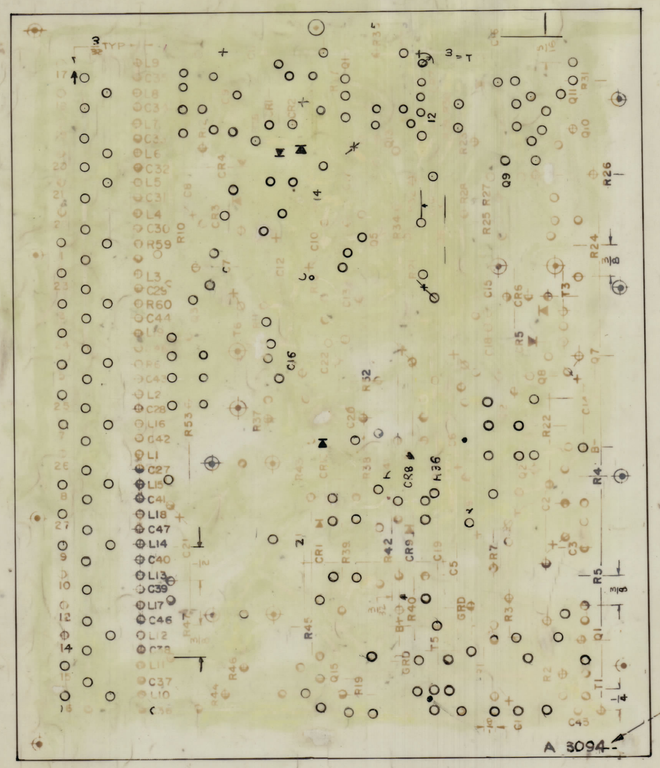



NOTES:

