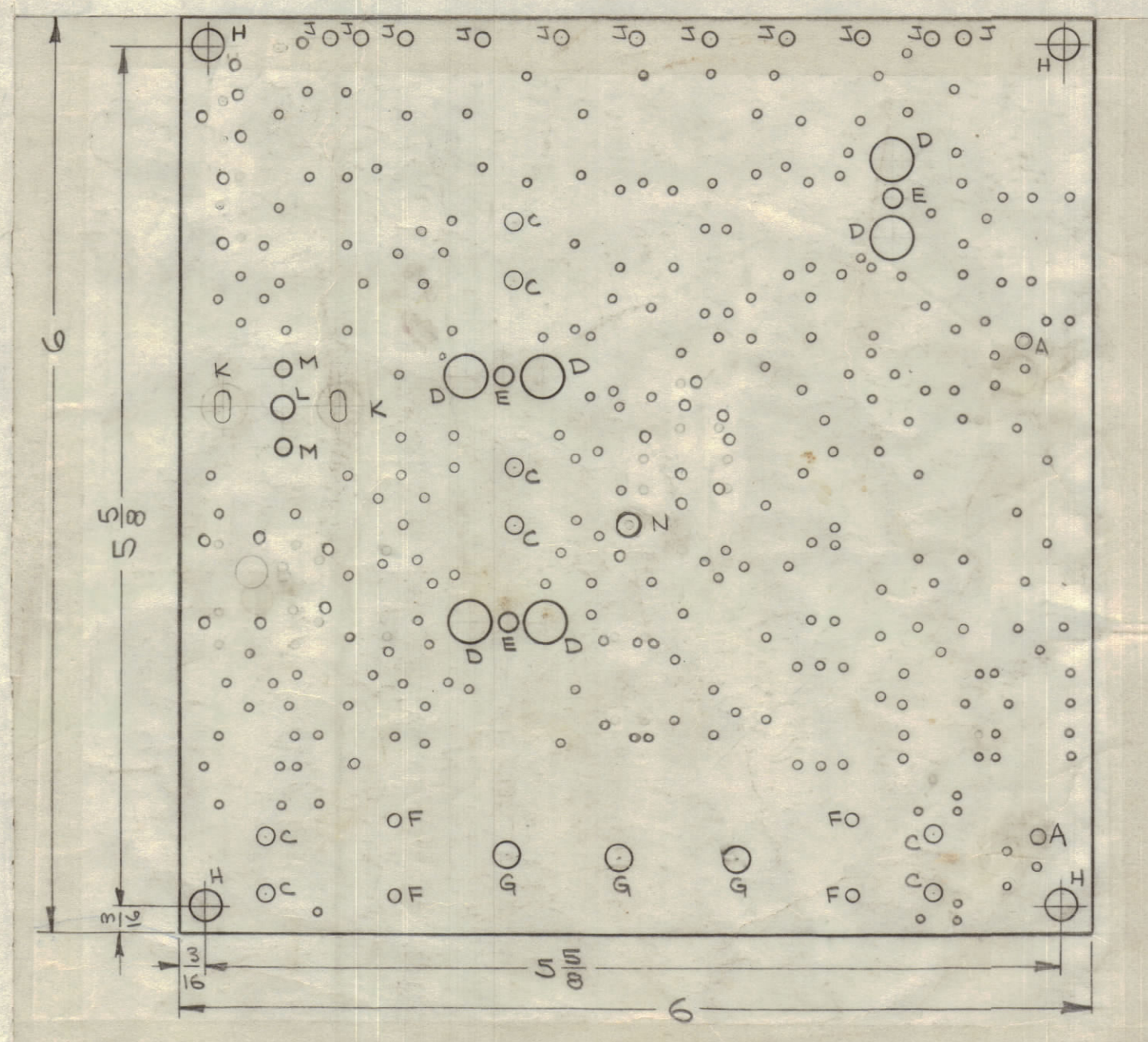


REVISIONS						
ZONE	SYM	DESCRIPTION	DATE	E.M.N. NO.	DRAFT	CHKD APPD
A	K	K SLOTS WERE .281 DIA. HOLES. SEE SHEET 2 OF 2	5/5/64	11325	A.M.	JLB/TJA
B		EXTENSIVE CHANGES ON CIRCUITRY	7/2/64	11442	TR.	@/TJA
C		ART WORK MODIFIED, 1" HOLE RELOC. HOLE DIA WAS .191-.194, PAD DIA WAS .250, PLAT.W. NO	8/15/64	11464	ATB	W/ATB
D		SEE SH. 2 FOR CHG	9/10/64	12350	LG	LG/TJA
E		SEE SHEET 2 OF 2 REV 'E'	8/29/64	12335	ATB	@/TJA
F		SEE SHEET 2 OF 2 REV 'F'	10/13/64	12424	ATB	@/TJA
G		SEE SHEET 2 OF 2 REV 'G'	10/13/64	12719	ATB	@/TJA
H		SEE SHEET 2 OF 2 REV 'H'	2/11/65	13300	ATB	@/TJA
I		SEE SHEET 2 OF 2 REV 'I'	8/22/65	13274	ATB	@/TJA
K		SEE SHEET 2 OF 2 REV 'K'	4/9/65	13741	PT	J.L.
L		SEE SHEET 2 OF 2 REV 'L'	4/7/65	14271	DVV	PT/DVV
M		SEE SHEET 2 OF 2	4/26/65	15460	DVV	PT/DVV
N		ARTWORK MODIFIED - 4 UNMARKED HOLES ADDED SEE SHEET 2 - 4 UNMARKED HOLES RELOCATED	2/4/66	15892	G.D.L.	PT/G.D.L.
P		SEE SHEET 2	1/3/66	16310	WHD	PT/WHD
R		ARTWORK MODIFIED SEE SHEET 2	9/6/66	16819	WHD	PT/WHD
S		8 UNMARKED HOLES RELOCATED, 3 HOLES DELETED, TWO ADDED - SEE SHEET 2	3/4/67	17954	G.D.L.	PT/G.D.L.



