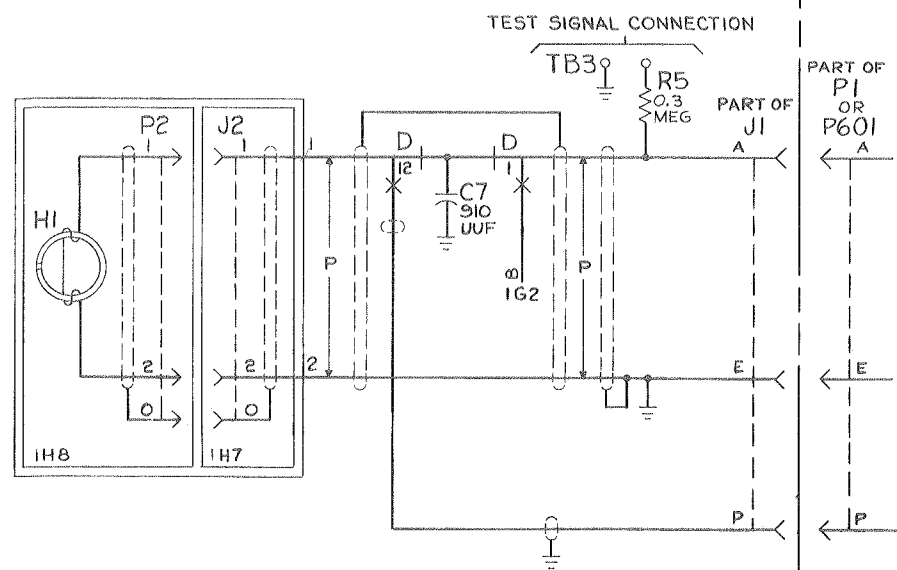




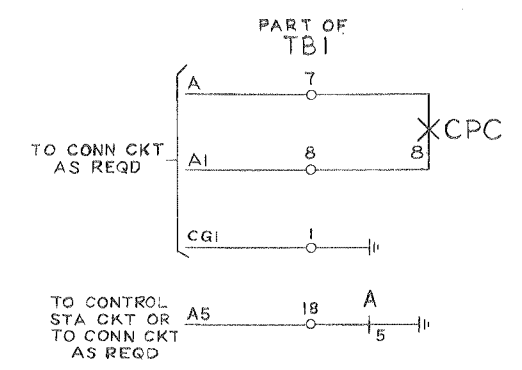


0 1 2 3 4 5 6 7 8 9

**FS4**  
AMPLIFIER INPUT  
CIRCUIT



**FS7**  
MISCELLANEOUS CIRCUIT

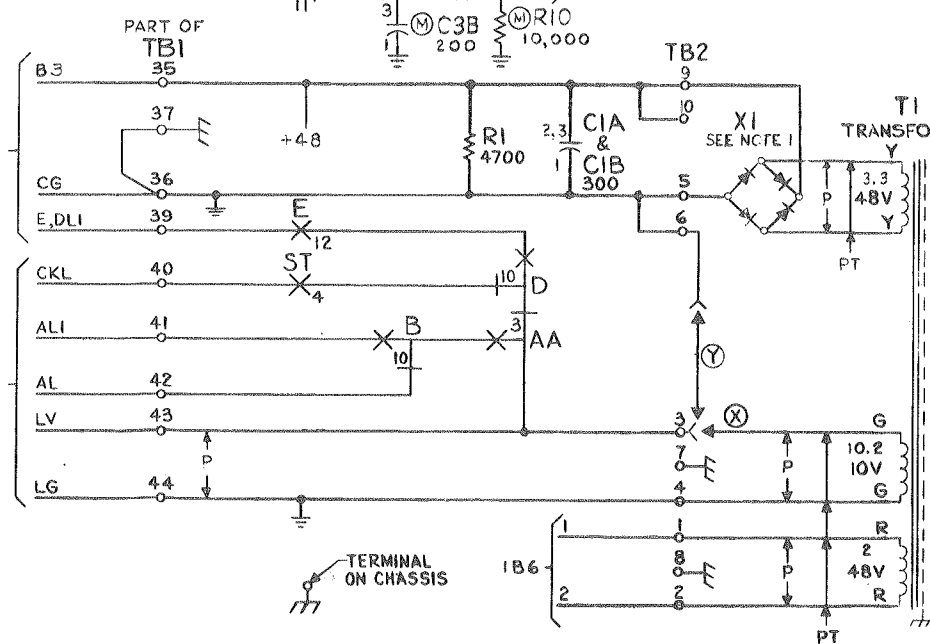


SHEET NOTE:  
IN KS-16765, LI ANNOUNCEMENT SETS PRIOR TO SERIAL NO. 5201, (X1) WAS A G.E. CO. NO. 6RS5TH73 SELENIUM RECTIFIER.

**FS8**  
POWER CIRCUIT

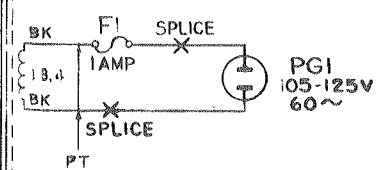
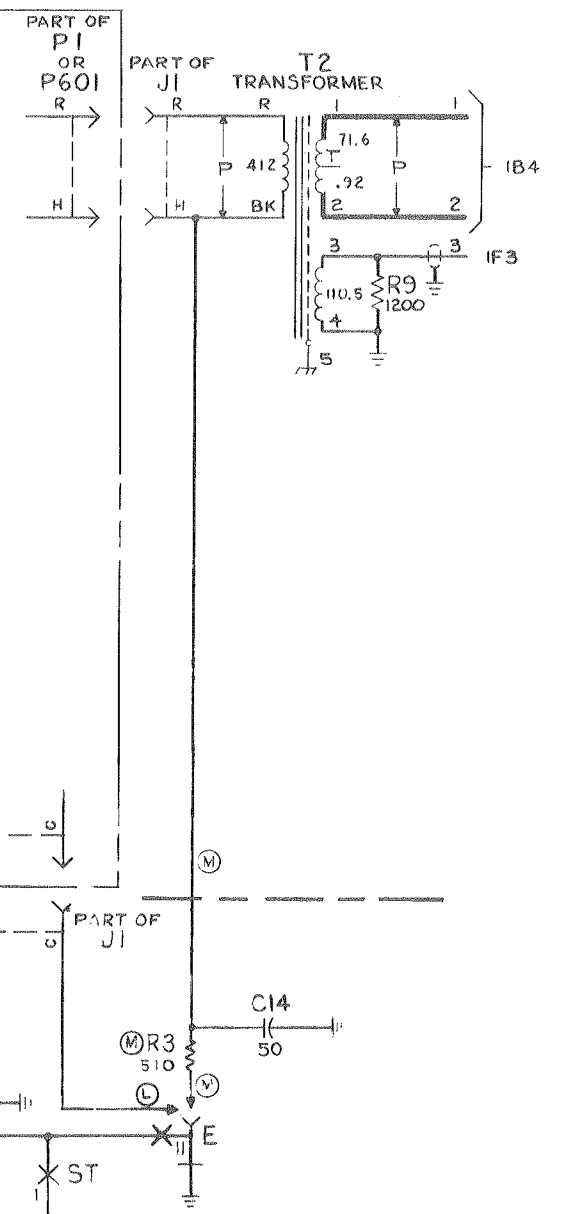
TO CONTROL STA CKT OR TO CONN CKT AS REQD