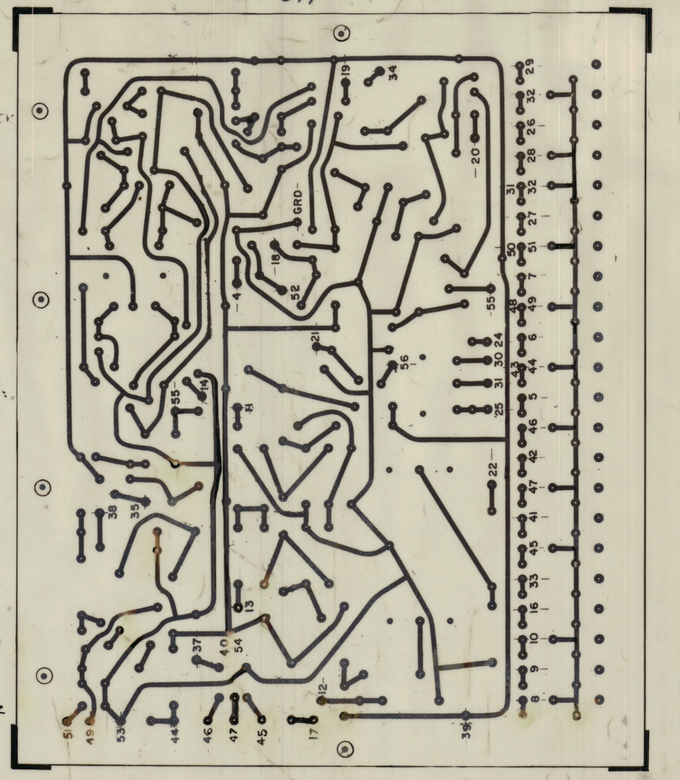
MARKING PROCESS:
AS PER TMC SPEC S-727

LETTERING: 3/32 HIGH BLACK
LOCATED AS SHOWN

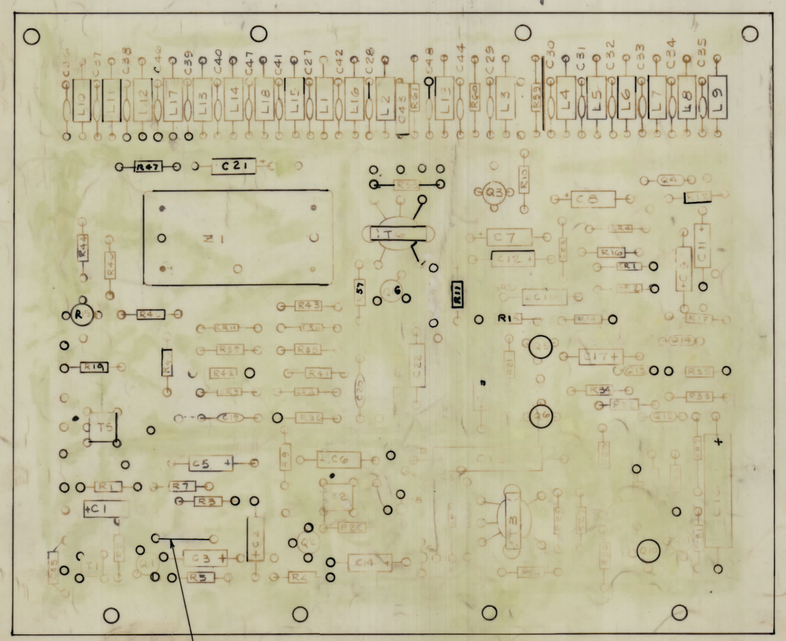
COMPONENT SIDE

TMC PART NO.
STAMPED AS SHOWN
WITH LATEST REV. LETTER

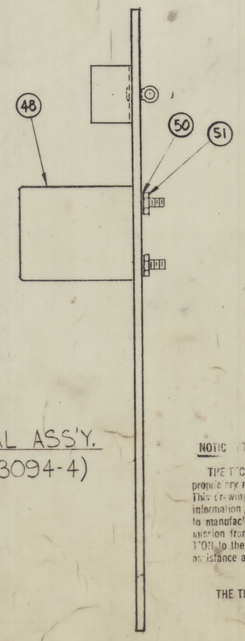
LETTERING
(A 3094-2)



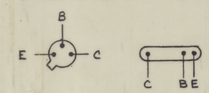
PRINTED CIRCUIT SIDE




FINAL ASS'Y.
(A 3094-4)




TRANSISTOR IDENTIFICATION




| REVISIONS | | | | | | | |
|---|---|---|---|---|---|---|---|
| ZONE | SYM | DESCRIPTION | DATE | E.M.N. NO. | DRAFT | CHK'D | APP'D |
| 2 TO 5 | B | ITEM(6) WAS ZN1830-231, ITEM(7) QTY. WAS 15. CHANGED POSITION OF C45 UNDER ITEM(6) AND 256", PICTORIAL CLARIFIED | 3-21-63 | 8516 | RC | | |
| B-2 | C | ITEM(3) WAS CM30B391K | 4-16-63 | 8887 | RC | | |
| — | D | DELETED ITEM(40) ADDED ITEM(57). ITEM(5) QTY. WAS(8) SYM C4 REMOVED. ITEM(11) SYM (C68) WAS (C66), ITEM(12) (C64) WAS (C63). ADDED DESCRIPTION TO ITEM(20). ITEM(23) QTY. WAS(16) REMOVED SYM (R26). ITEM(24) R7 WAS (25) R26 WAS R7. ITEM(39) WAS RC20GF393J, (50) WAS LWI06L, BN; IN PICT. REMOVED (R & R) & (C & L) LETTERING & ADDED PRINTED CIRCUIT CAPTIONS TO AGREE W/SPEC. | 7-31-63 | 9611 | AK. | | |
| 1 | E | ITEMS 54,55,56 DELETED, REPLACED BY REF TO SHEET 2 | 8-20-63 | 9751 | AK. | | |
| — | F | IT. 8 WAS CM30B330K, IT 18 WAS 2N2018, IT 19 W. 2N1129 IT. 23 REQ WAS 154 SYM R61 DELE, IT. 36 REQ WAS 18 SYM R61 ADD | 8-12-64 | 10586 | MB | | |
| — | G | SEE SHEET 2 OF 2 REV. "G". | 3-25-65 | 13403 | JF | | |
| — | H | IT 45 WAS - TF-246-6X | 9/16/65 | 14748 | AKK | | |
| — | J | IT. 57 WAS RC20GF331J. IN DENT DOTS T2 AND T5 RELOCATED. CONN. FT 12 THRU NO DELE. LETTERING ON 6T RELOCATED & RE-DELETED | 8/31/66 | 16439 | A.K.K. | | |
| — | K | DELETED ITEM 39 "R50" | 3-21-66 | 15961 | HLR | | |
| — | L | IT. 1 THRU 7 IS CE105-X-25 WAS CE105-X-15 | 6-9-66 | 16357 | BB | | |
| F5 | M | ADDED "B" HOLE TO BUS STRIP CONNECTION (SEE SH 2) | 3-16-67 | 17978 | L.A.K. | | |