A-3189-2 MACHINING

FINISHED HOLE & PAD SPECIFICATIONS				
HOLE	HOLE DIA.	PAD DIA.	QTY.	PLATED THRU
UNMARKED	.050	.120	262	YES
A	.088	.160	2	NO
B	DELETED	NONE	1	NO
C	.104	.166	8	YES
D	17/64	NONE	6	NO
E	.116	.194	3	YES
F	.062	.120	4	YES
G	5/32	AS SHOWN	3	NO
H	3/16	NONE	4	NO
J	.078	.160	11	YES
K	3/32 x 5/16 SLOT	AS SHOWN	2	YES
L	.140	NONE	1	NO
M	.086	NONE	2	NO
N	.156	.312	1	YES

SPECIFICATIONS:  
 BASE MATERIAL EPOXY G-10 3/32 THICK  
 FINISH SEAL ALL EDGES  
 COPPER FOIL .0027 MIN. THICKNESS (2oz)  
 PLATING TIN LEAD, ALL CONDUCTORS .0008

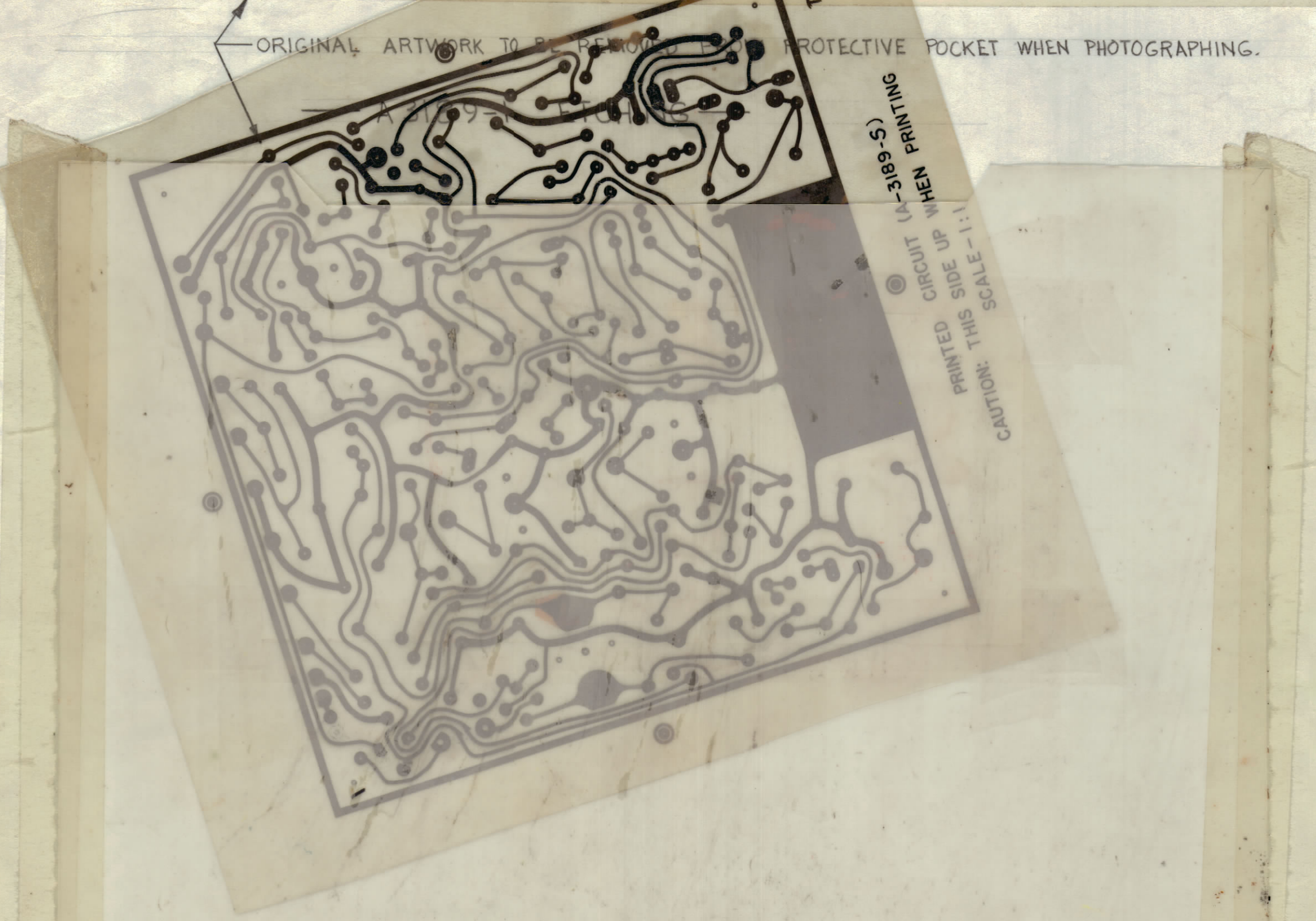
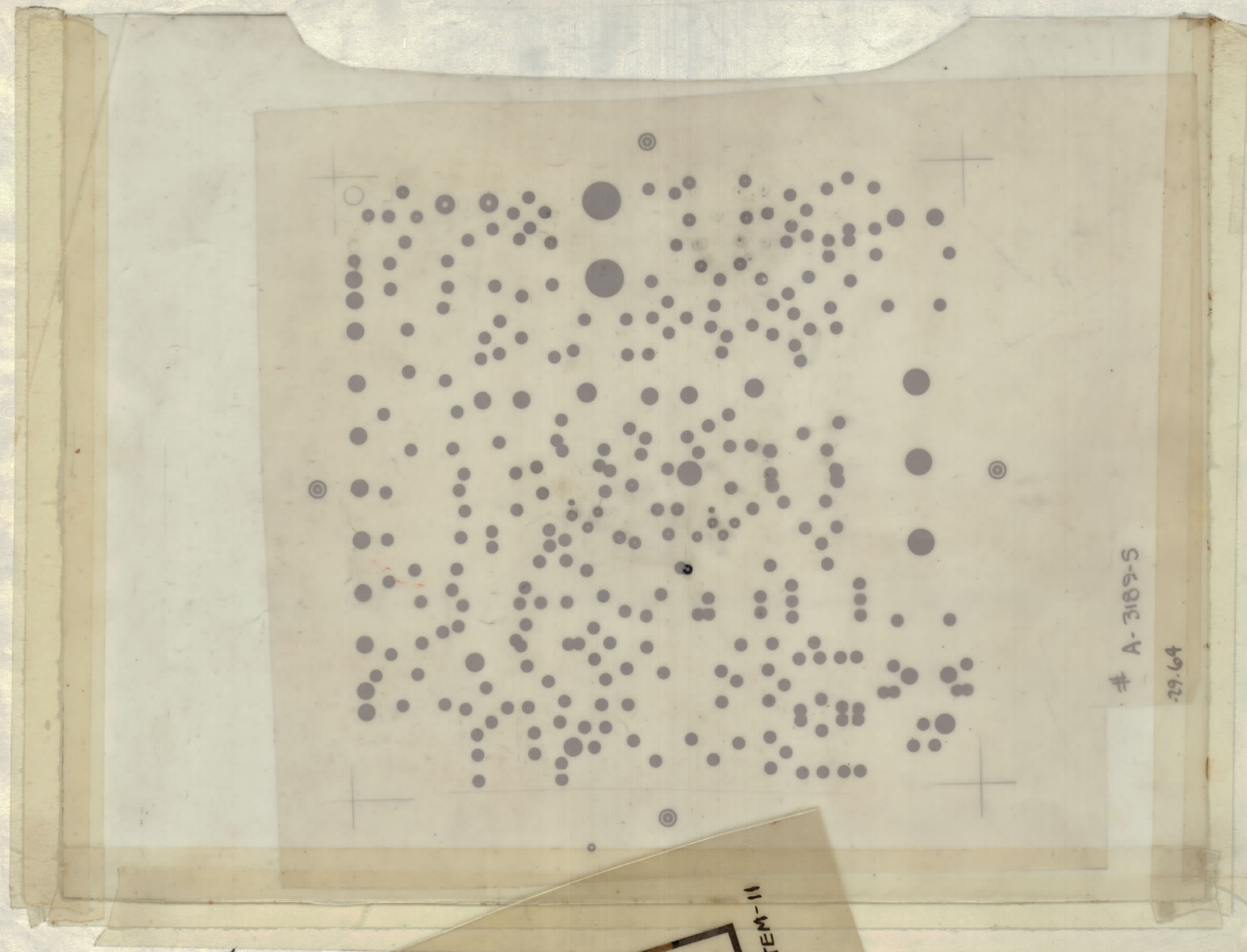
- NOTES:  
 1. LETTER DESIGNATIONS SHOWN ON CIRCUIT DENOTE HOLE SIZE-DO NOT PRINT.  
 2. HOLES AS NOTED ON CHART ARE TO BE PLATED THRU. ON ALL PLATED THRU HOLES, THERE MUST BE MINIMUM COPPER THICKNESS OF .0015 AT ANY POINT WITHIN THE HOLE.  
 3. SOLDER PLATING TO BE AS PER TMC SPEC S-735

