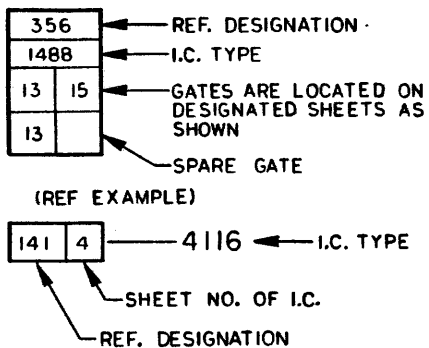
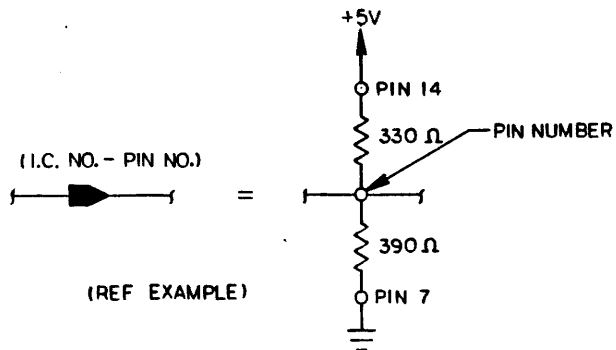


NOTES - UNLESS OTHERWISE SPECIFIED:

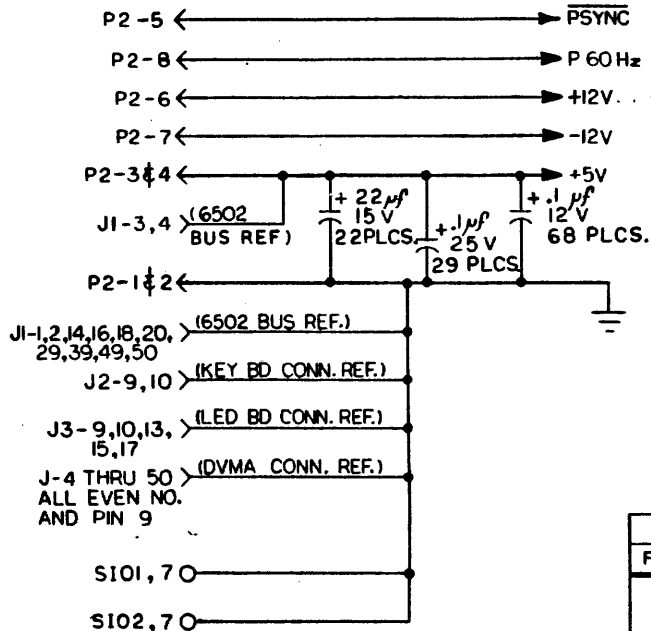
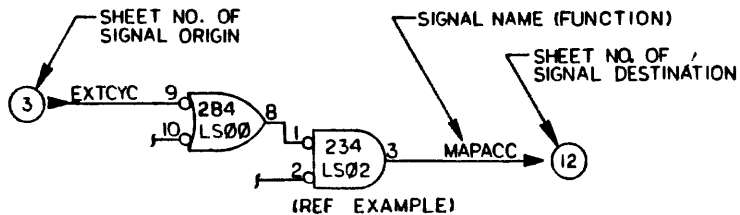
- CONNECTOR PIN DESIGNATIONS ARE PER SILK-SCREENED LED BOARD, NOT JI CONNECTOR PIN DESIGNATOR.
- ALL RESISTORS ARE IN OHMS AND ARE 1/4 W UNLESS OTHERWISE SPECIFIED.
- FOR MODULE MAP, SEE SHEETS 29, 30 AND 31. GATES ARE IN ORDER OF OUTPUT PIN NUMBERS AND ARE DEPICTED FROM LEFT TO RIGHT, TOP TO BOTTOM ORDER.



- THIS SYMBOL DENOTES A PULL-UP AND PULL-DOWN RESISTOR, FOR I.C.'S 359 AND 364, THAT ARE LOCATED ON SHEETS 9, 10, 15 AND 21:



- INPUT AND OUTPUT SIGNALS ARE DEPICTED AS FOLLOWS:



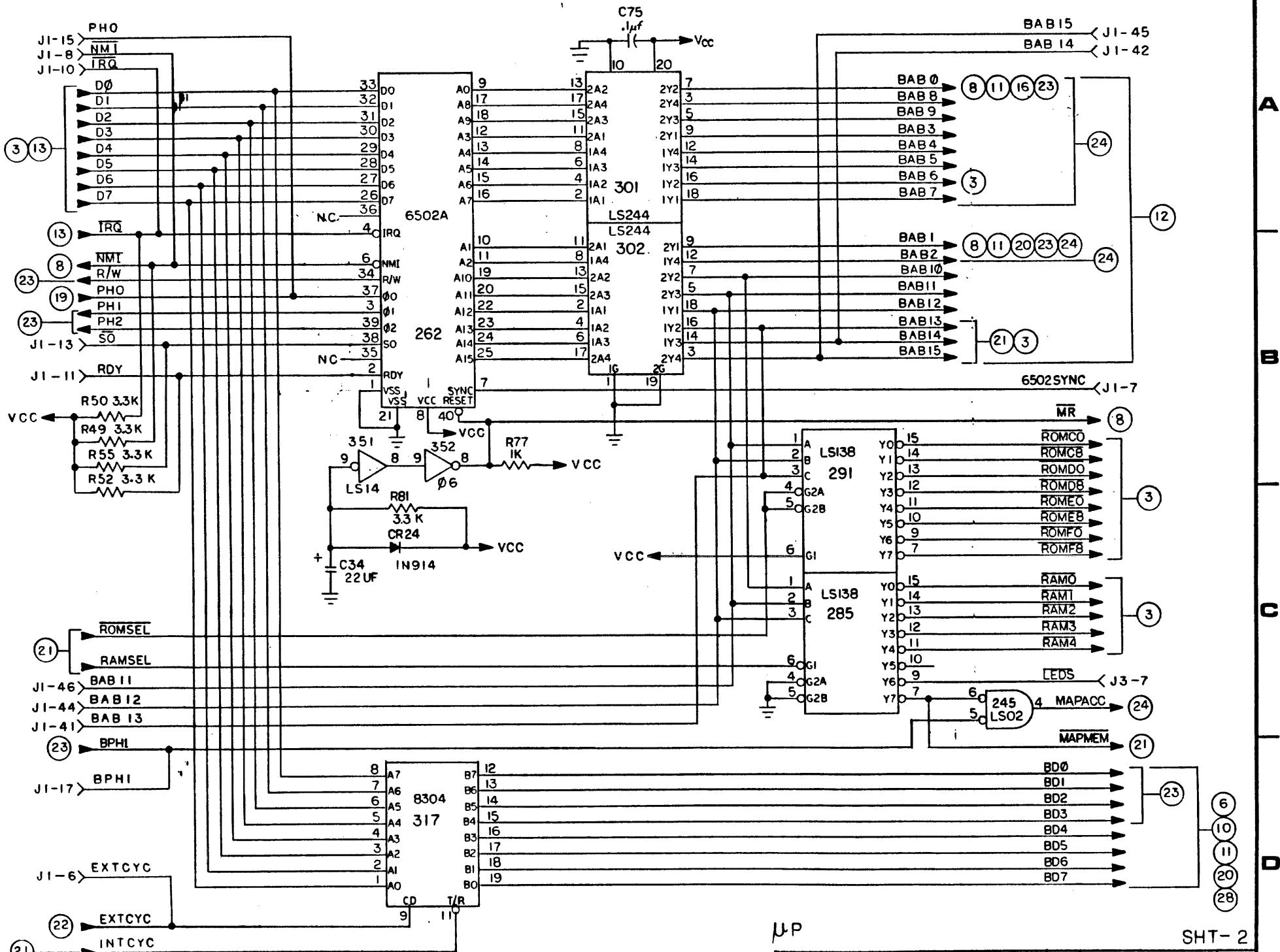
ISSUE	DESCRIPTION	DATE	APPROVED
A	REL. PER ECO-204	1/12/81	HG
B	ECO NO. 2068A	4/10/81	R. L. S. W.
C	ECO 2166	6/14/81	nan
D	ECO 2263	8/	Robert
E	ECO 2386	4/81	Kn

# MASTER

IF THIS STATEMENT APPEARS IN RED, RETURN TO: DOCUMENT CONTROL

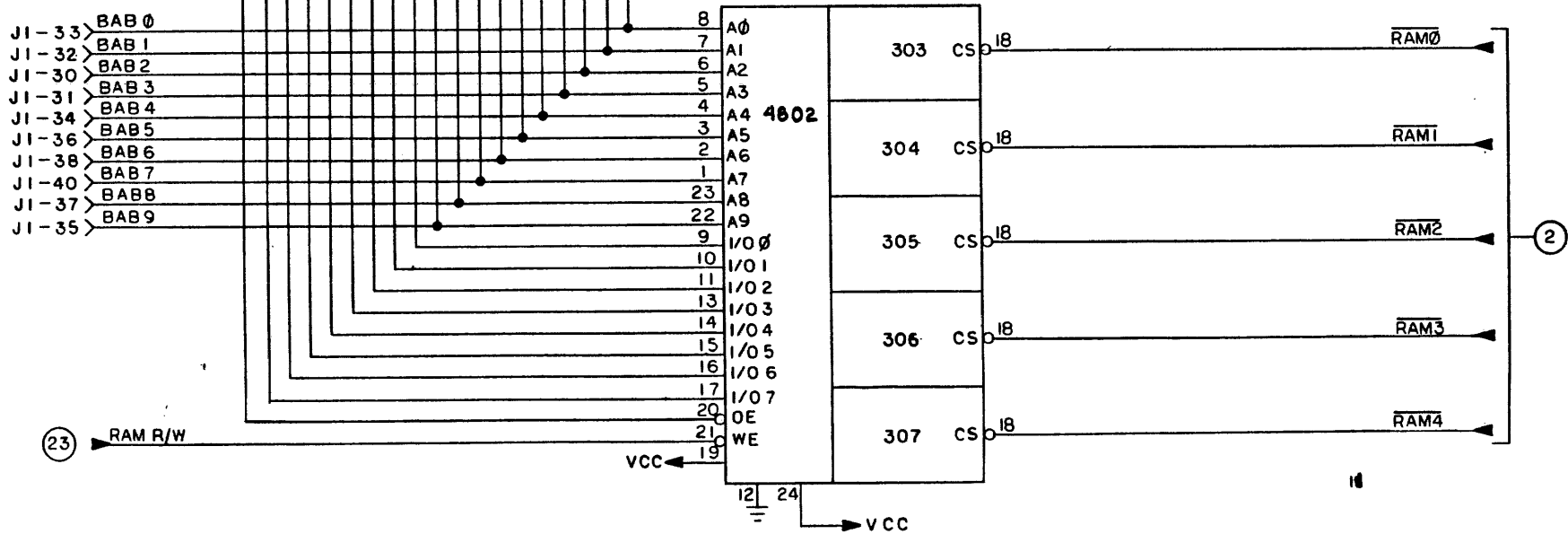
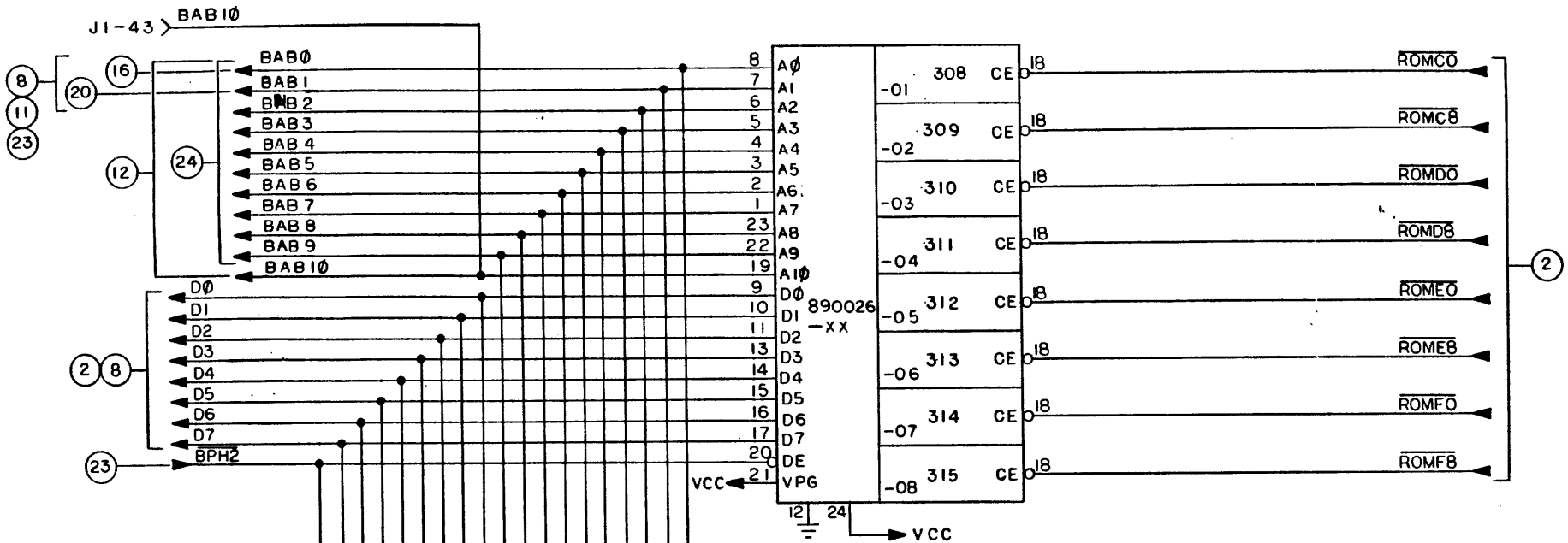
COMPONENT REF. DESIG.		
FIRST	LAST	UNUSED
RI	R174	8, 15, 22, 23, 27, 31, 45, 51, 57, 63, 72, 78, 80, 99, 100, 102, 103 - 130
CI	C102	2, 4, 5, 13, 14, 23, 25, 42 - 50, 66 - 69, 82
A00	A368	198
CR1	CR30	CR15 - 20, 23, 26 - 29
Q1	Q10	Q8, Q9
REG 4	10	REG 1, 2, 3, 5
P1	P3	---
J1	J4	---

-03 -02 -01		PART NUMBER	CODE IDENT	DESCRIPTION	ITEM NO.
QTY REQD					
TOLERANCE UNLESS OTHERWISE SPECIFIED	MATERIAL		DRAWN: 7-15-81 Jim Ammon		
.XX = ±	FINISH		CHKD: [Signature]		
.XXX = ±	DRAWING TITLE		APP'D: [Signature]		
ANGULAR	SCHEMATIC AED - 512		new Rom/ram		
SURFACE	SCALE		ADVANCED ELECTRONICS DESIGN, INC. SUNNYVALE, CALIF. 94088		
DASH NO.	NEXT ASSY	USED ON	DRAWING NUMBER	REV	
			120102-01	E	



