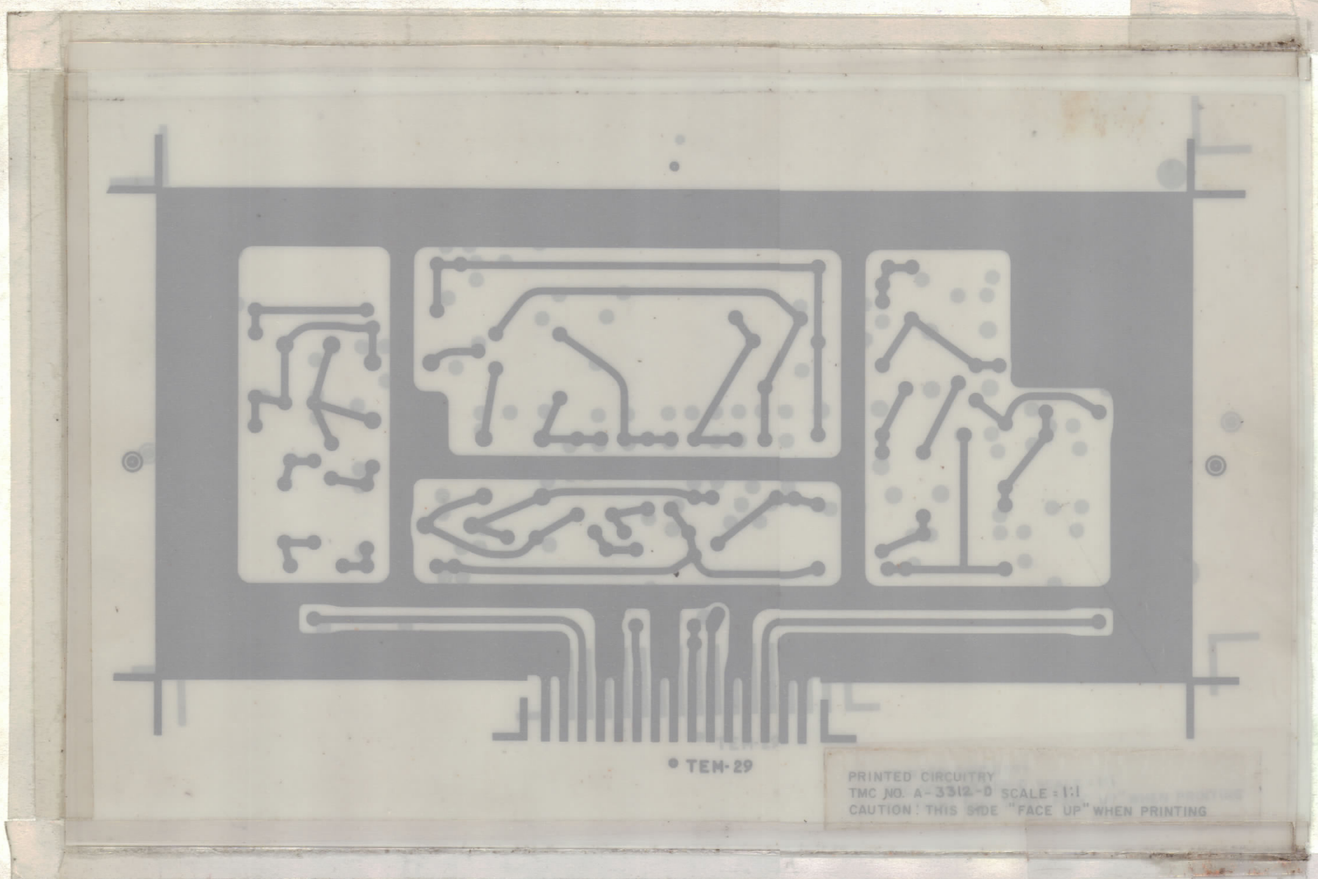
ETCHING, PRINTED CIRCUIT (A-3312-1)