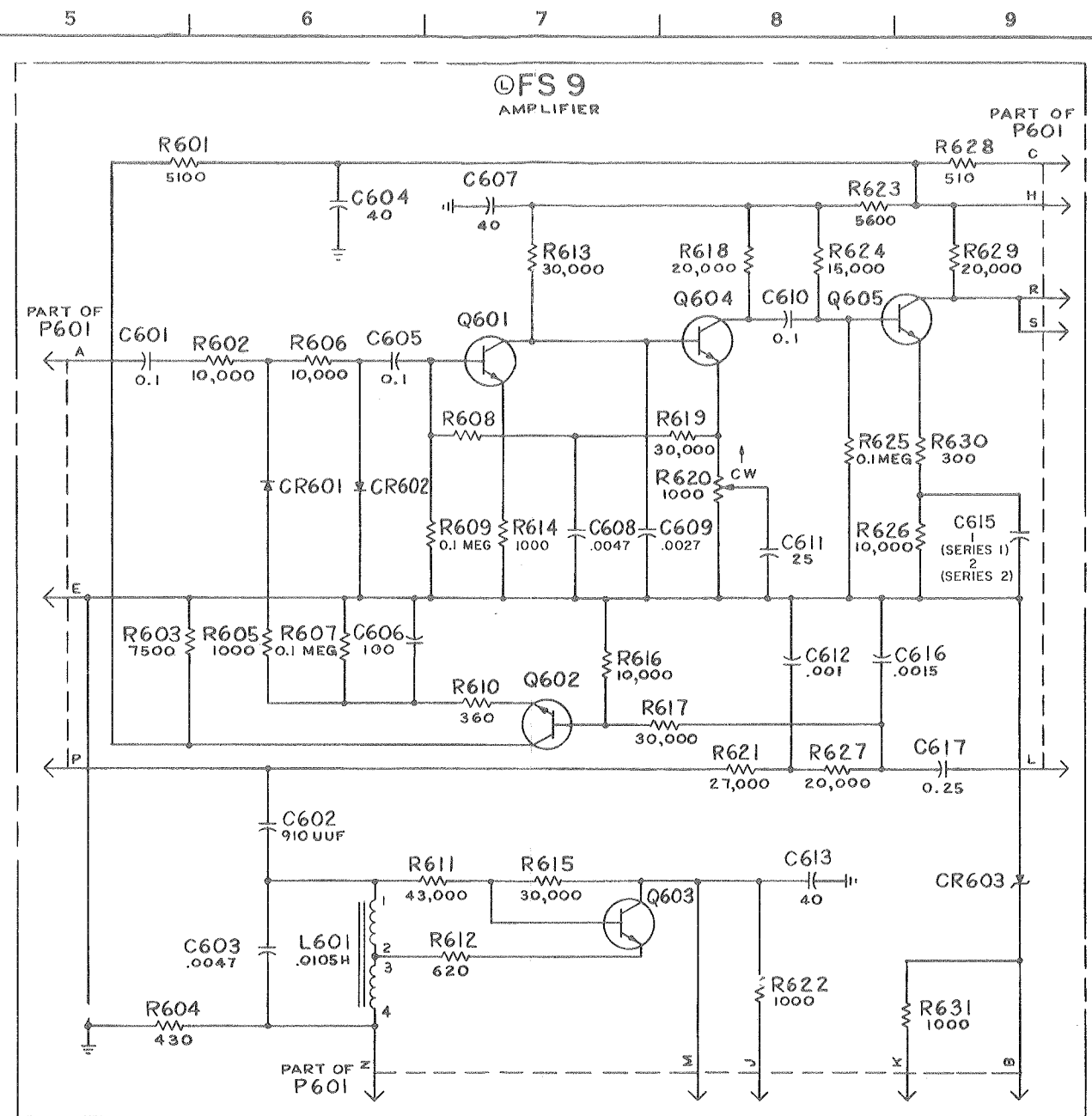
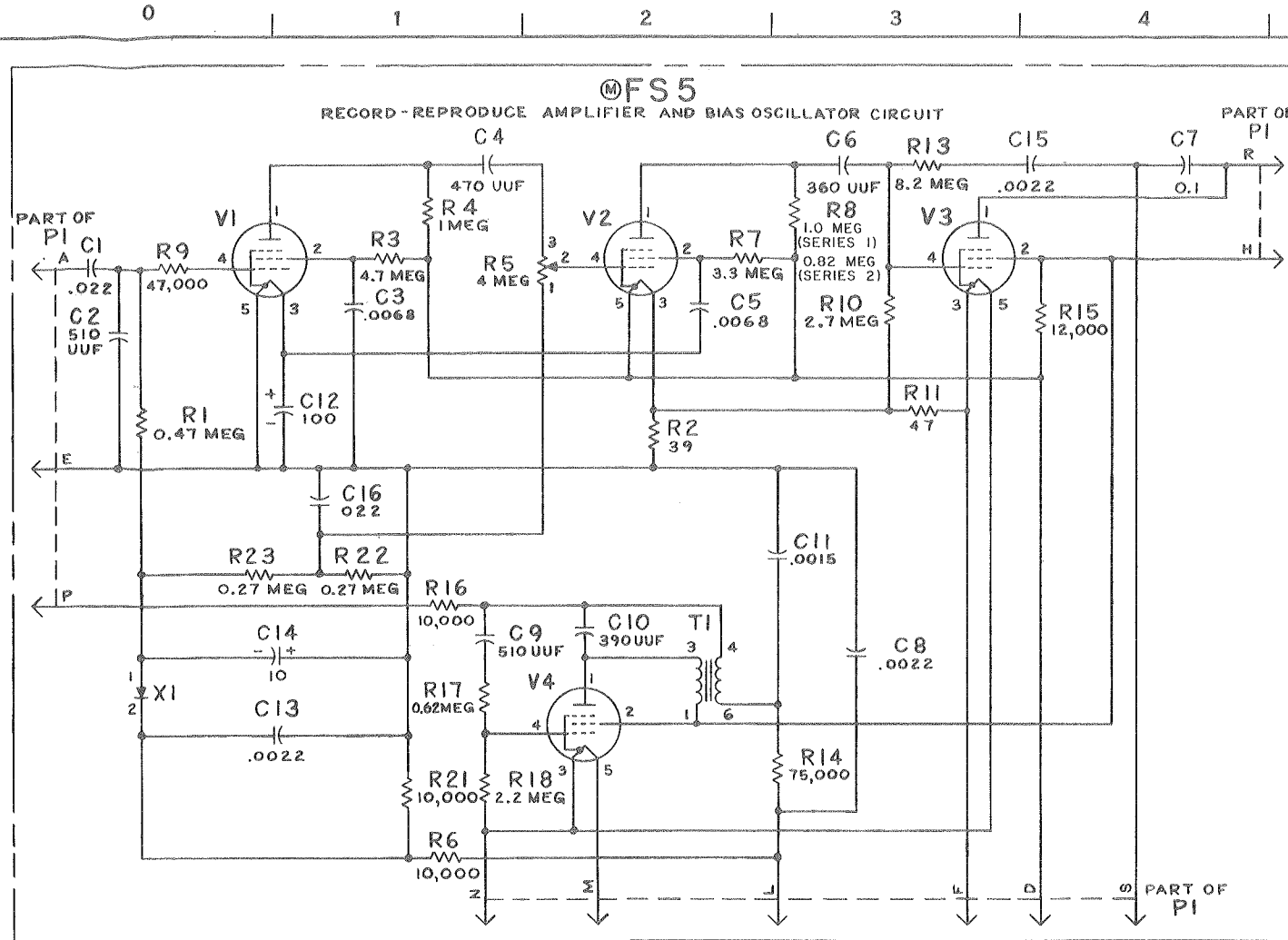
TO CONN CKT AS REQD



ⓂFS 5 (3A2)  
OR  
ⓁFS 9 (3A7)