UP

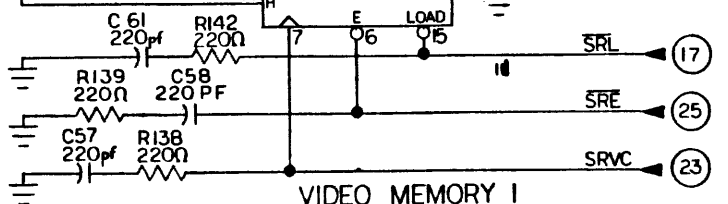
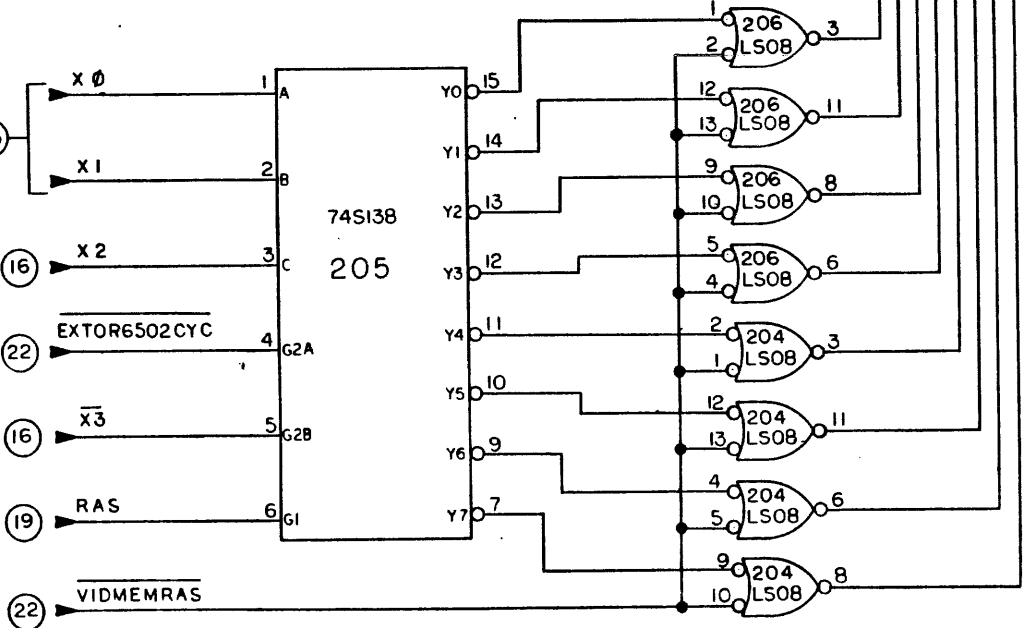
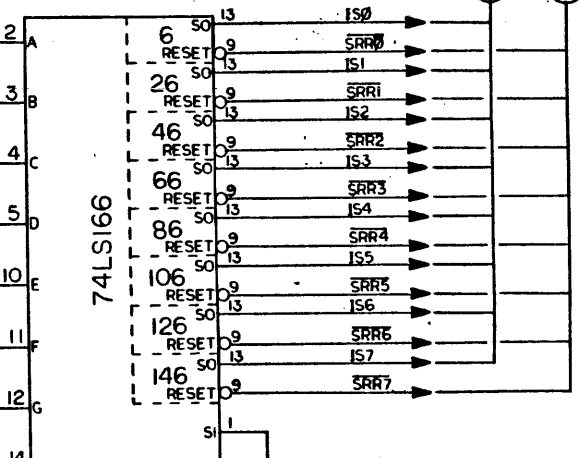
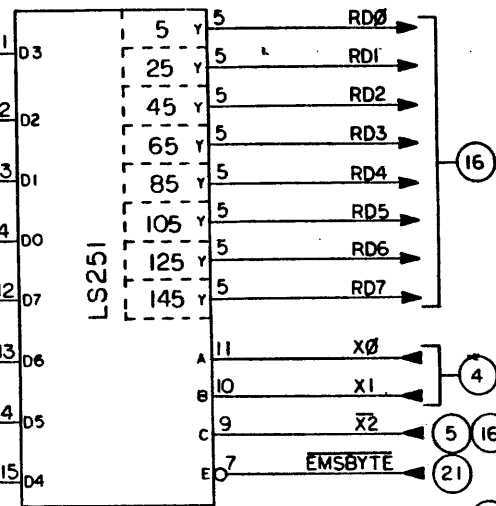
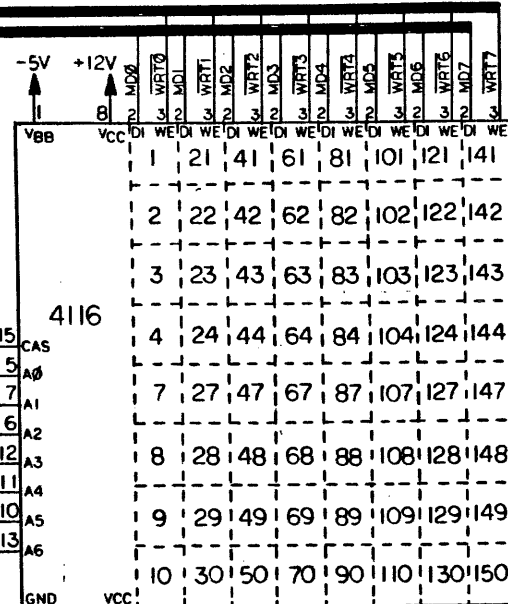
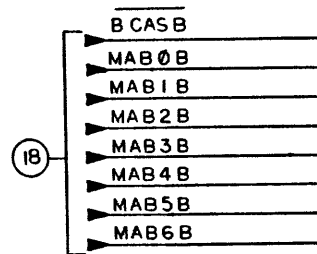
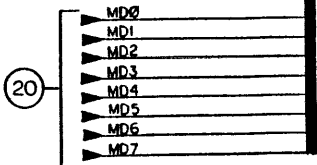
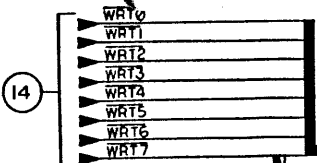
SHT-2



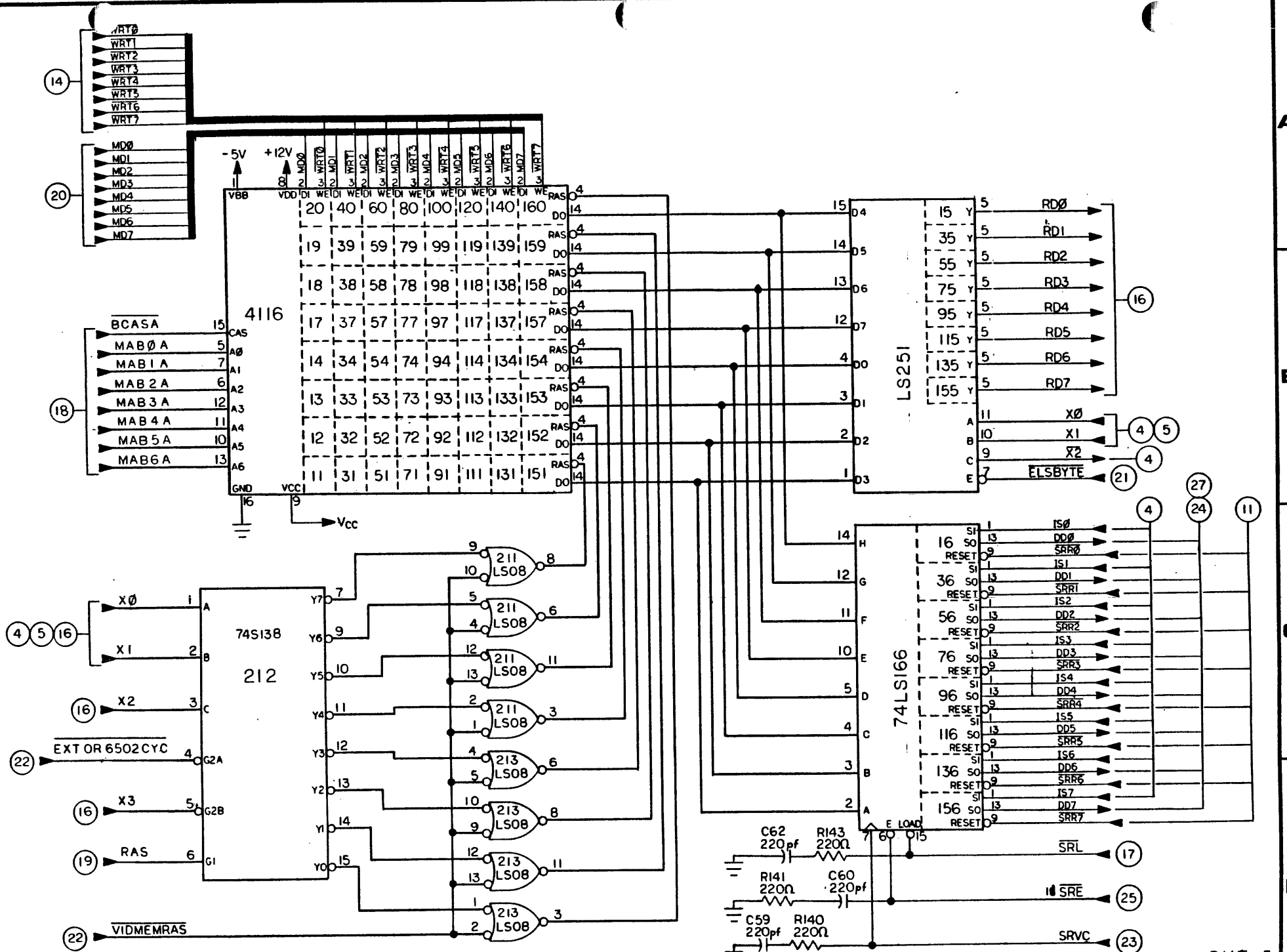
RAM/ROM

SHT-3

	ADVANCED ELECTRONICS DESIGN, INC. SUNNYVALE, CALIF. 94086	<b>C</b>	DRAWING NUMBER 120102-01	REV E
	SHEET 3 OF 31			



VIDEO MEMORY I SHT-4



VIDEO MEMORY 2

SHT-5

	ADVANCED ELECTRONICS DESIGN, INC. SUNNYVALE, CALIF. 94088	<b>C</b> DRAWING NUMBER 120102-01	REV E
	SHEET 5 OF 31		

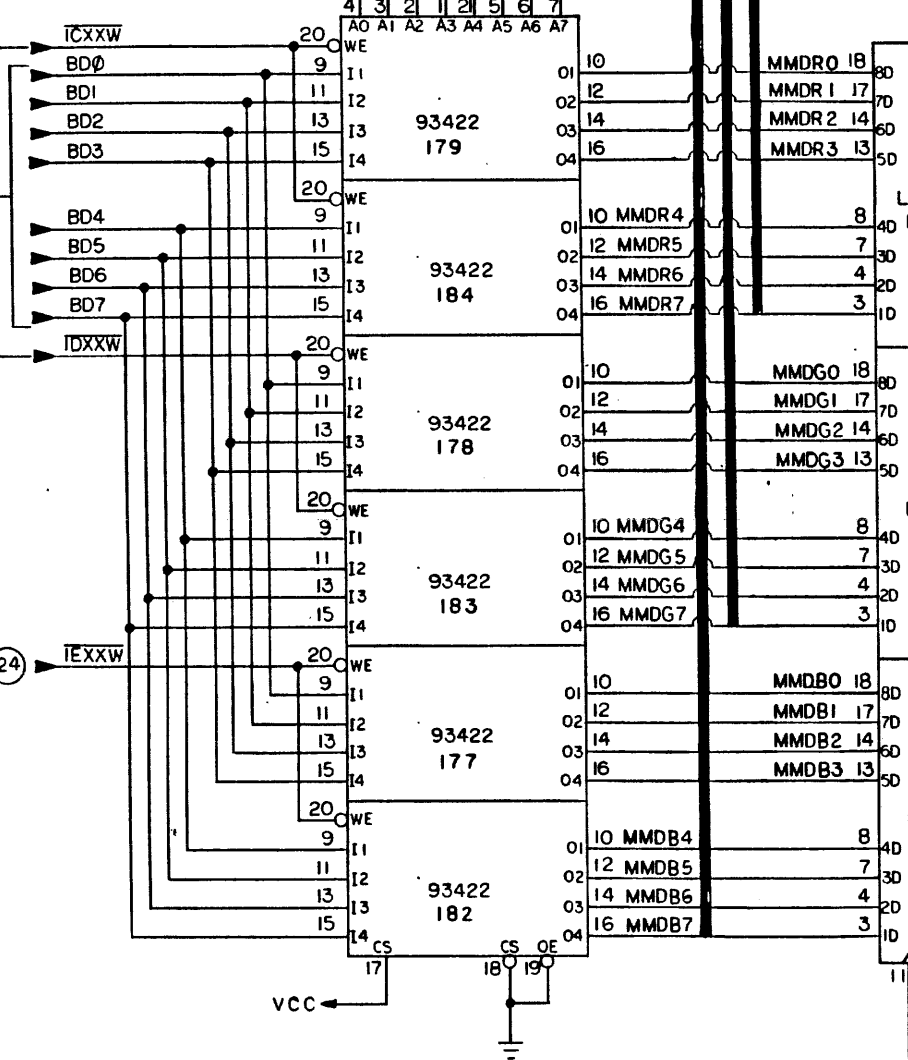
(24) MMA7  
MMA6  
MMA5  
MMA1  
MMA0  
MMA2  
MMA3  
MMA4