NOTES

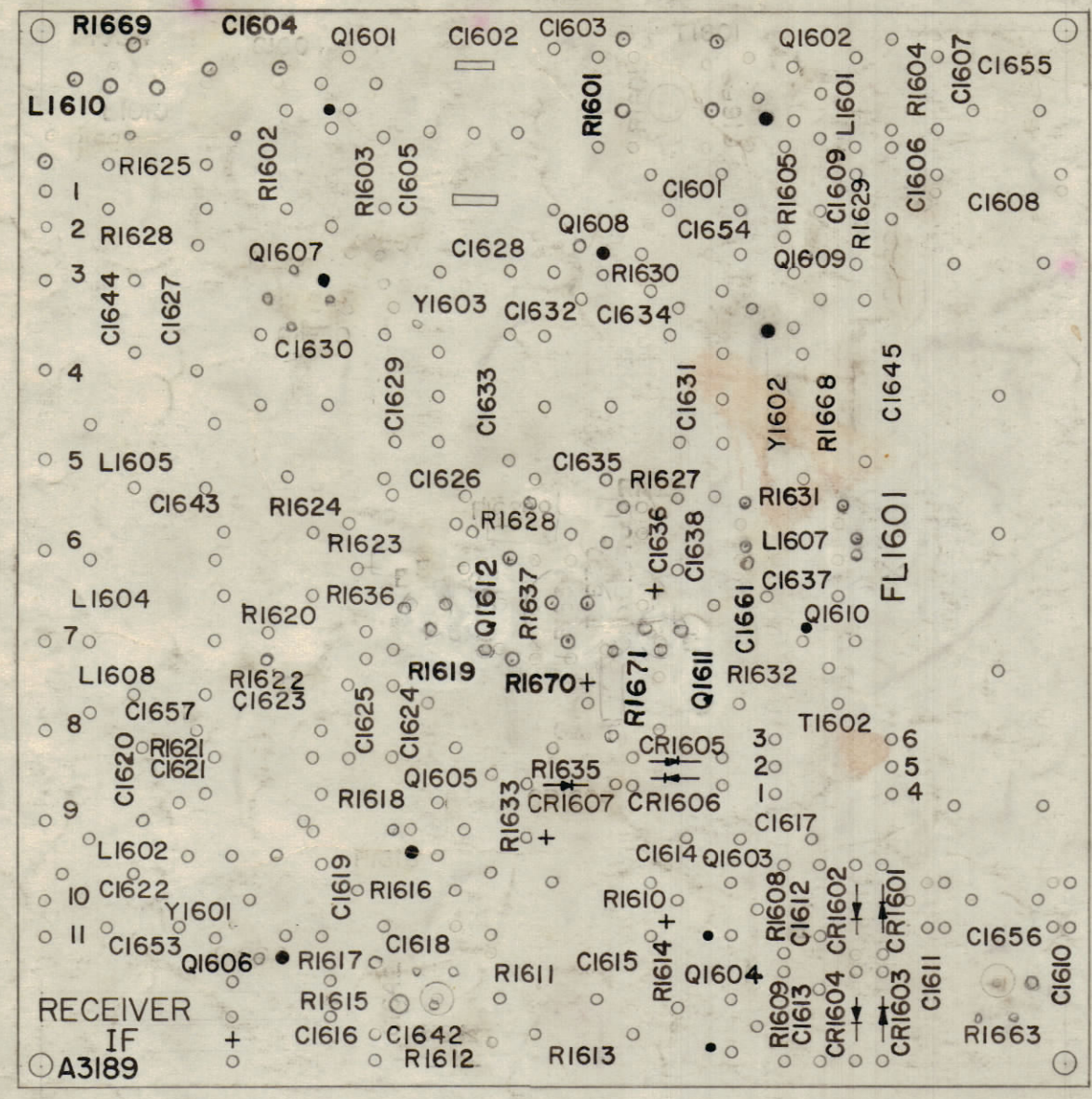
QTY./UNIT	TTR-10	AX-418
SCALE	CODE	ASSY. NO.
1" = 1"	A	

THE ORIGINAL ARTWORK TO BE SUPPLIED BY TMC FOR PHOTOGRAPHING (SCALE 1:1) (ITEM-11)

REQ'D.	ITEM	PART NUMBER	DESCRIPTION	SYMBOL
KOHN LIST OF MATERIAL E 3037				
MATERIAL				
FINISH				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES				
DRAWN		DATE	FINAL APPROVAL	
CHECKED		DATE	DATE	
ELECT. DES.		DATE	DATE	
MECH. DES.		DATE	DATE	
TOLERANCES		DECIMALS: .005, .01, .005		
		FRACTIONS: 1/64, .001, .005		
		ANGLES: ± 0° 30'		
		SHEET 1 OF 1		



A3189 S



A-3189-3 LETTERING

- ~ UNLESS OTHERWISE SPECIFIED ~
1. ALL LETTERING TO BE 3/32 HIGH WHITE GOTHIC.
  2. MARKING PROCESS: PER TMC SPEC S-727. LOCATE AS SHOWN.
  3. ALL DOTS 1/16 DIA.