**FS6**  
AMPLIFIER OUTPUT  
CIRCUIT





APP FIG. 1

| RELAY  |  | A    |     | B    |     | AA   |     | STP  |     | CPC  |     | D    |     | E    |     | ST   |     | RU   |     | DESIG  |  |
|--------|--|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|--------|--|
| CODE   |  | AK4  |     |      |     | AK4  |     |      |     | AJ50 |     | AJ5  |     | AK4  |     |      |     | AJ48 |     | CODE   |  |
| OPTION |  | CONT | LOC | CONT | LOC | CONT | LOC | CONT | LOC | CONT | LOC | CONT | LOC | CONT | LOC | CONT | LOC | CONT | LOC | OPTION |  |
| 12     |  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     | 12     |  |
| 11     |  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     | 11     |  |
| 10     |  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     | 10     |  |
| 9      |  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     | 9      |  |
| 8      |  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     | 8      |  |
| 7      |  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     | 7      |  |
| 6      |  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     | 6      |  |
| 5      |  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     | 5      |  |
| 4      |  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     | 4      |  |
| 3      |  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     | 3      |  |
| 2      |  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     | 2      |  |
| 1      |  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     | 1      |  |
| COIL   |  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     | COIL   |  |
|        |  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |        |  |

| CORD & PLUG |     |            |
|-------------|-----|------------|
| DESIG       | LOC | CODE       |
| PG1         | 2G8 | B-650422-2 |

| DIODE |     |      |
|-------|-----|------|
| DESIG | LOC | CODE |
| X2    | 1D3 | 400E |

| FUSE  |     |                      |
|-------|-----|----------------------|
| DESIG | LOC | CODE                 |
| F1    | 2G7 | BUSSMANN, AGC, 1 AMP |

| NETWORK |     |      |
|---------|-----|------|
| DESIG   | LOC | CODE |
| A       | 1F7 | 185A |
| AA      | 1A7 |      |
| B       | 1D7 |      |
| D       | 1C7 |      |
| E       | 1E7 |      |
| RU      | 1E3 |      |
| ST      | 1B7 |      |
| STP     | 1G7 |      |

| RECTIFIER |     |          |
|-----------|-----|----------|
| DESIG     | LOC | CODE     |
| X1        | 2F6 | B-650051 |

| RESISTOR |     |                                  |
|----------|-----|----------------------------------|
| DESIG    | LOC | CODE                             |
| R1       | 2F5 | 4700Ω ±10%, GB, ALLEN-BRADLEY    |
| R2       | 2F5 | WARD LEONARD, 5X1000             |
| R3       | 2F8 | 510Ω ±5%, EB                     |
| R4       | 1H2 | 3900Ω ±10%, GB                   |
| R5       | 2B2 | 0.3 MEG ±5% EB                   |
| R6       | 1G1 | 820Ω ±5%, GB                     |
| R7       | 1G1 | 180Ω ±5%, EB                     |
| R8       | 1F3 | 3900Ω ±5%, EB                    |
| R9       | 2B9 | 1200Ω ±5%, EB                    |
| R10      | 2F5 | 10,000Ω ±10%, EB                 |
| R11      | 1E6 | 681Ω, WARD LEONARD, 7/8Y, AX10HM |
| R12      | 1D1 | 6800Ω ±5%, EB                    |
| R13      | 1D3 | 2000Ω ±5%, EB                    |
| R14      | 1E4 | 47000Ω ±10%, EB                  |
| R15      | 1H1 | 1000Ω ±10%, GB                   |

| THERMISTOR |     |      |
|------------|-----|------|
| DESIG      | LOC | CODE |
| RT1        | 1C2 | 8C   |

| TRANSFORMER |     |          |
|-------------|-----|----------|
| DESIG       | LOC | CODE     |
| T1          | 2F7 | B-191263 |
| T2          | 2A8 | 529B     |

| VARISTOR |     |      |
|----------|-----|------|
| DESIG    | LOC | CODE |
| X3       | 1D2 | 317A |

| CAPACITOR   |     |                          |
|-------------|-----|--------------------------|
| DESIG       | LOC | CODE                     |
| [1] C1A     | 2F6 | SPRAGUE, D-27842         |
| C1B         | 2F6 |                          |
| C1C         | 1E3 |                          |
| (M) C2      | 2E6 | CORNELL-DUBILIER, BR5015 |
| (M) [1] C3A | 1H2 | SPRAGUE, D-27842         |
| C3B         | 2H5 |                          |
| C3C         | 2E7 |                          |
| C7          | 2B2 | ELMenco, CM200911J       |
| C8          | 1F2 | 91P22401S2               |
| C9          | 1D1 | 91P15403S2               |
| C10         | 1A2 | 75P10353                 |
| C11         | 1B2 | 75P10353                 |
| C12         | 1B3 | 116P10504S2              |
| C13         | 1C2 | 116P20504S13             |
| (M) C14     | 2E8 | CORNELL-DUBILIER, BR5015 |
| (K) C15     | 1H1 | 40D107G012DD4, SPRAGUE   |

CONNECTOR  
H.J. BUGGIE  
B-4226

| DESIG  |  | J1     |     |
|--------|--|--------|-----|
| CONN   |  | SOCKET |     |
| OPTION |  | NO.    | LOC |
|        |  | S      | 2E7 |
|        |  | R      | 2A8 |
|        |  | P      | 2E2 |
|        |  | N      | 2E4 |
|        |  | M      | 2E5 |
|        |  | L      | 2E6 |
|        |  | K      | 3F9 |
|        |  | J      |     |
|        |  | H      | 2B8 |
|        |  | E      | 2E6 |
|        |  | D      | 2C2 |
|        |  | C      | 2E7 |
|        |  | B      |     |
|        |  | A      | 2B2 |

CINCH  
14516

| DESIG  |  | J2     |     |
|--------|--|--------|-----|
| CONN   |  | SOCKET |     |
| OPTION |  | NO.    | LOC |
|        |  | 19     |     |
|        |  | 18     |     |
|        |  | 17     |     |
|        |  | 16     | 1A8 |
|        |  | 15     | 1B8 |
|        |  | 14     | 1F8 |
|        |  | 13     | 1D8 |
|        |  | 12     | 1E8 |
|        |  | 11     |     |
|        |  | 10     | 1E8 |
|        |  | 9      |     |
|        |  | 8      | 1D8 |
|        |  | 7      | 1B8 |
|        |  | 6      | 1C8 |
|        |  | 5      | 1F8 |
|        |  | 4      |     |
|        |  | 3      | 1D8 |
|        |  | 2      | 1H8 |
|        |  | 1      | 1G8 |
|        |  | 0      | 1H8 |

| TERMINAL BOARD |  | TB1      |     | TB2      |     | TB3                |     |
|----------------|--|----------|-----|----------|-----|--------------------|-----|
| CODE           |  | B-190894 |     | B-190895 |     | CINCH MFG CO. 1520 |     |
|                |  | NO.      | LOC | NO.      | LOC | NO.                | LOC |
|                |  | G        | 1D0 | 23       | —   | 1                  | 2H6 |
|                |  | R        | 1B0 | 24       | 1C0 | 2                  | 2H6 |
|                |  | T        | 1A0 | 25       | 1F5 | 3                  | 2H6 |
|                |  | 1        | 2F1 | 26       | 1A1 | 4                  | 2H6 |
|                |  | 2        | 1E0 | 27       | 1B0 | 5                  | 2G6 |
|                |  | 3        | 1F0 | 28       | 1B0 | 6                  | 2G6 |
|                |  | 4        | 1G0 | 29       | 1C0 | 7                  | 2H6 |
|                |  | 5        | 1G0 | 30       | 1D0 | 8                  | 2H6 |
|                |  | 6        | 1F0 | 31       | —   | 9                  | 2F6 |
|                |  | 7        | 2E1 | 32       | 1H0 | 10                 | 2F6 |
|                |  | 8        | 2E1 | 33       | 1C0 |                    |     |
|                |  | 9        | 1C0 | 34       | 1H0 |                    |     |
|                |  | 10       | 1A5 | 35       | 2F4 |                    |     |
|                |  | 11       | 1A0 | 36       | 2G4 |                    |     |
|                |  | 12       | 1B5 | 37       | 2F4 |                    |     |
|                |  | 13       | 1C5 | 38       | 1C0 |                    |     |
|                |  | 14       | 1A0 | 39       | 2G4 |                    |     |
|                |  | 15       | 1E5 | 40       | 2G4 |                    |     |
|                |  | 16       | 1E5 | 41       | 2G4 |                    |     |
|                |  | 17       | 1D0 | 42       | 2H4 |                    |     |
|                |  | 18       | 2F1 | 43       | 2H4 |                    |     |
|                |  | 19       | 1C0 | 44       | 2H4 |                    |     |
|                |  | 20       | 1D0 | 45       | 1G5 |                    |     |
|                |  | 21       | —   | 46       | 1A2 |                    |     |
|                |  | 22       | 1F0 | 47       | 1A2 |                    |     |

SHEET NOTE:  
1. UNLESS OTHERWISE SPECIFIED "B" NUMBERS REFERRED TO ARE B.T.L. DRAWING NUMBERS; ORDER AS FOLLOWS: "B\_(NO.)" (PART OF KS-16765, L1)".

