

| SHEET INDEX | | | | | | | | | | | | | | | | |
|-------------|-------------|---|---|---|---|---|---|------|-------------|---|---|---|---|---|---|---|
| SH. | SHEET ISSUE | | | | | | | SH | SHEET ISSUE | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 21 | 1 | 3 | 4 | 4 | 4 | 7 | 8 | 10-17-78 1 |
| 1A | - | - | - | - | - | 7 | 8 | 22 | 1 | 3 | 3 | 3 | 3 | 7 | 7 | SHEETS 14A & 23A ADDED. SHEET 23 FIG. 10 REPLACED. |
| 2 | 1 | 3 | 4 | 4 | 4 | 4 | 4 | 23 | 2 | 3 | 4 | 4 | 4 | 4 | 8 | 12-20-78 CL:A |
| 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 23A | 2 | 3 | 3 | 3 | 3 | 7 | 7 | 2-16-79 W.E.CO.CL:A |
| 4 | 1 | 3 | 3 | 3 | 3 | 3 | 8 | 23B | - | 3 | 3 | 3 | 3 | 7 | 8 | FIG.13 & FIG.9A ADDED. FIGS.6 & 7 HORIZ.LINES RMVD. CHG'D PER LDI1. |
| 5 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 23C | - | - | - | - | - | 7 | 8 | A.T.&T.CO.CL:A |
| 6 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 23CA | - | - | - | - | - | - | 8 | 2-16-79 W.E.CO.CL:A |
| 7 | 1 | 3 | 3 | 3 | 3 | 3 | 8 | 23CB | - | - | - | - | - | - | 8 | 3 |
| 8 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 23D | 1 | 3 | 3 | 3 | 3 | 7 | 8 | SHTS 1,2,10,14,14A,15,17,19, 20,21,23 & 26 CHGD. |
| 9 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 23E | 1 | 3 | 3 | 3 | 3 | 7 | 8 | 4-30-79 AT.&T.CL:AD WE.CO.CL:AD |
| 10 | 1 | 3 | 4 | 4 | 4 | 4 | 4 | 24 | - | 3 | 3 | 3 | 3 | 3 | 3 | 4 |
| 11 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 25 | - | - | - | 3 | 3 | 3 | 3 | SHEETS 27, 28, 29 & 30 ADDED. |
| 12 | 1 | 3 | 3 | 3 | 3 | - | - | 26 | - | - | - | 5 | 6 | 7 | 7 | 6-21-79 A.T.&T. CL:AD W.E. CL:AD |
| 13 | 1 | 3 | 3 | 3 | 3 | 7 | 8 | 27 | - | - | - | 5 | 6 | 7 | 7 | 5 |
| 14 | 1 | 3 | 4 | 4 | 4 | 7 | 8 | 28 | - | - | - | 5 | 5 | 7 | 7 | SHEETS 27, 28, 29 & 30 ADDED. |
| 14A | 2 | 3 | 4 | 4 | 4 | 4 | 8 | 29 | | | | 5 | 5 | 7 | 8 | A.T.&T. CL:AD |
| 15 | 1 | 3 | 4 | 4 | 4 | 7 | 7 | 30 | | | | 5 | 5 | 7 | 7 | 6-21-79 W.E. CL:AD |
| 16 | 1 | 3 | 3 | 3 | 3 | 7 | 7 | 31 | - | - | - | - | - | - | 8 | 5 |
| 17 | 1 | 3 | 4 | 4 | 4 | 7 | 8 | 32 | - | - | - | - | - | - | 8 | FIG'S 14A, 14B & 14C CHG'D. LOCATING PIN CHG'D TO 004. |
| 18 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | -79 WE CL AD |
| 19 | 1 | 3 | 4 | 4 | 4 | 7 | 8 | | | | | | | | | 6 |
| 20 | 1 | 3 | 4 | 4 | 4 | 7 | 7 | | | | | | | | | |

CONT. SHEET 1A

ISSUE

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

8

PREVIOUS DRAWING NUMBER WAS ED-5A000-12

1N98

COMMON SYSTEMS
ELECTRONIC SWITCHING
BELLPAC TECHNOLOGY
COORDINATE NUMBERING PLAN
FOR LOCATING EQUIPMENT
CENTER LINES, ASSOCIATED
REQUIREMENTS FOR
NUMBERING AND LETTERING

(SUPPLEMENT TO BSP SECTION 800-613)

A.T.&T. CO. RATING

STANDARD

W.E. CO. RATING

STANDARD

ED-4C249-10

WESTERN ELECTRIC COMPANY, INC.

DWG SIZE
1S

40 SHEETS, SHEET 1

SH 12 FIG 3 RMVD, SH 13 FIG 4 CHGD, SH 14 FIG 5 CHGD, SH 15 NOTE 1 CHGD, SH 16 CHGD, SH 17, NOTES 18.1, 18.22, 18.24 & 18.25 CHGD, SH 19 FIG 6 CHGD, SH 20 FIG 7 CHGD, SH 21 FIG 8 CHGD, SH 22 FIG 9 CHGD, SH 23 FIG 9A MD, SHEETS 23A, 23B, 23C, 23D, & 23E, ADDED SH 26 FIG 13 MD, SH 27 FIG 14 CHGD, SH 28 FIG 14B CHGD TO 14A, SH 29 NEW FIG 14B ADDED, SH 30 VIEW-A-A ADDED HDW TBL RMVD.

10-28-80 WE CL:AD

| | | | |
|---------|-----|--|---|
| IMP D/P | MAR | | 7 |
|---------|-----|--|---|

SH 4: DELETE REF TO ED-5A004-12. SHT 7: NOTE 6.4: NEW PIN IDENT EXAMPLES. SHT 13: FIG. 4: EQL WAS MTG. PLT. POS. SHT 14: FIG. WAS 5A. SHT 14A: ADD EX EE. SHT 17: ADD SILVER ALUMINUM FOIL OPTION. SHT 21: TBL DIM. A WAS FROM 5.46 TO 8.46. SHT 23: FIG. 9A IS MD. SHT 23C: ADD FIG. 10B HEADING. ADD NEW SHT 23CA, 23CB, 31, 32. TYPING CORR FIG. 6 & 10A. CHG. INCORPORATE PT ISS 7.1, 7.2, 7.3, 7.4.

8-24-83 A.T. & T. CL:AD W.E. CL:AD

| | | | |
|----|----|--|---|
| AS | WR | | 8 |
|----|----|--|---|

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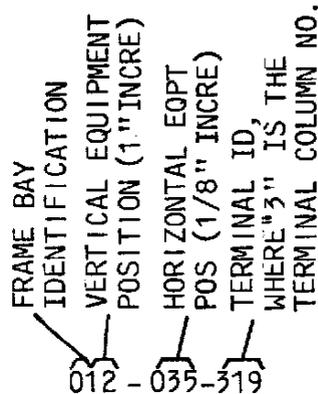
WESTERN ELECTRIC CO., INC.