REVISIONS							
ZONE	SYM	DESCRIPTION	DATE	E.M.N. NO.	DRAFT	CHKD	APPD
—	X1	SEE SHEET 2 OF 2 REVISION "X1"	11-20-63	1	JL		
—	X2	SEE SHEET 2, REVISION "X2"	7/24/64	2			
	X3	SEE SHEET 2, REVISION "X3"	4/9/64	3	JL		
	X4	DELETED "A" HOLES,	7-1-64	4	NP		
	X5	ADDED "A" HOLES & MTG SLOTS; REVISED NOTE 5	7/29/65	5	JL		
—	0	ORIGINAL RELEASE FOR PRODUCTION	7.31.64	—	WB		
	A	SEE SHEET 2 OF 2 REVISION "A"	9.30.64	12350			
	B	DIM. "5/16 R (TYP)" ADD, ON U/O "LFSA-1" WAS "LFS-1."	10.22.64	12750			
—	C	SEE SHEET 2 OF 2 REV. "C"	10.29.64	12786	WB		
	D	2 UNMARKED HOLES CHANGED TO "E" HOLES; HOLE CHART: UNMARKED DIA. WAS .050, REQ. WAS 132; "A" DIA. WAS .166; "E" ADD; SEE SHEET 2 OF 2 REV. "D"	2.11.65	13224			

(NOTE DOUBLE POCKETS)

ORIGINAL ARTWORK TO BE REMOVED FROM PROTECTIVE POCKETS WHEN PHOTOGRAPHING. (NOTE DOUBLE POCKETS.)

HOLE & PAD SPECIFICATION			
HOLE	DIA.	PAD DIA.	REQ'D
UNMARKED	.040	.130	130
A	.161 TO .164	.250	4
B	.096	.150	4
C	.062	.150	8
D	.040	CONTACT FINGERS	15
E	.050	.130	2

NOTES:

1 - MATERIAL - G-10 EPOXY GLASS LAMINATE 3/32 THICK, 2 OUNCE COPPER CLAD BOTH SIDES.

2 - ALL BOARDS WILL BE DOUBLE-SIDED. WHENEVER A PAD APPEARS ON THE PRINTED CIRCUIT SIDE, A SIMILAR SIZE AND SHAPE SHALL APPEAR ON THE COMPONENT SIDE IN EXACT REGISTER. (EXCEPT WHERE AN EXCEPTION IS NOTED.)

3 - FINGER CONTACTS SHALL ALSO APPEAR ON THE COMPONENT SIDE OF BOARD AND SHALL BE CONNECTED WITH A .040 DIA. PLATED-THRU HOLE LOCATED IN THE CENTER OF EACH FINGER CONTACT .050" AWAY FROM THE MAIN BODY OF BOARD.