(24) ICXXW  
BD0  
BD1  
BD2  
BD3  
BD4  
BD5  
BD6  
BD7

(24) IDXXW

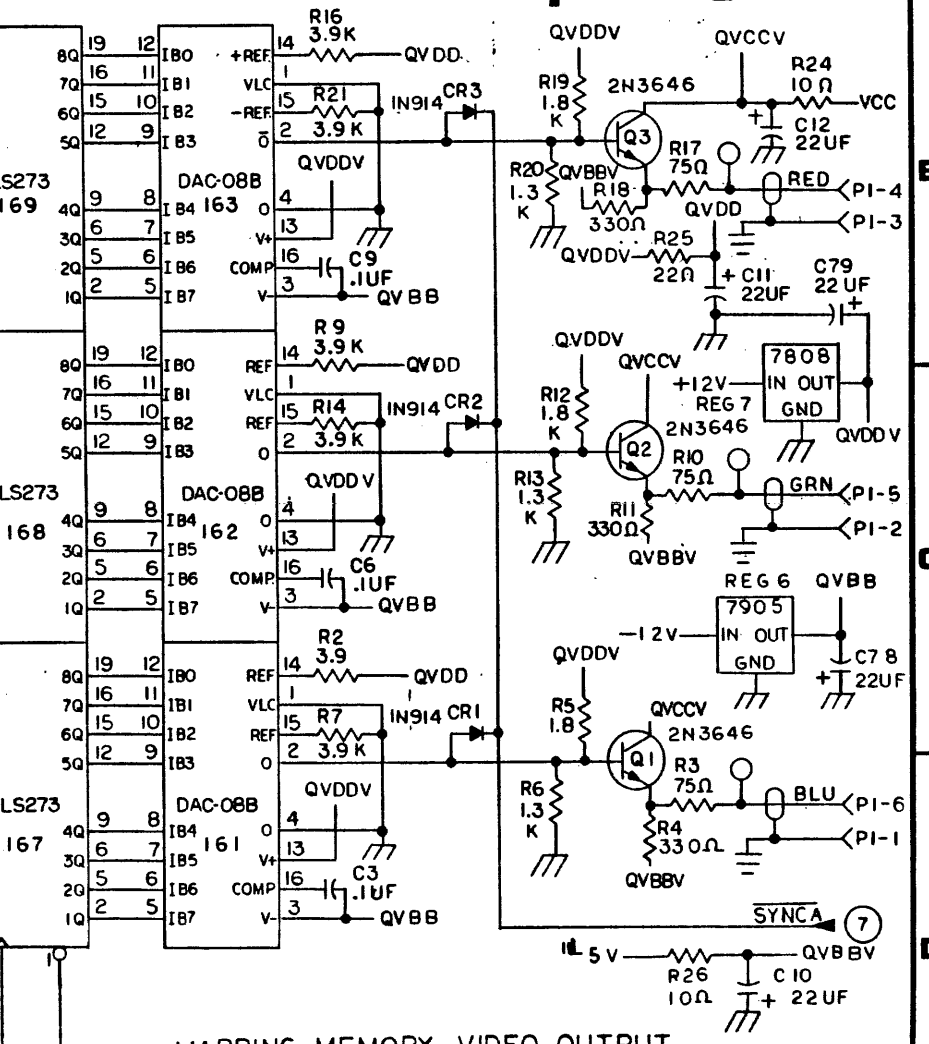
(24) IEXXW

(23) VC  
(17) RGB BLANK



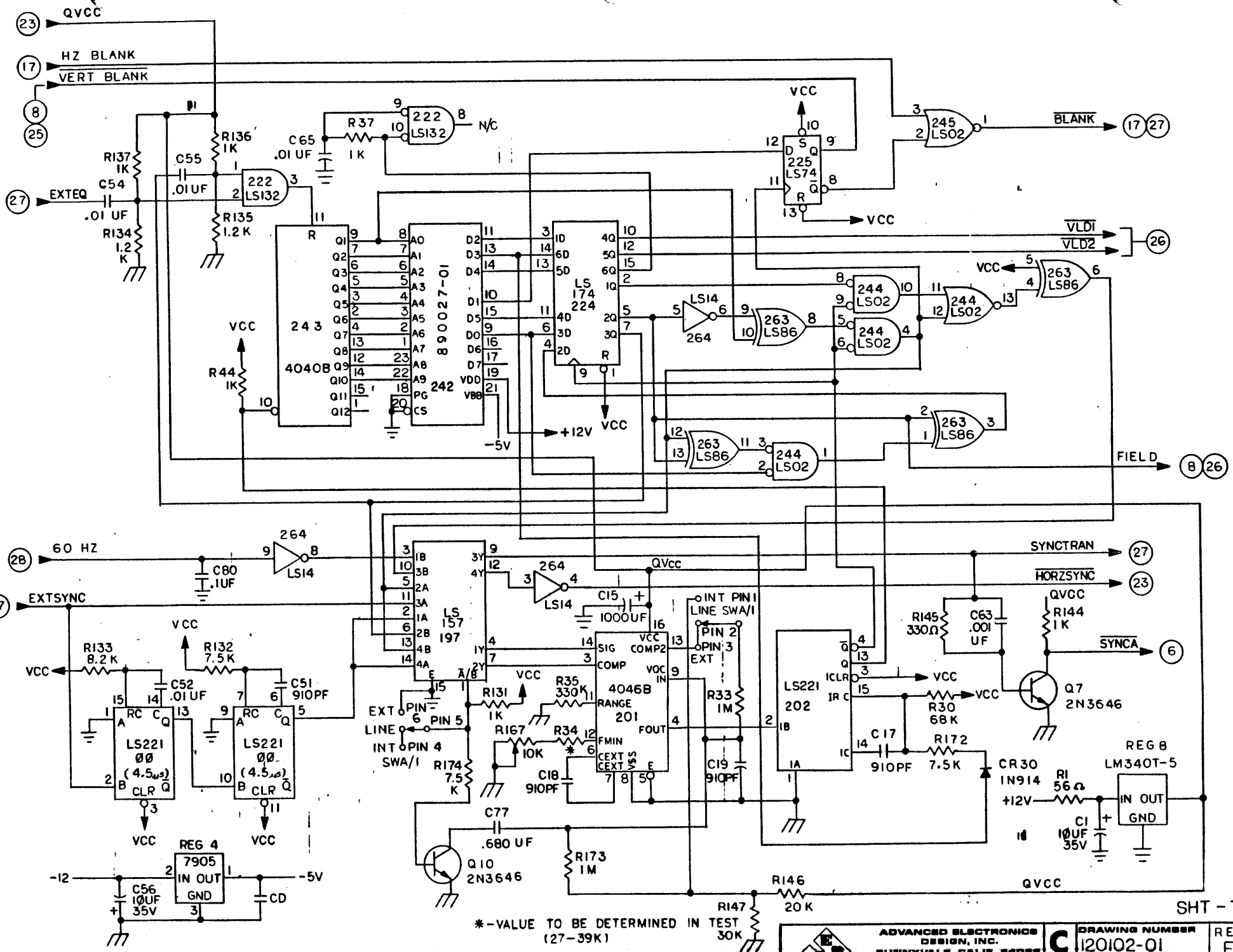
(14) MMDG0  
MMDG1  
MMDG2  
MMDG3  
MMDG4  
MMDG5  
MMDG6  
MMDG7

(14) MMDB0  
MMDB1  
MMDB2  
MMDB3  
MMDB4  
MMDB5  
MMDB6  
MMDB7  
MMDR0  
MMDR1  
MMDR2  
MMDR3  
MMDR4  
MMDR5  
MMDR6  
MMDR7

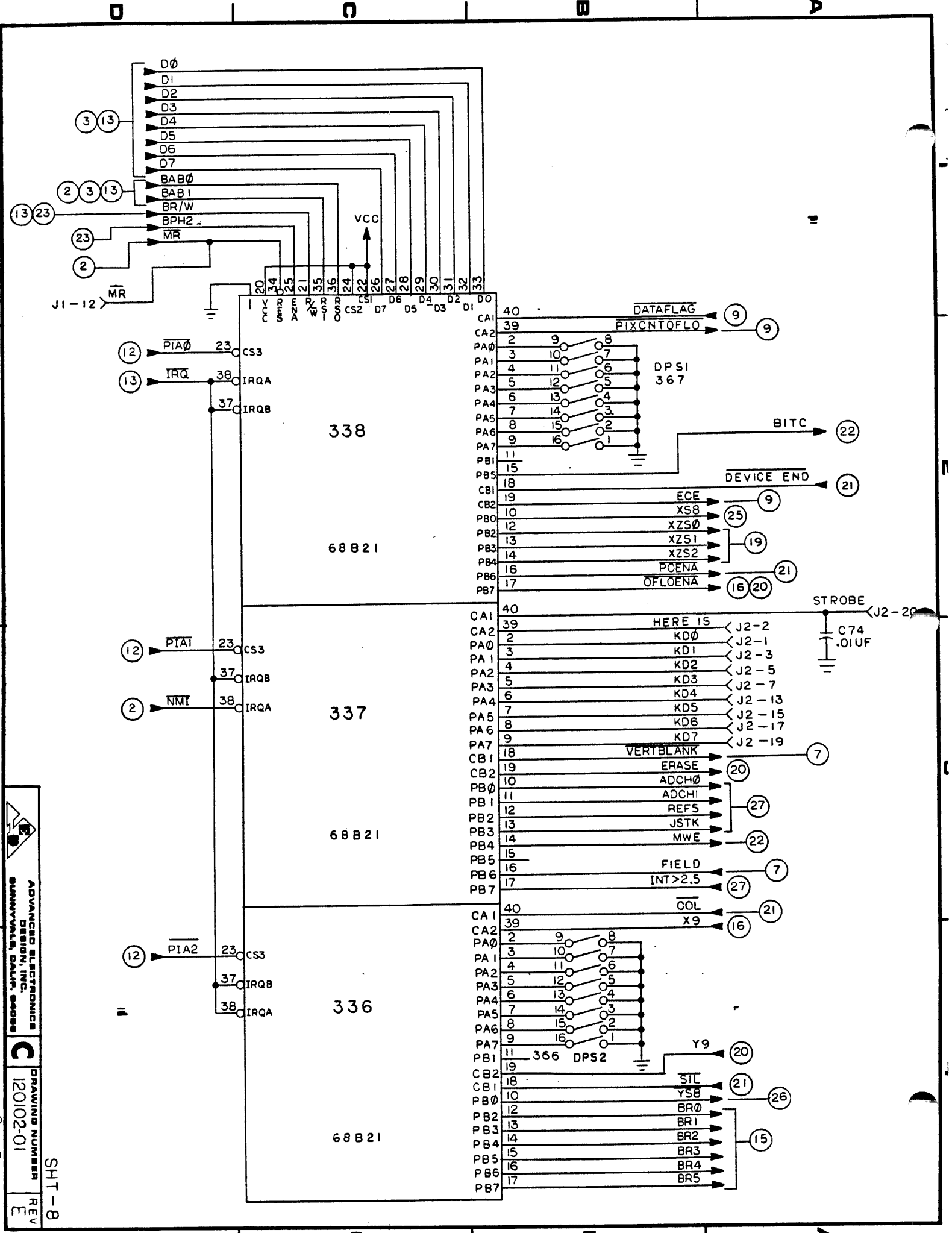


MAPPING MEMORY VIDEO OUTPUT SHT-6

	ADVANCED ELECTRONICS DESIGN, INC.		DRAWING NUMBER		REV
	SUNNYVALE, CALIF. 94088		120102-01		E

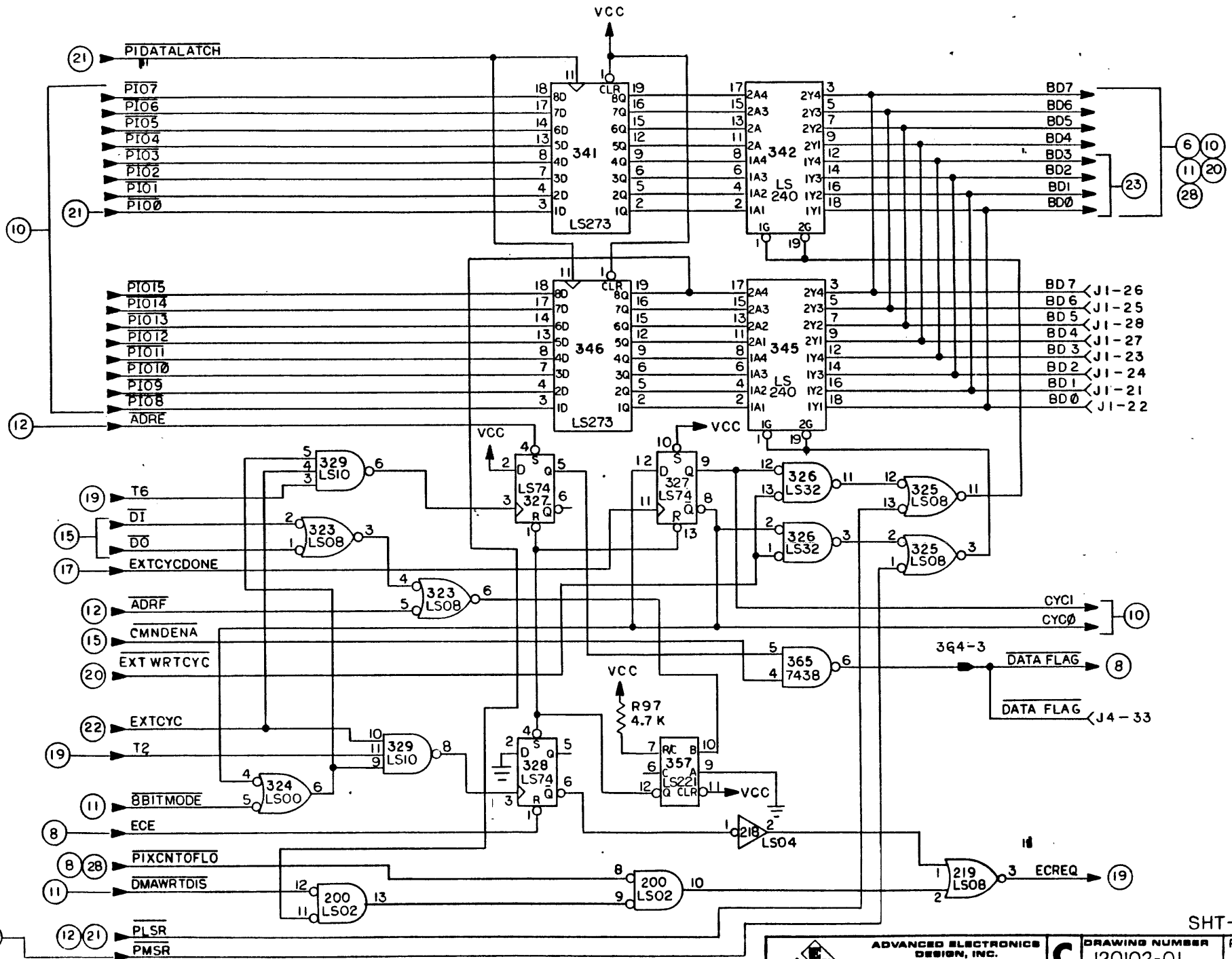


\*-VALUE TO BE DETERMINED IN TEST (27-39K)



ADVANCED ELECTRONICS  
 DESIGN, INC.  
 SUNNYVALE, CALIF. 94088  
 DRAWING NUMBER  
 120102-01  
 REV  
 E  
 SHT-8  
 SHEET 8 OF 31





SHT-9

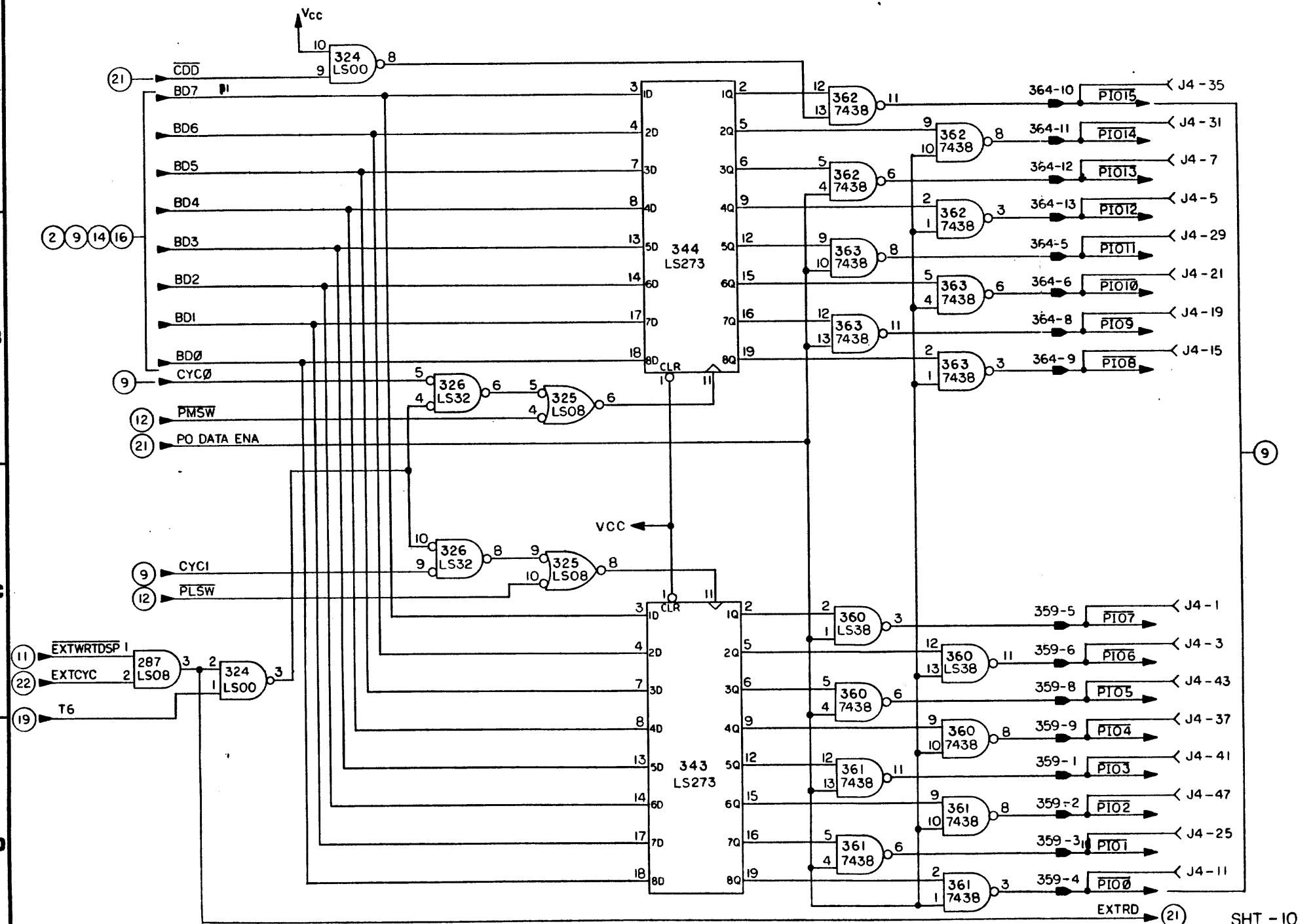
ADVANCED ELECTRONICS DESIGN, INC. SUNNYVALE, CALIF. 94088