DWR. SIZE 1S

ED-4C249-10
PRINTED IN U.S.A. SHEET 1A

6.3 EQL ASSIGNMENT

THE EQL IS CONSTRUCTED IN THE FOLLOWING WAY:
FOR EQL'S ON GRID LOCATION



6.4 MULTILAYER AND DOUBLE SIDED BACKPLANE PIN FIELD NUMBERING (FIG. 5)

BELLPAK TECHNOLOGY USES BACKPLANES THAT ARE DOUBLE SIDED PIN-STAKED, VIA DIRECT PIN INSERTION. CONNECTOR PIN FIELDS ARE DEFINED CORRESPONDING TO VARIOUS SIZES OF CONNECTORS (FEMALE) ON THE CIRCUIT PACKS THAT MATE, ON THE EQUIPMENT SIDE, WITH A CERTAIN NUMBER OF PIN COLUMNS. SINGLE PIN FIELD COLUMNS ARE DESIGNATED FOR TERMINAL FIELDS, AS REQUIRED.

A CONNECTOR PIN FIELD MAY BE TWO, FOUR, OR SIX COLUMNS WIDE. A TERMINAL PIN FIELD IS ONLY ONE COLUMN WIDE. TERMINAL PIN FIELDS MAY BE CONTINUOUSLY ADJACENT TO EACH OTHER, AS REQUIRED. TERMINAL PINS ARE ALSO AVAILABLE WITHIN CERTAIN CONNECTOR PIN FIELDS, ON THE BOTTOM, ON TOP, AND IN THE MIDDLE OF SUCH FIELDS.

PIN NUMBERING PROCEEDS FROM A UNIT FRONT (CIRCUIT PACK) VIEW. THE PIN FIELD VERTICAL EQL (1" INCREMENTS) IS THE VERTICAL CENTER OF THIS FIELD, AND IT CORRESPONDS TO THE VERTICAL CENTER OF THE RELATED CP APPARATUS MOUNTING. THE HORIZONTAL PIN FIELD EQL (1/8" INCREMENTS) IS THE EQL IMMEDIATELY TO THE RIGHT OF THE "0" COLUMN OF THAT FIELD. CONNECTOR PIN FIELD COLUMN NUMBERS START WITH "0" AND INCREASE SEQUENTIALLY, LEFT TO RIGHT. TERMINAL PIN FIELD COLUMN IS ALWAYS 0. (CONSEQUENTLY, THE EQL CENTER LINE FOR A TERMINAL PIN FIELD COLUMN WILL RESIDE OUTSIDE, TO THE RIGHT, OF THIS SINGLE COLUMN FIELD).

VERTICAL PIN NUMBERING STARTS, FROM THE BOTTOM OF THE FIELD (AT BOTTOM OF APP HSG) WITH B0, B1, AND THEN 00 SEQUENTIALLY, NUMERICALLY TO THE GIVEN PIN FIELD HEIGHT.

| | | | | | | | | | | | | | | | |
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| ISSUE | 1 | 3 | | | | | | | | | | WESTERN ELECTRIC CO., INC. | DWG. SIZE | 1S | ED-4C249-10 |
| | | | | | | | | | | | | | | | PRINTED IN U.S.A. SHEET 6 |

9. BACKPLANE CONNECTOR CABLE ASSEMBLIES SHALL BE STAMPED AS SHOWN IN FIG.10 IN ACCORDANCE WITH BSP 800 613 150.
10. POWER SWITCH REFERENCE DESIGNATIONS SHALL BE STAMPED AS SHOWN IN FIG.11 IN ACCORDANCE WITH BSP 800 613 150.
11. FRAME BASE COVER STAMPING SHALL BE STAMPED AS SHOWN IN FIG.12 IN ACCORDANCE WITH BSP 800 613 150 AND BSP 800 613 161.

| | | | | | | | | | | | | | | |
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| ISSUE | 1 | 3 | | | | | | | | | WESTERN ELECTRIC CO.,INC. | DWG. SIZE | 1S | ED-4C249-10 |
| | | | | | | | | | | | | | | PRINTED IN U.S.A. SHEET 8 |

COMPONENTS RESIDING IN BELLPAC TECHN BACKPLANES ARE LOCATED PER LOWER RIGHTMOST PIN MATING WITH SUCH COMPONENT FROM A UNIT FRONT VIEW. THIS TRANSLATES TO LOWER LEFTMOST PIN ON THE WIRING SIDE. THE EQL OF THE LOCATING PIN IS THAT OF ITS FIELD. THE EQL OF A COMPONENT IS THAT OF ITS LOCATING PIN.

BELLPAC APPARATUS MOUNTING EXTEND ON THEIR ENDS OVER TWO PIN ROW POSITIONS, WHERE NO PINS ARE MOUNTED. THE FIG. 5A EXAMPLES ARE LOCATED AS FOLLOWS: (LET BAY=B, AND PIN FIELD VERT EQL = YY)

A: BYY - 016 - 200

B: BYY - 014 - 032

BELLPAC BACKPLANE CONNECTORS CAN EXIST IN DIFFERENT SIZES AND ARE LOCATED ON THE BACKPLANE WIRING SIDE, PER LOWER LEFTMOST PIN. FIGURE 5A EXAMPLES ARE LOCATED AS FOLLOWS:

C: BYY - 016 - 000

D: BYY - 016 - 204

E: BYY - 014 - 047

EE: BYY - 023 - 032 *HOR MTD BACK PL CONN LOC PER UPPER LEFT MOST PIN.

BELLPAC PWR LUG ASSEMBLIES ARE LOCATED, ON THE BACKPLANE WIRING SIDE, PER LOWER LEFTMOST PIN, PLUS THEY REQUIRE A PICTORIAL DETAIL OF THEIR MOUNTING ORIENTATION. FIG. 5A EXAMPLES ARE LOCATED AS FOLLOWS:

