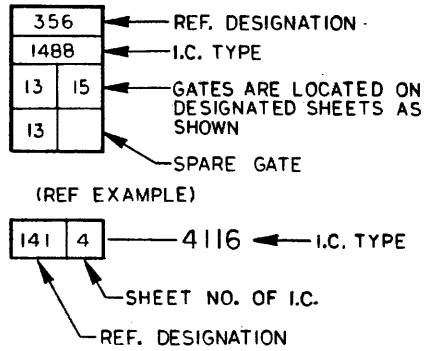


ISSUE	DESCRIPTION	DATE	APPROVED
A	REL. PER ECO-20411	3/10/82	HG

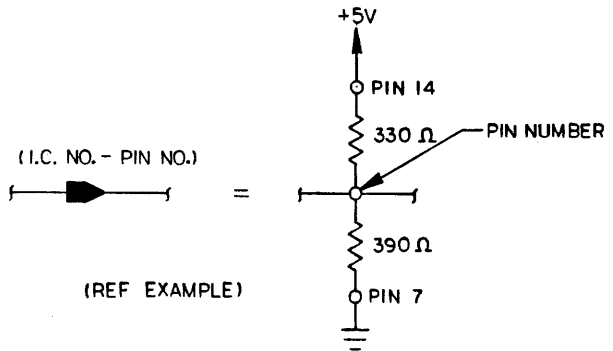
*NEW*

NOTES - UNLESS OTHERWISE SPECIFIED:

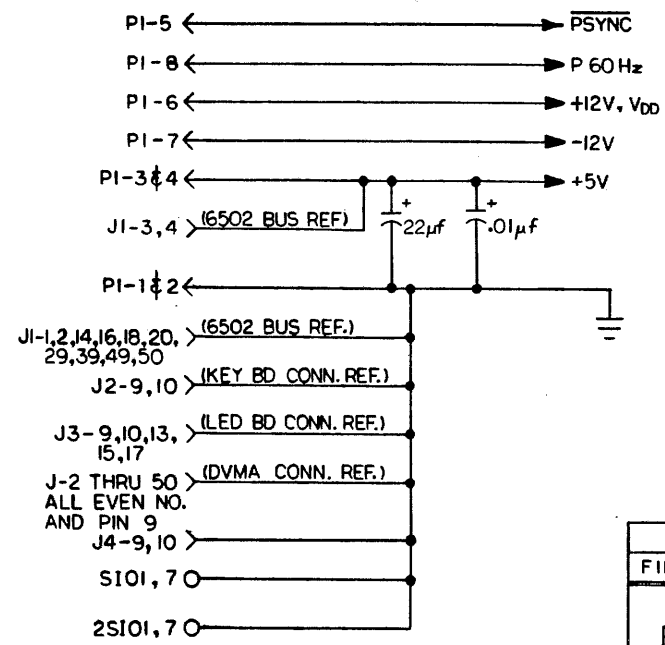
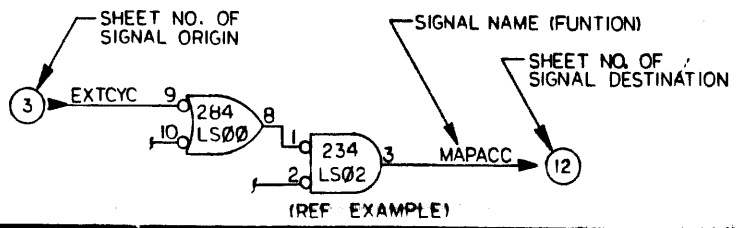
- CONNECTOR PIN DESIGNATIONS ARE PER SILK-SCREENED LED BOARD, NOT JI CONNECTOR PIN DESIGNATOR.
- ALL RESISTORS ARE IN OHMS AND ARE 1/4 W UNLESS OTHERWISE SPECIFIED.
- FOR MODULE MAP, SEE SHEETS 29, 30 AND 31. GATES ARE IN ORDER OF OUTPUT PIN NUMBERS AND ARE DEPICTED FROM LEFT TO RIGHT, TOP TO BOTTOM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



