

CIRCUIT NOTES:

| 101. FEATURE OR OPTION  | PROVIDE  |            |           |
|-------------------------|----------|------------|-----------|
|                         | FIG.     | APP OR WIR | QUANTITY  |
| AMPLIFIER CIRCUIT       | I        | Z          | 1 PER CKT |
| NOMINAL AC LINE VOLTAGE | 110-120V | Z          |           |
|                         | 120-130V | Y          |           |

| 102. 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 |
| I  | X OR W                        | X                    | 103      | W              |     | X  |

103. W OPTION IS FURNISHED IN KS-16617L1 AMPLIFIERS MANUFACTURED AFTER OCTOBER, 1959; THE DATE OF MANUFACTURE IS STAMPED ON THE WIRING SIDE OF THE CHASSIS IN THE LOWER LEFT CORNER.

EQUIPMENT NOTES:

- 201. WHEN SHIELDED CABLE IS FURNISHED FOR THE INPUT LEADS THE SHIELD SHALL BE TERMINATED AS SHOWN AT THE AMPLIFIER END ONLY.
- 202. WHEN REQUIRED, SHIELDED CABLE FOR THE OUTPUT LEADS SHALL BE SPECIFIED ON THE CONNECTING CIRCUIT.

INFORMATION NOTES:

- 301. UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS AND CAPACITANCE VALUES ARE IN MICRO-MICROFARADS.
- 302. THE VOLTAGES SHOWN REPRESENT TYPICAL DC VALUES FOR A QUIESCENT CONDITION WITH AVERAGE ELECTRON TUBES AND NOMINAL LINE VOLTAGE. THE VOLTAGES ARE MEASURED FROM POINTS SHOWN TO GROUND TERMINAL 9 USING A VOLTMETER HAVING A RESISTANCE OF 10 MEGOHMS (MINIMUM).
- 303. THE INPUT AND OUTPUT TERMINAL NUMBERS FOR THE KS-16617, L1 AMPLIFIER AND THE CORRESPONDING TERMINAL NUMBERS FOR THE KS-12081, L4A AMPLIFIER WHICH IT REPLACES ARE AS FOLLOWS:

| KS-16617, L1 | KS-12081, L4A |
|--------------|---------------|
| 1            | 26            |
| 2            | 27            |
| 3            | 1             |
| 4            | 2             |
| 5            | 5             |
| 6            | 6             |
| 7            | 7             |
| 8            | 10            |
| 9            | 13            |
| 10           | -             |
| 11           | -             |
| 12           | -             |
| 13           | 21            |
| 14           | 22            |
| 17           | 20            |
| 18           | 19            |
| 19           | 18            |

305. UNLESS OTHERWISE SPECIFIED, ALL RESISTORS ARE 1/2W, HAY-ING RESISTANCE VALUES AS SHOWN ON THE CIRCUIT WITH ±10% TOLERANCE; THEY ARE COMPOSITION RESISTORS (ALLEN-BRADLEY EB(1/2W), GB(1W) OR HB(2W) OR EQUIVALENT) EXCEPT AS FOLLOWS:

- R28 - ELECTROHM, C5 SERIES
  - R31, R32 - IRC, TYPE PW-10
  - R41 - OHMITE, TYPE ALBLO
- WIRE WOUND RESISTORS

304. CODE INFORMATION NOT SHOWN ON CKT IS AS FOLLOWS:

| DESIG      | DESCRIPTION              | MFR               |
|------------|--------------------------|-------------------|
| C1         | 0.15UF, 200V             |                   |
| C2         | 1UF, 200V                | TYPE PJ           |
| C3         | 0.05UF, 200V             |                   |
| C4, C8     | 25UF, 6V                 | TYPE BBR          |
| C5         | 20/10/5 UF, 450/400/350V | TYPE UP           |
| C6         | 3000 UUF, 600V           | TYPE PJ           |
| C7         | 2200UF, ± 10% 500V       | CLASS GA TYPE 19C |
| C9, C19    | 0.022UF, 400V            | TYPE PJ           |
| C11        | 1000 UUF ± 20% 500V      | CLASS GA TYPE 19C |
| C12        | 0.1UF, 400V              | TYPE PJ           |
| C13, C14   | 0.25UF, 400V             |                   |
| C15        | 25UF, 25V                | TYPE BBR          |
| C16, C17   | 3000UUF, 1600V           |                   |
| C18        | 0.047UF, 400V            | TYPE PJ           |
| C20        | 6800UUF, ± 20% 500V      | TYPE LB-C4        |
| C22        | 20/20UF, 500V            | TYPE UP           |
| C24        | 20/20UF, 450V            | CAT. NO. 17D14    |
| F1         | 2 AMP, DUAL ELEMENT      | 313002 MDL 2      |
| R1, R3 ETC | SEE NOTE 305             | RESISTOR          |
| R2, R4     | B-186486-5               |                   |
| R36        | B-186486-4               |                   |
| R38        | B-186486-3               |                   |
| T1         | B-187697                 |                   |
| T2         | B-187698                 |                   |
| T3         | B-187293-2               |                   |
| T4         | B-186489                 |                   |
| TB1        | B-187303                 |                   |
| TB2        | B-187305                 |                   |
| TB3        | CAT. NO. 3-1W2-W         |                   |
| S1         | 3 AMP, 250V, SPST        | CAT. NO. 8290K15  |

| FIGURES AND OPTIONS ON THIS DWG |               |
|---------------------------------|---------------|
| CKT FIG.                        | APP OR WIRING |
| I                               | Z             |
|                                 | Y             |
|                                 | X             |
|                                 | W             |

| HIGHEST RES AND CAP. USED ON THIS DRAWING |     |
|---|-----|
| R44                                       | C24 |
| NOT USED                                  |     |
|   | C10 |
|   | C21 |
|   | C23 |

| DWG ISSUE | CD ISSUE | DATE ISSUED | DRWN | APP'D |
|-----------|----------|-------------|------|-------|
| 1         | 1        | 4-28-59     | WJG  | AWW   |
| 2D        | 1        | APPX 1-2-79 | WJG  | WJG   |

NOTICE  
NOT FOR USE OR DISCLOSURE OUTSIDE THE BELL SYSTEM EXCEPT UNDER WRITTEN AGREEMENT

THIS DRAWING NOT TO BE USED FOR MANUFACTURING PURPOSES

|   |      |                          |
|---|------|--------------------------|
| SD-95259-01   | 3N06 | ISSUE 2D                 |
| COMMON SYSTEMS<br>KS-16617 AMPLIFIER CIRCUIT<br>SPECIAL PURPOSE AMPLIFIER<br>FOR USE IN<br>MDF LOUDSPEAKER TELEPHONE SYSTEM |      | MFR DISC                 |
| BELL TELEPHONE LABORATORIES<br>INCORPORATED   |      | SD-95259-011<br>3 SHEETS |