F:  BYY - 023 - 080

G:  BYY - 007 - 051

H&J:  H: BYY - 022 - 057

J: BYY - 016 - 357

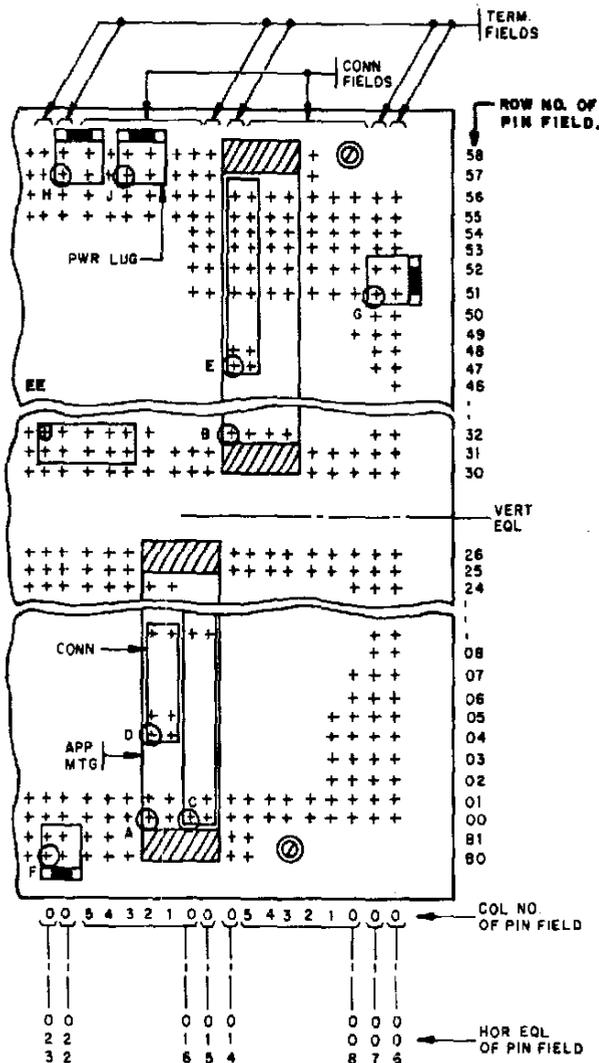


FIG. 5A

TYPICAL PLACEMENT OF BELLPAC TECHN COMPONENTS ON REAR (WIRING) SIDE OF 8" MLPWB

NOTE:

YY-VERTICAL EQL'S ON ONE INCH INCREMENTS

HORIZONTAL EQL'S ARE ON 1/8" INCREMENTS

ISSUE

8

ENGR

DRAWN

TITLE

PLACEMENT OF BELLPAC COMPONENTS

ED-4C249-10

SHEET 14A

11. LEVEL NUMBERS MAY BE HOT STAMPED ON THE DESIGNATION STRIP PER THE UNIT EQUIPMENT DRAWING WHEN THE DESIGNATION STRIP IS UNIQUE AND MOUNTS IN ONLY ONE POSITION. IF THE DESIGNATION STRIP IS USED ON MORE THAN ONE POSITION OR THE UNIT IS MOUNTED IN VARIOUS FRAME LOCATIONS, THE LEVEL NUMBER MAY BE INK STAMPED PER A MANUFACTURING NOTE ON THE UNIT OR FRAME EQUIPMENT DRAWING RESPECTIVELY.

GENERAL NOTES FOR DESIGNATION STRIPS (CONTINUED)

12. RESERVED

13. RESERVED

14. POWER MODULES SHALL BE IDENTIFIED AS FOLLOWS:

2ND LINE: "+3V DC - DC CONV"

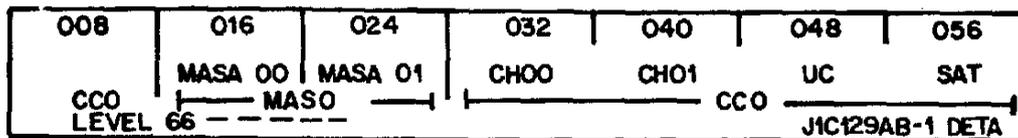
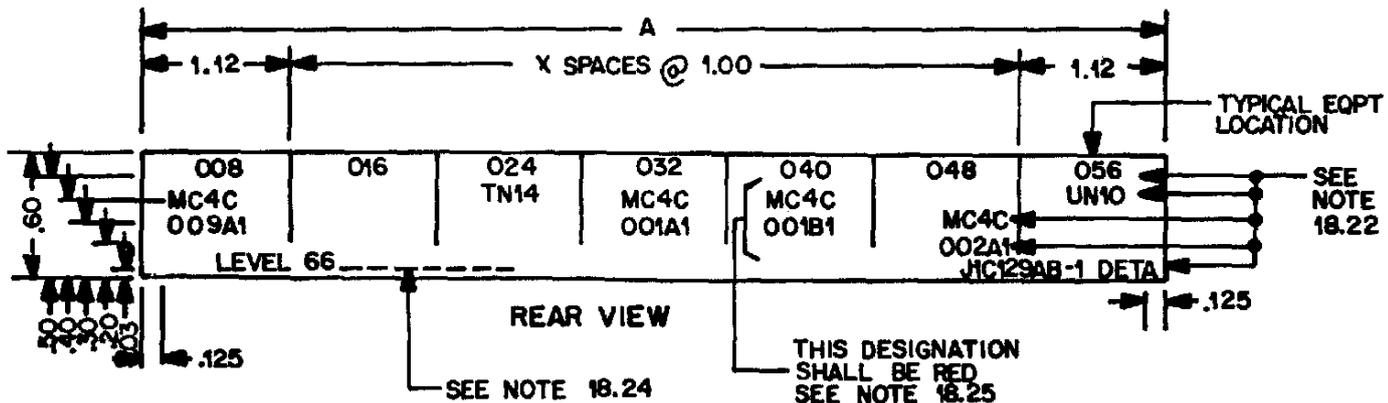
3RD LINE: "J87369F-1,L1"

SEE FIG. 9B FOR EXAMPLE

15. RESERVED

16. RESERVED

| | | | | | | | | | | | | | |
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| ISSUE | 1 | 3 | 7 | | | | | | | WESTERN ELECTRIC CO.,INC. | DWG. SIZE | 1S | ED-4C249-10 |
| | | | | | | | | | | | | | PRINTED IN U.S.A. SHEET 16 |



TYPICAL ADHESIVE BACKED, PHOTSENSITIVE, ANODIZED ALUMINUM DESIGNATION LABEL, TO BE MOUNTED ON 140 TYPE DESIGNATION STRIPS.

FIG. 6

TYPICAL EQUIPMENT LOCATION (NOTE 11)

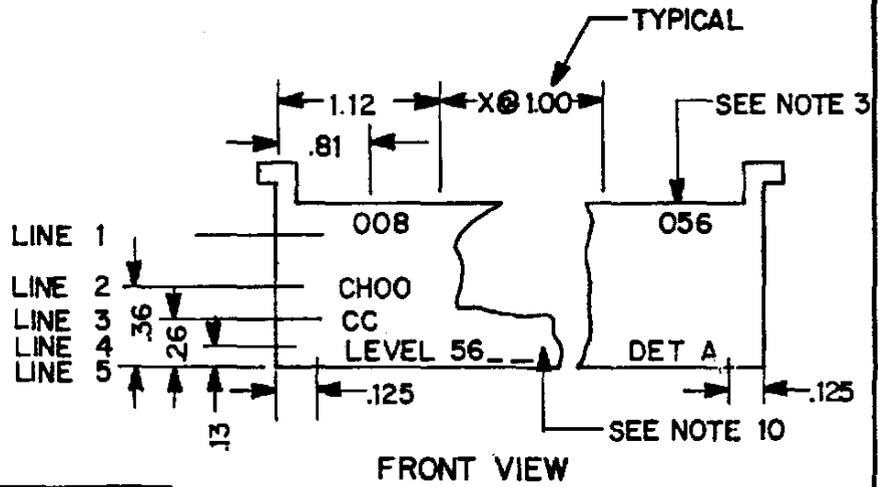
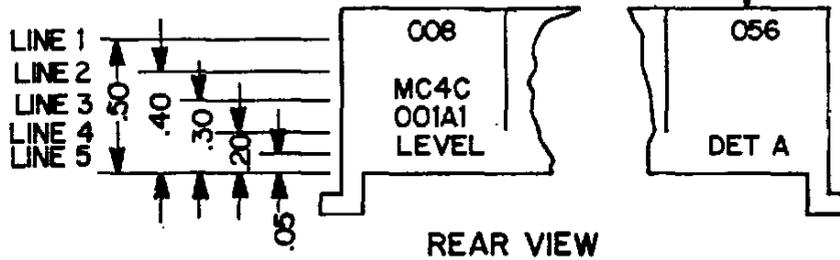