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, 167 - 169
CI	C80	2, 4, 5, 13, 14, 23, 25, 42 - 50, 66 - 69
A00	A367	198
CRI	CR30	CR15 - 20, 23, 26 - 29
Q1	Q10	Q8, Q9
REG 4	10	REG 1, 2, 3, 5
PI	P3	

-03 QTY REQD	-02	-01	PART NUMBER	CODE IDENT	DESCRIPTION	ITEM NO.
TOLERANCE UNLESS OTHERWISE SPECIFIED			MATERIAL		DWN. 7-15-81 <i>Jim Ammon</i>	
.XX ±			FINISH		CHK <i>F. Anderson 1/24/81</i>	
.XXX ±			DRAWING TITLE		APPD. ✓	
ANGULAR			SCHEMATIC			
SURFACE			AED - 512			
SCALE			ADVANCED ELECTRONICS DESIGN, INC. SUNNYVALE, CALIF. 94088			
01	120016	512	DRAWING NUMBER		REV	
DASH NO.	NEXT ASSY	USED ON	120102-01		A	
APPLICATION						

A

B

C

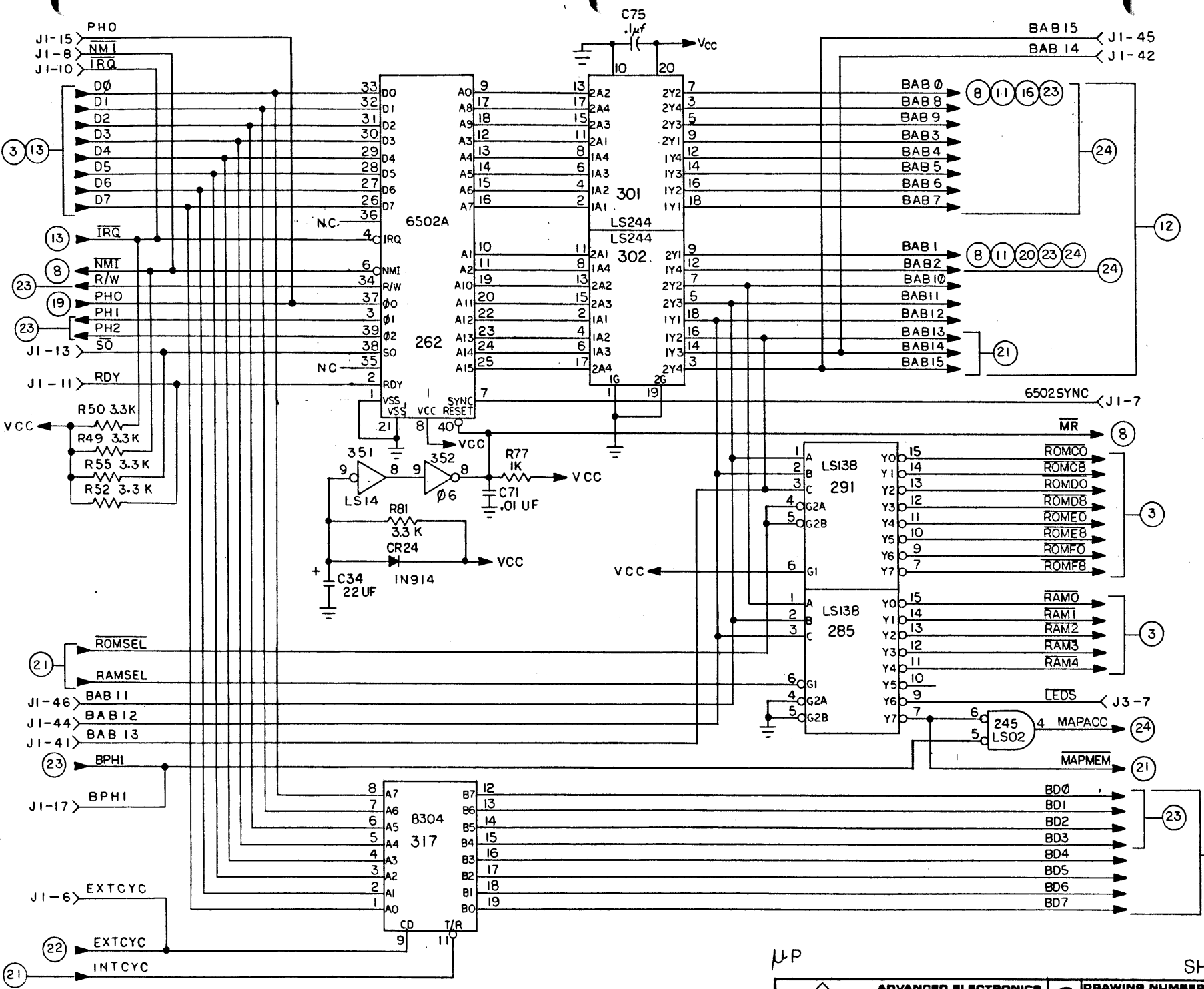
D

A

B

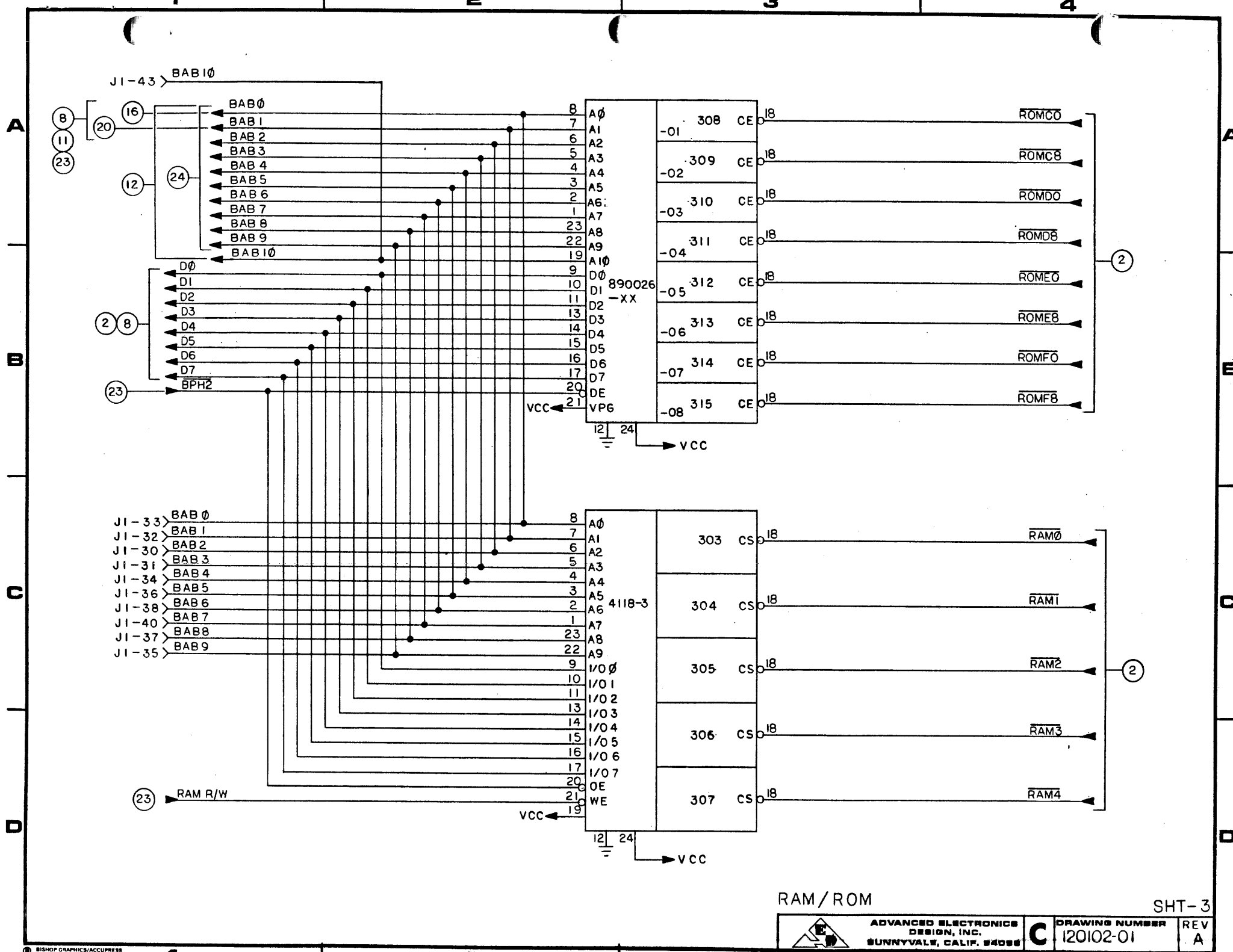