| | | | | |
|---|---|---|---|---|
| 19 | 41 | CL-240-120 | COIL, R.F. FIXED | L1, 18, L4, 3, 19, 2, L9, 8, 7, 6, 5, L17, 12, 11, 10, L16, 15, 14, 13 |
| | 40 | DELETED | | |
| | 39 | DELETED | | |
| 1 | 38 | RC20GF821J | RESISTOR, FIXED | R53 |
| 1 | 37 | RC20GF104J | RESISTOR, FIXED | R2 |
| 2 | 36 | RC20GF680J | RESISTOR, FIXED | R60, R61 |
| 2 | 35 | RC20GF271J | RESISTOR, FIXED | R46, R47 |
| 2 | 34 | RC20GF181J | RESISTOR, FIXED | R38, R39 |
| 1 | 33 | RC20GF152J | RESISTOR, FIXED | R32 |
| 1 | 32 | RC20GF561J | RESISTOR, FIXED | R31 |
| 1 | 31 | RC20GF470J | RESISTOR, FIXED | R22 |
| 1 | 30 | RC20GF272J | RESISTOR, FIXED | R1 |
| 2 | 29 | RC20GF473J | RESISTOR, FIXED | R28, R19 |
| 1 | 28 | RC20GF273J | RESISTOR, FIXED | R17 |
| 2 | 27 | RC20GF102J | RESISTOR, FIXED | R25, R52 |
| 8 | 26 | RC20GF472J | RESISTOR, FIXED | R40, R45 R50, R12, R37, R9, R23, R24 |
| 1 | 25 | RC20GF222J | RESISTOR, | R26 |
| 4 | 24 | RC20GF223J | RESISTOR, FIXED | R7, R11, R18, R27 |
| 14 | 23 | RC20GF103J | RESISTOR, FIXED | R44, R59, R43, R42, R41, R16, R21, R36, R10, R14, R35, R33, R29, R5 |
| 1 | 22 | RC20GF474J | RESISTOR, FIXED | R34 |
| 1 | 21 | RC20GF681J | RESISTOR, FIXED | R3 |
| 1 | 20 | RC20GF122J | RESISTOR, FIXED | R4 |
| 2 | 19 | 2N1194 | TRANSISTOR, | Q6, Q16 |
| 2 | 18 | 2N1190 | TRANSISTOR, | Q7, Q8 |
| 4 | 17 | 2N 213A | TRANSISTOR, | Q14, Q4 Q12, Q13 |
| 8 | 16 | 2N1370-7 | TRANSISTOR, | Q15 Q5, Q9 Q11, Q3 Q1, Q2, Q10 |
| 3 | 15 | IN60A | DIODE, SEMICONDUCTOR DEVICE | CR5, 6, 7 |
| 8 | 14 | IN34A | DIODE, SEMICONDUCTOR DEVICE | CR8, 9, 10, 11 CR1, 2, 3, 4, |
| 1 | 13 | CC-100-36 | CAPACITOR, DISC | C19 |
| 1 | 12 | CC-100-15 | CAPACITOR, DISC | C44 |
| 2 | 11 | CC-100-28 | CAPACITOR, DISC | C18, C20 |
| 19 | 10 | CC-100-9 | CAPACITOR, DISC | C47, C48, C28, C27 C31, C30, C29 C34, C33, C32 C39, C36, C37 C38, C39, C46 C40, C41, C42 |
| 1 | 9 | CM20B391K | CAPACITOR, MICA | C45 |
| 1 | 8 | CM15B330K | CAPACITOR, MICA | C43 |
| 2 | 7 | CE-105-200-25 | CAPACITOR, ELECTROLYTIC | C15, C16 |
| 2 | 6 | CE-105-50-25 | CAPACITOR, ELECTROLYTIC | C2, C5 |
| 2 | 5 | CE-105-30-25 | CAPACITOR, ELECTROLYTIC | C7, C8 |
| 1 | 4 | CE-105-100-25 | CAPACITOR, ELECTROLYTIC | C13 |
| 1 | 3 | CE-105-10-25 | CAPACITOR, ELECTROLYTIC | C14 |
| 1 | 2 | CE-105-5-25 | CAPACITOR, ELECTROLYTIC | C17 |
| 3 | 1 | CE-105-3-25 | CAPACITOR, ELECTROLYTIC | C1, C3, C6, C9, C10 C11, C12, C21 |
| REQ'D. | ITEM | PART NUMBER | DESCRIPTION | SYMBOL |