DRAWING NUMBER 120102-01

REV E

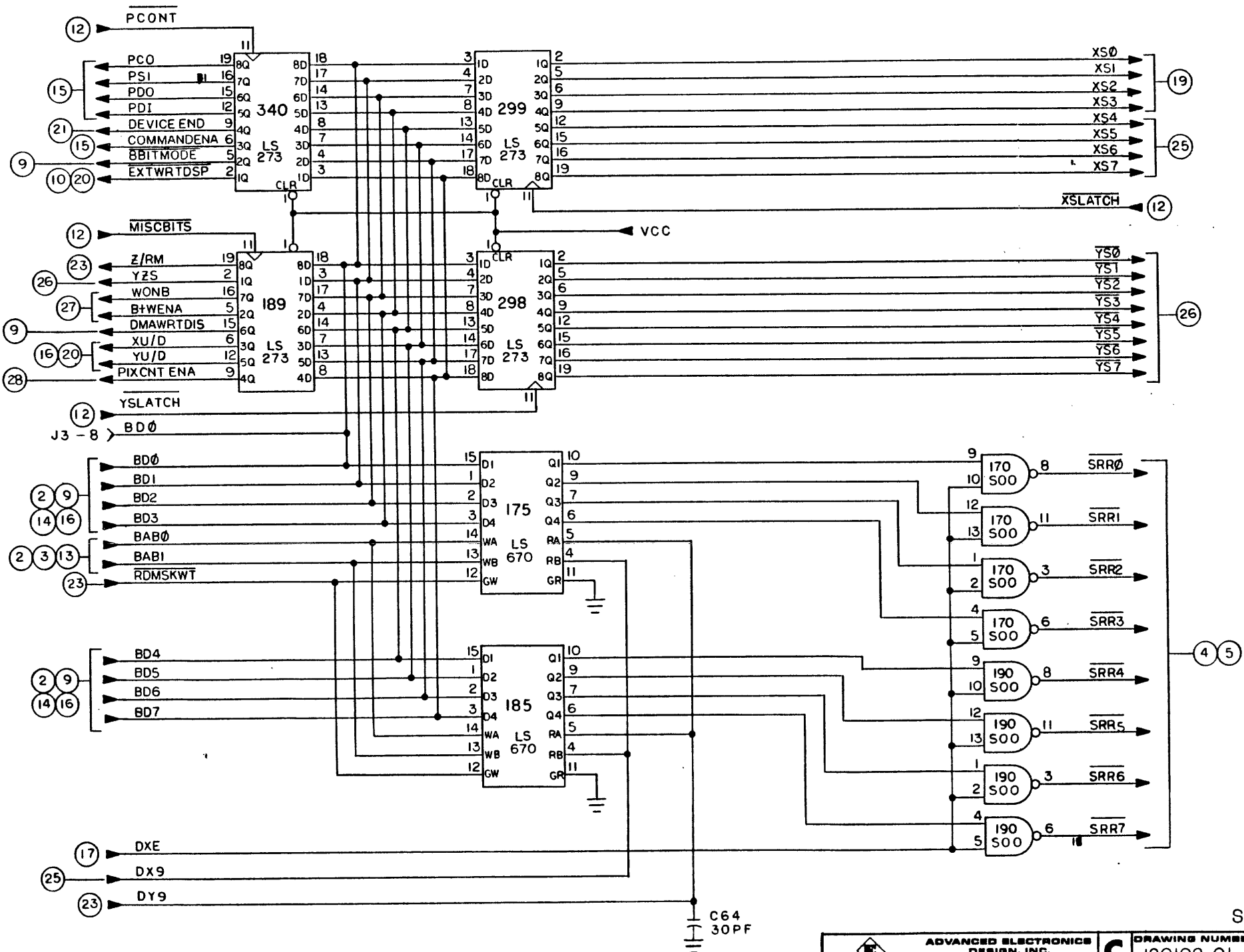
A  
B  
C  
D

A  
B  
C  
D



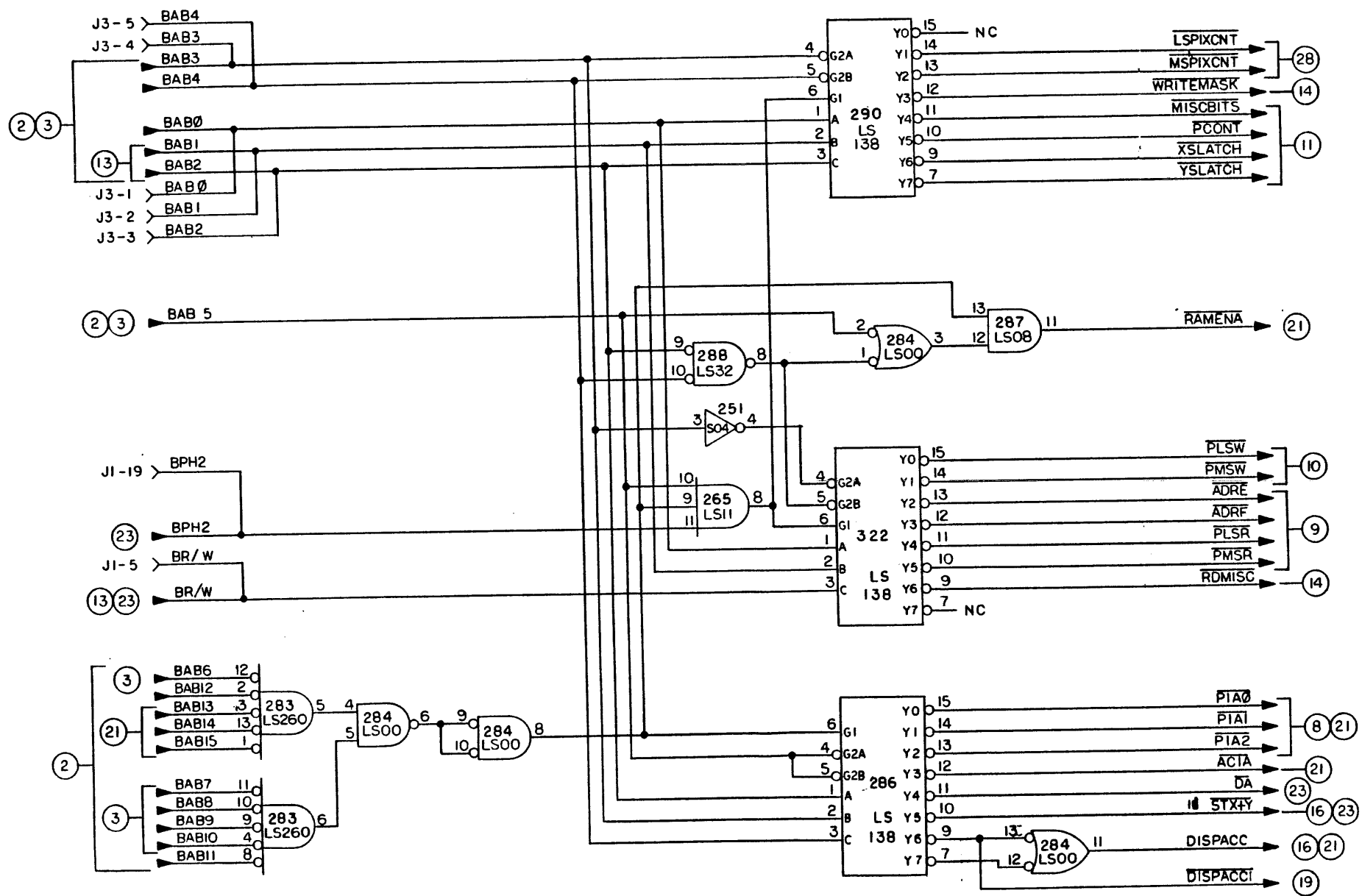
9

EXTRD (21) SHT - 10

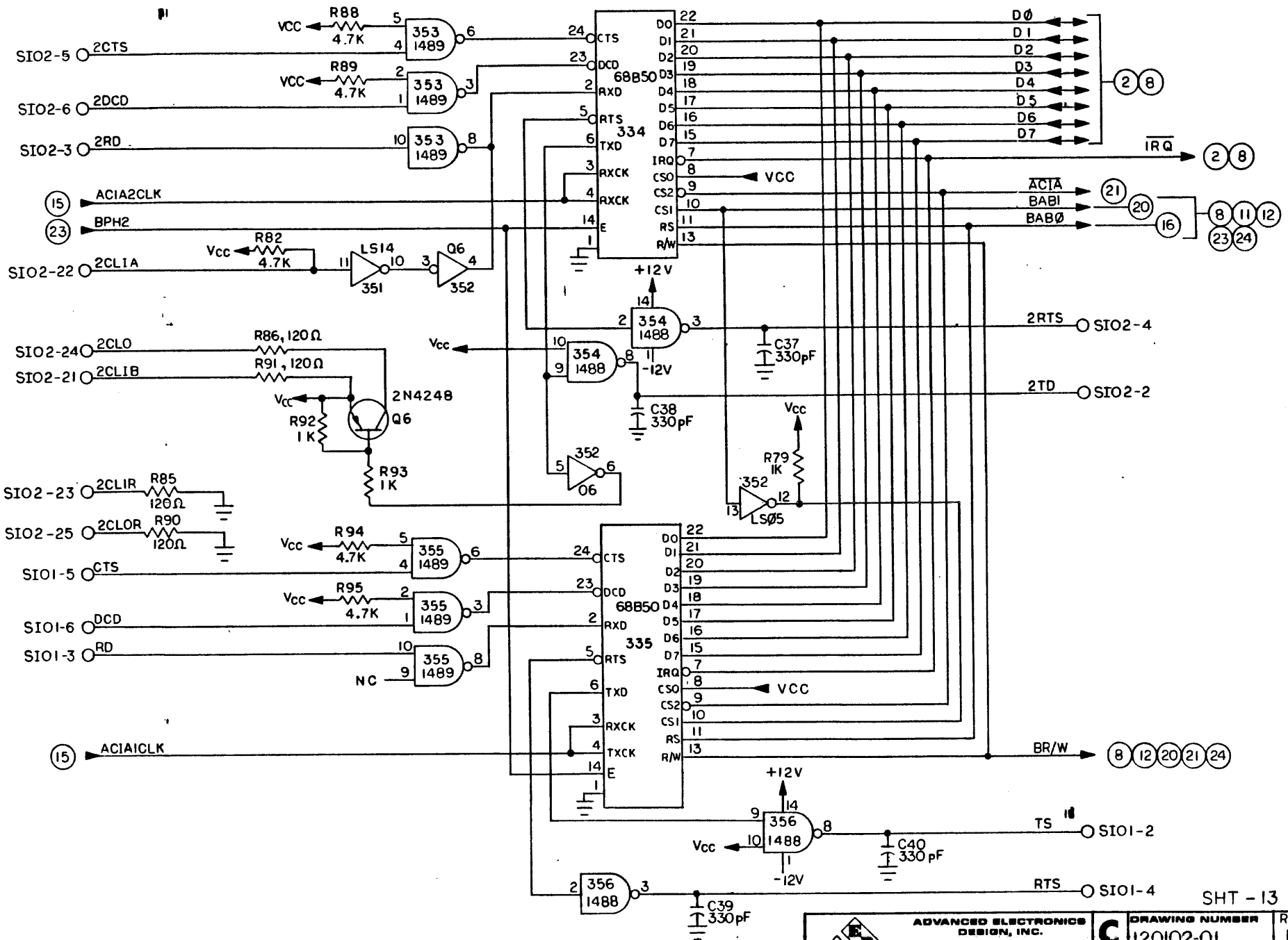


SHT-11

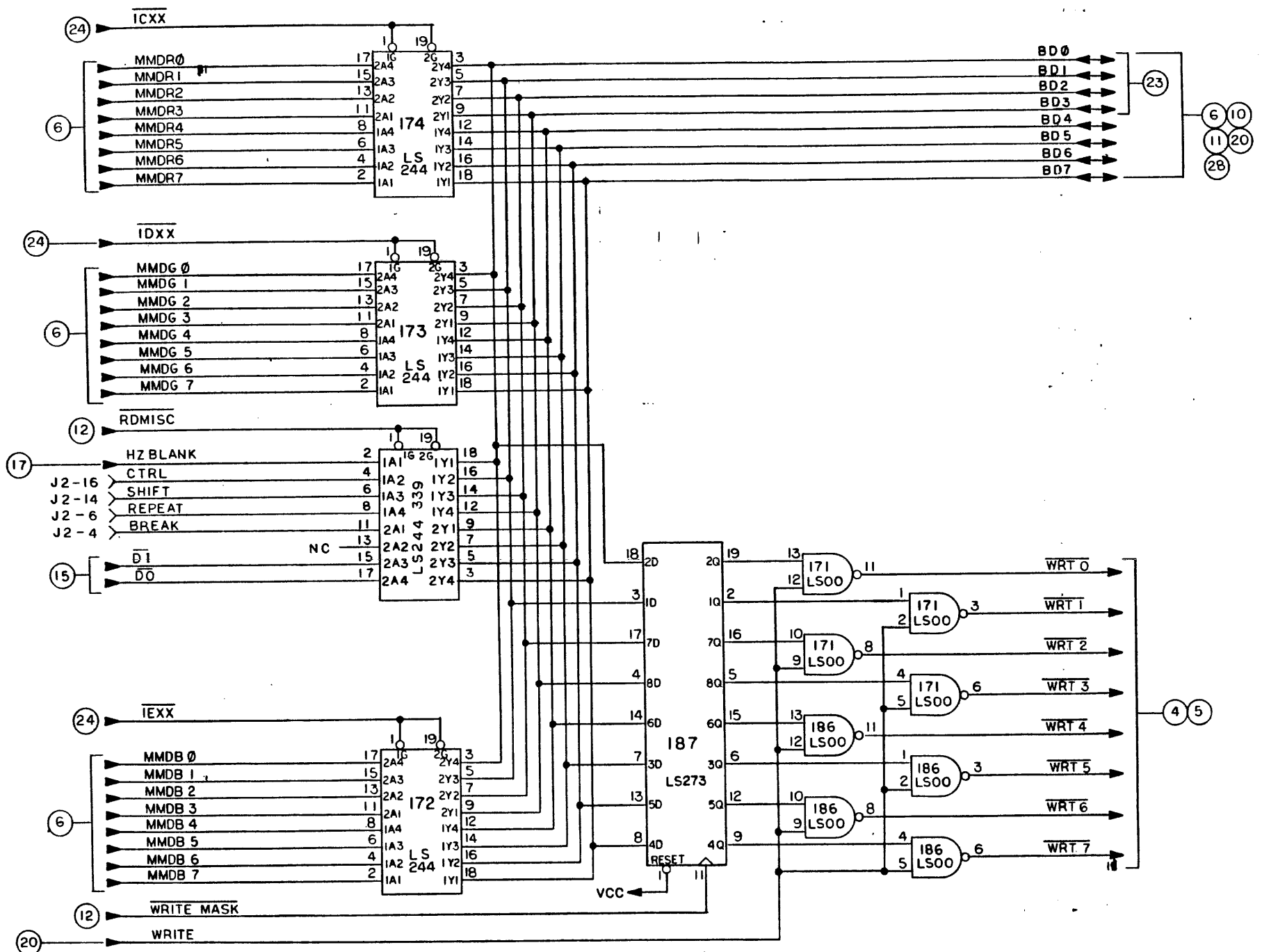
	<b>ADVANCED ELECTRONICS DESIGN, INC.</b> SUNNYVALE, CALIF. 94088	<b>C</b>	<b>DRAWING NUMBER</b> 120102-01	<b>REV</b> E
	<b>SHEET 11 OF 31</b>			