APP FIG. 2  
(FS 3)

KS-16765, L3 RECORDER

SOLENOID  
B-190918

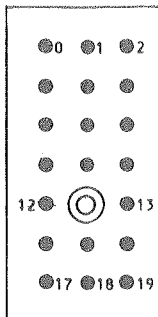


L1 1B8  
L2 1C8

CAPACITOR  
DESIG LOC  
C1 1A9

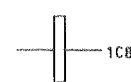
CODE  
121P40591R5T13, SPRAGUE

CONNECTOR  
CINCH, 14586



| DESIG  | P2      |
|--------|---------|
| CONN   | PLUG    |
| OPTION |         |
|        | NO. LOC |
|        | 19      |
|        | 18      |
|        | 17      |
|        | 16 1A8  |
|        | 15 1A8  |
|        | 14 1F8  |
|        | 13 1D8  |
|        | 12 1E8  |
|        | 11      |
|        | 10 1D8  |
|        | 9       |
|        | 8 1C8   |
|        | 7 1B8   |
|        | 6 1C8   |
|        | 5 1F8   |
|        | 4       |
|        | 3 1D8   |
|        | 2 1G8   |
|        | 1 1G8   |
|        | 0 1G8   |

ERASE COIL  
L3  
B-190922



HEAD  
DESIG LOC CODE  
H1 1G8 B-191264

MOTOR

DESIG  
M1

LOC  
1A9

CODE  
B-650418  
PART OF  
B-650412  
DRIVE ASSEMBLY  
(SEE NOTE 2)

NETWORK

DESIG  
L1

LOC  
1B8

CODE  
1B5A

RESISTOR

DESIG  
R1

LOC  
1F8

CODE  
0.1 MEG  
0.47 MEG  
0.47 MEG

ALLEN  
BRADLEY  
EB, ±10%

SWITCH

B-191179  
S1

B-190969-1  
S2

B-19069-2  
S3

APP FIG. 3 (MFR DISC)  
(FS 5)

KS-16765, L4

RECORD-REPRODUCE AMPLIFIER AND BIAS OSCILLATOR CIRCUIT (PRINTED WIRING BOARD ASSEMBLY)

CAPACITOR

DESIG

LOC

CODE

C1 3A0 65P22391 SPRAGUE OR EQUIV  
C2 3B0 CM150511J ELMENCO OR EQUIV  
C3 3B1 75P68291 SPRAGUE OR EQUIV  
C4 3A1 CM150471J ELMENCO OR EQUIV  
C5 3B2 75P68291 SPRAGUE OR EQUIV  
C6 3A3 CM150361J ELMENCO OR EQUIV  
C7 3A4 65P10491  
C8 3C3 85P22291 SPRAGUE OR EQUIV  
C9 3C1 CM150511J  
C10 3C2 CM150391J ELMENCO OR EQUIV  
C11 3C3 85P15291  
C12 3B1 150D107X0010R2 } SPRAGUE  
C13 3D1 85P22291 } OR  
C14 3C1 150D106X0035R2 } EQUIV  
C15 3A4 85P22291  
C16 3C1 65P22391

CONNECTOR  
H. H. BUGGIE  
EC-B4225



| DESIG  | P1      |
|--------|---------|
| CONN   | PLUG    |
| OPTION |         |
|        | NO. LOC |
|        | S 3D4   |
|        | R 3A4   |
|        | P 3C0   |
|        | N 3D1   |
|        | M 3D2   |
|        | L 3D3   |
|        | K       |
|        | J       |
|        | H 3A4   |
|        | F 3D3   |
|        | E 3B0   |
|        | D 3D4   |
|        | C       |
|        | B       |
|        | A 3A0   |

DIODE

DESIG  
X1

LOC  
3C0

CODE  
400

POTENTIOMETER

DESIG  
R5

LOC  
3A2

CODE  
JA-4052-502024,  
ALLEN BRADLEY

RESISTOR

DESIG

LOC

CODE

R1 3B0 0.47 MEG ±20%  
R2 3B2 39Ω  
R3 3A1 4.7 MEG ±5%  
R4 3A1 1 MEG  
R6 3D1 10,000Ω ±10%  
R7 3A2 3.3 MEG  
R8 3A3 1.0 MEG SER 1 } ±5%  
0.82 MEG SER 2  
R9 3A0 47,000Ω ±10%  
R10 3B3 2.7 MEG ±10%  
R11 3B3 47Ω  
R13 3A3 8.2 MEG  
R14 3D3 75,000Ω ±5%  
R15 3B4 12,000Ω  
R16 3C1 10,000Ω  
R17 3C1 0.62 MEG  
R18 3D1 2.2 MEG  
R21 3D1 10,000Ω ±10%  
R22 3C1 0.27 MEG  
R23 3C0 0.27 MEG

ALLEN  
BRADLEY, EB  
OR  
EQUIV

TRANSFORMER

DESIG  
T1

LOC  
3C2

CODE  
669D

TUBE, ELECTRON

DESIG  
V1

LOC  
3A0

CODE  
CK-512AX

V2 3A2

CK-5672

V3 3A3

V4 3C2

RAYTHEON  
MFG CO.

SHEET NOTE:

- UNLESS OTHERWISE SPECIFIED "B" NUMBERS REFERRED TO ARE BTL DRAWING NUMBERS; ORDER AS FOLLOWS; "B- (NO.) (PART OF KS-16765, L3)".
- ON SETS WITH SERIAL NO. 8410 AND LOWER M1 MOTOR IS KS-15914, L1 OR L2.

COMMON SYSTEMS  
ANNOUNCEMENT CIRCUIT

SD-95286-01-C2

BELL TELEPHONE LABORATORIES  
INCORPORATED

6S

PRINTED IN U.S.A.



KS-16765, L6 AMPLIFIER (PRINTED WIRING BOARD ASSEMBLY)

APP FIG. 4  
(FS 9)

DRAWING  
ISSUE  
5B  
WEN  
DLV

CAPACITOR

| DESIG | LOC | CODE         |                                      |
|-------|-----|--------------|--------------------------------------|
| C601  | 3B5 | 65P10491     | SPRAQUE OR EQUIV<br>ELMENDO OR EQUIV |
| C602  | 3D6 | CM20D911J    |                                      |
| C603  | 3E6 | CM20E472J    |                                      |
| C604  | 3A6 | KS-16390, L8 | SPRAQUE<br>OR EQUIV                  |
| C605  | 3B6 | 65P10491     |                                      |
| C606  | 3C6 | 40D114A2     |                                      |
| C607  | 3A7 | KS-16390, L8 | SPRAQUE<br>OR EQUIV                  |
| C608  | 3C7 | 85P47291     |                                      |
| C609  | 3C8 | 85P27291     |                                      |
| C610  | 3B8 | 65P10491     | ELMENDO OR EQUIV                     |
| C611  | 3C8 | 40D149A2     |                                      |
| C612  | 3C8 | CM20E102J    |                                      |
| C613  | 3E8 | KS-16390, L8 | SPRAQUE<br>OR EQUIV                  |
| C615  | 3C9 | 40D186A2     |                                      |
|       |     | SERIES 1     |                                      |
|       |     | 40D187A2     | SPRAQUE<br>OR EQUIV                  |
|       |     | SERIES 2     |                                      |
|       |     | 85P15291     |                                      |
| C616  | 3C9 | 542C         |                                      |
| C617  | 3D9 | 542C         |                                      |