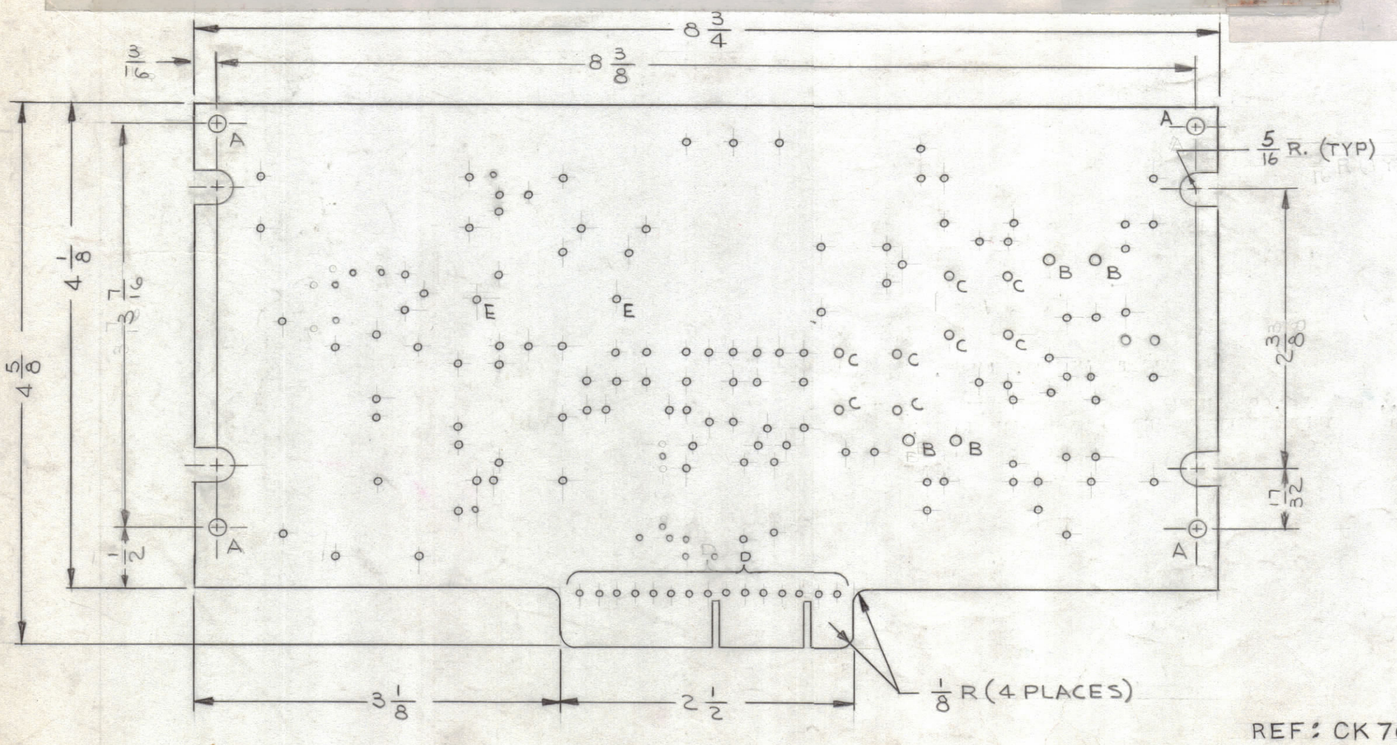
4 - THE PRINTED CIRCUIT BOARDS SHALL BE KEYED WITH SLOTS .070" WIDE & .400" HIGH LOCATED BETWEEN FINGER CONTACTS 8 & 9, 13 & 14 AS VIEWED FROM COMPONENT SIDE OF BOARD.

5 - (A) ALL HOLES TO BE PLATED-THRU WITH MINIMUM COPPER PLATING THICKNESS OF .001, EXCEPT "A" MTG. HOLES.

(B) PLATE .0003 TO .0005 NICKEL & 25 MILLIONTHS MINIMUM OF GOLD ALL ETCHED SURFACES AND PLATED-THRU HOLES.

(C) FINGER CONTACT AREA TO BE RHODIUM PLATED .00003 TO .00005 THICK.

A 3312 D



REF: CK 705

MACHINING (A-3312-2)

DO NOT SCALE, WORK TO DIMENSIONS

THE ORIGINAL ARTWORK TO BE SUPPLIED BY TMC FOR PHOTOGRAPHING (SCALE 1:1)

REQ'D.	ITEM	PART NUMBER	DESCRIPTION	SYMBOL

GELLMAN — LIST OF MATERIAL

MATERIAL: SEE NOTE #1	THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK		
FINISH: SEE NOTE #1	TITLE: PRINTED CIRCUIT BOARD, ASS'Y (-MIXER MODULE)		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES	DRAWN: J. LESHINSKI	DATE: 11/6/63	FINAL APPROVAL / DATE
	CHECKED	DATE: 7-31-64	
DECIMALS: .X ± .05, .XX ± .01, .XXX ± .005 — TOLERANCES — FRACTIONS ± 1/64, ANGLES ± 0° 30'	ELECT. DES.	DATE	A 3312 D
	MECH. DES.	DATE	SHEET 1 OF 2 — REV. LTR.