SHT-12

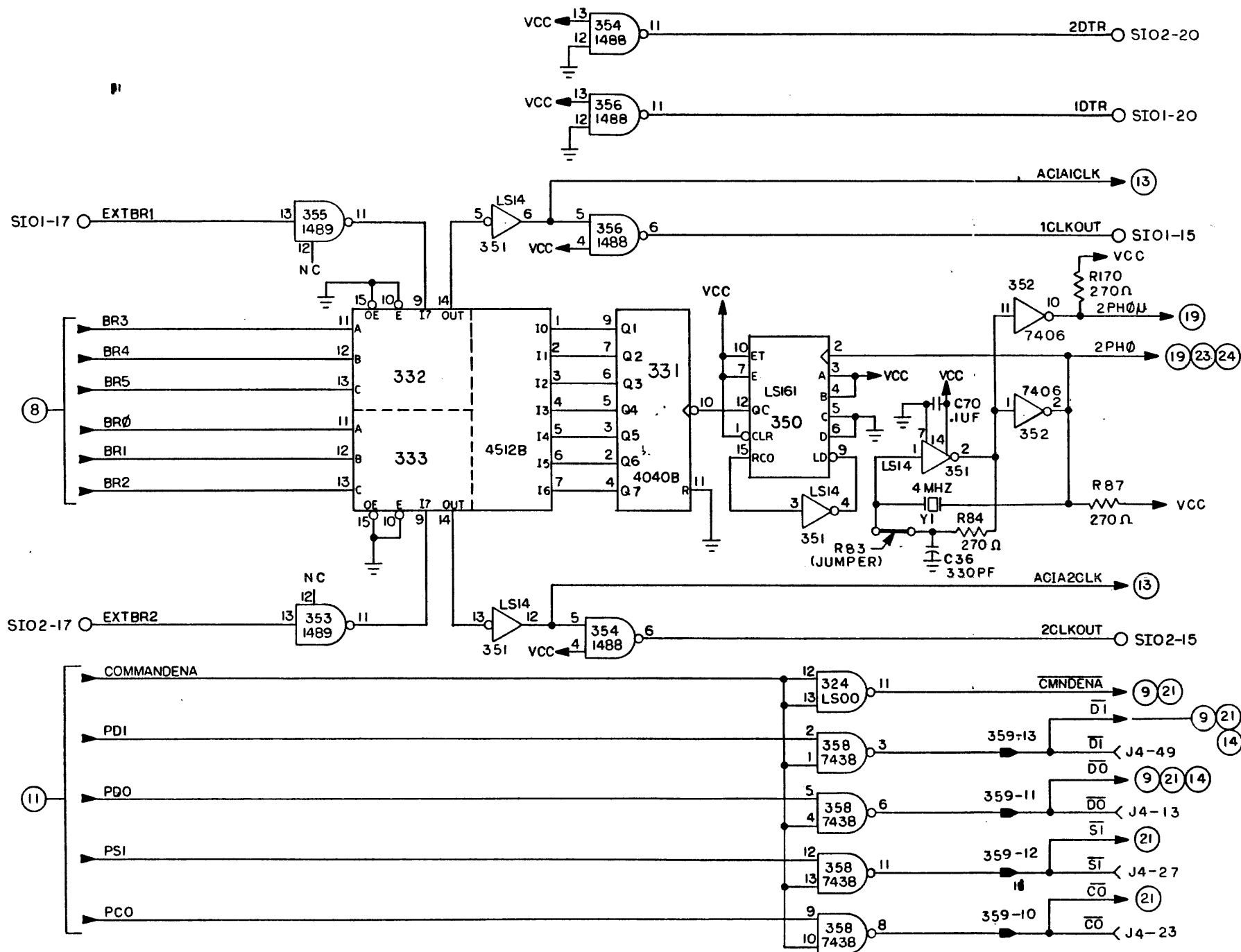


SHT - 13



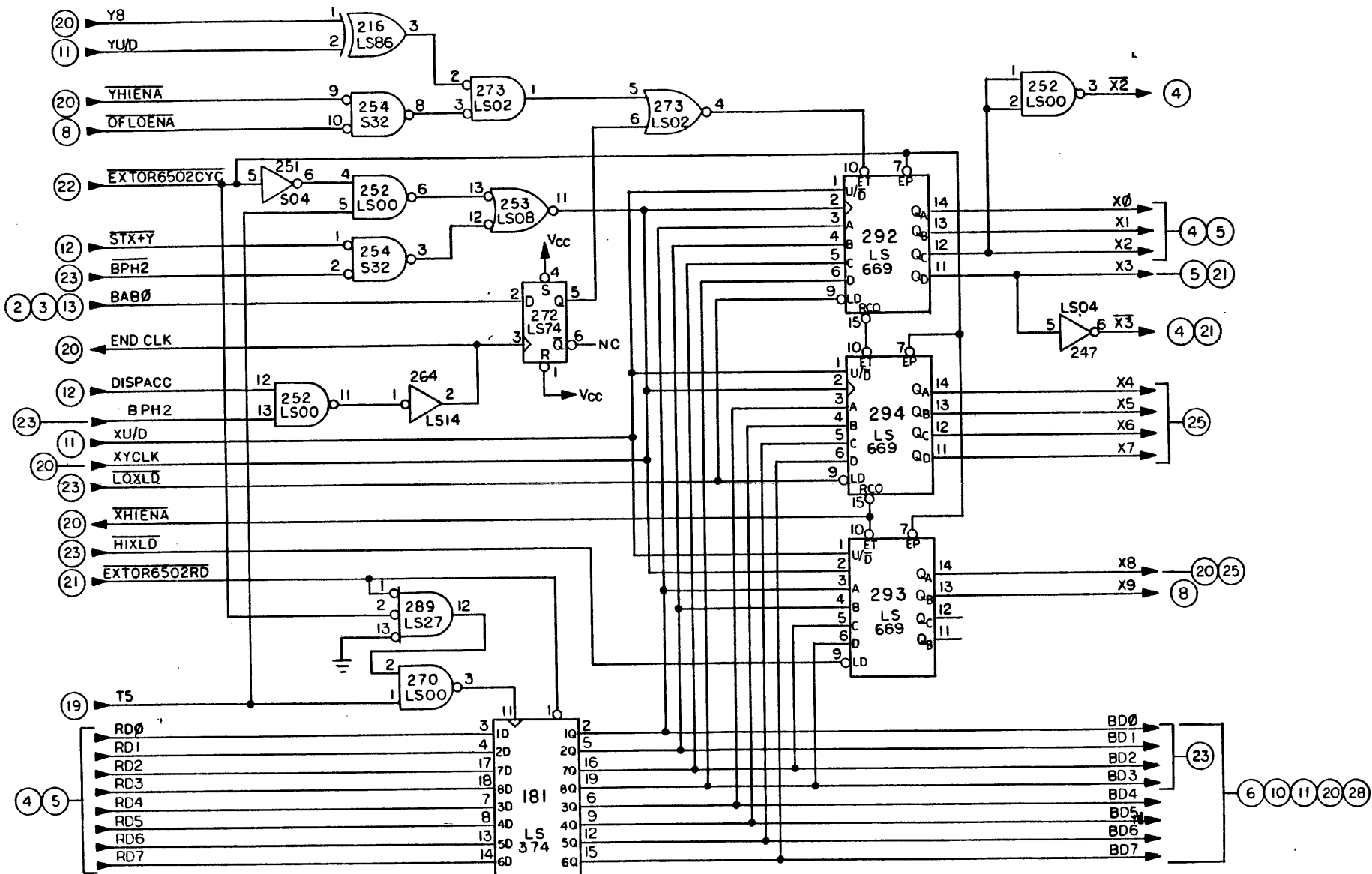
SHT-14

	<b>ADVANCED ELECTRONICS DESIGN, INC.</b> SUNNYVALE, CALIF. 94088	<b>C</b> DRAWING NUMBER 120102-01	REV E
	SHEET 14 OF 31		



SHT-15

	ADVANCED ELECTRONICS	DRAWING NUMBER	REV
	DESIGN, INC.		
SUNNYVALE, CALIF. 94088		SHEET 15 OF 31	

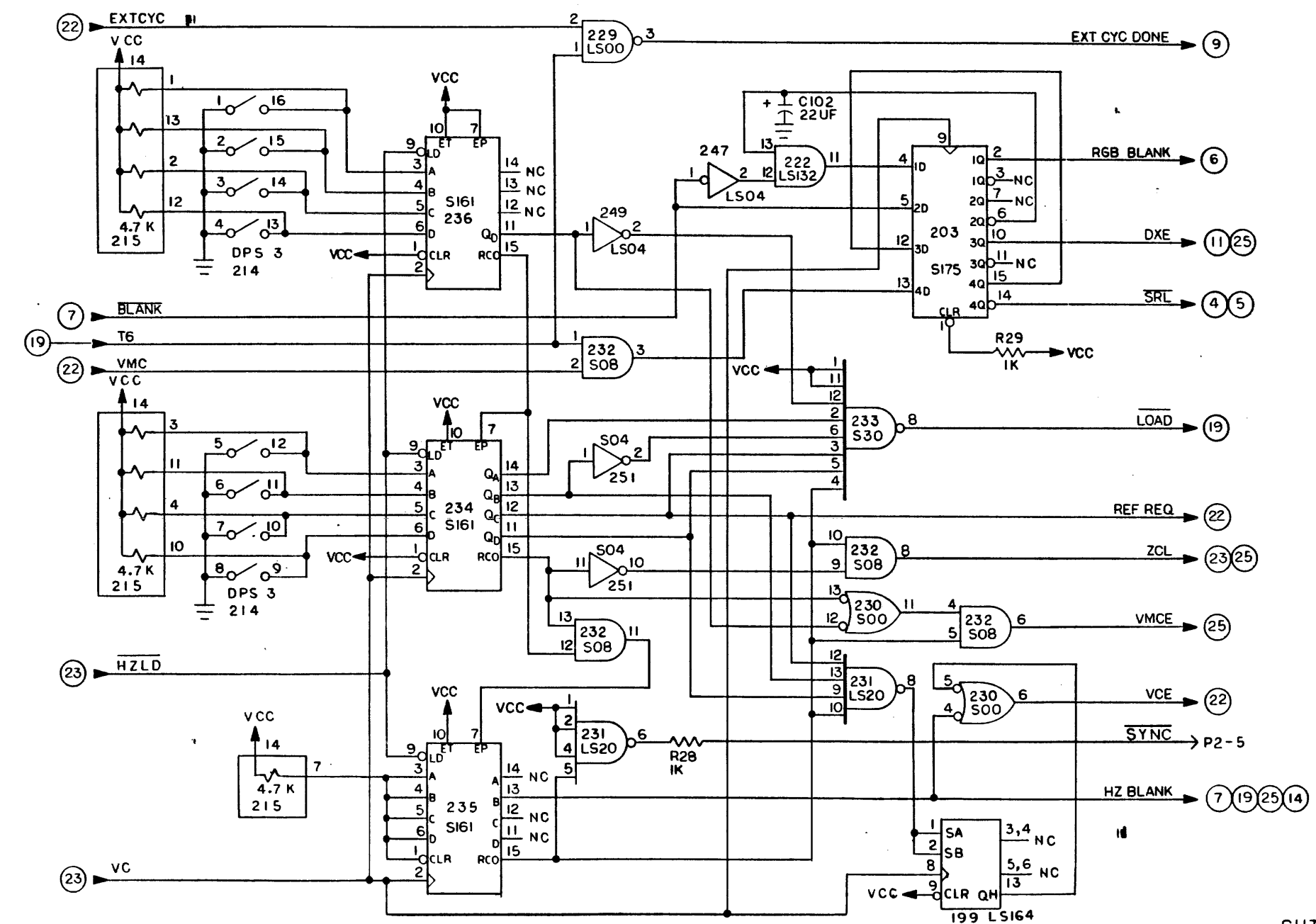


SHT -16

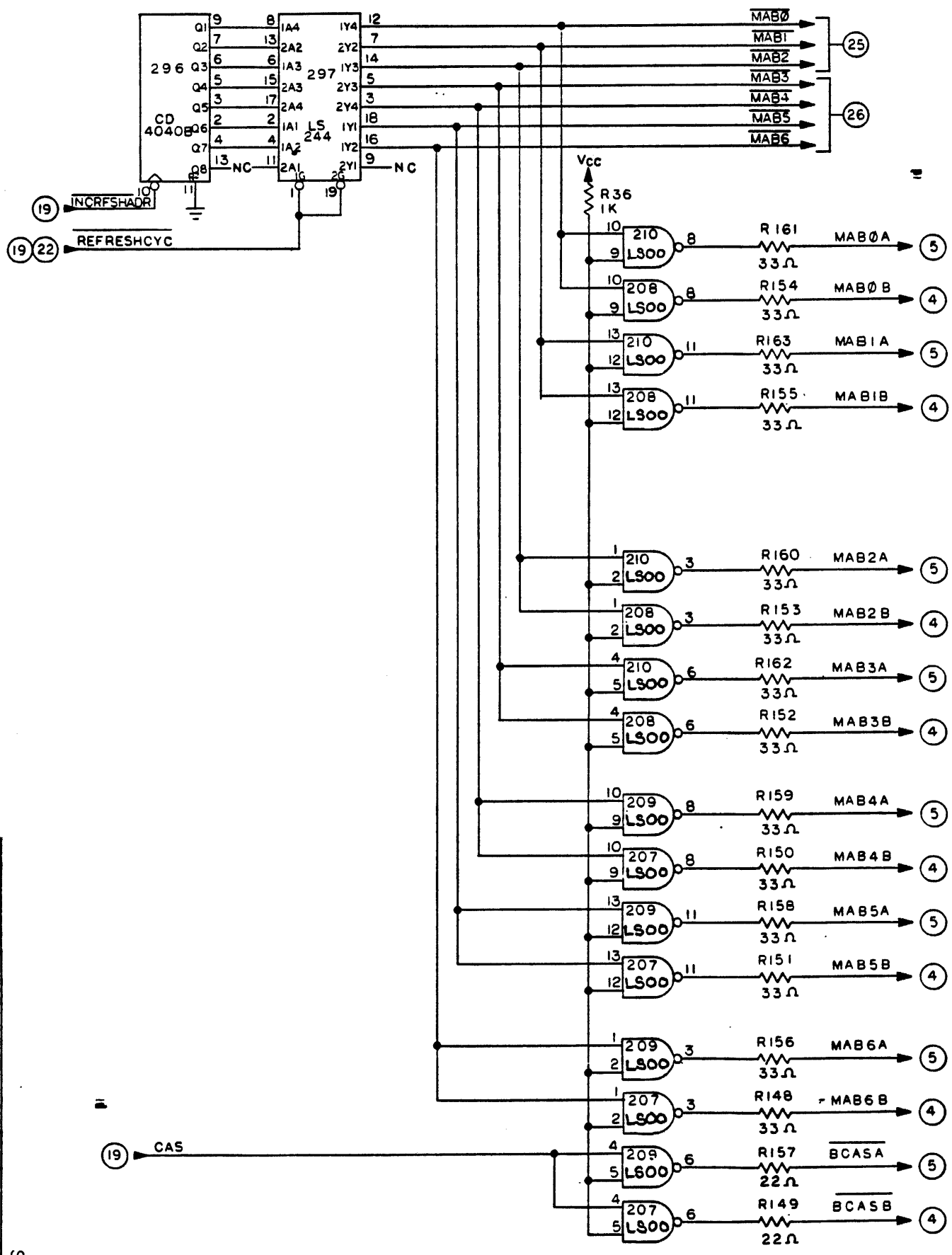
	<b>ADVANCED ELECTRONICS DESIGN, INC.</b> SUNNYVALE, CALIF. 94088	<b>C</b>	<b>DRAWING NUMBER</b> 120102-01	<b>REV</b> E
	<b>SHEET 16 OF 31</b>			



