

ASSEMBLY INSTRUCTIONS

1. NOT USED.
2. PUT A JUMPER WIRE BETWEEN PINS 1 AND 2 OF U37. PIN 1 IS CONNECTED TO C59 AND C499.
3. INSTALL JUMPER WIRES BETWEEN THE FOLLOWING EPOINTS:
 - A) E185 TO E188, E190 TO E130, E171 TO E166, E170 TO E164, E172 TO E168, E151 TO E156, E150 TO E154, E160 TO E158, E136 TO E186, E117 TO E118, E129 TO E126, E178 TO E175.
(NOTE: ON THE ABOVE, THIS PROCEDURE TIES THE SHIELDS OF THE DETECTOR CABLES TO AGND)
 - B) E197 TO E199, E200 TO E202, E194 TO E196, E191 TO E193, E206 TO E208, E203 TO E205, E212 TO E214, E209 TO E211, E218 TO E220, E215 TO E217, E224 TO E226, E221 TO E223, E230 TO E232, E227 TO E229, E236 TO E238, E233 TO E235.
(NOTE: THIS TIES SERIAL CONTROL ON PREAMP ASIC'S TO GROUND, AGND)
 - C) FOR U1 THROUGH U8, EACH OF THE FOLLOWING GROUPS OF CAPACITORS MUST BE SHORTED TOGETHER AND TIED TO THE NEAREST AGND VIA THROUGH THE LARGE VIAS ATTACHED TO THE CAPACITORS ON THE BOTTOM SIDE OF THE BOARD. MOST OF THE LARGE VIAS ARE LOCATED NEXT TO THE SILKSCREEN REFERENCE DESIGNATOR OF THE CAPACITOR:
(SEE DETAIL A ON SHEET 1)
 - I) U1 CAPACITORS: C231, C245, C259, C273, C287, C301, C315, C329.
 - II) U2 CAPACITORS: C232, C246, C260, C274, C288, C302, C316, C330.
 - III) U3 CAPACITORS: C233, C247, C261, C275, C289, C303, C317, C331.
 - IV) U4 CAPACITORS: C234, C248, C262, C276, C290, C304, C318, C332.
 - V) U5 CAPACITORS: C235, C249, C263, C277, C291, C305, C319, C333.
 - VI) U6 CAPACITORS: C236, C250, C264, C278, C292, C306, C320, C334.
 - VII) U7 CAPACITORS: C237, C251, C265, C279, C293, C307, C321, C335.
 - VIII) U8 CAPACITORS: C24, C26, C28, C30, C32, C34, C36, C38.

ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
21	R74-R76,R78,R80, R81,R84,R88,R97, R145-R148	13	RES., 0 OHM, CRCW0805-000, DALE	1		1	P.C.DETAIL
				2		REF	SCHEMATIC
				3	C2-C38,C48-C56,C65- C77,C98-C102,C105-	305	CAP., 0.1UF, C0805, KEMET
22	R85,R109-R115	8	RES., 3, CRCW0805-3R0J, DALE				
23	R86,R117-R122, R150	8	RES., 20, CRCW0805-200, DALE		C335,C340,C342, C557,C559-C565		
24	R89,R125-R131, R168-R171	12	RES., 1, CRCW0805-1R0J, DALE	4	C39-C45,C57-C64, C78-C97,C103,C104	37	CAP., 0.01UF, C0805, KEMET
25	R90,R91,R174	3	RES., 120, CRCW0805-121J, DALE	5	C341,C343-C349,	24	CAP., 100UF, T491D, AVX
26	R92	1	RES., 2.4K, CRCW0805-242J, DALE		C494,C528-C534,		
27	R93-R96,R106,R107, R138,R172,R173	9	RES., 10K, CRCW0805-103J, DALE		C542-C549		
28	R98	1	RES., 2K, CRCW0805-202J, DALE	6	C439,C441,C442, C445-C453,C461-	40	CAP., 6.8UF, T491B, AVX
29	R99	1	RES., 22, CRCW0805-220J, DALE		C488		
30	R100	1	RES., 43K, CRCW0805-433J, DALE	7	C440,C454-C460	8	CAP., 47UF, T491D, AVX
31	R101,R149	2	RES., 1K, CRCW0805-102J, DALE	8	C443,C444	2	CAP., 4.7UF, T491B, AVX
32	R105,R108,R133- R136	6	RES., (NOT USED)	9	C489,C490,C496, C501-C506	9	CAP., 10.0UF, T491C, AVX
33	R132	1	RES., 0.1, RM2512, IRC	10	C495,C514,C536- C541	8	CAP., NU, T491D
34	R158,R161-R167	8	RES., 51K, CRCW0805-513J, DALE				
35	R159,R160	2	RES., 91, CRCW0805-910J, DALE	11	C497,C499,C550-	11	CAP., 22UF, T491C, AVX
36	R175	1	RES., 390, CRCW0805-391J, DALE		C556,C573,C574		
37	RP1,RP2,RP12-RP19, U38	11	RES., 22, PRN110-16-22R0J, CMD	12	C558,C566-C572	8	CAP., 0.22UF, C0805, KEMET
38	RP3,U39-U42	5	RES., 10K, PRN110-16-1002J, CMD	13	D1	1	DIODE, LM385BD-2.5, NATL SEMI
39	RP4-RP11	8	RES., 100, PRN110-16-1000J, CMD	14	E1-E18,E20-E26,E28- E68,E70-E77,E87-	201	EPOINT, PAD ONLY
40	U1-U8	8	I.C., 8CHPREAMP, ORNL		E94,E108-E123,E126, E127,E129-E148,		
41	U9-U12	4	I.C., SN74AHCT16245DL		E150,E151,E154- E160,E164-E172, E175,E176,E178-E238		
42	U13	1	I.C., HS-2870-200MHZ, NEL FREQ CONT				
43	U16-U20	5	I.C., 74ALS08, TI				
44	U21	1	I.C., 74ALS32, TI				
45	U22	1	I.C., 74ALS86, TI	15	F1	1	FUSE, RGE300, POLYFUSE
46	U23,U24	2	I.C., AMUADC, ORNL	16	P1	1	CONN., 70230-111, BERG
47	U25,U26	2	I.C., CRY32, SPT2, SEIKO	17	P2	1	CONN., 905-72178F, BICC-VERO
48	U27,U28	2	I.C., DS2437S, DALLAS SEMI	18	R1,R102,R104,R139- R144	9	RES., 100, CRCW0805-101J, DALE
49	U32-U34,V1	4	I.C., REF43GS, ANA DEV				
50	U36	1	I.C., MIC29300-5.OBU, MICREL	19	R54-R61	8	RES., 5.1 MEG, CRCW0805-515J, DALE
51	U37	1	I.C., MIC29302BU, 5 PIN, MICREL	20	R73,R77,R79,R82, R83,R87,R123,R124	8	RES., 15, CRCW0805-150J, DALE
52	400-062 BGV	2	CARD EJECTOR, ELECTRO SPACE FABRICATION				

NOTES:

1. ASSEMBLE AND SOLDER PER IPC-6012, CLASS II.
2. MARK APPROXIMATELY AS SHOWN WITH CONTRASTING COLOR USING 1/8 INCH HIGH CHARACTERS.(COVER WITH CONFORMAL COAT)

H	R175 VALUE WAS 360 IS NOW 390	9/26/00	GS		
G	REMOVED ASSY NOTE 1.	9/12/00	GS		
F	R138 VALUE WAS 22 OHM	6/27/00	GS		
E	ADDED CARD EJECTORS	6/22/00	GS		
D	BILL OF MATERIAL CHANGES.	4/18/00	GS		
C	VALUE OF R145-R148 WAS 1 OHM.	4/10/00	GS		
B	REDESIGNED	3-7-00	G.S.		
A	REDESIGNED	11-9-99	G.S.		
ORIGINAL ISSUE					
REVISION LETTER	CLASS REVIEW	REVISIONS	DATE	CHANGED BY	CHECKED BY APPROVED BY
LOS ALAMOS			CLASSIFICATION OF DRAWING: UNCL		
LOS ALAMOS NATIONAL LABORATORY LOS ALAMOS, NEW MEXICO 87545			PART: UNCL TITLE BLOCK: UNCL		
TITLE			CROC CATHODE READOUT ASSEMBLY		
	SIGNATURE	DATE	GROUP		
ORIGINATED	M.CAFFERTY	4/26/99	NIS-4		
DRAWN	G.R.	4/26/99	NIS-4	.X= +/- ____ 0.XX= +/- ____ ANGULAR= +/- ____	
CHECKED				0.X= +/- ____ 0.XXX= +/- ____ FINISH= +/- ____	
PROJ. ENGR.					
APPROVED				SCALE	TOTAL SHEETS
RELEASED				2/1	2
				DRAWING NO.	SHEET No.
				10Y-226430	D2-B