| | | | | |
|---|---|---|---|---|
| | 57 | WL100-7 | WIRE, ELEC. BUSS | |
| | 56 | SEE SHEET 2 | | |
| | 55 | SEE SHEET 2 | | |
| | 54 | SEE SHEET 2 | | |
| | 53 | SEE SHEET 2 | | |
| | 52 | SEE SHEET 2 | | |
| 4 | 51 | NTH0632BN8 | NUT, HEX | |
| 4 | 50 | LWI06MRN | LOCKWASHER, INTERNAL | |
| | 49 | BS-100 | SOLDER, SOFT | |
| 1 | 48 | FX-181 | FILTER AUDIO | Z1 |
| 1 | 47 | TF-247 | TRANSFORMER, OUTPUT | T6 |
| 1 | 46 | TF-246-17X | TRANSFORMER, INPUT | T5 |
| 1 | 45 | TF-334-1 | TRANSFORMER HIGH | T1 |
| 1 | 44 | TF-248 | TRANSFORMER, INT. AUDIO | T3 |
| 1 | 43 | TF-246-4X | TRANSFORME, P.P. INPUT | T2 |
| 1 | 42 | CE-107-1 | CAPACITOR | C22 |
| REQ'D | ITEM | PART NUMBER | DESCRIPTION | SYMBOL |

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THE TECHNICAL MATERIEL CORPORATION
MAMARONECK, NEW YORK

NOTES

STRUMER — LIST OF MATERIAL

MATERIAL

FINISH

THE TECHNICAL MATERIEL CORP
MAMARONECK, NEW YORK

TITLE: PRINTED CIRCUIT BOARD & COMPONENTS

| QTY/UNIT | MODEL USED ON | ASS'Y. NO. |
|---|---|---|
| 1 | SPU-2 | |

SCALE: FULL — CODE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY TREATED OR PLATED FINISHES

TOLERANCES: FRACTIONS ± 1/64; ANGLES ± 0° 30'; .XX ± .01; .XXX ± .005

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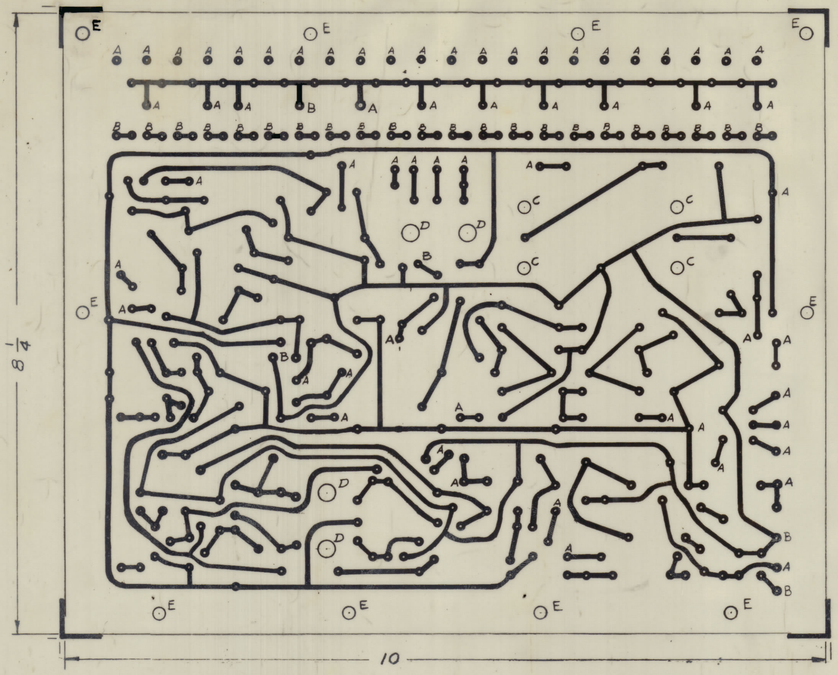
| | | | |
|---|---|---|---|
| DRAWN | TR | DATE 12-9-62 | FINAL APPROVAL |
| CHECKED | | DATE 12-11-62 | DATE |
| ELECT. ENG. | | DATE 12-12-62 | A 3094 M |
| MECH. ENG. | | DATE 12-12-62 | SHEET 1 OF 2 |