A  
B  
C  
D

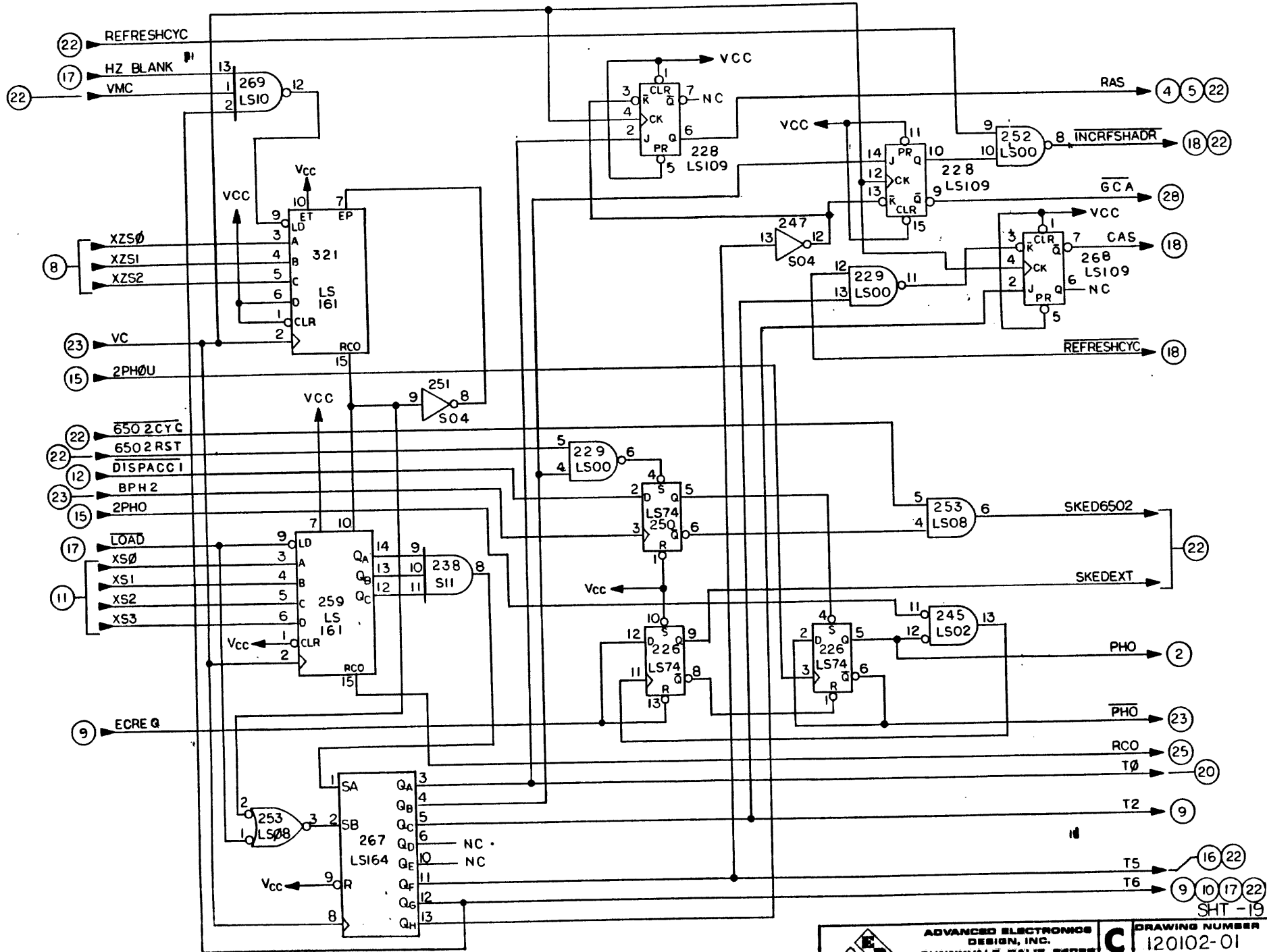


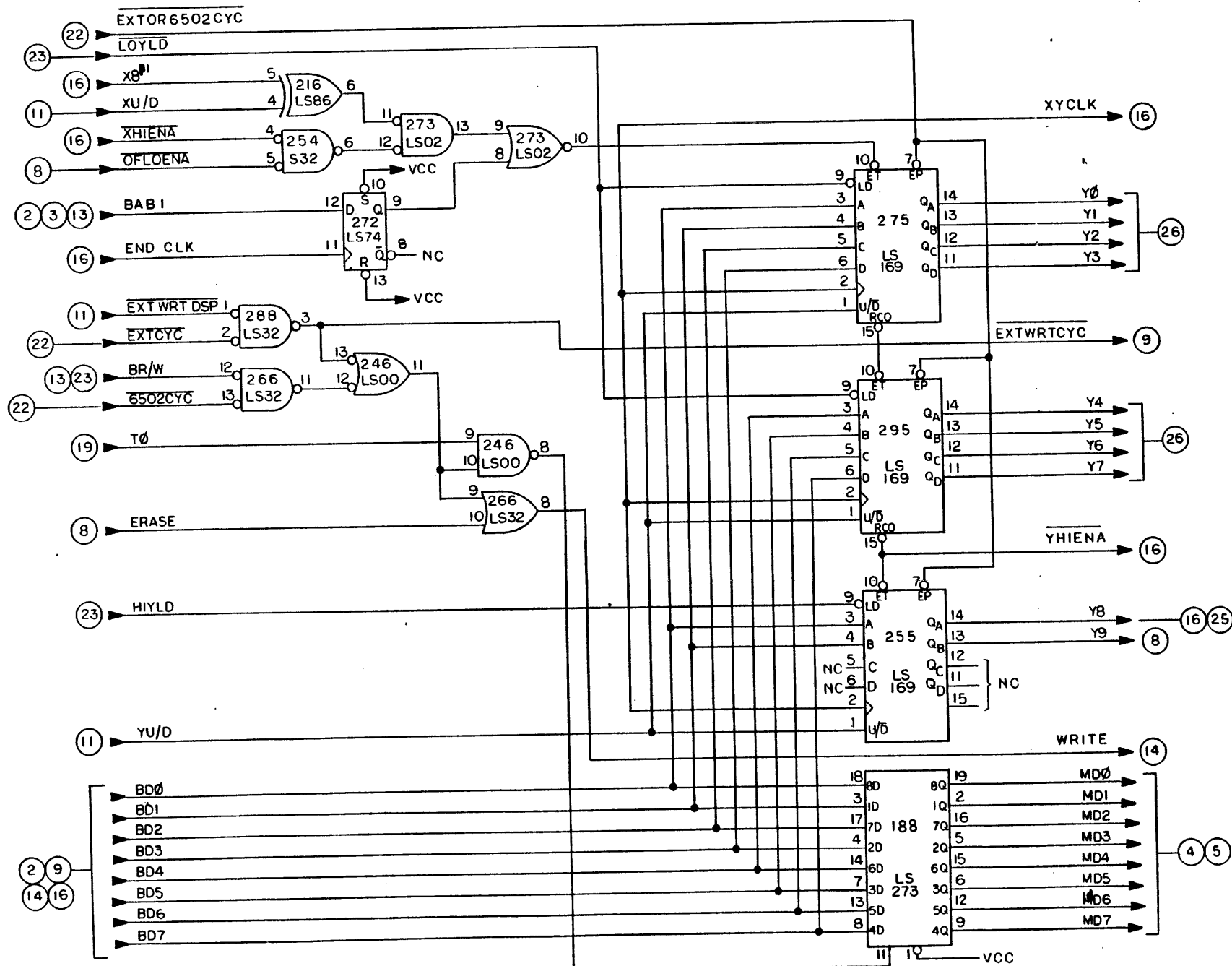
SHT-17



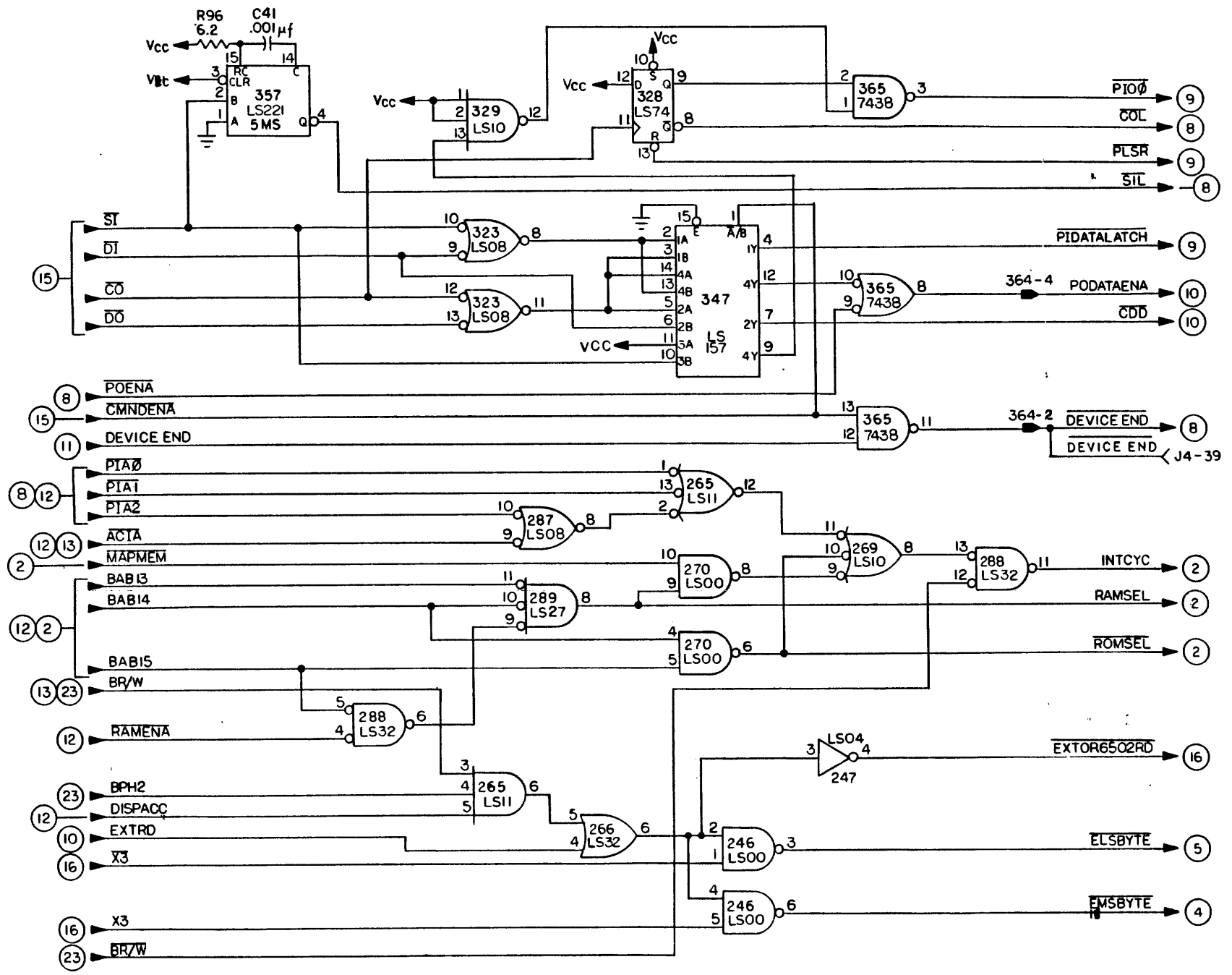
  
 ADVANCED ELECTRONICS  
 DESIGN, INC.  
 SUNNYVALE, CALIF. 94088  
 DRAWING NUMBER  
 120102-01  
 REV  
 E

SHT - 18



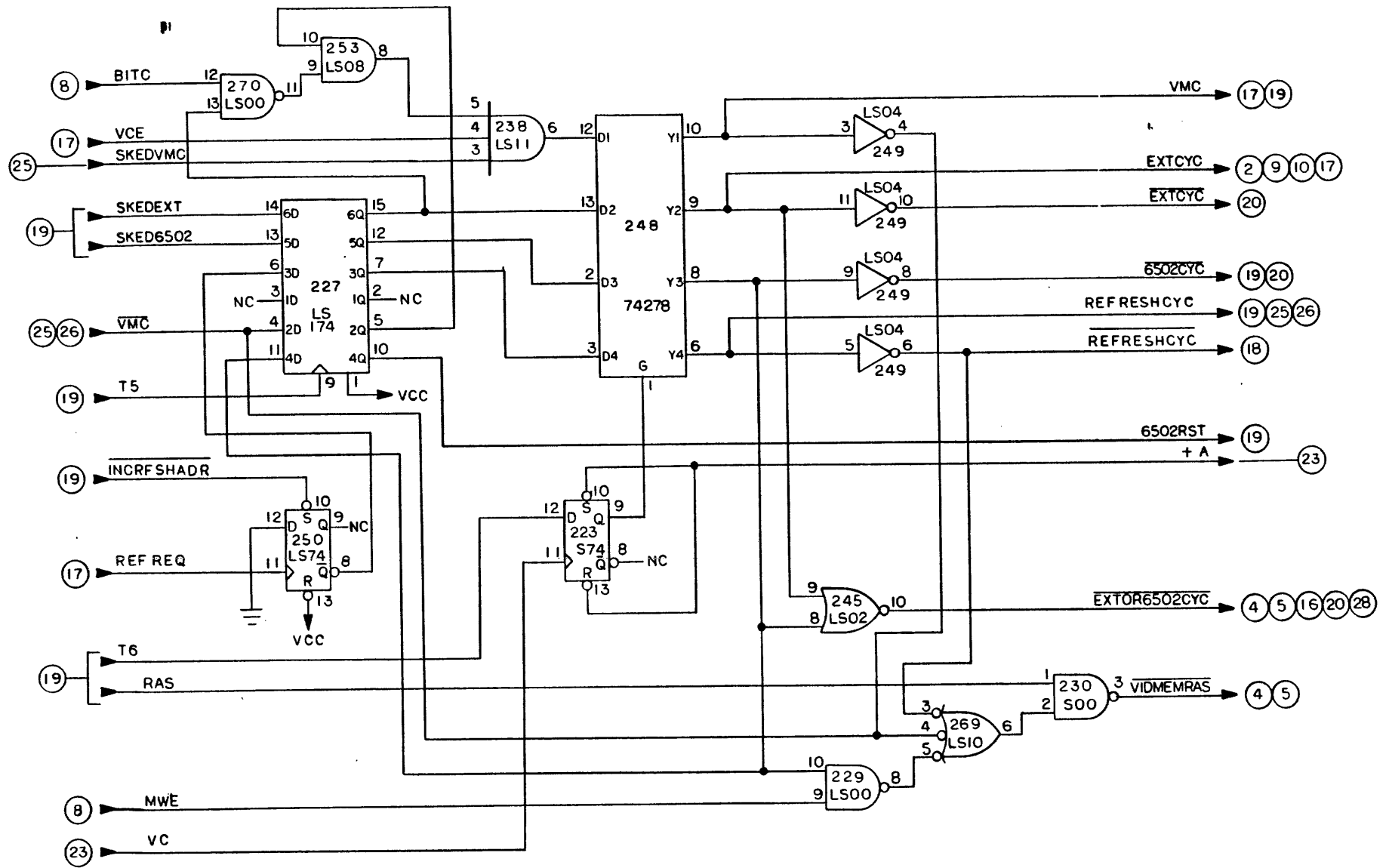


SHT-20



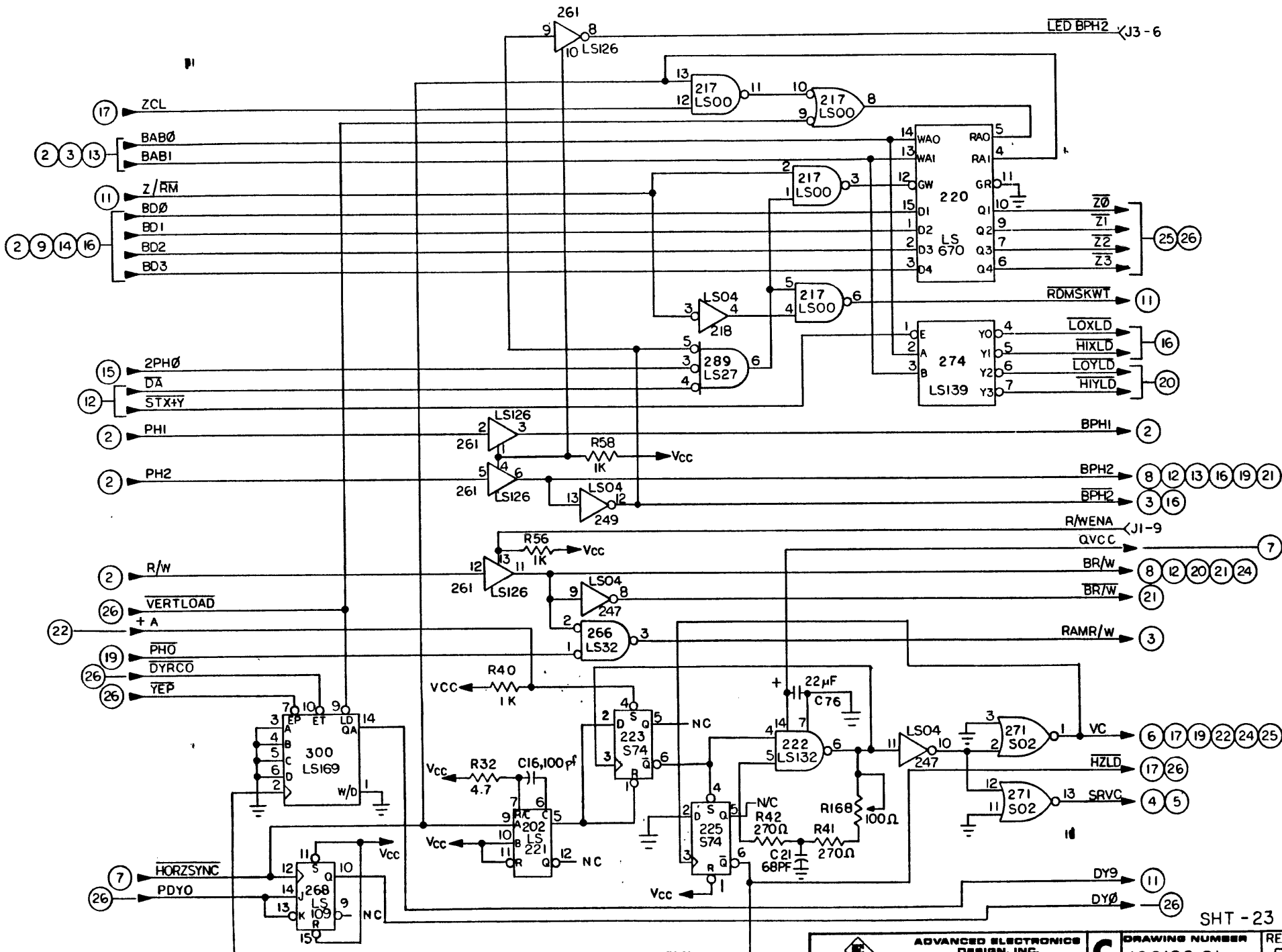
SHT - 21