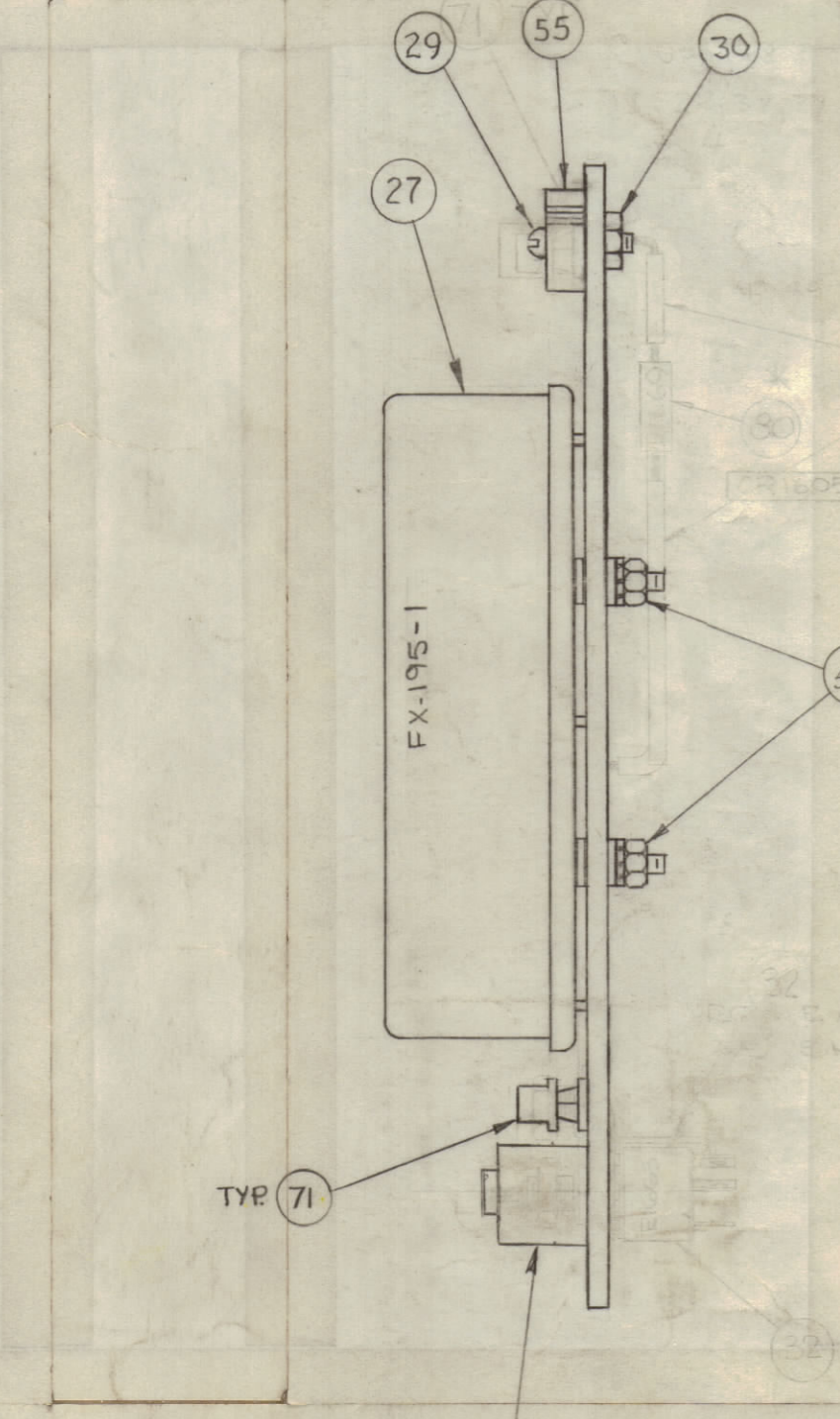
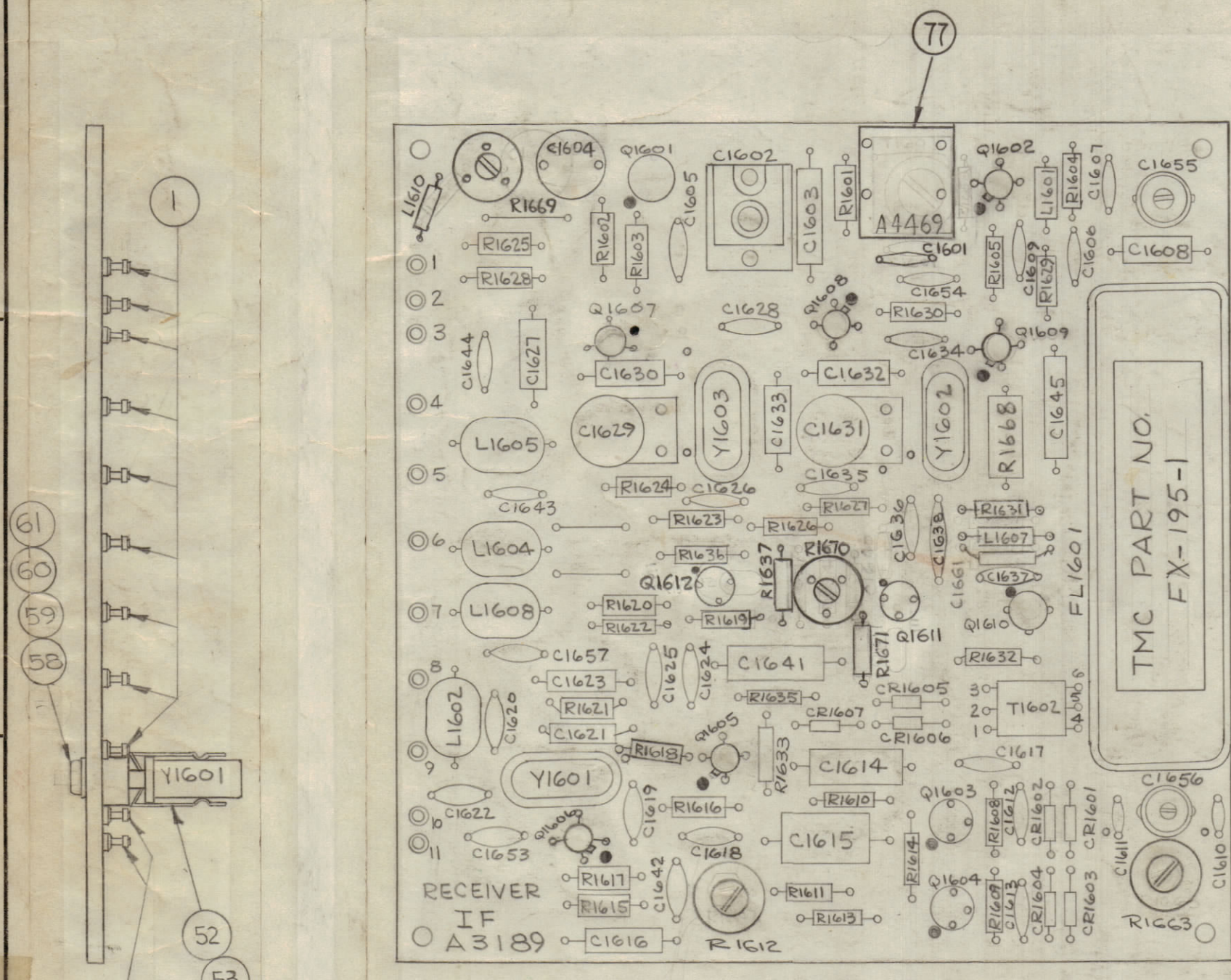
MOUNT IN ALL "J" HOLES.

