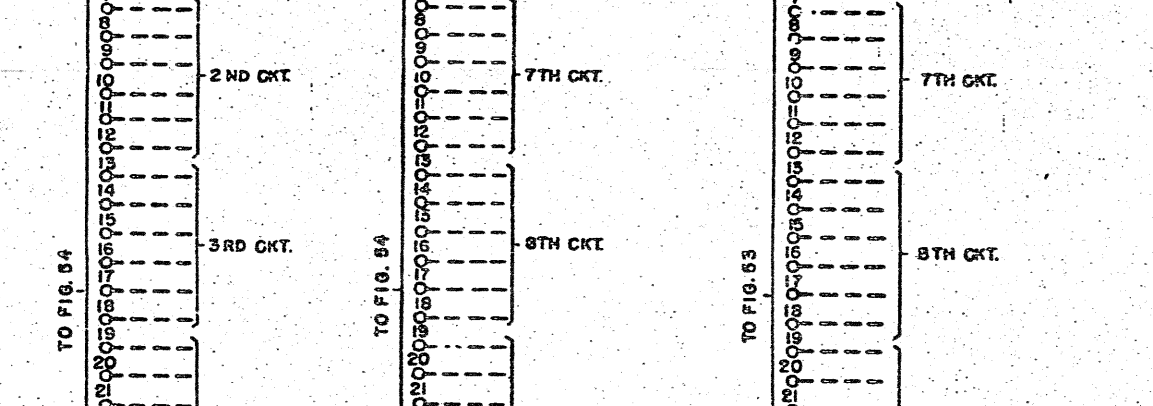
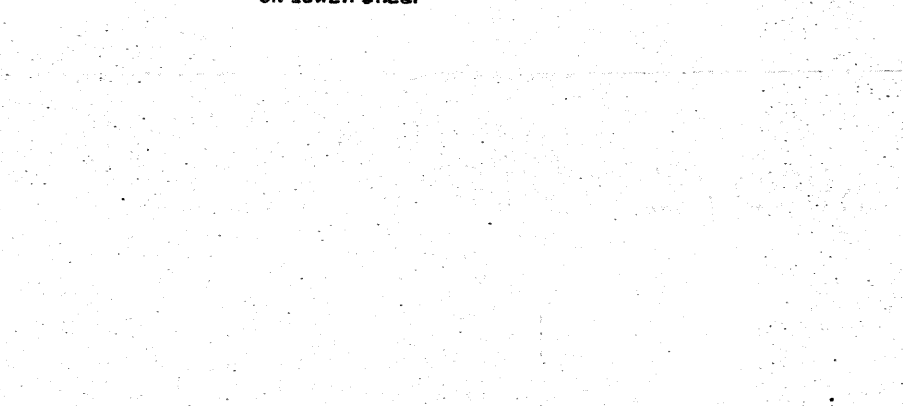
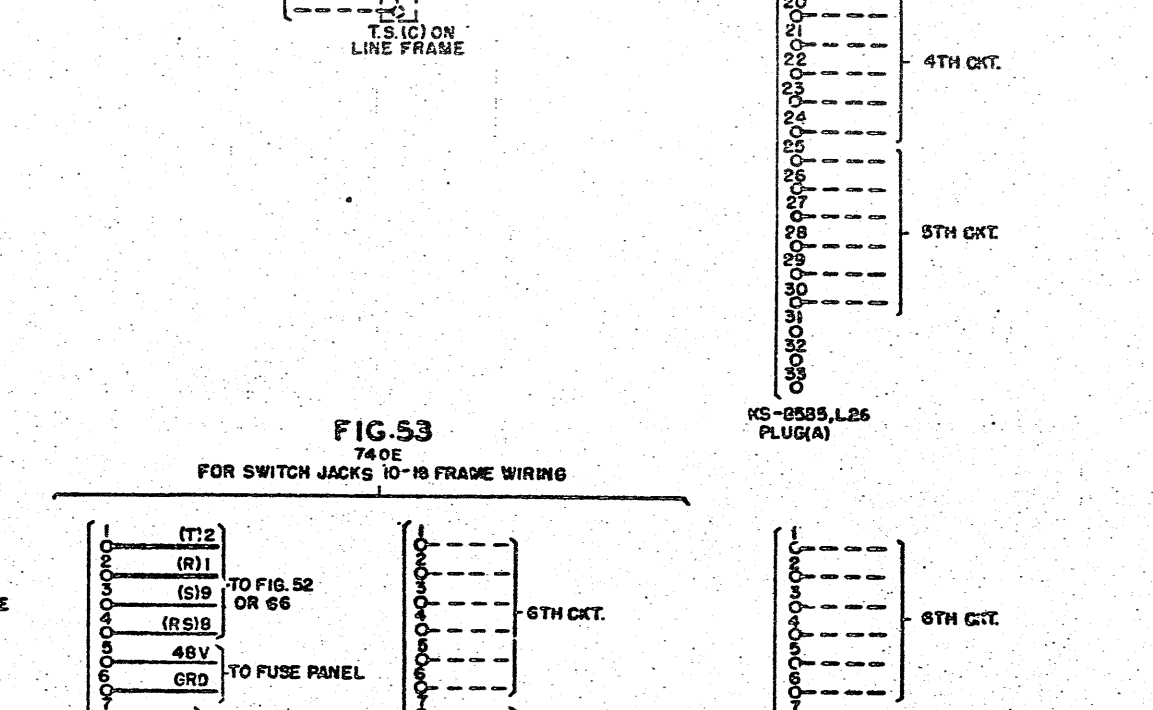
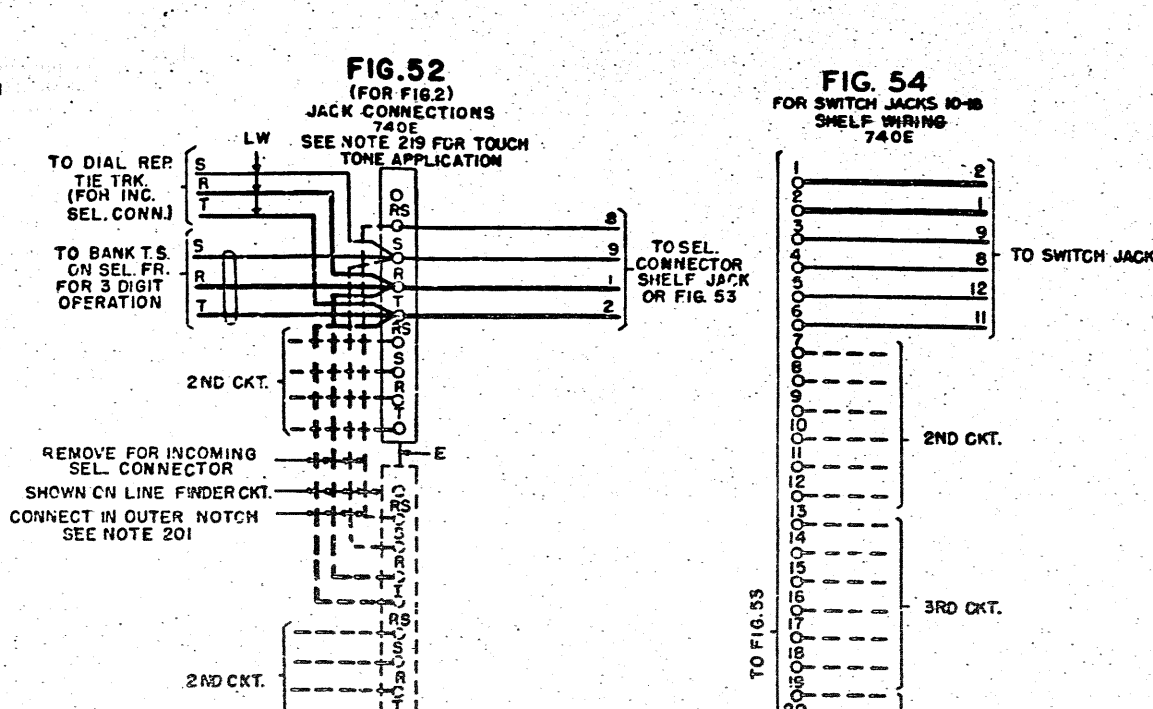
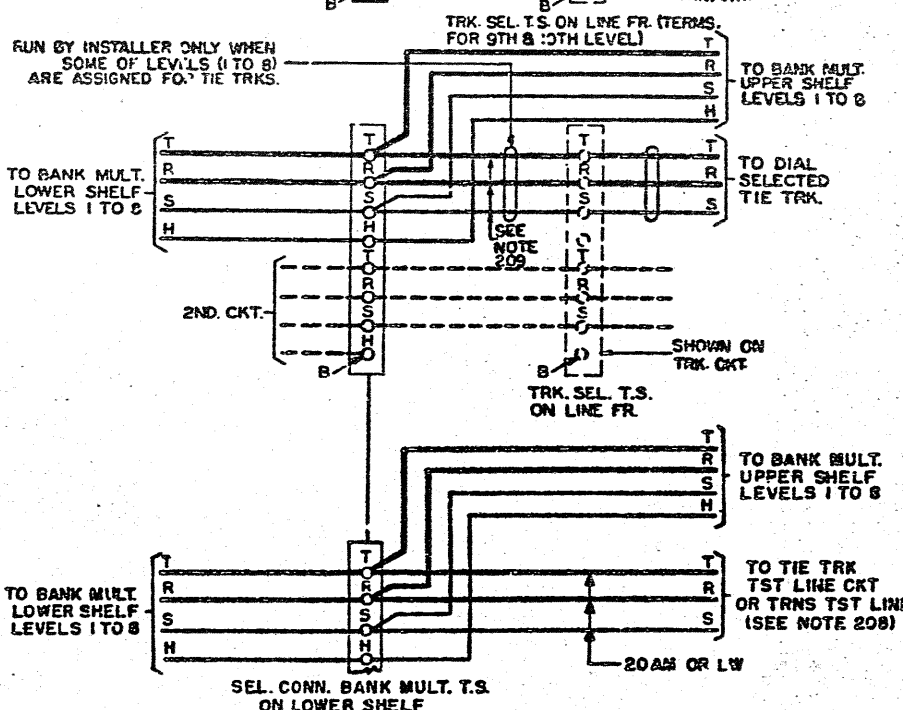
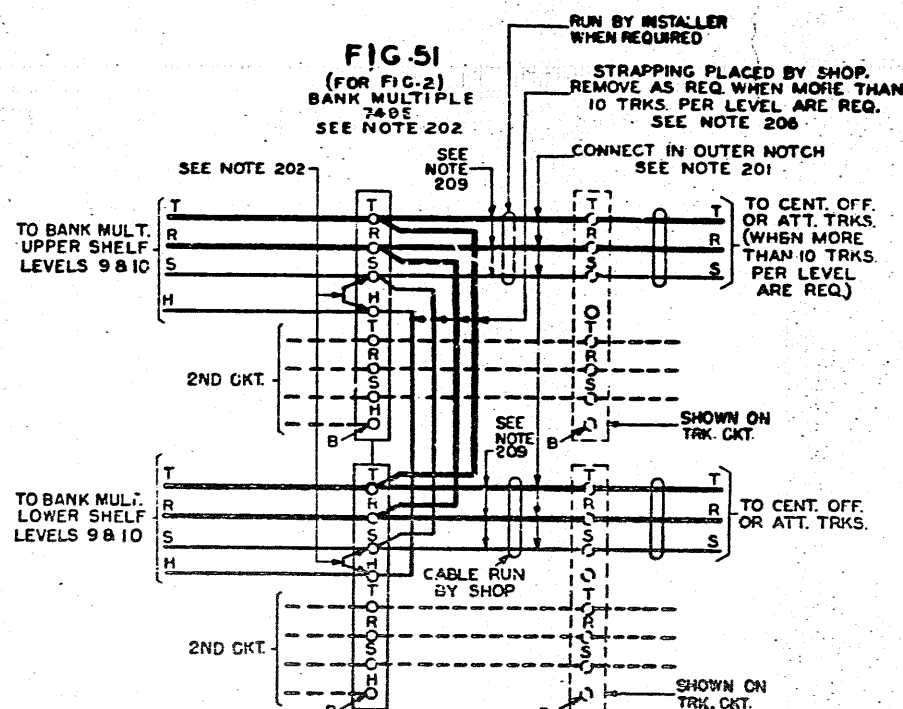
TEST NOTES:  
1. ARM. NEED NOT TOUCH CORE ON OPERATE CURRENT.  
2. TEST - CONT. FOLLOW ON MAKE CONT. - MIN. 8. CONT. SEPARATION ON ALL CONTS. MIN. 3.  
3. FOR USE WHEN TIME REQ. ARE NOT APPLIED.  
4. TEST HOLD-USE 1400Ω LOOP IN PULS. NO TEST SET.  
5. JACK SPRINGS 9B II SHALL MAKE CONT. WHEN SWITCH IS REMOVED FROM FRAME.  
6. TEST HOLD-USE LEAK A IN PULSING TEST SET.  
7. IN ASSOC. LINE FINDER-BLOCK (D) OPR. INSULATE (I(A)).  
8. REMOVE SHORT CKT. FROM SPGS. 3-4 OF TEST JACK.  
9. OPEN SLEEVE IN ASSOCIATED TIE TRUNK.