Q'T'Y./UNIT	MODEL USED ON	ASS'Y. NO.
1	LFSA-1	AX-474

SCALE 1:1 — CODE A

NOTES

THE CONTENTS OF THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF THE TECHNICAL MATERIEL CORP. ITS UNAUTHORIZED USE OR REPRODUCTION IN WHOLE OR IN PART IS STRICTLY FORBIDDEN.

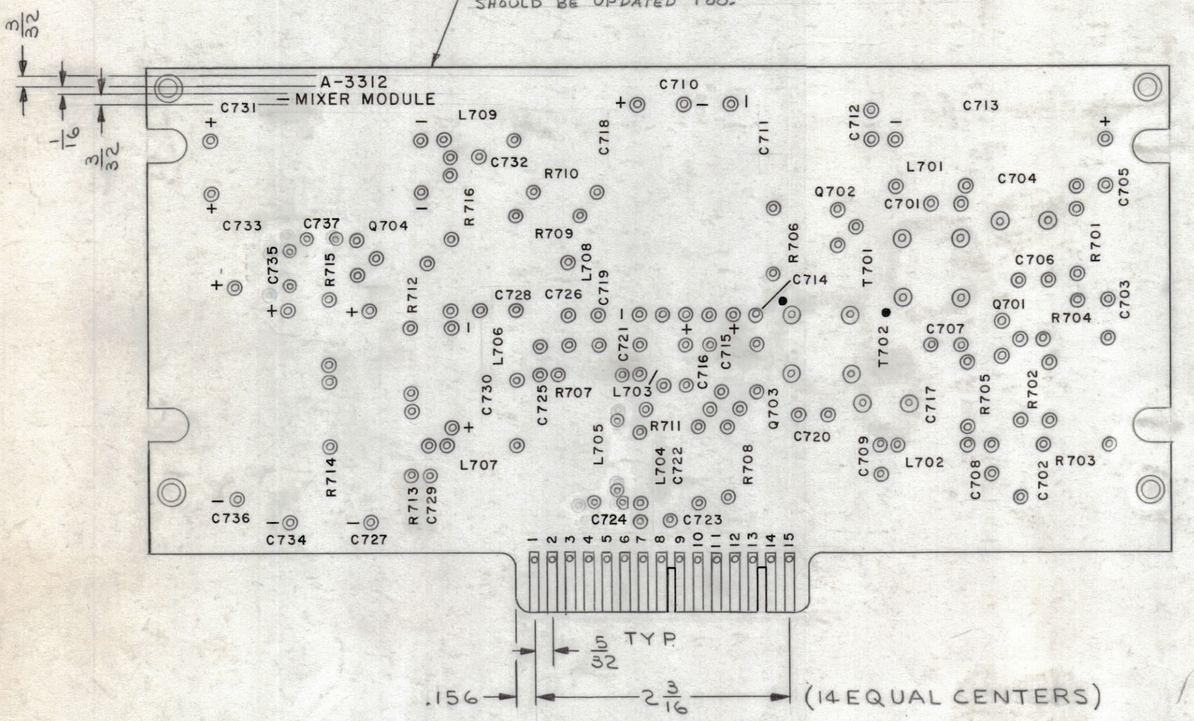
TMC FORM 110 — STOCK NO. 440H

- UNLESS OTHERWISE SPECIFIED -

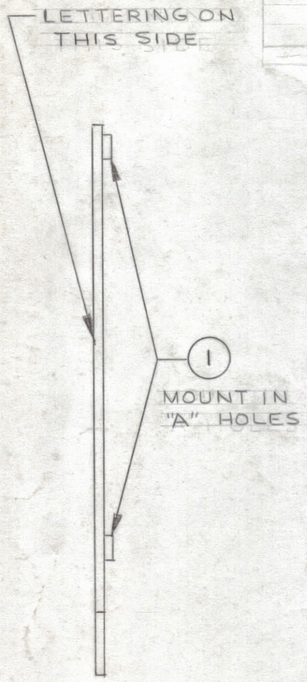
1- ALL LETTERING TO BE 5/64 HIGH BLACK GOTHIC, .010 STROKE; ALL DOTS TO BE 1/16 DIA., LOCATED APPROX. AS SHOWN.