FIG. 8

| DESIG STRIP | COLOR | A DIM |
|-------------|-------|-------|
| 140A | GRAY | 5.25 |
| 140B | GRAY | 6.25 |
| 140C | GRAY | 7.25 |
| 140D | GRAY | 8.25 |
| 140E | WHITE | 5.25 |
| 140F | WHITE | 6.25 |
| 140G | WHITE | 7.25 |
| 140H | WHITE | 8.25 |
| 151 A | WHITE | 2246 |
| 151 B | WHITE | 17.04 |

(MFR DISC)

| | | | | | | |
|----------|------|------|-------|-------|------------|------|
| 008 | 016 | 024 | 032 | 040 | 048 | 056 |
| MC4C | TN14 | TN14 | MC4C | MC4C | MC4C | UN10 |
| 009A1 | | | 001A1 | 001B1 | G02A1 | |
| LEVEL 66 | | | | | JIC129AB-1 | DETA |

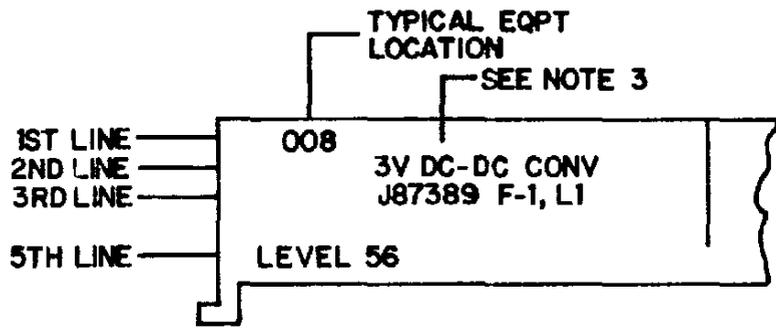
REAR VIEW

| | | | | | | |
|----------|---------|---------|------|------|-----|-----|
| 008 | 016 | 024 | 032 | 040 | 048 | 056 |
| CCO | MASA 00 | MASA 01 | CH00 | CH01 | UC | SAT |
| LEVEL 66 | MASO | | CCO | | | |

FRONT VIEW

TYPICAL ASSY OF DESIG LABEL AND 140
TYPE DESIG STRIP (NOTES 18.44 AND
18.45)

FIG. 9



TYPICAL POWER MODULE STAMPING
ON 140 TYPE DESIGNATION STRIP

FIG. 9B

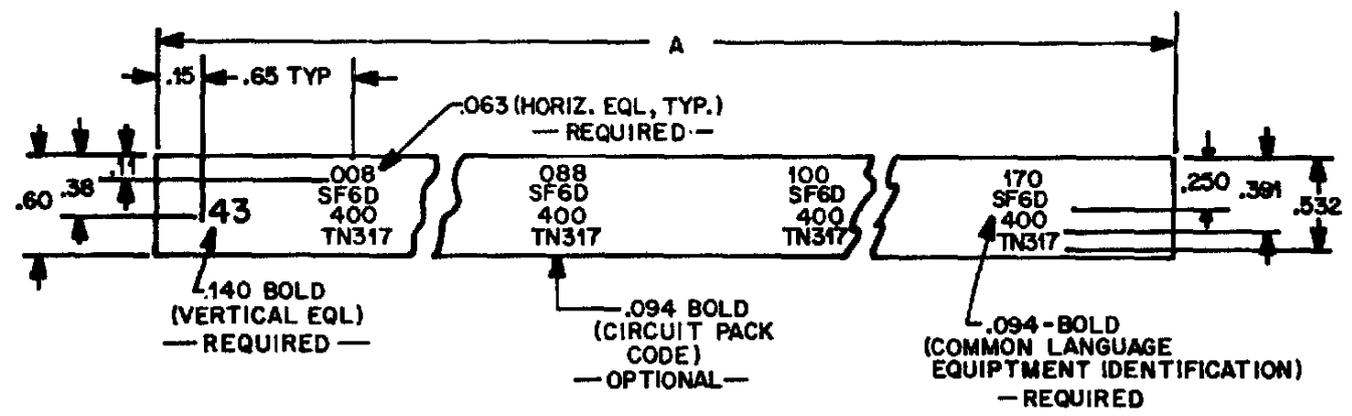


FIG. 9D
 TYPICAL REAR LABEL
 FOR 151 TYPE
 DESIGNATION STRIP

NOTES

1. ALL CHARACTERS SHALL BE BLACK HELVETICA CONDENSED, EITHER STANDARD OR BOLD AS SPECIFIED AND SIZE AS INDICATED.
2. MATERIAL SHALL BE PLASTIC PER KS-20207, L1 WITH PRESSURE SENSITIVE ADHESIVE AND RELEASE LINER. BACKGROUND SHALL BE WHITE.
3. DIMENSIONAL TOLERANCE $\pm .01$
4. MAXIMUM 6 CHARACTERS PER LINE.