| CIRCUIT REQUIREMENTS              |       |                   |          |        |        |           |                        |                   |                                |                  |                   |                          |           |           |
|-----------------------------------|-------|-------------------|----------|--------|--------|-----------|------------------------|-------------------|--------------------------------|------------------|-------------------|--------------------------|-----------|-----------|
| 740E MTG. SEL. CONN. (SEL. CONN.) |       |                   |          |        |        |           |                        |                   |                                |                  |                   |                          |           |           |
| DESIG.                            | CODE  | FEATURE OR OPTION | CT. FIG. | RATING | RESID. | BSP. FIG. | CONT. ARM. PRES. TRVL. | BLOCK OR INSULATE | TEST CLIP DATA                 | TEST SET PREP.   | SEE TEST NOTE NO. | DIRECT CURRENT FLOW REQ. | TIME REQ. | REMARKS   |
| E                                 | 221EL |                   | I        | S-2    | 162    | 14        | 9(E) B                 |                   | 4(B) GRD. 1/2<br>4(B) GRD. 1   | O                | FS                | 15.5 14.7                |           |           |
|                                   |       |                   |          |        |        |           | 4(B) (J)               |                   | TST. JK. 1<br>TST. JK. 2       | V-M 3/4<br>V-M 4 | H                 | FS                       | 10.6 11.2 | .111      |
|                                   |       |                   |          |        |        |           | 9(E) B                 |                   | TST. JK. 1<br>TST. JK. 2       | V-M 4<br>V-M 4   | R                 | FS                       | 10.6 11.2 | .300 .275 |
|                                   |       |                   |          |        |        |           | 4(B) (J)               |                   |                                |                  |                   |                          |           |           |
| F                                 | 222LD |                   | I        | S-4    | 701    | 29        | (H) O                  |                   | SEE NOTE 10<br>NOTE 10         | GRD. 8<br>GRD. 8 | P                 | O                        | 26.5 27   |           |
|                                   |       |                   |          |        |        |           | (H) O                  |                   | IO(D) GRD. 7<br>IO(D) GRD. 7   | S                | O                 | FS                       | 37.5 35.5 |           |
|                                   |       |                   |          |        |        |           | (H) O                  |                   |                                |                  |                   | 26.5 30                  |           |           |
| G                                 | 221EE |                   | I        | S-4    | 163    | 13        | 3(T) K                 |                   | (I) ROT. GRD.<br>(I) ROT. GRD. | O                | FS                | 14.7 14                  |           |           |
|                                   |       |                   |          |        |        |           | 3(T) K                 |                   |                                |                  |                   | 10.9 11.5                |           |           |
| H                                 | 222GF |                   | I        | S-4    | 69     | 18        | 5 (H)                  |                   | 7(B) K GRD.<br>7(B) K GRD.     | O                | FS                | 25 23.5                  |           |           |
|                                   |       |                   |          |        |        |           |                        |                   |                                |                  |                   | 17 18                    |           |           |