2- MARKING PROCESS: AS PER TMC SPEC. S727.

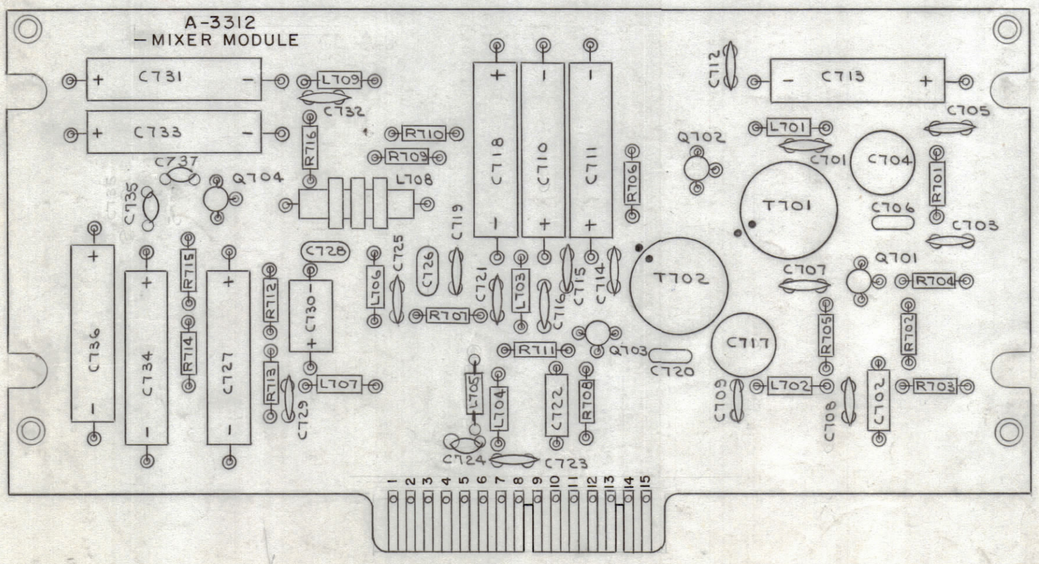
ANY CHANGE ON A3312-3, 2-1 ARTWORK SHOULD BE UPDATED TOO.



MARKING (A-3312-3)



SUB-ASS'Y (A-3312-4)



ELECTRICAL ASS'Y (A-3312-5)

REVISIONS							
ZONE	SYM	DESCRIPTION	DATE	E.M.N. NO.	DRAFT	CHKD	APPD
	B	SEE SHEET 1 OF 2 FOR "B" REV.	10.22.64	12750			
D2	C	IT. 17 WAS CM112E102H1S	10.29.64	12786			
	D	IT. 22 WAS 2N1637, SEE SHEET 1 FOR REV D	2.11.65	13224			
		ON BUILDUP SYMBOLS UPDATED ON MEAS					
	X3	ITEM 7 REQD WAS 8; ADDED ITEM 8 & AX-474	6/9/65	5	JL		
	X4	TYPE 2 & 3 TOL WAS ±1; ITEM 4 WAS 3N197, 4 WAS 5N [illegible]	7-1-67	4	N.B.		
		ITEM 11 WAS CC100-9, 12 WAS C-100-29; FUNGUS PROOF					
		ITEM 24, 25, 26 ADDED; ITEM 1 WAS NT144-0440, A3312-4 DELETED					
	X5	ADDED ITEM 1 SUB-ASSY, MTG HOLES & SLOTS	7/29/[illegible]	5	JL		
	0	ORIGINAL RELEASE FOR PRODUCTION	5-1-64				

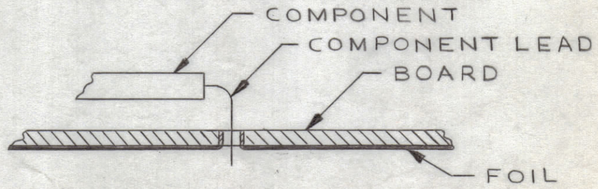
ASSEMBLY NOTICE

1- TO MOUNT COMPONENTS INSERT LEAD THROUGH PLATED-THRU HOLES AND BEND ABOUT 1/16" OF LEAD OVER COPPER FOIL AS SHOWN.