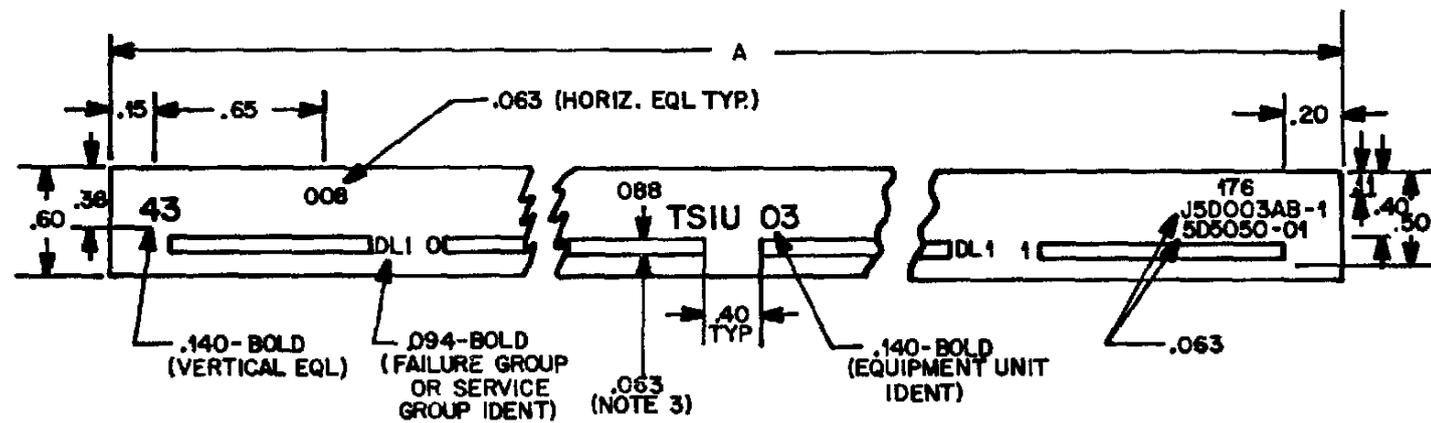
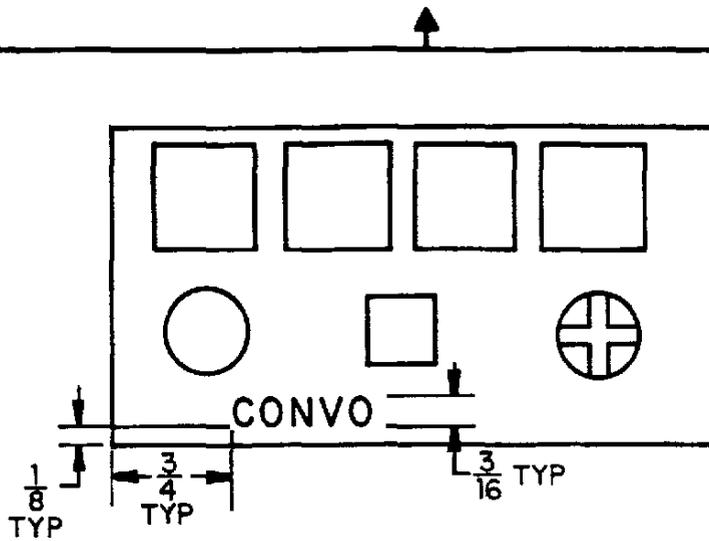


FIG 9C

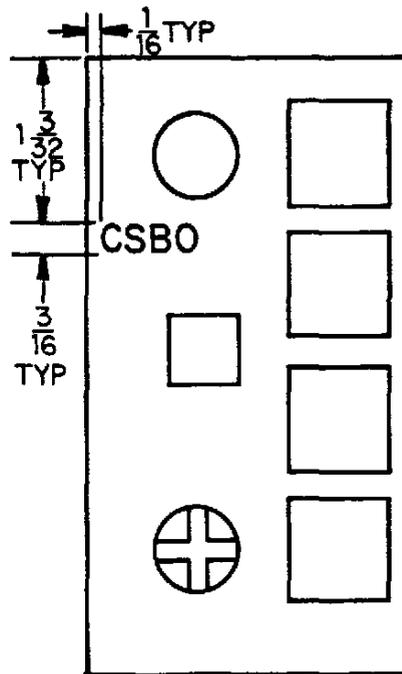
TYPICAL FRONT LABEL
FOR 151 TYPE DESIGNATION
STRIP LABEL

NOTES

1. ALL CHARACTERS SHALL BE BLACK HELVETICA CONDENSED, EITHER STANDARD OR BOLD AS SPECIFIED AND SIZE AS INDICATED.
2. MATERIAL SHALL BE PLASTIC PER KS-20207, L1 WITH PRESSURE SENSITIVE ADHESIVE AND RELEASE LINER. BACKGROUND SHALL BE WHITE.
3. HORIZONTAL BAR SHALL BE SOLID BLACK UNLESS OTHERWISE SPECIFIED.
4. DIMENSION TOLERANCE $\pm .01$.



FRONT VIEW OF POWER SWITCH FOR HORIZONTAL MOUNTING



FRONT VIEW OF POWER SWITCH FOR VERTICAL MOUNTING

FIG. 11

TYPICAL STAMPING OF REFERENCE DESIGNATIONS ON POWER SWITCHES

| | | | | | | | | | | | | | |
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| ISSUE | 1 | 3 | | | | | | | | | WESTERN ELECTRIC CO., INC. | DWG. SIZE | ED-4C249-10 |
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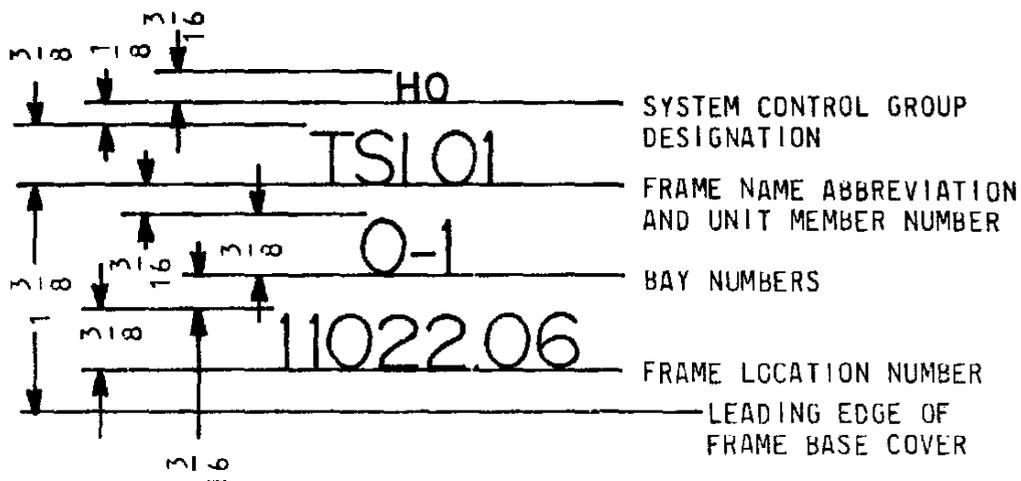


FIG. 12

TYPICAL STAMPING ON TOP SURFACE OF FRAME BASE COVER

NOTE: IF SPECIFIC FRAME DESIGNS DO NOT REQUIRE ALL LINES OF STAMPING SHOWN ABOVE, THE REQUIRED LINES OF STAMPING SHALL BE STAMPED IN THE POSITIONS SHOWN. SPECIFIC FRAME STAMPING INFORMATION SHALL BE OBTAINED FROM FLOOR PLAN LAYOUTS.

| | | | | | | | | | | | | | | | | |
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| ISSUE | 1 | 3 | | | | | | | | | WESTERN ELECTRIC CO., INC. | DWG. SIZE | 1S | ED-4C249-10 | PRINTED IN U.S.A. | SHEET 25 |
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NOTES:

1. 5/64 HIGH CHARACTERS
MAX. OF FIVE, ALL CHARACTERS
BLACK, HOT STAMPED UNLESS
OTHERWISE INDICATED.
2. 5/64 HIGH CHARACTERS ALL RED.
3. XXXXXX
 - YEAR OF RETURN
 - LOCATION
 - RETURN LOCATION
 - MONTH OF RETURN
 LOCATION 5/64 HIGH CHARACTERS
BLACK
4. IF NO FIRMWARE IS USED ON PACK,
THE TAB SHOULD BE STAMPED WITH
THE APPARATUS CODE INFORMATION,
SIMILAR TO THE LATCH.
5. ALL PLUG IN UNITS SHALL HAVE
BAR CODE LABEL APPLIED AS
SHOWN BELOW IN FRONT VIEW.