CONNECTOR

H.H. BUGGIE  
EC-B4225

| DESIG  | LOC   | CODE |
|--------|-------|------|
| CONN   |       | PLUG |
| OPTION |       |      |
|        | TERM. | LOC  |
|        | S     | 3B9  |
|        | R     | 3B9  |
|        | P     | 3D5  |
|        | N     | 3F6  |
|        | M     | 3F8  |
|        | L     | 3D9  |
|        | K     | 3F9  |
|        | J     | 3F8  |
|        | H     | 3A9  |
|        | F     |      |
|        | E     | 3C5  |
|        | D     |      |
|        | C     | 3A9  |
|        | B     | 3F9  |
|        | A     | 3B5  |

INDUCTOR

| DESIG | LOC | CODE   |                                 |
|-------|-----|--------|---------------------------------|
| CR601 | 3C6 | IN1692 | TEXAS<br>INSTRUMENT<br>OR EQUIV |
| CR602 | 3C6 |        |                                 |
| CR603 | 3E9 | 420M   |                                 |

RESISTOR

| DESIG | LOC | CODE     |                                          |
|-------|-----|----------|------------------------------------------|
| R601  | 3A5 | 5100Ω    |                                          |
| R602  | 3B6 | 10,000Ω  |                                          |
| R603  | 3C5 | 7500Ω    |                                          |
| R604  | 3E5 | 430Ω     |                                          |
| R605  | 3C6 | 1000Ω    |                                          |
| R606  | 3B6 | 10,000Ω  |                                          |
| R607  | 3C6 | 0.1 MEG  | ALLEN<br>BRADLEY,<br>EB, ±5%<br>OR EQUIV |
| R608  | 3B7 | 0.13 MEG |                                          |
| R609  | 3C7 | 0.1 MEG  |                                          |
| R610  | 3D7 | 360Ω     |                                          |
| R611  | 3E7 | 43,000Ω  |                                          |
| R612  | 3E7 | 620Ω     |                                          |
| R613  | 3A7 | 30,000Ω  |                                          |
| R614  | 3C5 | 1000Ω    |                                          |
| R615  | 3E7 | 30,000Ω  |                                          |
| R616  | 3C7 | 10,000Ω  |                                          |

INDUCTOR

| DESIG | LOC | CODE  |
|-------|-----|-------|
| L601  | 3E6 | 1589B |

RESISTOR (CONT)

| DESIG | LOC | CODE    |                                          |
|-------|-----|---------|------------------------------------------|
| R617  | 3D8 | 30,000Ω |                                          |
| R618  | 3A8 | 20,000Ω |                                          |
| R619  | 3B8 | 30,000Ω |                                          |
| R621  | 3D8 | 27,000  |                                          |
| R622  | 3E8 | 1000Ω   |                                          |
| R623  | 3A8 | 5600Ω   |                                          |
| R624  | 3A8 | 15,000Ω | ALLEN<br>BRADLEY,<br>EB, ±5%<br>OR EQUIV |
| R625  | 3B8 | 0.1 MEG |                                          |
| R626  | 3C9 | 10,000Ω |                                          |
| R627  | 3D8 | 20,000Ω |                                          |
| R628  | 3A9 | 510Ω    |                                          |
| R629  | 3A9 | 20,000Ω |                                          |
| R630  | 3B9 | 300Ω    |                                          |
| R631  | 3E9 | 1000Ω   |                                          |

POTENTIOMETER

| DESIG | LOC | CODE                    |                           |
|-------|-----|-------------------------|---------------------------|
| R620  | 3C8 | RV4NAXSB102D,<br>TYPE J | ALLEN BRADLEY<br>OR EQUIV |

TRANSISTORS

| DESIG | LOC | CODE   |                                 |
|-------|-----|--------|---------------------------------|
| Q601  | 3B7 | ZN2712 | GENERAL<br>ELECTRIC<br>OR EQUIV |
| Q602  | 3D7 | ZN697  |                                 |
| Q603  | 3E7 | ZN697  |                                 |
| Q604  | 3B8 | ZN2712 |                                 |
| Q605  | 3B8 | ZN697  |                                 |

COMMON SYSTEMS  
ANNOUNCEMENT CIRCUIT

BELL TELEPHONE LABORATORIES  
INCORPORATED

6S

SD-95286-01-C3

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| DRAWING<br>ISSUE |                   |
|------------------|-------------------|
| 5B               | HVP<br>WEH<br>DLV |
| 6B               | EY<br>HVP<br>DLV  |

CIRCUIT NOTES:

101.

| DESIG                 | FUSE AMP | POTENTIAL | ONE PER              |
|-----------------------|----------|-----------|----------------------|
|                       |          |           |                      |
| <u>BATTERY SYMBOL</u> |          |           | <u>VOLTAGE RANGE</u> |

· 102.

| FEATURE OR OPTION                                            |                                                    | PROVIDE |                   |           |
|--------------------------------------------------------------|----------------------------------------------------|---------|-------------------|-----------|
|                                                              |                                                    | FIG.    | APP OR WRG        | QUANTITY  |
| KS-16765,L1 ANNOUNCEMENT SET                                 |                                                    | 1,2,3   | M                 | 1 PER SET |
|                                                              |                                                    | 1,2,4   | L                 | 1 PER SET |
| KS-16765,L3 RECORDER                                         |                                                    | 2       |                   | AS REQD   |
| KS-16765,L4 AMPLIFIER                                        |                                                    | 3       | M                 | AS REQD   |
| KS-16765,L6 AMPLIFIER                                        |                                                    | 4       | L                 | AS REQD   |
|                                                              |                                                    |         |                   |           |
| MINIMUM LINE SEIZURE DELAY TIME                              |                                                    |         | Z                 |           |
| CKT GRD IN PLACE OF 10V AC                                   |                                                    |         | *Y                |           |
| AUTOMATIC ANNOUNCEMENT                                       |                                                    |         | W                 |           |
| AUTOMATIC ANSWER                                             | 20~ BRIDGED RINGING AS START SIGNAL                |         | V                 |           |
|                                                              | CKT CLOSURE BETWEEN LEADS B AND B1 AS START SIGNAL |         | T                 |           |
| MONITOR CUTOFF IN AUTOMATIC ANNOUNCEMENT                     |                                                    |         | S                 |           |
| TEL SET RINGER DISCONNECTED DURING DICTATE (BRIDGED RINGING) |                                                    |         | R                 |           |
| GROUP ALERTING SYSTEM-53A CONTROL UNIT                       |                                                    |         | *Z,Y<br>W,S       |           |
| 8A ANNOUNCEMENT SYSTEM                                       |                                                    |         | Z,V,<br>R         |           |
| GROUP ALERTING SYSTEM-53B CONTROL UNIT (SEE NOTE 106)        |                                                    |         | *Z,Y<br>W,S,<br>P |           |
|                                                              |                                                    |         |                   |           |

\* SEE NOTE 105

103.

| NETWORK VALUES |                       |                      |
|----------------|-----------------------|----------------------|
| NETWORK NO.    | RESISTANCE<br>IN OHMS | CAPACITANCE<br>IN UF |
| 1              | 470                   | 0.11                 |
|                |                       |                      |

CIRCUIT NOTES: (CONT)

104.

[illegible]

105. WHEN Y WIRING IS PROVIDED, DISCONNECT X WIRING, WHICH IS FURNISHED WITH SETS AS MANUFACTURED, TAPE AND STORE IN SET.