C

D



μP

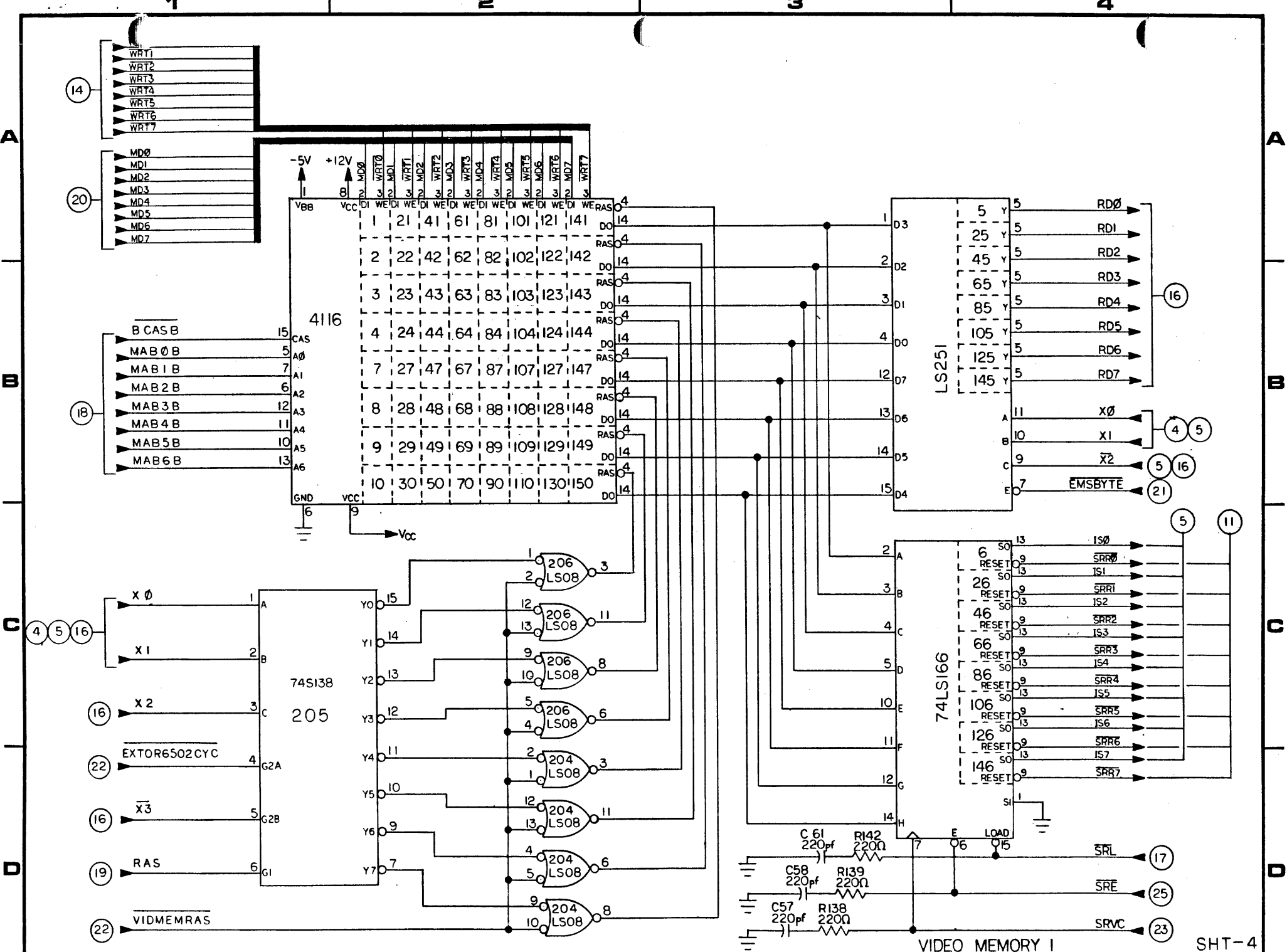
SHT-2



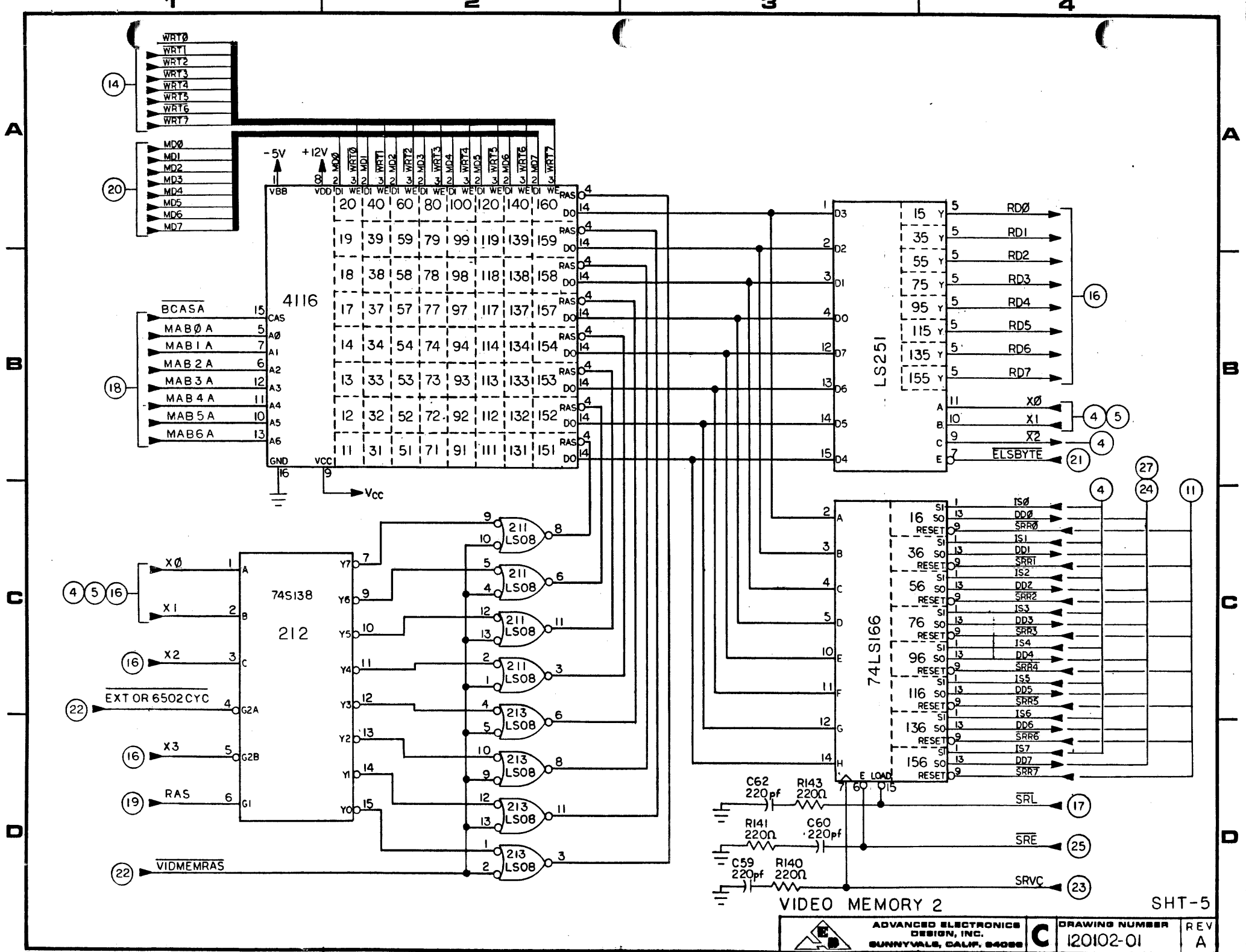
RAM/ROM

SHT-3

	ADVANCED ELECTRONICS DESIGN, INC. SUNNYVALE, CALIF. 94086	<b>C</b>	DRAWING NUMBER	REV
			120102-01	A