COMPONENT SIDE

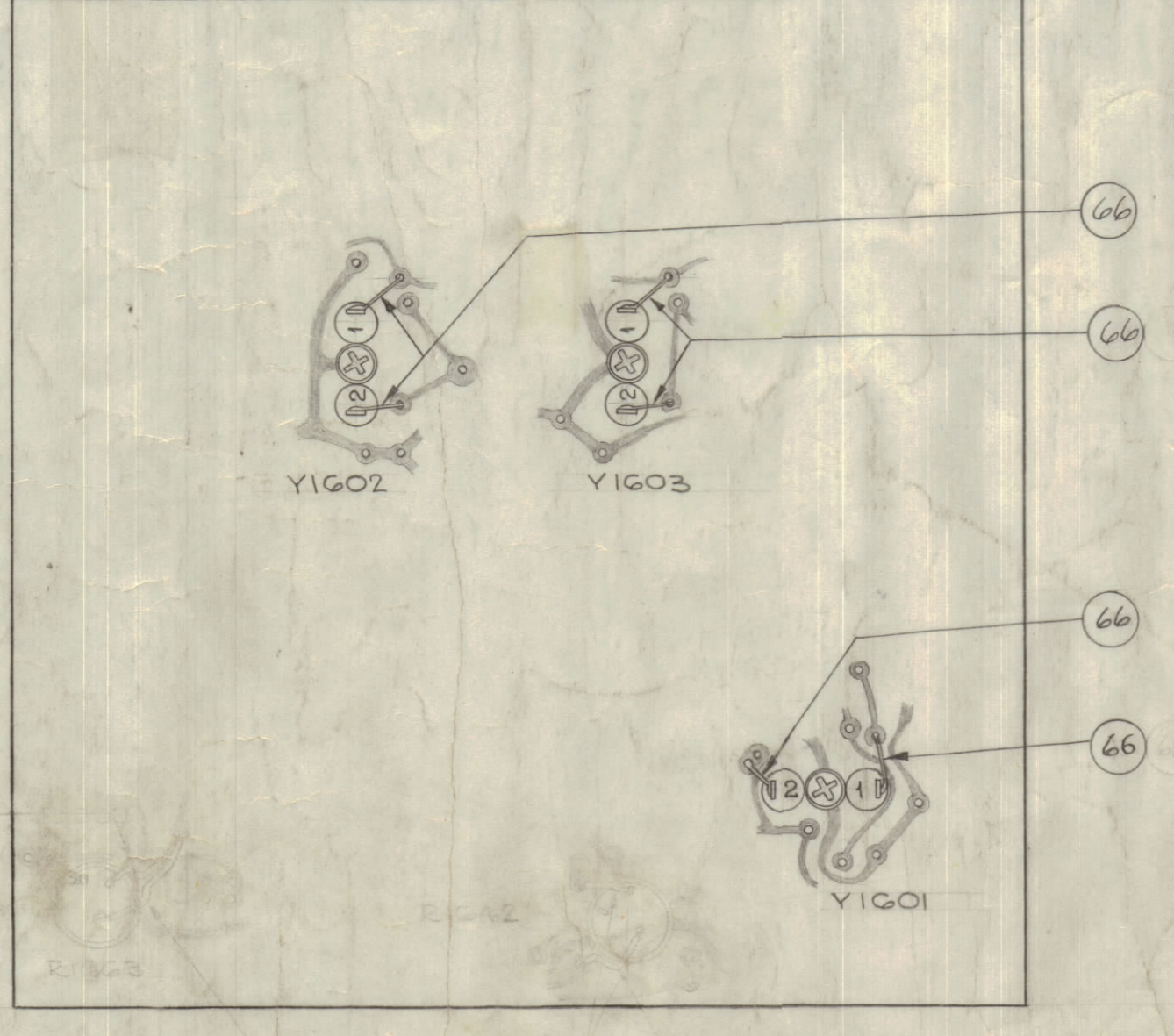
SUB-ASSY A-3189-4

ZONE	SYM	DESCRIPTION	DATE	E.M.N. NO.	DRAFT	CHKD	APPD
A		ITEMS 14 & 16 CHANGED, ITEMS 15 & 35 DELETED, ITEM 67 ADDED. SEE SHEET 1 OF 2	5/5/64	11328	AM	JLB	
B		ITEM 68 ADDED, ITEM 32 WAS RVI11U503A ITEM 31 WAS RVI11U503A, ITEM 13 DELETED ITEM 8 WAS 1 REQ. 10 AND 2 REQ. 13A	7/2/64	11442	TR	@ JLC	
C		IT. 28 WAS TS 104-1, IT. 33 WAS CU-149-1, IT. 39 WAS 300T IT. 52 WAS 250P, IT. 53 WAS 2000P, IT. 54 WAS N.1500P IT. 58 WAS 5 REQ., IT. 66 WAS 0-10 REQ., IT. 63 ADDED IT. 62, 63, 64, 65 PX-104-2, -3, -4, -1 (023) DELETED	8/5/64	11464	SB	JLB	
D		IT. 18 WAS 2 REQ., DELE @ 11-11. ADD IT. 70	9/10/64	12330	LB	JLB	
E		IT. 39 WAS CM15B240J, IT. 49 WAS CV109-1 IT. 53 & IT. 54 WERE CR-27/U	9/29/64	12335	SB	@ JLB	
F		IT. 71 ADDED TO B/M.	10/13/64	12622	SB	JLB	
G		IT. 41 WAS CM15B101J	10/21/64	12719	SB	JLB	
H		ON PICT. CHART ADD; IT. 70 CALLOUT @ TVR, ADDED B/M; IT. 14 WAS 2N2884, IT. 16 WAS 2N1370-4, IT. 18 WAS 2N1308, IT. 31 WAS FP-109, 2 REQ. & NOTE DELE; IT. 38 WAS C-160-26; IT. 58 QTY. WAS 2; IT. 60 WAS NHT1498NB.	2/12/65	13300	SB	JLB	