106. N WIRING INTRODUCED IN PRODUCTION AT SERIAL NUMBER 6677. WHEN USING KS-16765, L1 ANNOUNCEMENT SETS WITH SERIAL NUMBERS LOWER THAN 6677 IN GROUP ALERTING SYSTEM WITH 53B CONTROL UNIT LEADS MUST BE ADDED IN THE ANNOUNCEMENT SET BETWEEN UNUSED RELAY CONTACTS AND SPARE TERMINALS ON (TB1) AS FOLLOWS:

FROM

TO

5 MAKE (A) RELAY  
6 MAKE (D) RELAY

(TB1) 11  
(TB1) 14

107. M WIRING IN SETS WITH SERIAL NUMBERS LOWER THAN 8136 FOR USE WITH EITHER LIST 4 OR LIST 6 AMPLIFIERS. L WIRING FOR USE WITH LIST 6 AMPLIFIERS ONLY.

108. K OPTION INTRODUCED IN SETS BEGINNING WITH  
SERIAL NUMBER 11056.

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.

302. OFFICE WIRING LIST RECORDS NEED NOT BE MAINTAINED FOR OPTIONS Z TO P INCLUSIVE.

COMMON SYSTEMS  
ANNOUNCEMENT CIRCUIT

SD-95286-OI-DI

**BELL TELEPHONE LABORATORIES**  
INCORPORATED

DWG SIZE  
65

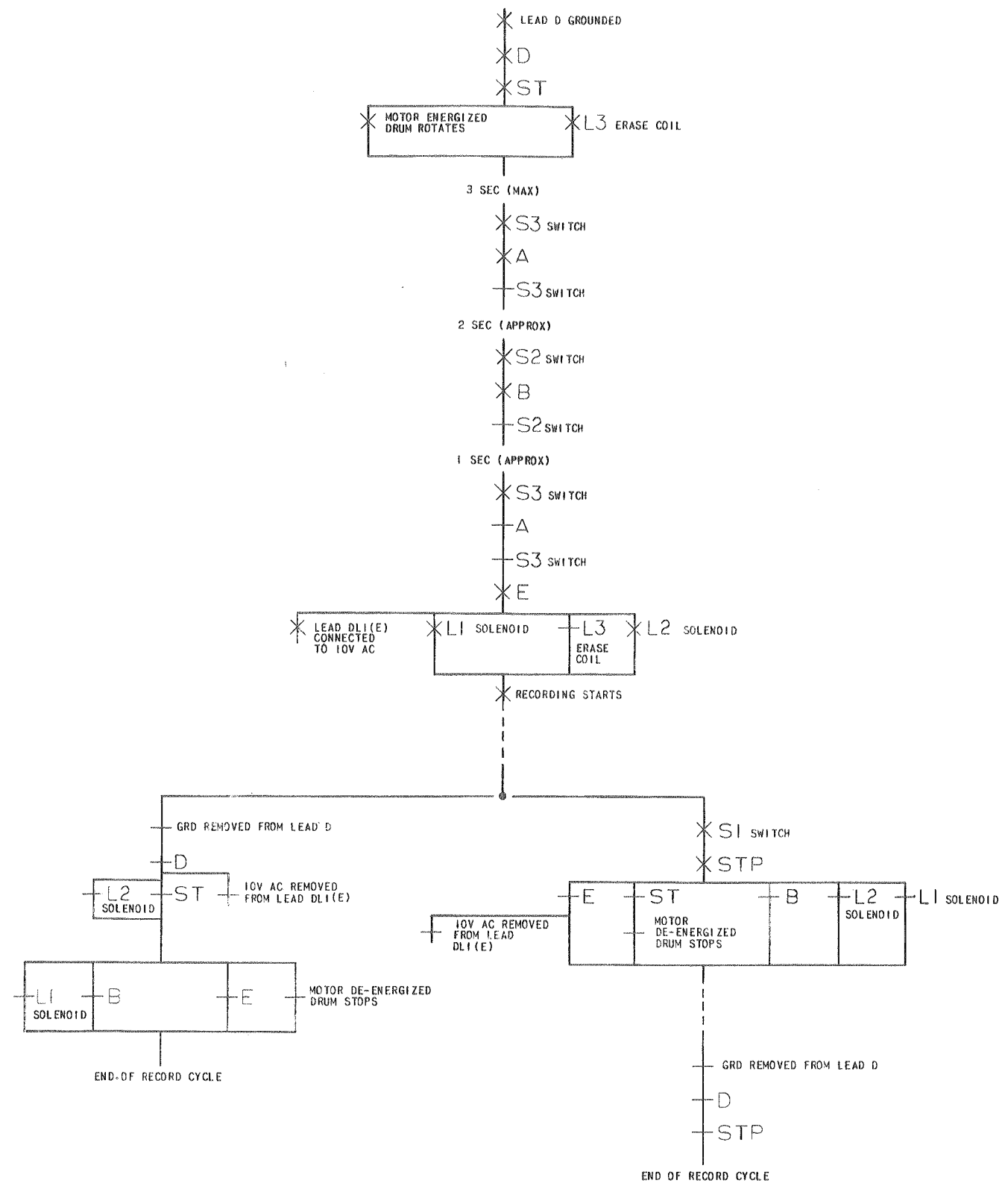
PRINTED IN U. S. A.



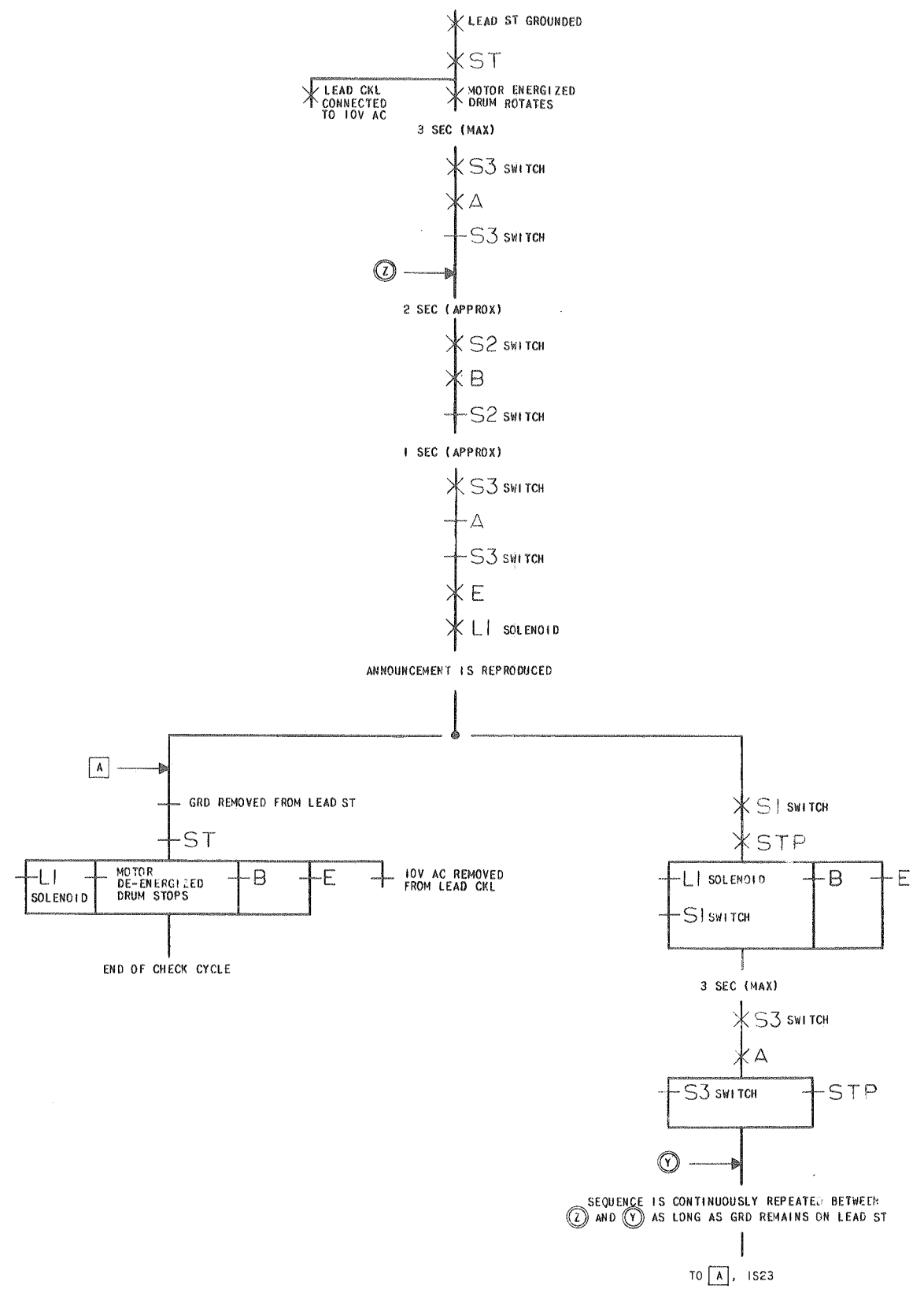
A B C D E F G H J K L M N P Q R S T U V W X Y Z AA AB AC AD AE