A-3094 M




MACHINING (A 3094-1)

## HOLE & PAD SPECS

| HOLE | DIAMETER .059 DIA (SEE NOTE 2) - | PAD DIA. | REQ'D |
|---|---|---|---|
| UNMARKED | | .120 | 272 |
| A | .093 DIA. | .120 | 61 |
| B | .073 DIA. | .156 | 27 |
| C | 5/32 DIA. | NONE | 4 |
| D | 7/32 DIA. | NONE | 4 |
| E | 3/16 DIA. | NONE | 10 |

## OTHER SPECIFICATIONS

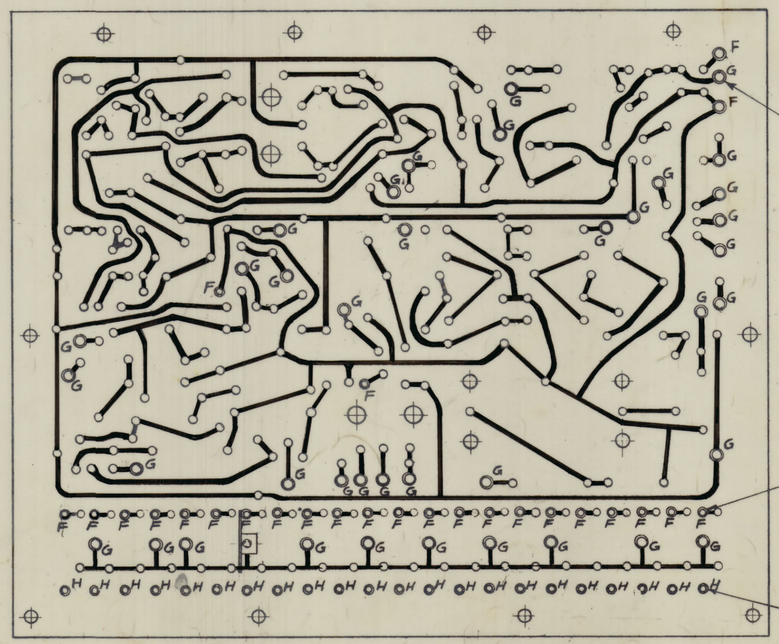
CONDUCTOR:
NOMINAL WIDTH: .062
MIN. WIDTH: .040
MIN. SPACING: .031
NO FILLETS REQ'D
COPPER FOIL: 2 OUNCES - ONE SIDE
PLATING:
MIN. THICKNESS: .0008 TIN LEA.
ALL CONDUCTORS
BASE MATERIAL:
EPOXY G-10 3/32 THICK

NOTE: 1-LETTER DESIGNATIONS AS SHOWN ON CIRCUIT DENOTE HOLE SIZES; DO NOT PRINT

2- HOLES ARE TO BE "PLATED-THRU" AND HAVE A MINIMUM COPPER PLATING THICKNESS OF .0015 AT ANY POINT WITHIN THE HOLE. THE SOLDER-PLATE THICKNESS MUST BE A MINIMUM OF .0008 AT ANY POINT WITHIN THE HOLE PER TMC SPEC # S-735
THE FINISHED DIA. OF THE PLATED HOLE MUST BE A MINIMUM OF .050.