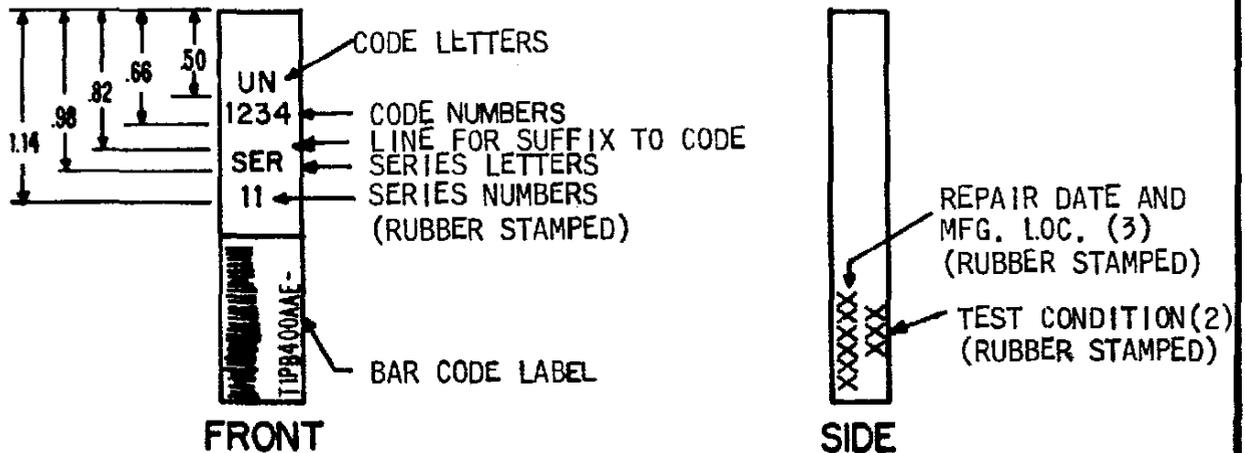
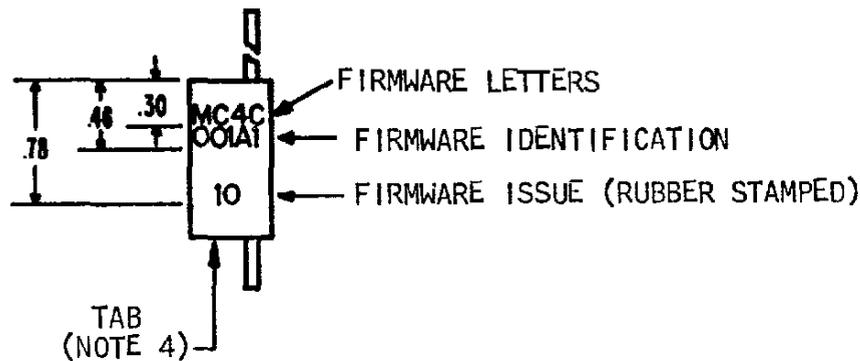
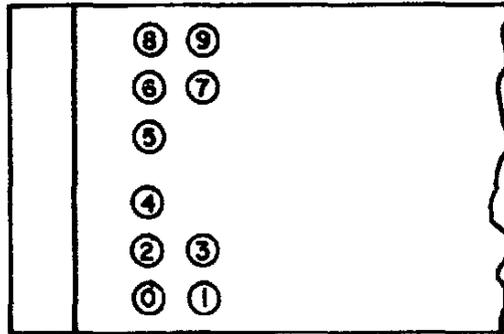


FIG. 13 MD

| | | | | |
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| ISSUE | 7 | ENGR | TITLE | ED-4C249-10 |
| | | DRAWN | CIRCUIT PACK IDENTIFICATION | SHEET 26 |

TYPICAL NUMBERING SCHEME FOR DETERMINING
THE LOCATION OF 843057654 KEY PIN FOR
BACKPLANE ASSEMBLIES.



HOLE NUMBERS

FIG 14

NOTE: KEY PIN PLACEMENT IS DEFINED BY THE FOLLOWING
INFORMATION:

1. APP HSG LOCATION
2. KEY BLOCK TYPE (A, B OR OTHER)
3. KEY BLOCK POSITION (FIG 14B)
4. KEY CODE (FIG 14A)

| | | | | | | | | | |
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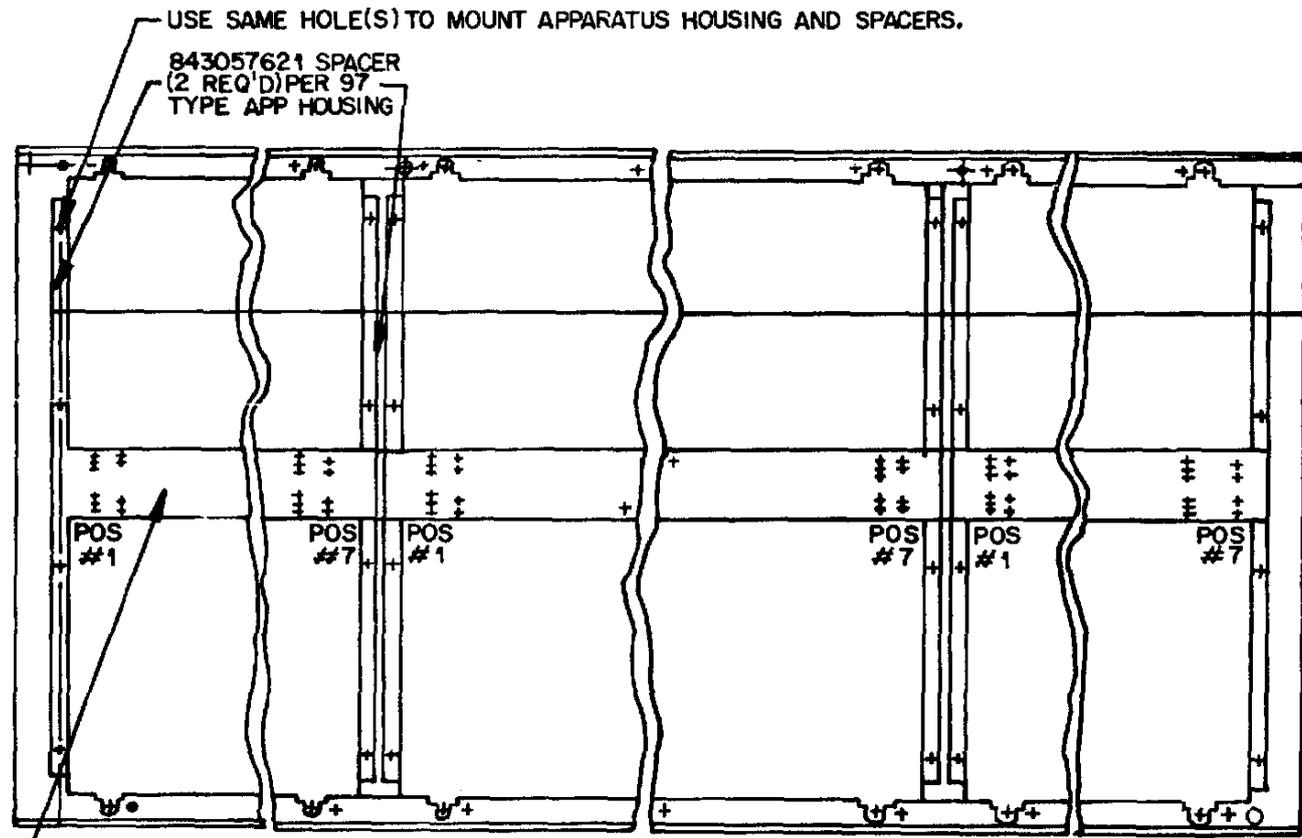
ISSUE 8