| DRAWING ISSUE |          |
|---------------|----------|
| I             | STP      |
| 4D            | WHEN DLY |
| 5B            | WHEN DLY |

# SCI RECORD



# SC2 CHECK



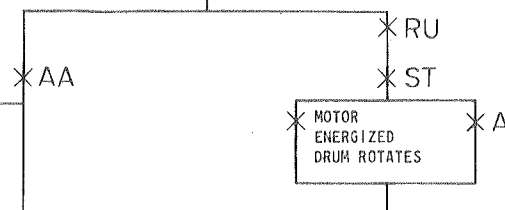
A B C D E F G H J K L M N P Q R S T U V W X Y Z AA AB AC AD AE

SC3

AUTOMATIC ANNOUNCEMENT

W, Y, AND Z OPTIONS PROVIDED

LEAD ANN GROUNDED



3 SEC (MAX)

S2 SWITCH

B

S2 SWITCH

2 SEC (APPROX)

S3 SWITCH

A

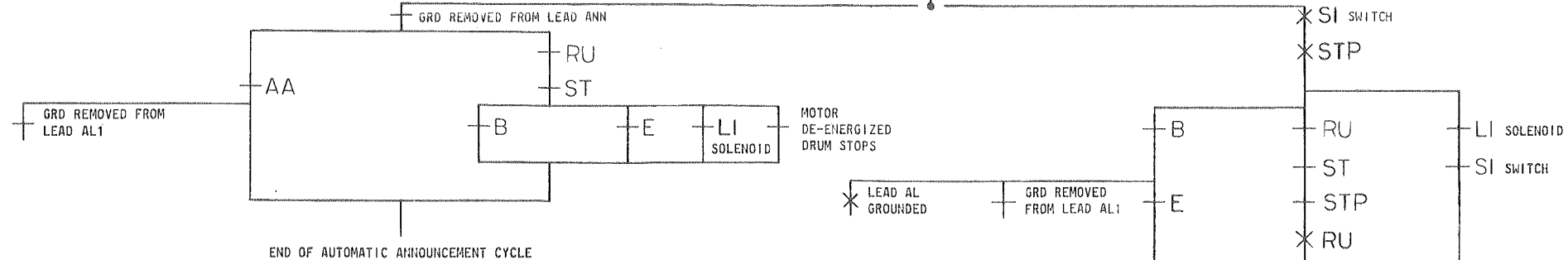
S3 SWITCH

E

LI SOLENOID

ANNOUNCEMENT IS REPRODUCED ON LEADS T AND R

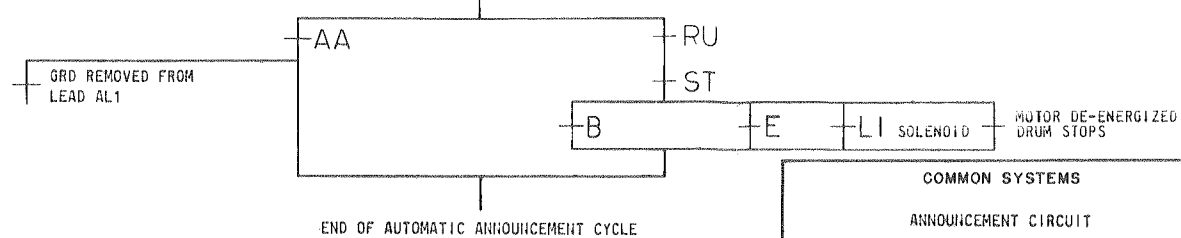
GRD REMOVED FROM LEAD ANN



END OF AUTOMATIC ANNOUNCEMENT CYCLE

SEQUENCE IS CONTINUOUSLY REPEATED BETWEEN  
X AND W AS LONG AS GRD REMAINS ON LEAD ANN

GRD REMOVED FROM LEAD ANN



END OF AUTOMATIC ANNOUNCEMENT CYCLE

COMMON SYSTEMS  
ANNOUNCEMENT CIRCUIT

SD-95286-01-E2

BELL TELEPHONE LABORATORIES  
INCORPORATED

6S

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A B C D E F G H J K L M N P Q R S T U V W X Y Z AA AB AC AD AE

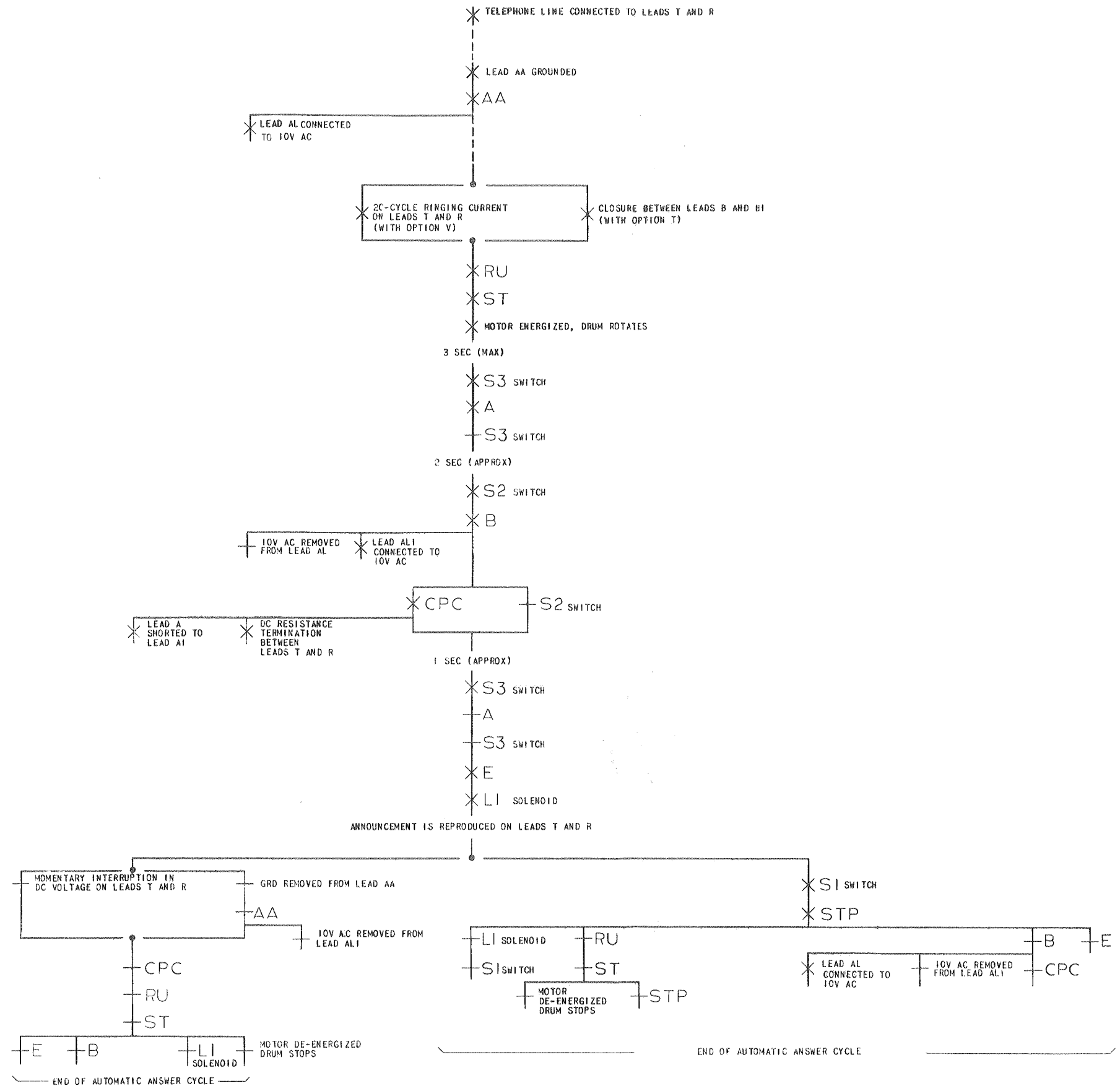
A B C D E F G H J K L M N P Q R S T U V W X Y Z AA AB AC AD AE