## REVISIONS

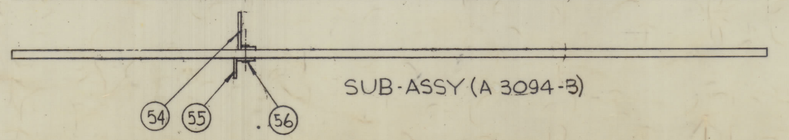
| ZONE | SYM | DESCRIPTION | DATE | E.M.N. NO. | DRAFT | CHKD | APPD |
|---|---|---|---|---|---|---|---|
| G4 F8 | A | LEGEND, 'A' WAS 63; 'B' WAS 24, 276 WAS 279 A-3094-1 CLARIFIED; SEE SHEET 1 OF 2 REVISION A | 2-7-63 | 9203 | | | |
| A3, G4 | B | ITEM 52 QTY WAS 64, ITEM 53 QTY WAS 24, 4 HOLES WERE SPEC. 'D' WAS 24 PICTORIAL CORRECTED; ITEM 16 WAS 2W 370-231; C45 DELETED, IN ITEM 24 WAS 15 REQ'D | 3-19-63 | 8516 | | | |
| A2 | C | ITEM (52) WAS TE-127-5-B | 4-26-63 | 8887 | | | |
| E2, E8, F3, G5 | D | LEADS REMOVED & RELOCATED. UNMARKED HOLES WERE (276) REQ'D. | 7-31-63 | 9611 | AK | | |
| A8 | E | ON PICT & BUILD-UP ITEMS 54, 55 & 56 ADDED | 8-20-63 | 9751 | AK | | |
| — | F | FOR REVISION SEE SHEET 1 OF 2 REV "F" | 8-12-64 | 10586 | JJB | | |
| G9 | G | (1) "A" HOLE CHANGED TO "B" & (1) "B" HOLE CHANGED TO "A". | 3-25-65 | 13407 | | | |
| — | H | SEE SHEET 1 OF 2 | 9-10-65 | 15748 | | | |
| — | J | (SEE SHEET 1 OF 2) | 4-5-66 | 15439 | | | |
| B8, F9 | K | SEE SHEET 1 OF 2) CONN. BET. 'A' & 'B' HOLES ADDED | 3-31-66 | 15961 | HLA | | |
| — | L | SEE SHEET 1 OF 2 | 6-9-66 | 16357 | | | |
| B8, G9 | M | ADDED CONNECTION TO "B" HOLES BUS (SEE SHEET) | 3-14-67 | 17978 | L AK | | |



(52) "G" SWAGE ON THIS SIDE, TERM. EXTENDING ON OTHER SIDE

(53) "F" FEED-THRU SWAGE ON OTHER SIDE

(52) "H" SWAGE ON OTHER SIDE, TERM. EXTENDING ON THIS SIDE




SUB-ASSY (A 3094-3)

| | | | |
|---|---|---|---|
| 1 | 56 | EY-100-4 | EYELET, FLAT FLANGE |
| 1 | 55 | TE-147 | LUG, TERM |
| 1 | 54 | MS-3088 | SHIELD, ELECTRICAL |
| 26 | 53 | TE-168-0-C | TERMINAL, MINIATURE |
| 61 | 52 | TE-127-5 | TERMINAL, STUD |

REQ'D. | ITEM | PART NUMBER | DESCRIPTION | SYMBOL

STRUKER

LIST OF MATERIAL

MATERIAL

FINISH

THE TECHNICAL MATERIEL CORP.
MAMARONECK, NEW YORK

TITLE: PRINTED CIRCUIT BOARD & COMPONENTS

Q'TY/UNIT | MODEL USED ON | ASS'Y. NO.: SPU-2

SCALE: 1:1 | CODE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES

DECIMALS: .X ± .05, .XX ± .01, .XXX ± .005 | FRACTIONS ± 1/64 | ANGLES ± 0° 30'

TOLERANCES

DRAWN: TR | DATE 12-11-62
CHECKED: [illegible] | DATE 12-11-62
ENGINEER: [illegible] | DATE 12-12-62
MFG. APPR. [illegible] | DATE 12-12-67
FINAL APPROVAL: BP | DATE

A 3094 M

SHEET 2 OF 2

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TMC FORM 111

A-3094 M