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DWG. SIZE 1S

ED-4C249-10

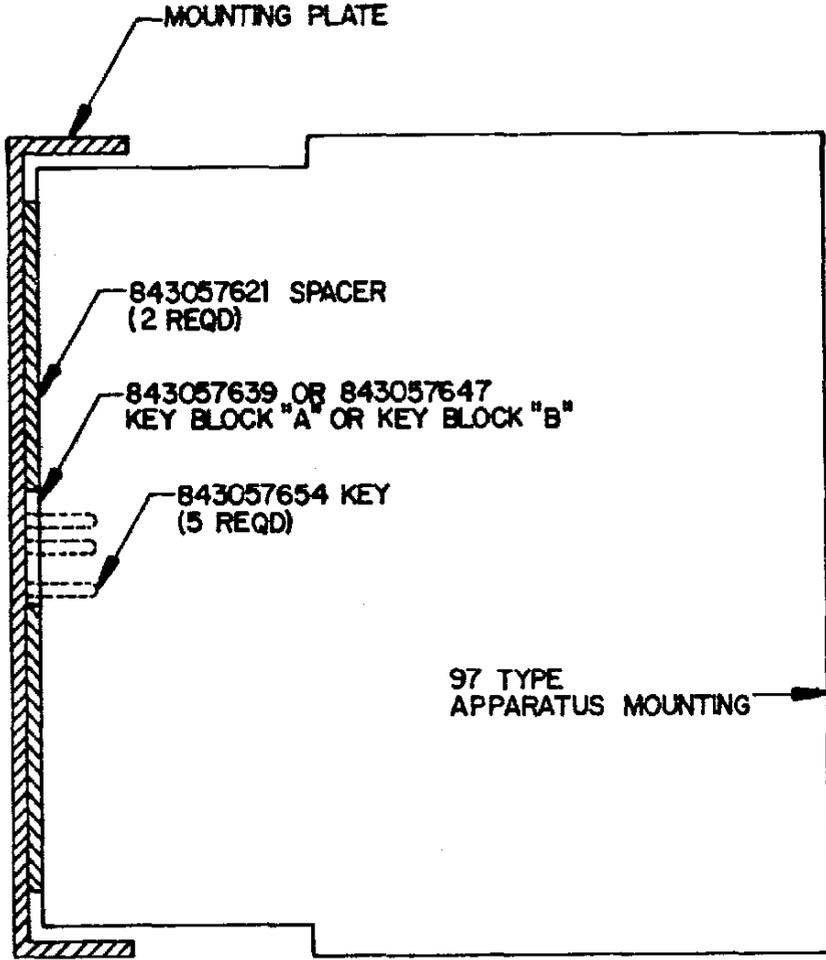
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KEY BLOCK (POSITIONS WHEN ORIENTED AS SHOWN) (! REQUIRED PER 97 TYPE APP. HSG).

- NOTE 1. TO MOUNT 843057621 SPACERS AND 97D APP HSG USE 840058341 SCREWS.
2. TO MOUNT 843057621 SPACERS AND 97J APP HSG USE 840058309 SCREW.
3. BEFORE INSTALLING THE KEY BLOCK THE CENTER RIB OF THE MOUNTING PLATE SHOULD BE INSPECTED TO INSURE THAT THERE ARE NO BACKPLANE SCREWS PROTRUDING MORE THAN .020 INCHES.

FIG. 14B



VIEW A-A
 SIDE VIEW
 TYPICAL PLACEMENT OF KEYING HARDWARE

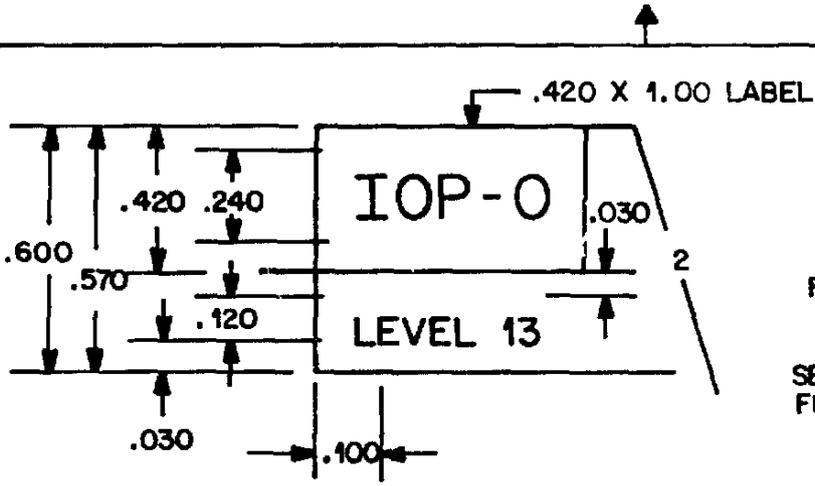
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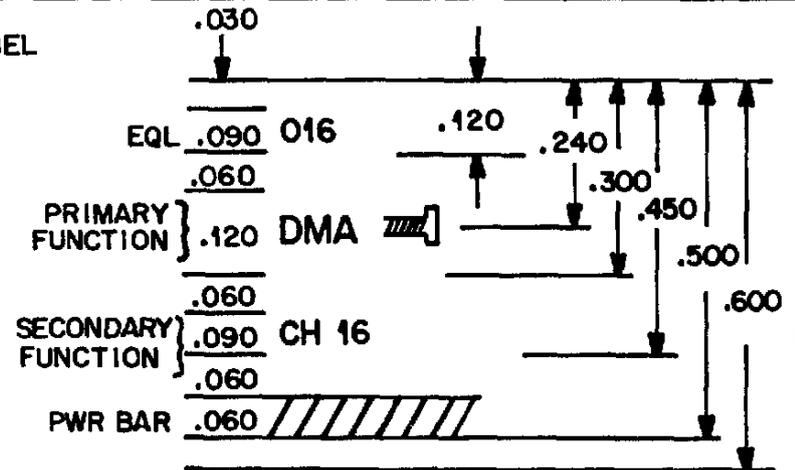
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 ED-4C249-10
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 SHEET 31