SC4  
AUTOMATIC ANSWER

| DRAWING ISSUE |         |
|---------------|---------|
| 1             | REVISED |
| 4D            | REVISED |
| 5B            | REVISED |

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A B C D E F G H J K L M N P Q R S T U V W X Y Z AA AB AC AD AE

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## CIRCUIT REQUIREMENTS

## ANNOUNCEMENT CIRCUIT

DRAWING  
ISSUE

| APPARATUS            |                   |        |      | MECH. REQ.  |                 |               | CIRCUIT PREPARATION          |                            |                            |                     | DIRECT CURRENT FLOW REQ. |              |              |                      |                   |              |                                                    | REMARKS |
|----------------------|-------------------|--------|------|-------------|-----------------|---------------|------------------------------|----------------------------|----------------------------|---------------------|--------------------------|--------------|--------------|----------------------|-------------------|--------------|----------------------------------------------------|---------|
| DESIG                | CODE              | OPTION | FIG. | BSP<br>FIG. | CONT.<br>PRESS. | ARM.<br>TRVL. | BLOCK<br>OR<br>INSULATE      | TEST CLIP DATA             |                            | TEST<br>SET<br>PREP | SEE<br>TEST<br>NOTE      | TEST<br>WDG. | TEST<br>FOR  | AFTER<br>SOAK<br>MA. | TEST<br>MA.       | READJ<br>MA. |                                                    |         |
|                      |                   |        |      |             |                 |               |                              | CONN. BAT.                 | CONN. GRD.                 |                     |                          |              |              |                      |                   |              |                                                    |         |
| MAGNETS<br>SOLENOIDS |                   |        |      |             |                 |               |                              |                            |                            |                     |                          |              |              |                      |                   |              |                                                    |         |
| L1,<br>L2            | SEE APP<br>FIG. 2 |        | 2    |             |                 |               |                              |                            |                            |                     | 1, 2,<br>3, 4,<br>9      |              |              |                      |                   |              |                                                    |         |
| RELAYS               |                   |        |      |             |                 |               |                              |                            |                            |                     |                          |              |              |                      |                   |              |                                                    |         |
| A                    | 1/2AK4            |        | 1    | 202         |                 |               | (E)O                         | 2L(A)                      | 1L(A)                      | NGB                 | 1, 5                     | B            | 0            |                      | 11.9              | 11.3         | MTD WITH (B)                                       |         |
| AA                   | 1/2AK4            |        | 1    | 202         |                 |               | (STP)O,<br>(C)O              | 2L(AA)                     | 1L(AA)                     | NGB                 | 1, 5                     | B            | 0            |                      | 11.9              | 11.3         | MTD WITH (STP); DISCONNECT<br>LEAD AA FROM 10(TB1) |         |
| B                    | 1/2AK4            |        | 1    | 202         |                 |               | (STP)O                       | 2U(B)                      | 1U(B)                      | NGB                 | 1, 5                     | T            | 0            |                      | 11.9              | 11.3         | MTD WITH (A)                                       |         |
| CPC                  | AJ50              |        | 1    | 46          |                 |               |                              | 2L(CPC)                    | 1U(CPC)                    | NGB                 | 1, 5,<br>6, 7            | P/S          | 0            |                      | 10.5              | 10           |                                                    |         |
| D                    | AJ5               |        | 1    | 220         |                 |               |                              | L(D)                       | U(D)                       | NGB                 | 1, 5                     |              | 0            |                      | 13.3              | 12.6         | DISCONNECT LEAD D FROM<br>13(TB1).                 |         |
| E                    | 1/2AK4            |        | 1    | 202         |                 |               | (A)O                         | 2U(E)                      | 1U(E)                      | NGB                 | 1, 5                     | T            | 0            |                      | 11.9              | 11.3         | MTD WITH (ST)                                      |         |
| RU                   | AJ48              |        | 1    | 3           |                 |               | 9E(STP)<br>9E(STP)<br>2L(RU) | 1L(RU)<br>1L(RU)<br>2U(RU) | 1U(RU)<br>1U(RU)<br>2U(RU) | NGE<br>NGE<br>NGE   | 1, 5<br>6<br>1, 5, 6     | P<br>P<br>S  | 0<br>NO<br>0 |                      | 8.4<br>6.1<br>5.2 | 8<br>6.5     |                                                    |         |
| ST                   | 1/2AK4            |        | 1    | 202         |                 |               | (D)O,<br>(STP)O              | 2L(ST)                     | 1L(ST)                     | NGB                 | 1, 5                     | B            | 0            |                      | 11.9              | 11.3         | MTD WITH (E)                                       |         |
| STP                  | 1/2AK4            |        | 1    | 202         |                 |               | 9B(E)                        | 2U(STP)                    | 1U(STP)                    | NGB                 | 1, 5                     | T            | 0            |                      | 11.9              | 11.3         | MTD WITH (AA)                                      |         |

## TEST NOTES:

1. DISCONNECT AC POWER FROM ANNOUNCEMENT SET BEFORE PERFORMING ANY TESTS.
2. REFER TO BSP FOR MECHANICAL REQUIREMENTS AND ADJUSTING PROCEDURES.
3. IF OPERATE TESTS ARE MADE ON SOLENOID (L2) IT WILL BE NECESSARY TO RECORD A NEW ANNOUNCEMENT AFTER COMPLETING TESTS.
4. MIN. OPR VOLTAGE 44V DC ACROSS WINDING.
5. POLARITY FOR TEST SET CONNECTION: BAT (-); GRD (+).
6. ARMATURE BACK TENSION MIN. 20 GRAMS READJUST, 15 GRAMS TEST.
7. CONTACT MAKE 5, NO MAKE 8.5 READJUST; MAKE 3.5, NO MAKE 10 TEST.

8. IF NECESSARY TO TEST SEC. WDG OF RELAY (RU) DISCONNECT LEAD FROM 2U(RU).

9. BEFORE ENERGIZING SOLENOID (L1), ROTATE DRUM MANUALLY BY TURNING DRUM SHAFT PULLEY (AVOID TOUCHING MAGNETIC RECORDING BAND) COUNTERCLOCKWISE AS VIEWED FROM MOTOR SIDE UNTIL PIN ON DRUM OPERATES SWITCH (S3).

ANNOUNCEMENT CIRCUIT

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