2- APPLY HEAT AND SOLDER TO LEAD AND FOIL
- CAUTION - TOO MUCH HEAT WILL CAUSE THE FOIL TO SEPARATE FROM THE BOARD.

3- CLEAN AND INSPECT AS PER S-676.

4- FUNGUS PROOF PER TMC SPEC S113



		L703 THRU 707, 709		
		L701, 702, 703, 704, 710		
		C710, 711, 713, 718, 727, 731, C733, 734, 736		
		C701, 705, 707, 708, 709, C712, 714, 715, 716, 719, C721, 723, 724, 725, 729, C732, 735, 737.		
		R701, 714, 716, 708, 709,		
		R703, R712		

REQ'D.	ITEM	PART NUMBER	DESCRIPTION	SYMBOL
1	26	CM15B101J	CAPACITOR, FIXED, MICA	C722
1	25	RC20GF682J	RESISTOR, FIXED, COMPOSITION	R707
2	24	RC20GF332K	RESISTOR, FIXED, COMPOSITION	R710, 704
X	23	BS 100	SOLDER, SOFT	
4	22	TX105	TRANSISTOR	Q701, 702, Q703, 704
2	21	TZ 165	TRANSFORMER, R.F., FIXED	T701, 702
1	20	CL 226-1	COIL, R.F., FERR	L708
6	19	CL 275-473	COIL, R.F., FIXED	
2	18	CL 275-101	COIL, R.F., FIXED	L701, L702
2	17	CM 112E102H3S	CAPACITOR, FIXED, MICA	C726, 728
2	16	CM 111E101G5S	↕	C706, 720
1	15	CM 15B511J	↕	C702
9	14	CE 105-200-15	CAPACITOR, FIXED, ELECTROLYTIC	
1	13	CE 105-50-15	CAPACITOR, FIXED, ELECTROLYTIC	C730
18	12	CC 100-35	CAPACITOR, FIXED, CERAMIC	
1	11	CC 100-29	CAPACITOR, FIXED, CERAMIC	C703
2	10	CV 109-8	CAPACITOR, VARIABLE	C704, 717
2	9	RC20GF273K	RESISTOR, FIXED, COMPOSITION	R705, 711
1	8	RC20GF822K	↕	R713
5	7	RC20GF102J	↕	
1	6	RC20GF153K	↕	R706
1	5	RC20GF222J	↕	R715
1	4	RC20GF390K	↕	R702
	3	RC20GF33[illegible]	↕	
2	2	RC20GF101J	RESISTOR, FIXED, COMPOSITION	
4	1	NT-144-0440	NUT, PLAIN, SPLINE	A

M. GELLMAN — LIST OF MATERIAL

Q'T'Y./UNIT	MODEL USED ON	ASS'Y. NO.
1	LFSA-1	AX-474

SCALE 1:1 — CODE A

MATERIAL —//—

FINISH —//—

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

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

THE CONTENTS OF THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF THE TECHNICAL MATERIEL CORP. ITS UNAUTHORIZED USE OR REPRODUCTION IN WHOLE OR IN PART IS STRICTLY FORBIDDEN.

NOTES

THE TECHNICAL MATERIEL CORP.
MAMARONECK, NEW YORK

TITLE: PRINTED CIRCUIT BOARD, ASSEMBLY (-MIXER MODULE)

DRAWN J. LESHINSKI	DATE 11/5/63	FINAL APPROVAL	DATE
CHECKED	DATE 7-31-64		
ELECT. DES.	DATE	A 3312	D
MECH. DES.	DATE	SHEET 2 OF 2	REV. LTR.

TMC FORM 110 — STOCK NO. 440H