J		PICT; IT. 71 RELOC; ITS. 29, 30, 55 ADD; IT. 33 CHART: SMR-1 WAS STE-1; U/O BLOCK UPDATED; B/M; IT. 27 WAS FX195; IT. 31 (RVI11U501A) DELE; IT. 32 QTY. WAS 1, R1612 ADD; IT. 39 WAS CM15B240J; IT. 42 WAS CM15B240J; IT. 43 WAS CM15B101J; IT. 44 WAS CM20B180J; IT. 52 WAS CR47/U; IT. 68 WAS CM15C240J	3/22/65	13634	SB	JLB	
K		B/M; IT. 3 QTY. WAS 1, R1602 ADD; IT. 7 QTY. WAS 1, R1618 ADD; IT. 8 QTY. WAS 2, R1602 DELE; IT. 25 (CL-140-10, L1609) DELE; IT. 31 (RVI11U501A, R1652) DELE; IT. 32 QTY. WAS 1, R1612 ADD; IT. 37 QTY. WAS 5, C1604 DELE; IT. 38 QTY. WAS 4, C1609 DELE; IT. 72, 73, 74, & 75 ADDED.	4/8/65	13741	SB	J.L.	
L		IT. 42 CM15F271J WAS CM15C271J - IT. 68 CM15C10033W WAS CM15C1003 - IT. 75 CM15C1003 WAS CM15C1003	6/17/65	14271	D.W.	JLB	
M		R1609 WAS 1 REQ.	7/16/65	15460	SB	JLB	
N		LETTERING L1610, C1604 ADDED - C1604	8/16/66	15892	SDL	JLB	
P		ITEM 18 WAS TX106	6/26/66	16310	WTV	JLB	
R		ITEMS 76 THRU 80 ADDED, P/HST CLARIFIED	9/6/66	16819	LHW	JLB	
S		ITEM 81 ADDED - ITEM 70 & 56 DELETED QTY ITEM 18 WAS 1, R1611 ADDED - ITEM 24 VALUE WAS 3-4.6P 220MH. - SEE SHEET 1. QTY ITEM 79 WAS 2	3/4/67	17954	SDL	JLB	