TEST NOTES:  
1. FOR MTGE. ONLY WHEN TIME REQ. ARE NOT APPLIED.  
2. TEST - MIN. 10 GRAMS ON CONTS. 5-9.  
3. TEST HOLD-USE LEAK A IN PULSING TEST SET.  
4. FOR USE WHEN TIME REQ. ARE APPLIED.  
5. CONTS. 1-2 AND 3-4 MAY BREAK ON NON-OPR.  
6. CONTS. 1-2 & 4-5 MAY BREAK ON NON-OPR.  
7. CONTS. 1-2 SHALL MAKE BEFORE SPG. I STRIKES THE BUSHING ON SPG. 4. CONTS. 1-2 MAY MAKE AND CONTS. 3-4 AND 7-9 MAY BREAK ON THE SEC. NON-OPR.  
8. START THE RINGING MACHINE. TEST DURING THE SILENT INTERVAL OF THE RINGING.  
9. ONLY CONTS. 1 AND 2 NEED MAKE.  
10. CONNECT GRD. TO 3(F) OPTION 2A OR 7(F) OPTION 2B.

| CIRCUIT REQUIREMENTS              |       |                   |          |        |        |           |                        |                   |                                |                      |                   |                          |           |                              |
|-----------------------------------|-------|-------------------|----------|--------|--------|-----------|------------------------|-------------------|--------------------------------|----------------------|-------------------|--------------------------|-----------|------------------------------|
| 740E MTG. SEL. CONN. (SEL. CONN.) |       |                   |          |        |        |           |                        |                   |                                |                      |                   |                          |           |                              |
| DESIG.                            | CODE  | FEATURE OR OPTION | CT. FIG. | RATING | RESID. | BSP. FIG. | CONT. ARM. PRES. TRVL. | BLOCK OR INSULATE | TEST CLIP DATA                 | TEST SET PREP.       | SEE TEST NOTE NO. | DIRECT CURRENT FLOW REQ. | TIME REQ. | REMARKS                      |
| J                                 | 223DB |                   | I        | 3-5    | 435    | 16        |                        |                   | 6(F) IO(F) M<br>6(F) IO(F) M   | 1/5/6 P/S<br>2/6 P/S | O                 | FS                       | 29.5 28   | CONNECT DIRECT GRD. TO 13(F) |
|                                   |       |                   |          |        |        |           |                        |                   | IO(F) GRD.<br>IO(F) GRD.       | P                    | O                 | FS                       | 59.5      |                              |
| K                                 | 224CE |                   | I        | S-4    | 436    | 27        | 5(G) B                 |                   | 3(E) 4(G) B/G<br>3(E) 4(G) B/G | 3 P O<br>3 P O       |                   | 26.5 P5                  |           |                              |
|                                   |       |                   |          |        |        |           | IT(K)                  |                   | IT(K) 4(S) O<br>IT(K) 4(S) O   | S O<br>S O           |                   | 38.5 36.5                |           |                              |
|                                   |       |                   |          |        |        |           | IT(K)                  |                   | IT(K) GRD. 4<br>IT(K) GRD. 4   | S NO<br>S NO         |                   | 27 26.5                  |           |                              |