	<b>ADVANCED ELECTRONICS DESIGN, INC.</b> SUNNYVALE, CALIF. 94088		<b>C</b>	DRAWING NUMBER	REV
				120102-01	E

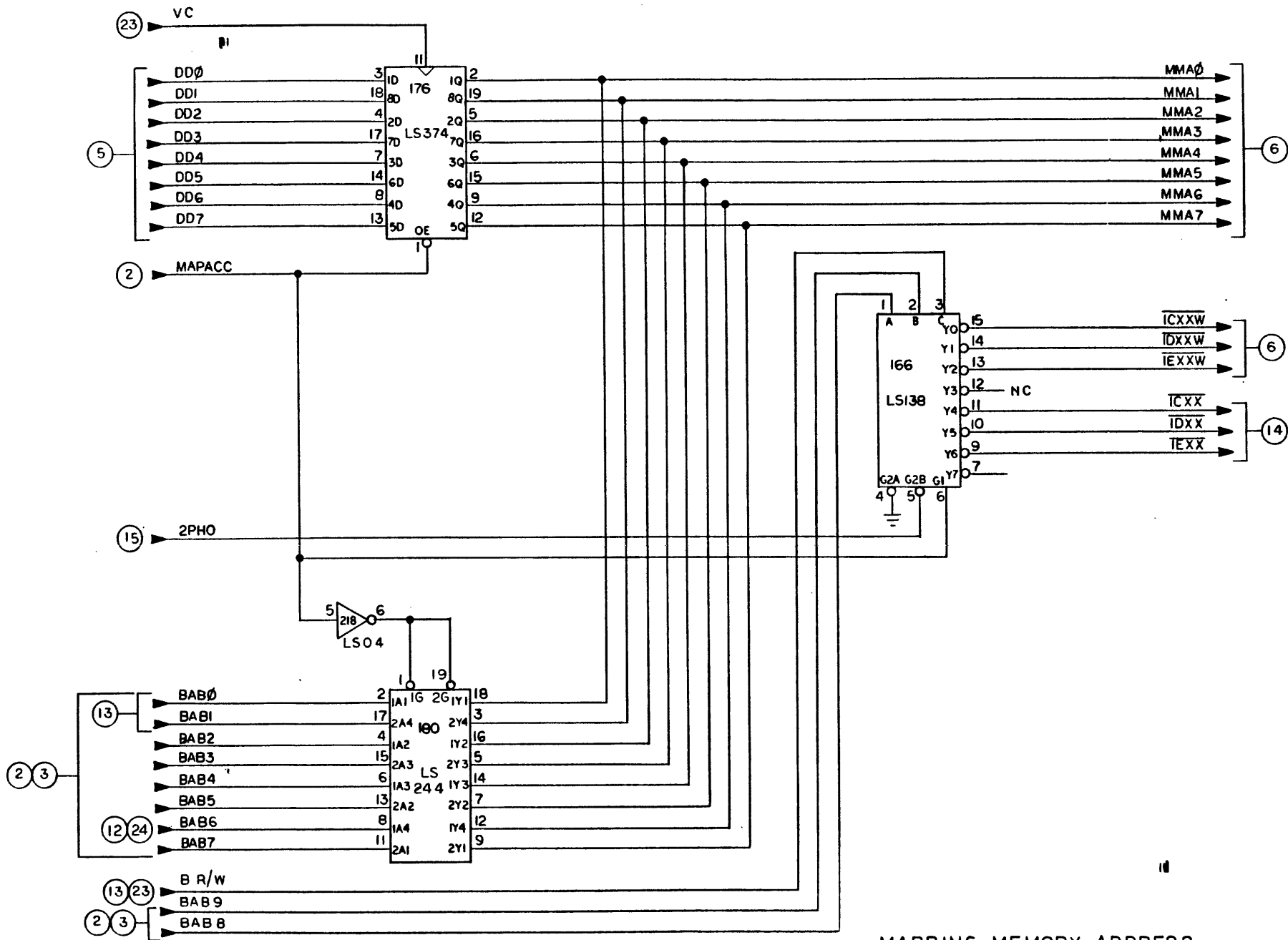


SHT-22

	ADVANCED ELECTRONICS DESIGN, INC. SUNNYVALE, CALIF. 94088		<b>C</b>	DRAWING NUMBER 120102-01	REV E
	SHEET 22 OF 31				



SHT - 23



MAPPING MEMORY ADDRESS

SHT 24



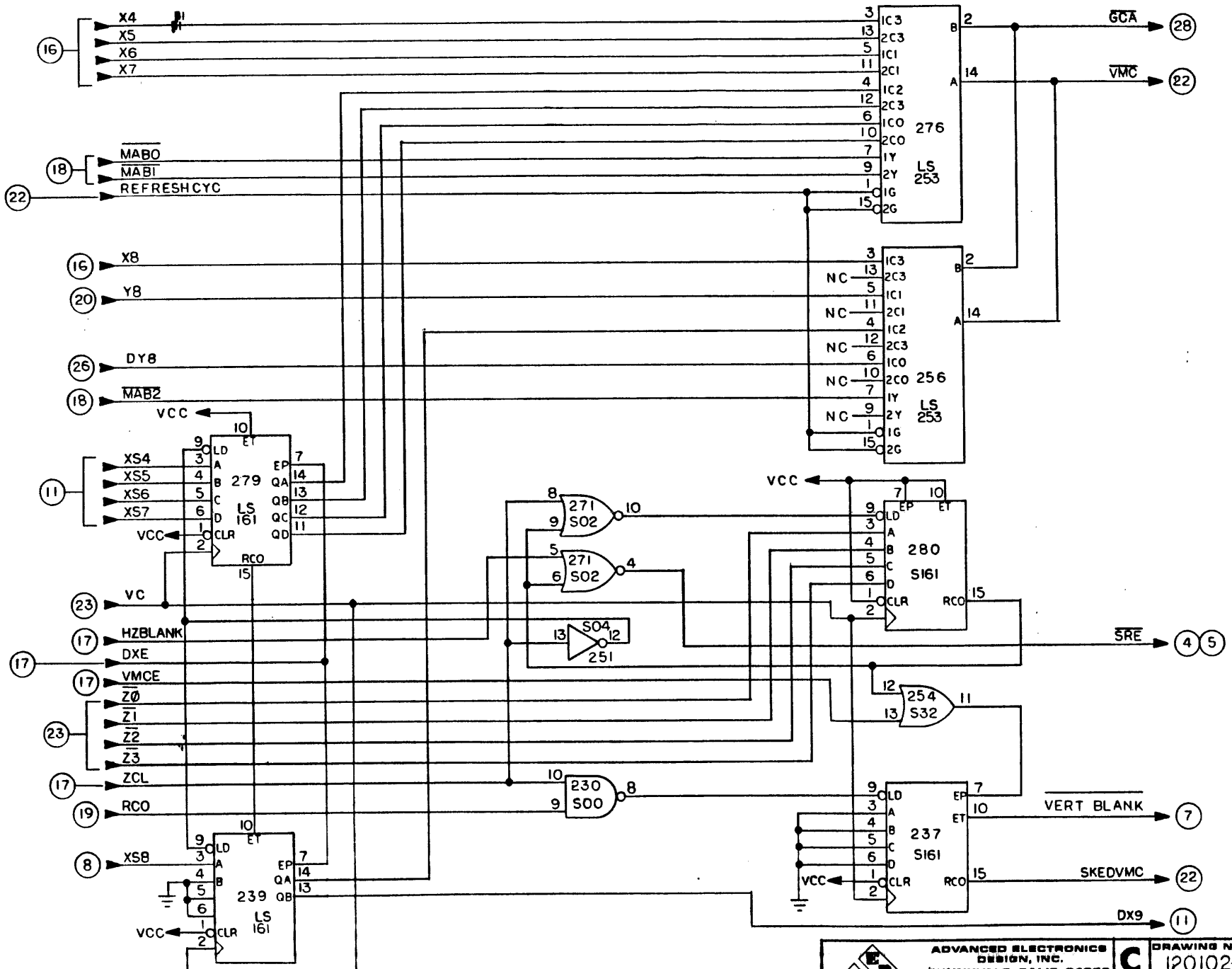
ADVANCED ELECTRONICS  
DESIGN, INC.  
SUNNYVALE, CALIF. 94088