1	81	RC20GF 562 J	RESISTOR, FIXED COMPOSITION	R1671
1	80	RVI11U503A	RESISTOR, VARIABLE	R1669
1	79	RC20GF 822 J	RESISTOR, FIXED COMPOSITION	R1601
1	78	RV111U103A	RESISTOR, VARIABLE COMPOSITION	R1670
1	77	A4469	PC BD, IF	
1	76	RC20GF 101 J	RESISTOR, FIXED COMPOSITION	R1602
1	75	CM15F511 J	CAPACITOR, FIXED, MICA	C1609
1	74	CV109-3	CAPACITOR, VARIABLE, CERAMIC	C1604
1	73	CM111E681J5S	CAPACITOR, FIXED, MICA	C1661
1	72	CL275-151	COIL, RF, FIXED	L1610
12	71	PX829-1	PAD, TRANSISTOR MTG	
1	70	DELETED		
3	69	WA109-17	WASHER, FIBER	
	68	DELETED		
1	67	CC100-15	CAPACITOR, FIXED, CERAMIC	C1620
0-04	66	WL-100-8	WIRE, BUSS, SIZE 24	
	65	DELETED		
	64	DELETED		
	63	DELETED		
	62	DELETED		
3	61	SCBP0440BN7	SCREW, MACHINE	
5	60	NTH0440BN6	NUT, HEX	
5	59	LWEO4MRN	WASHER, LOCK, EXT	
5	58	FWOAHBN	WASHER, FLAT	
x	57	BS-100	SOLDER, SOFT	
	56	DELETED		
	55	DELETED		
1	54	CR-18/U-15000000MC	CRYSTAL UNIT, QUARTZ	Y1603
1	53	CR-18/U-20000000MC	CRYSTAL UNIT, QUARTZ	Y1602
1	52	CR-46AN-250,000KC	CRYSTAL UNIT, QUARTZ	Y1601
1	51	CV-114-1	CAPACITOR, VARIABLE, MICA	C1602
2	50	CV112-2	CAPACITOR, VARIABLE, CER.	
2	49	CV109-6	CAPACITOR, VARIABLE, CER.	
1	48	CE105-4-15	CAPACITOR, FIXED, ELECTROLYTIC	C1616
1	47	CE105-50-15	CAPACITOR, FIXED, ELECTROLYTIC	C1615
2	46	CE105-25-15	CAPACITOR, FIXED, ELECTROLYTIC	
2	45	CM-111D181G5S	CAPACITOR, FIXED, MICA	
1	44	CM100-11		C1603
1	43	CM20F1026		C1645
3	42	CM15F271J		C1623
1	41	CM15C470J		C1608
1	40	CM15C680G		
2	39	CM15C240J	CAPACITOR, FIXED, MICA	
3	38	CC-100-25	CAPACITOR, FIXED, CERAMIC, DISC	
4	37	CC-100-16	CAPACITOR, FIXED, CERAMIC, DISC	
7	36	CC-100-33	CAPACITOR, FIXED, CERAMIC, DISC	
	35			
11	34	CC-100-28	CAPACITOR, FIXED, CERAMIC, DISC	
3	33	SEE CHART	RETAINER, CRYSTAL HOLDER	
2	32	RVI11U501A	RESISTOR, VARIABLE, COMP	R1643
	31	DELETED		
1	30	NT-137-1032	NUT, NYLON	
1	29	SC-143-1032-B-8	SCREW, NYLON 1/2" LONG	
3	28	TS104-2	SOCKET, CRYSTAL	
1	27	FX-195-1	FILTER, MECHANICAL	FL1601
1	26	TF-228K15	XFMR, PULSE	T1602
	25	DELETED		
4	24	CL-140-6	COIL, RF, FIXED 220-UH	
1	23	CL-275-102	COIL, RF, FIXED 1.0MH	L1607
1	22	CL-275-473	COIL, RF, FIXED 47MH	L1601
4	21	IN34A	SEMICONDUCTOR DEVICE, DIODE	
3	20	IN68	SEMICONDUCTOR DEVICE, DIODE	
	19	DELETED		
2	18	2N697	TRANSISTOR	
1	17	2N1130		Q1610
2	16	TX107	TRANSISTOR	Q1603
	15			Q1604
7	14	TX109	TRANSISTOR	
	13	DELETED		
1	12	RC20GF 104 J	RESISTOR, FIXED, COMP.	R1637
9	11	103		
1	10	682		R1630
5	9	472		
1	8	332		
11	7	102		
1	6	561		FL29
1	5	RC20GF 471 J		R1610
	4			
1	3	RC20GF 221 J		R1636
1	2	RC20GF 220 J	RESISTOR, FIXED, COMPOSITION	R1616
11	1	TE-127-3	TERMINAL, STUD	



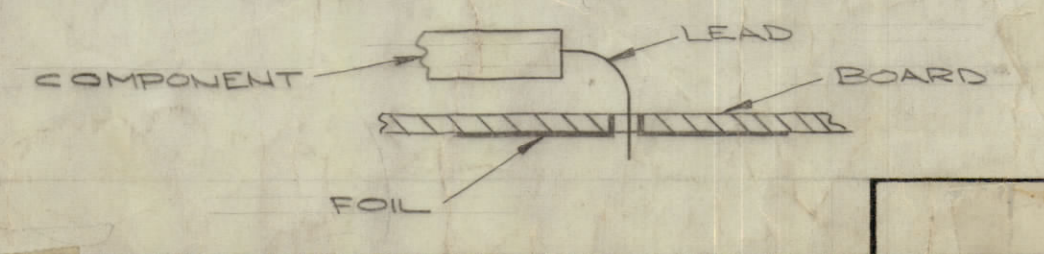
NOTE: MOUNT BETWEEN TERMINAL TO 2.5" FROM CENTER OF Q1601



NOTE: PRINTED CIRCUITRY SHOWN PERTAINS TO CRYSTAL SOCKET WIRING ONLY.

ITEM	DESCRIPTION
STR-1	CU-149-1
SMR-1	
TTR-10	FP-109

- ~ ASSEMBLY NOTICE ~
1. TO MOUNT COMPONENTS, INSERT LEAD THROUGH PLATED THRU-HOLES AND BEND ABOUT 1/8 OF LEAD OVER COPPER FOIL AS SHOWN
  2. APPLY HEAT AND SOLDER TO LEAD & FOIL ~ CAUTION ~ TOO MUCH HEAT WILL CAUSE FOIL TO SEPARATE FROM BOARD
  3. CLEAN & INSPECT AS PER S-676



NOTES

SCALE	CODE	MODEL USED ON	ASSY. NO.
DO NOT SCALE	A		

REQ'D.	ITEM	PART NUMBER	DESCRIPTION	SYMBOL
KOHU LIST OF MATERIAL				
MATERIAL				
FINISH				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES				
DECIMALS ±.05	FRACTIONS ± 1/64	ANGLES ± 0° 30'		
DRAWN		DATE	FINAL APPROVAL	
CHECKED		DATE	DATE	
ELECT. DES.		DATE	DATE	
MECH. DES.		DATE	DATE	

THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK

TITLE: PRINTED CIRCUIT BOARD ASSY RECEIVER IF

DATE: 10/16/63  
SHEET 2 OF 2  
REV. LTR.