TEST NOTES:  
1. CONT. PRESSURE SPGS. 6-7, & 9-10 MIN. 35 GRAMS.  
2. AS PERMITTED BY SEQUENCE ANY TWO BREAK CONTS. MAY BREAK ON NON-OPR.  
3. ONLY CONTS. IT & 2T NEED MAKE.  
4. CONTS. IT-2T SHALL MAKE BEFORE SPG. IT STRIKES THE BUSHING ON 4T AND BEFORE ARM. STUD STRIKES 2B. AS PERMITTED BY SEQUENCE ANY TWO BREAK CONTS. MAY BREAK & CONTS. IT-2T MAY MAKE ON THE SEC. NON-OPR.  
5. TEST-CONTS. 3T-4T SHALL MAKE BEFORE 7B-8B MAKE.  
6. WHEN "Y" OPTION IS USED, INSULATE 18 (J).



SIO-15722-02

SELECTOR CONNECTOR CIRCUIT SD-65721-012  
BELL TELEPHONE LABORATORIES, INC. PRINTED IN U.S.A. 3 RI

DWG. 155.  
12D  
13D  
14D  
15D  
16D  
17D  
18D  
19D  
20D

4 SHEETS, SHEET 2



SEL CONN SHELF UNIT ARR TO MOUNT  
ON SW FR MISC LEADS  
(701B AND 711B)  
SEE NOTE 215



SEL CONN SHELF UNIT ARR TO MOUNT ON  
SW FR OR R R BANKS  
(701A, 701B, 711A & 711B)  
SEE NOTE 216 & 217



BANK MULT CONT: THROUGH DIST FR-6 POINT TS-GRADED  
MULT TS NOT USED FOR THESE TERMS, OF EACH LEVEL  
(701B & 711B)  
SEE NOTE 216



BANK MULT TRUNK LEADS TO GRADED MULT TERM. STRIPS  
AT DIST FR ONE SET PER LEVEL FOR TERMS. SPECIFIED  
(701B & 711B)  
SEE NOTES 212, 213, 214 & 216



METHOD OF MAKING BUSY UNUSED SEL CONN  
TERMS.WHICH ARE CABLED TO DIST FRAME,  
THE LEVELS OF WHICH ARE USED FOR TRUNKS OR  
TIE TRUNKS, PER FIG.59 & 60  
(701B & 711B)  
SEE NOTE 214

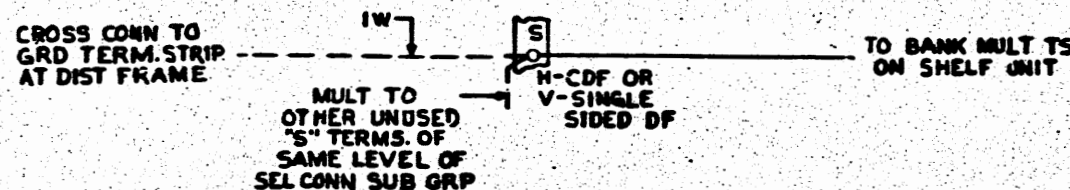


FIG.62 (A & M ONLY)

SEL CONN 54ELF UNIT (10 OR 20 SW CAPACITY)  
MISC LEADS  
(701A & 711A)