DRAWING NUMBER  
120102-01

REV  
E



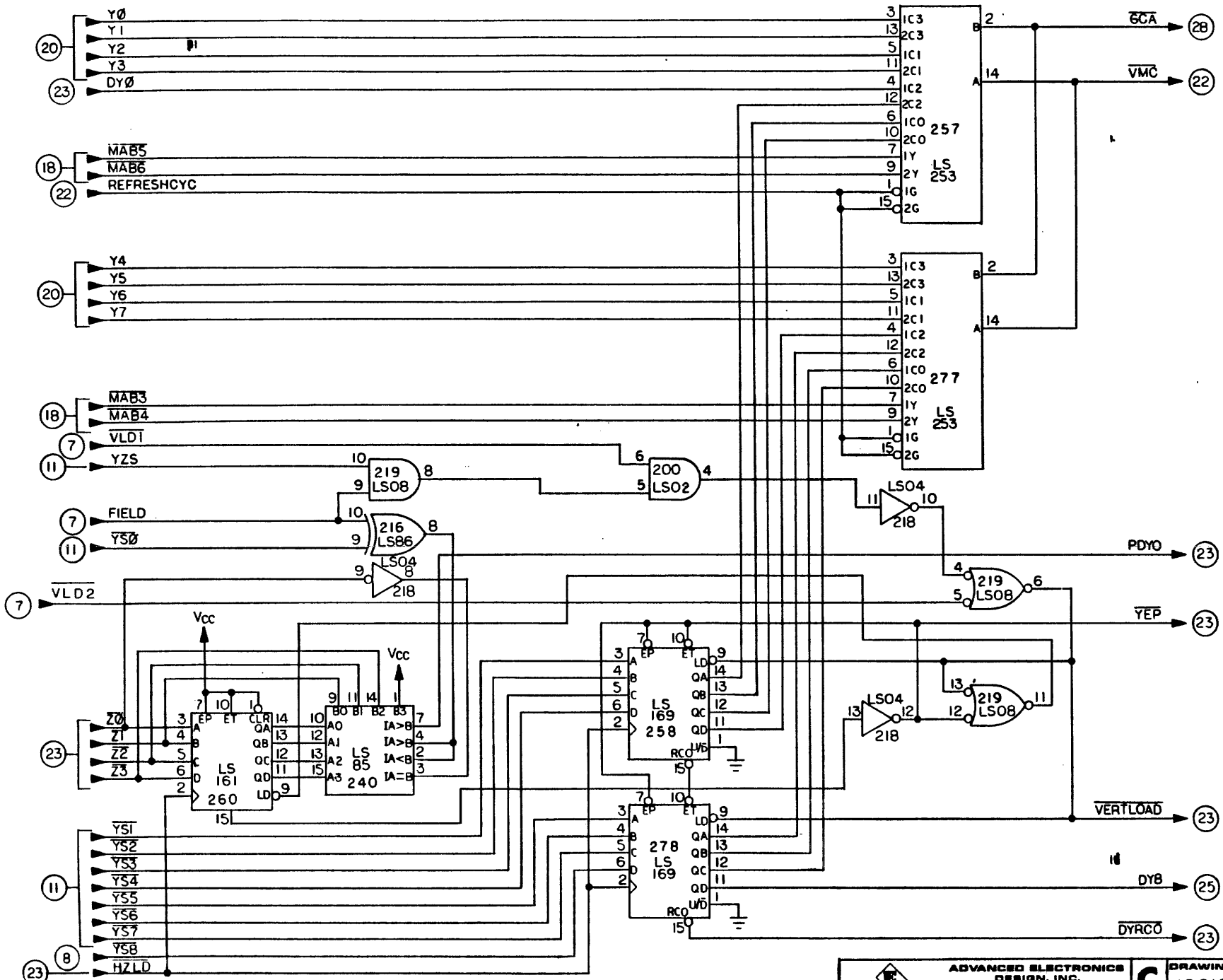


A

B

C

D

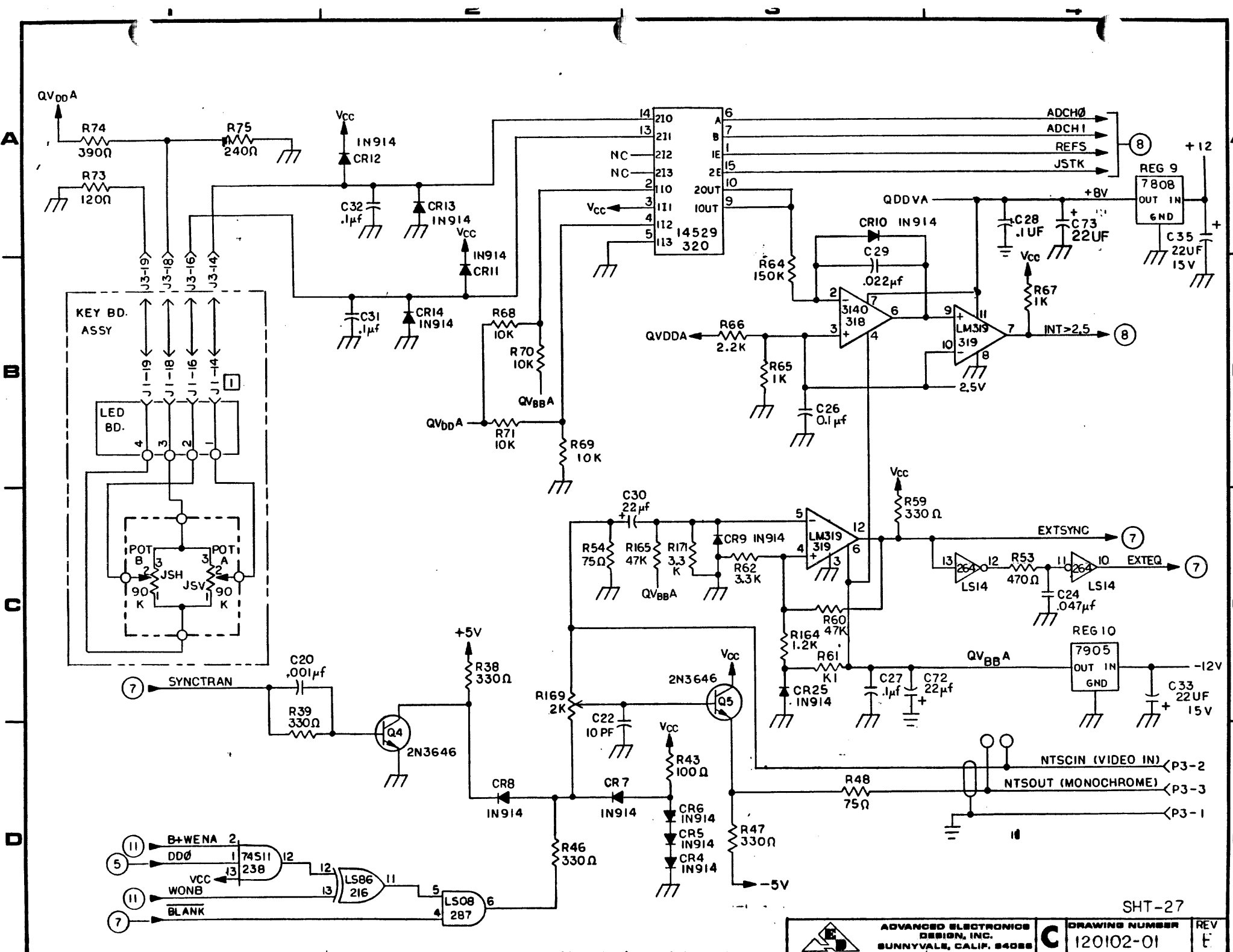


ADVANCED ELECTRONICS  
DESIGN, INC.  
SUNNYVALE, CALIF. 94086

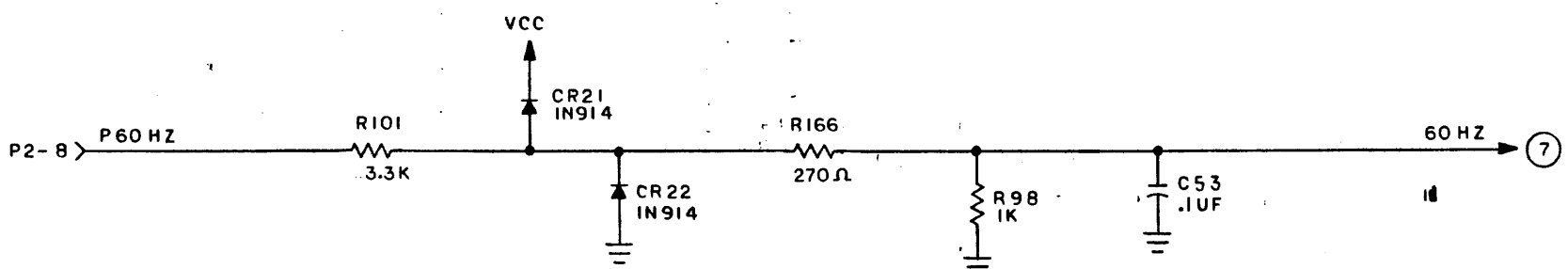
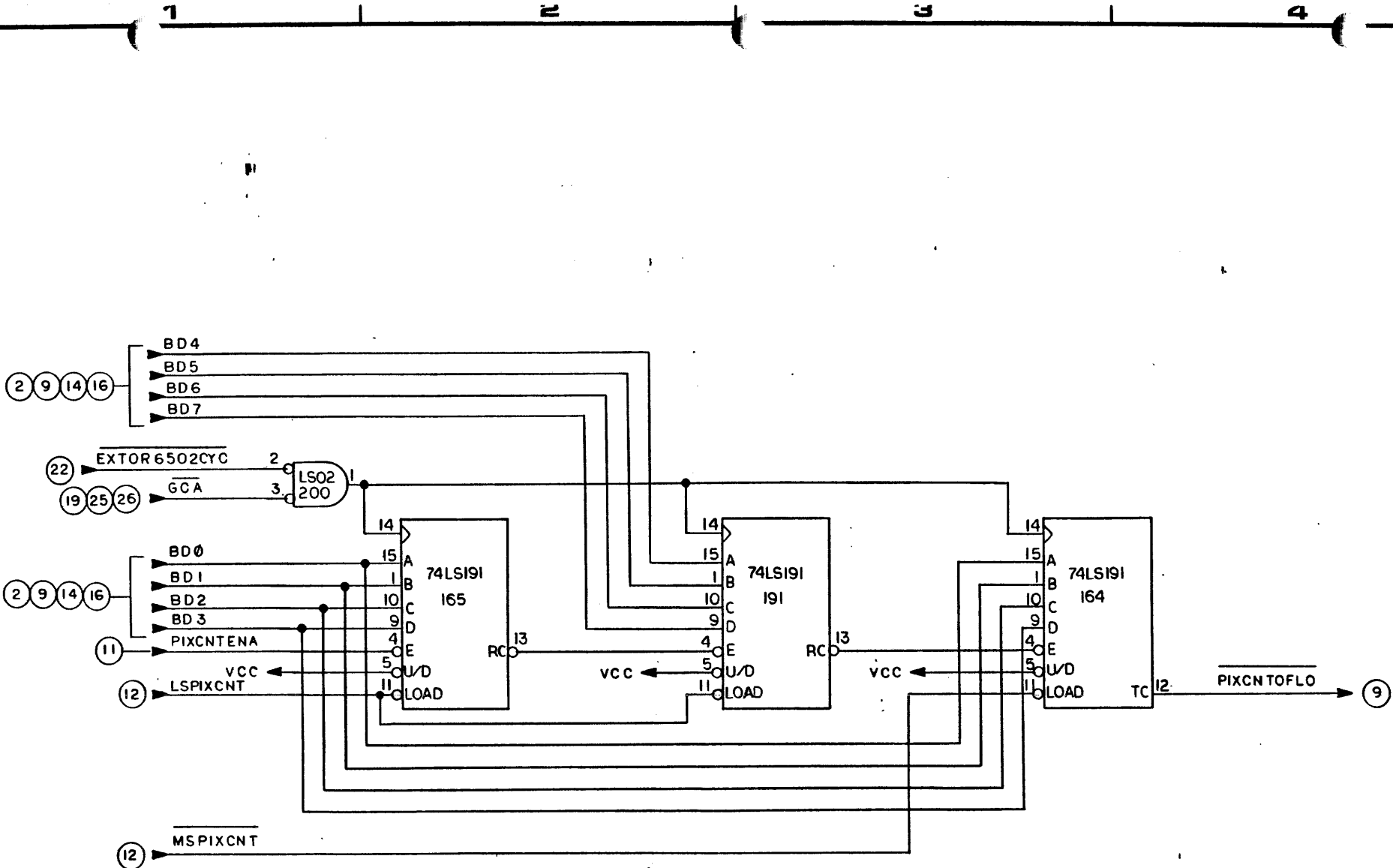
**C** DRAWING NUMBER  
120402-01

REV  
E

SHT - 26



SHT-27



SHT-28

	<b>ADVANCED ELECTRONICS DESIGN, INC.</b> SUNNYVALE, CALIF. 94088		<b>C</b>	DRAWING NUMBER 120102-01	REV E

00	141	4	121	4	101	4	81	4	61	4	41	4	21	4	1	4
LS221	142	4	122	4	102	4	82	4	62	4	42	4	22	4	2	4
7	143	4	123	4	103	4	83	4	63	4	43	4	23	4	3	4
	144	4	124	4	104	4	84	4	64	4	44	4	24	4	4	4
11	145	4	125	4	105	4	85	4	65	4	45	4	25	4	5	4
	146	4	126	4	106	4	86	4	66	4	46	4	26	4	6	4
	147	4	127	4	107	4	87	4	67	4	47	4	27	4	7	4
	148	4	128	4	108	4	88	4	68	4	48	4	28	4	8	4
	149	4	129	4	109	4	89	4	69	4	49	4	29	4	9	4
	150	4	130	4	110	4	90	4	70	4	50	4	30	4	10	4
	151	5	131	5	111	5	91	5	71	5	51	5	31	5	11	5
	152	5	132	5	112	5	92	5	72	5	52	5	32	5	12	5
	153	5	133	5	113	5	93	5	73	5	53	5	33	5	13	5
	154	5	134	5	114	5	94	5	74	5	54	5	34	5	14	5
	155	5	135	5	115	5	95	5	75	5	55	5	35	5	15	5
	156	5	136	5	116	5	96	5	76	5	56	5	36	5	16	5
	157	5	137	5	117	5	97	5	77	5	57	5	37	5	17	5
	158	5	138	5	118	5	98	5	78	5	58	5	38	5	18	5
	159	5	139	5	119	5	99	5	79	5	59	5	39	5	19	5
	160	5	140	5	120	5	100	5	80	5	60	5	40	5	20	5

4116-3

74LS251

74LS166

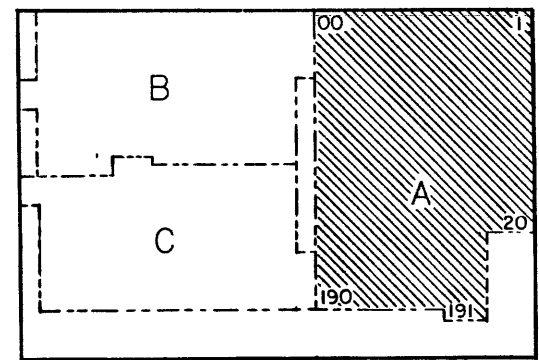
4116-3

74LS251

74LS166

4116-3

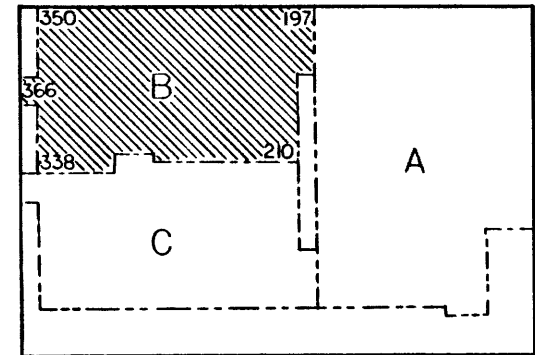
186	181	176	171	166					
LS00	LS374	LS374	LS00	LS138					
14	14	16	24	14	14	24			
14	14			14	14				
187	182	177	172	167	161				
LS273	93422	93422	LS244	LS273	DAC-08B				
14	6	6	14	6	6				
188	183	178	173	168	162				
LS273	93422	93422	LS244	LS273	DAC-08B				
20	6	6	14	6	6				
189	184	179	174	169	163				
LS273	93422	93422	LS244	LS273	DAC-08B				
11	6	6	14	6	6				
190	185	180	175	170	164	165	191		
74S00	LS670	LS244	LS670	74S00	LSI91	LSI91	LSI91		
11	11	11	24	11	11	11	28	28	28
11	11				11	11			



SHT - 29

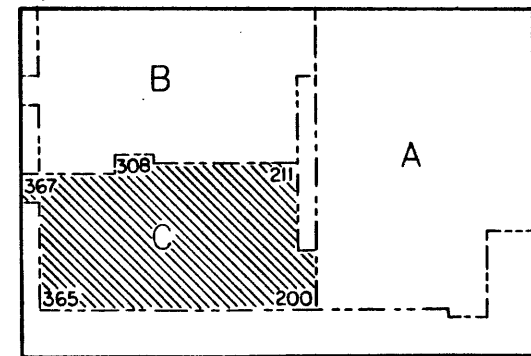
	ADVANCED ELECTRONICS DESIGN, INC.		DRAWING NUMBER	REV
	SUNNYVALE, CALIF. 94088		120102-01	E

350				261		201	197		
LS161				LS126		4046B	LS157		
15				23 23		7	7		
				23 23					
351	331			262	242	222	202		
LS14	4040B			6502A	890027-01	LS132	LS221		
15 15	15			2	7	7 23	7		
15 2						7 17	23		
13 15									
352	332		301	283	263	243	223	203	
7406	4512B		LS44	LS26	LS86	4040B	74574	S175	
15 13	15		2	12	7 7	7	23	17	
13 2				12	7 7		22		
15 13									
353	333	317	302	284	264	244	224	204	
1489	4512B	8304	LS244	LS00	LS14	LS02	LS174	LS08	
13 13	15	2	2	12 12	16 7	7 7	7	4 4	
13 15				12 12	7 7	7 7		4 4	
					27 27				
354	334	318	303	285	265	245	225	205	
1488	68B50	3140	4802	LS138	LS11	LS02	LS74	S138	
13 15	13	27	3	2	21	7 2	23	4	
13					12	22 19	7	4	
					21				
366	355	319	304	286	266	246	226	206	
DPS2	1489	335	LM319	LS138	LS32	LS00	LS74	LS08	
8	13 13	68B50	27	4802	12	23 21	21 21	19	4 4
	13 15	13	27			20 20	20 20	19	4 4
356			3	287	267	247	227	207	
1488				LS08	LS164	LS04	LS174	LS00	
13 15	336		305	10 27	19	17 21	22	18 18	
13	68B21		4802	21 12		16 23		18 18	
						23 19			
	8	320	3	288	268	248	228	208	
		14529		LS32	LS109	74278	LS109	LS00	
				20 21	19	22	19	18 18	
	337	27	306	12 21	23	22	19	18 18	
	68B21		4802						
				289	269	249	229	209	
	8		3	LS27	LS10	LS04	LS00	LS00	
				23	22	17 22	17 19	18 18	
				21	21	22 22	22 19	18 18	
	338		307	16	19	22 23	22 19	18 18	
	68B21		4802	290	270	250	230	210	
				LS138	LS00	LS74	S00	LS00	
	8		3	12	16 21	19	22 17	18 18	
					21 22	22	25 17	18 18	



SHT - 30

					291	271	251	231	211	
					LS138	74S02	74S04	LS20	LS08	
				308						
				890026-01	2	23 25	17 12 16 19	17	5 5	
				3		25 23	17 25	17	5 5	
367	357	339	321		292	272	252	232	212	
DPSI	LS221	LS244	LS161		LS669	LS74	LS00	S08	S138	
8	21	14	19	309	16	16	16 16	17 17	5	
	9			890026-02		20	19 16	17 17		
	358	340	322		293	273	253	233	213	
	7438	LS273	LS138	3	LS669	LS02	LS08	74S30	LS08	
	15 15	11	12		16	16 16	19 19	17	5 5	
	15 15			310		20 20	22 16		5 5	
	359	341	323	890026-03	294	274	254	234	214	
	330/390	LS273	LS08		LS669	LS139	74S32	S161	DPS3	
	10 10 10 10	9	9 9	3	16	23	16 20	17	17	
	10 10 10 10		21 21				16 25			
	15 15 15 15									
	360	342	324	311	295	275	255	235	215	
	LS38	LS240	LS00	890026-04	LS169	LS169	LS169	S161	4.7K RN	
	10 10	9	10 9	3	20	20	20	17	17 17 17 17	
	10 10		10 15						17	
	10 10								17 17 17 17	
	361	343	325	312	296	276	256	236	216	
	7438	LS273	LS08	890026-05	4040B	LS253	LS253	S161	LS86	
	10 10	10	9 10	3	18	25	25	17	16 20	
	10 10		10 9						26 27	
	362	344	326		297	277	257	237	217	
	7438	LS273	LS32	313	LS244	LS253	LS253	74S161	LS00	
	10 10	10	9 10	890026-06	18	26	26	25	23 23	
	10 10		10 9						23 23	
	363	345	327	3	298	278	258	238	218	198
	7438	LS240	LS74		LS273	LS169	LS169	74S11	LS04	SPARE
	10 10	9	9	314	11	26	26	22	9 23	
	10 10		9	890026-07				19	24 26	
								27	26 26	
	364	346	328		299	279	259	239	219	199
	330/390	LS273	LS74	3	LS273	LS161	LS161	LS161	LS08	LS164
	21 9 21	9	9		11	25	19	25	9 26	17
	10 10 10 10		21	315					26 26	
	10 10 10 10									
	365	347	329	890026-08	300	280	260	240	220	200
	7438	LS157	LS10	3	LS169	74S161	LS161	LS85	LS670	LS02
	21 9	21	9		23	25	26	26	23	28 26
	21 21		9							9 9
			21							



SHT - 31