UNIT IDENT LABEL
 AND LEVEL
 FIG. 15A



TYPE A
 PRIMARY & SECONDARY FUNCTION
 FIG. 15B

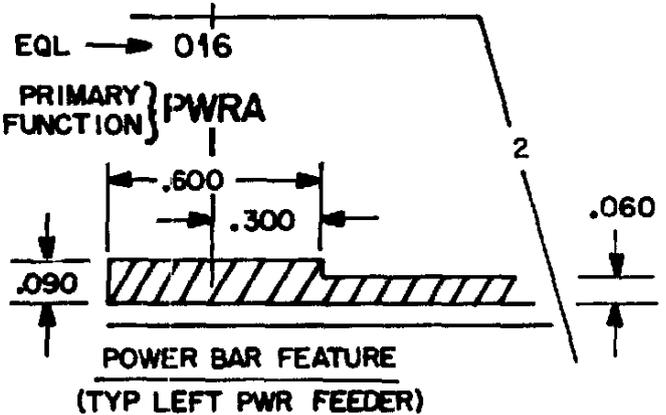


FIG. 15C

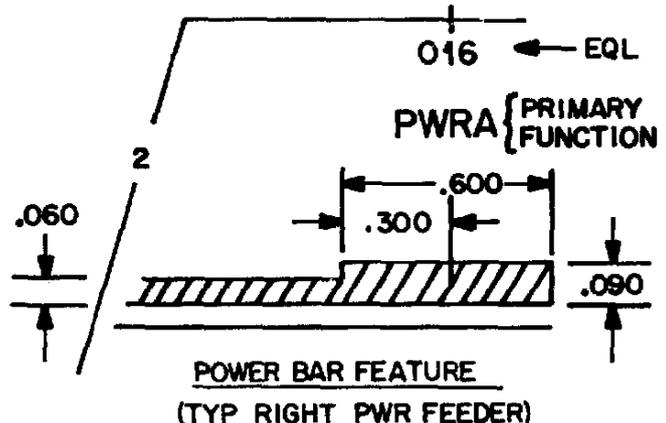
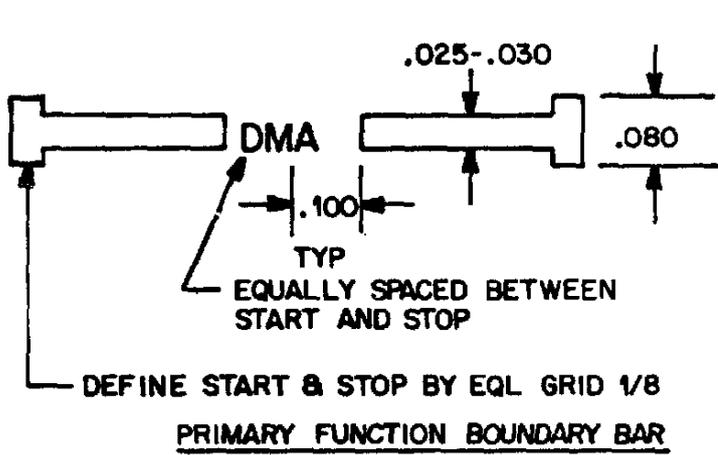
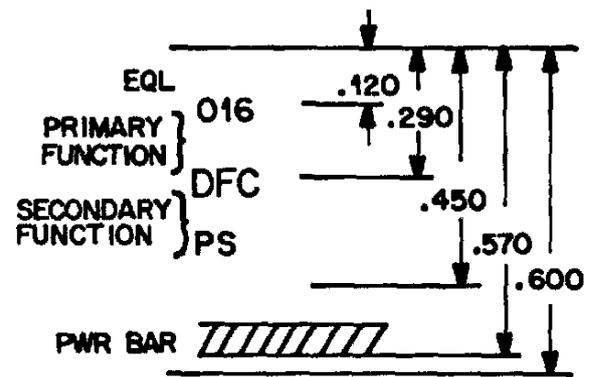
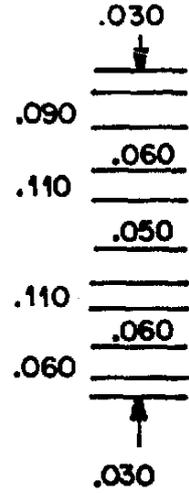


FIG. 15D

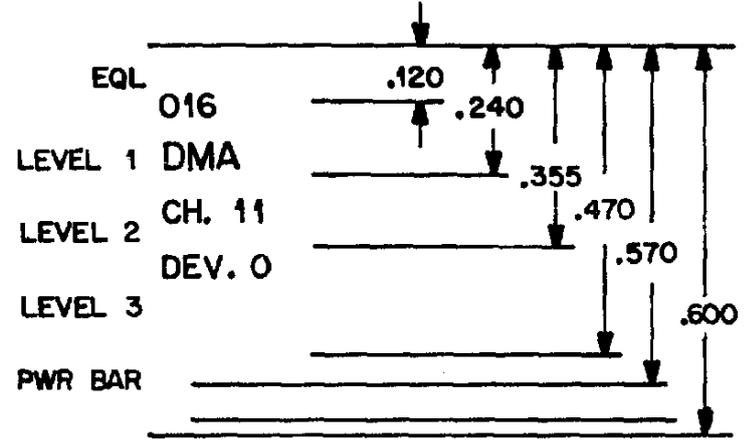
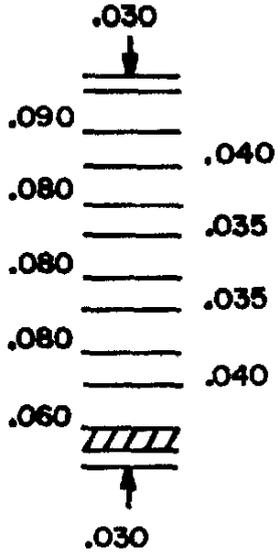
SHEET NOTE: 3B20S PROC MOD 2 LABELS AND DESIGNATIONS ARE PER NO. 15 FIGURES.



FEATURES
FIG. 15E



TYPE B
PRIMARY & SECONDARY FUNCTIONS
FIG. 15G



TYPE C
FIG. 15H