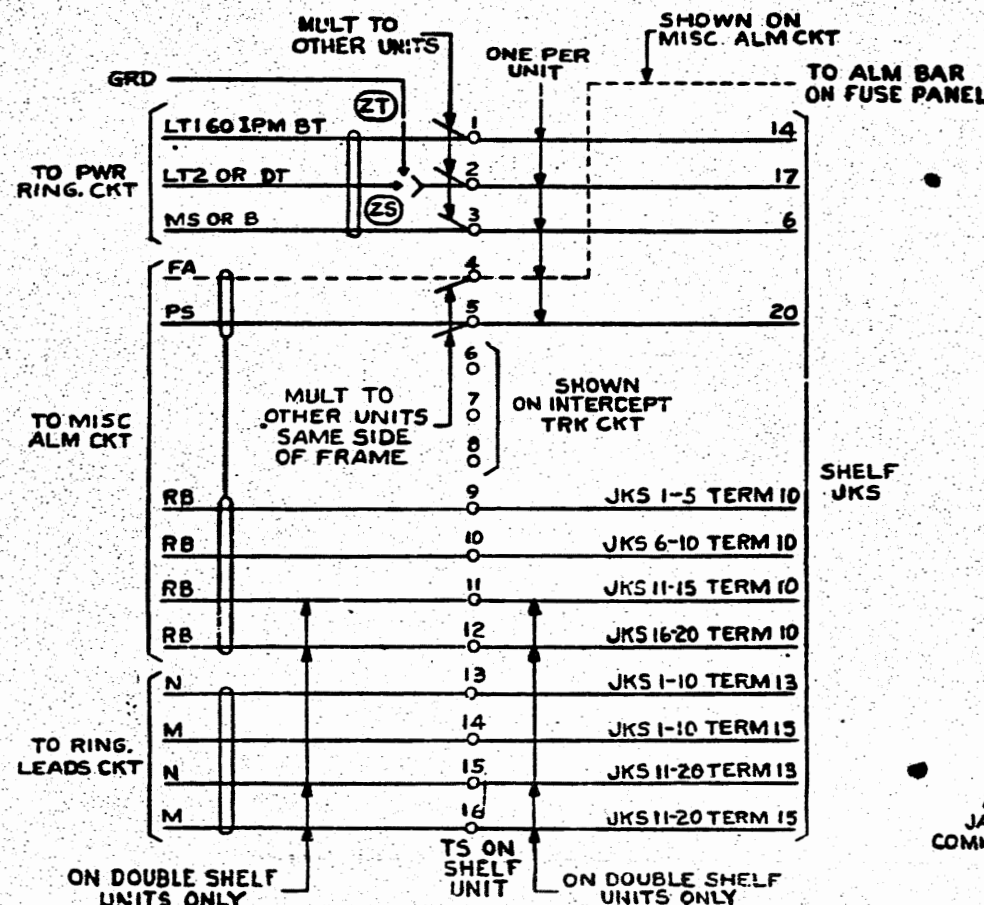


FIG. 63

TO1A, TO1B, 711A OR 711B PBX  
SHELF UNIT ARR TO MOUNT  
ON SWITCH FRAME  
SWITCH JACKS

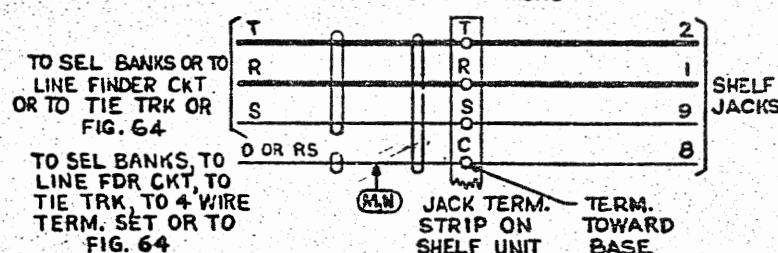
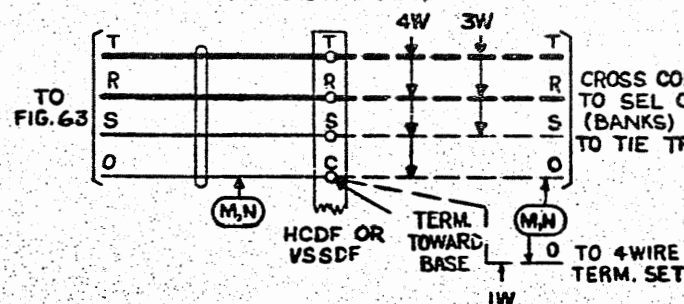


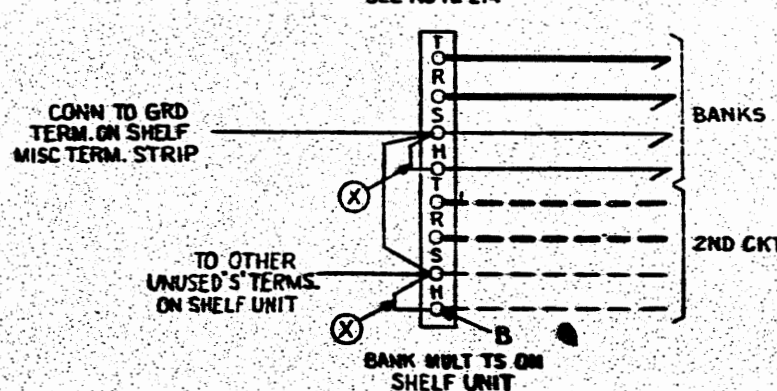
FIG. 64

701A, 701B, 711A OR 711B PBX  
SWITCH JACKS CONNECTED  
THRU DISTG FRAME



**FIG. 65**  
**701B & 711B**

METHOD OF MAKING BUSY UNUSED SEL-CONN  
TERMS. NOT CABLED TO THE DIST FRAME, THE LAST  
TERMS. OF EACH UNUSED LEVEL CONNECTED TO  
AN INTERCEPT TRK, SEL-CONN SHELF MTD ON SW FR  
SEE NOTE 214



**FIG. 66**  
**(FOR FIG. 2)**

2 DIGIT OPERATION  
JACK CONNECTIONS FOR  
COMMON GROUP TOUCH TONE  
APPLICATION

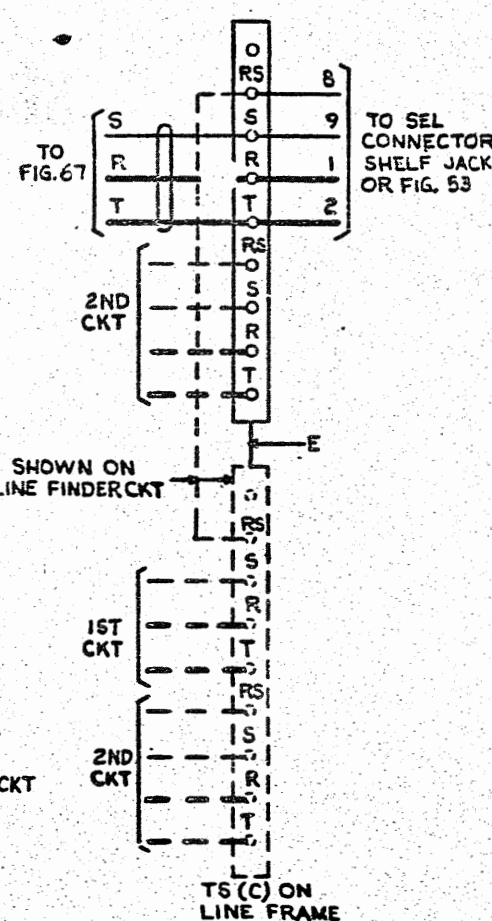
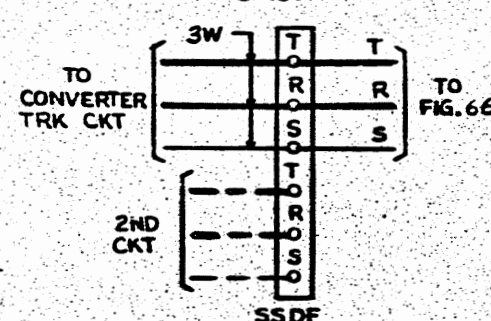


FIG. 67

740E  
2 DIGIT OPERATION  
METHOD OF CONNECTING SELECTOR  
JACK TO CONVERTER TRUNK  
CIRCUIT



201. ALL CONNECTIONS ARE TO BE MADE TO INNER NOTCH OF TERMINALS UNLESS OTHERWISE SPECIFIED.
272. FOR 740E STATION LINES, "X" OPTION APPEARS ON STATION LINE CKT 5065661-01, FIG. 51. FOR 2 DIGIT HUNTING OPERATION, "X" OPTION FOR TRUNK OR TIE TRUNK LEVELS SHALL BE PLACED ON BANK MULTIPLE TERMINAL STRIP.
203. ALL SHELVES ARE WIRED UNIVERSAL FOR USE WITH SELECTOR-CONNECTORS OR CONNECTORS.
204. THE WIRING OPTIONS OF THE NORMAL POST SPRINGS ARE MADE BY STRAPPING THE INSULATED TERMINALS 3R, 4R, 5R, 6L AND 5L TO THE CONTACT SPRINGS AS SHOWN.
205. WHEN "S", "M" OR "Y" OPTION IS NOT REQUIRED THE WIRE SHALL BE REMOVED FROM THE TERMINAL, INSULATED AND TIED BACK TO OTHER WIRES.
206. THE STRAPS BETWEEN BANK MULTIPLE TERMINALS FOR LEVELS 9 AND 10 IN FIG. 51 SHALL BE CONTINUOUS BARE WIRE STRAPPING LAID IN THE OUTER NOTCH, SOLDERED, AND CUT BETWEEN PAIRS OF TERMINALS.
207. THE WIRE FROM THE (D) RESISTOR SHALL BE LONG ENOUGH TO REACH TERMINAL "B" OR "2B" OF THE (J) RELAY.
208. WHEN THE TIE TRUNK TEST LINE CIRCUIT OR TRANSMISSION TEST LINE CKT IS FURNISHED FOR 740E, THE "T" AND "R" LEADS OF THE (CO) RELAY THAT WOULD NORMALLY BE USED SHALL BE DISCONNECTED AT THE LINE RELAY UNIT. THE "W" STRAP AT THE LINE TERMINAL STRIP SHALL ALSO BE DISCONNECTED.
209. WHEN CONVERTING FROM 2 DIGIT TO 3 DIGIT OPERATION THIS CABLE SHALL BE DISCONNECTED AT EITHER THE BANK MULT T.S. OR THE TRK SEL T.S. OR REMOVED. IF LEFT IN PLACE, THE FREE ENDS SHALL BE PROPERLY INSULATED.
210. WHEN THIS CIRCUIT IS USED WITH 3 WIRE BANKS, THE SECOND (UPPER) 4 INCH WIPER CORD SHALL BE OMITTED AND THE TWO WIPER TERMINALS FOR THE UPPER WIPERS STRAPPED TOGETHER PER "B" OPTION.
211. "A" OPTION IS PROVIDED BY STRAPPING THE 7 AND 15 TERMINALS OF THE SWITCH PLUG.
212. THE SELECTOR CONNECTOR BANK MULT TRUNK GRADING TERM. STRIP PFR FIG. 60 PROVIDE A CONVENIENT MEANS FOR ASSIGNING SUCCEEDING CIRCUITS TO THE SELECTOR CONNECTOR TRUNKS ON A GRADED MULTIPLE BASIS. THE TRUNKS ARE GROUPED BY LEVELS AT THE OF AND CORRESPONDING TERMINALS OF ASSOCIATED "DIVISIONS" ARE STRAPPED TOGETHER TO FORM "SUBGROUPS". THESE ARE CUT TO ESTABLISH "SUBGROUPS" OF SELECTORS TO SUIT TRAFFIC REQUIREMENTS. WHERE REVERSALS ARE DESIRED IN A SUBGROUP, THE STRAP ARE CUT AND THE REVERSAL MADE WITH CROSS CONNECTIONS.

213. THE BASIC PATTERN OF THE SELECTOR BANK MULTIPLE TRUNK GRADING TERMINAL STRIPS PER FIG. 60 IS SHOWN ON THE DISTRIBUTING FRAME TYPICAL EQUIPMENT DRAWING. ONE ROW CROSSWISE OF THE TERM. STRIP IS ASSIGNED TO EACH SELECTOR SHELF ON A "PER LEVEL" BASIS. THESE ROWS ACCOMMODATE THE "T", "R" AND "S" LEADS OF CIRCUITS 9 AND 0, FOR EXAMPLE. THE CIRCUITS ARE STRAPPED LENGTHWISE OF THE TERMINAL STRIP, AS REQUIRED, AND JUMPERED FROM THE LEFT OR TOP ROW OF EACH BLOCK OF TERMINALS TO THE SUCCEEDING CENTRAL OFFICE OR ATTENDANT TRUNK CIRCUIT.
214. WHEN INTERCEPT SERVICE IS NOT SPECIFIED, THE VACANT BANK TERMINALS OF THE SEL-COMM SHALL ALL BE MADE BUSY. ANY VACANT LINES EQUIPPED WITH RELAYS SHALL HAVE THE "S" LEAD TO THE STATION LINE RELAY EQUIPMENT DISCONNECTED AT THE SEL-COMM BANK MULTS TO PREVENT OPERATION OF THE (CO) RELAY. HOWEVER, WHEN INTERCEPT SERVICE IS DESIRED ON A VACANT TRUNK OR TIE TRUNK LEVEL OR ON VACANT TERMINALS OF A WORKING LEVEL, THE LAST TERMINAL OF EACH VACANT LEVEL OR GROUP OF VACANT TERMINALS SHALL BE CONNECTED TO A SELECTOR INTERCEPT TRUNK AND THE PRECEDING VACANT TERMINALS OF EACH LEVEL MADE BUSY AND ARRANGED FOR X STRAPPING. WHEN INTERCEPT SERVICE IS DESIRED ON DIAL LINES EQUIPPED WITH (L) & (CO) RELAYS, THE LINES SHALL BE INTERCEPTED AS INDICATED ON THE CONNECTOR INTERCEPT CKT. ON DIAL LINES NOT EQUIPPED WITH (L) & (CO) RELAYS, THE LINES ASSOCIATED WITH EACH LEVEL SHALL BE MADE BUSY EXCEPT THE LAST LINE, WHICH SHALL BE INTERCEPTED AS INDICATED ON THE CONNECTOR INTERCEPT CKT.
215. "A" WIRING IS NOT FURNISHED BY THE SHOP. THE INSTALLER SHALL ADD "A" WIRING WHEN REQUIRED.
216. X STRAPPING SHALL BE PROVIDED AT EACH SHELF WHEN FIG. 60 IS USED. PROVIDE X STRAPPING ON THE FIRST SHELF WHEN FIG. 60 IS USED.
217. WHEN THE TIE TRUNK TEST LINE CKT OR TRANSMISSION TEST LINE CKT IS REQUIRED FOR THE 701B OR 711B PBX, THE "T" AND "R" (RT & RD OF THE (CO) REL) SHALL BE INSULATED BY MEANS OF A PLASTIC SLEEVE PER P320126 AND OMIT "Z" WIRING ON THE STATION LINE CKT ASSOCIATED WITH THIS TIE TRUNK TEST LINE. WHEN THIS TIE-TRUNK TEST LINE OR TRANSMISSION TEST LINE CKT IS REQUIRED FOR THE 701A OR 711A PBX DISCONNECT THE "T", "R" AND "S" LEADS AT THE (CO) RELAY OF THE STATION LINE CIRCUIT ASSOCIATED WITH THIS TEST LINE.
218. IF TRANSMISSION PAD CONTROL FEATURE IS ADDED TO THIS CIRCUIT, THE PRESENT NORMAL POST SPRINGS, P463366, MUST BE REMOVED AND REPLACED BY P154430 NORMAL POST SPRINGS AND WIRED PER ZF OPTION.
219. WHEN APPLYING COMMON TOUCH TONE DIALING TO A 2 DIGIT 740E USE FIGS. 66 AND 67.

CONTINUED ON SHEET 04