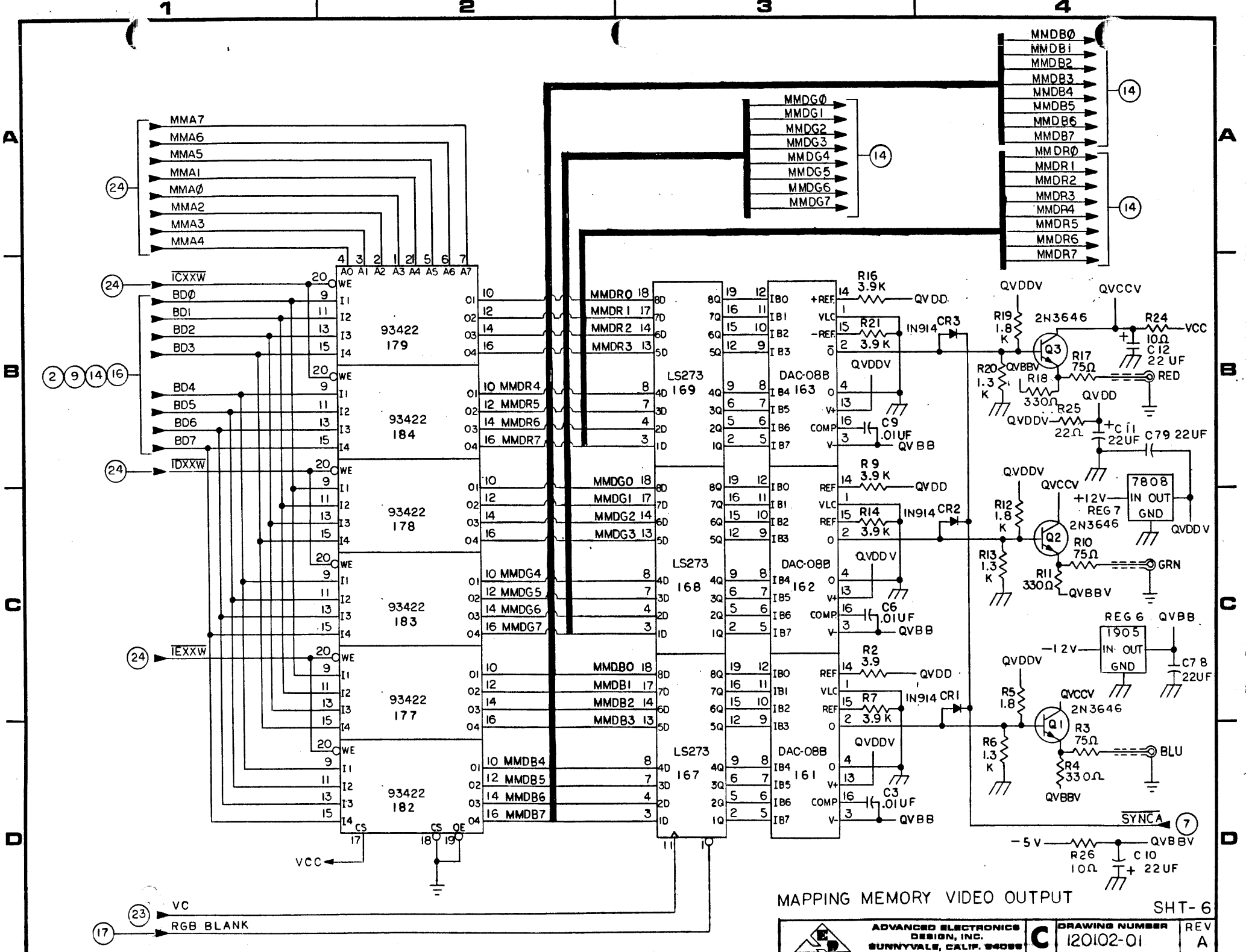


VIDEO MEMORY I SHT-4



VIDEO MEMORY 2 SHT-5

<b>ADVANCED ELECTRONICS DESIGN, INC.</b> SUNNYVALE, CALIF. 94088	<b>DRAWING NUMBER</b> <span style="font-size: 2em; font-weight: bold;">C</span> 120102-01	<b>REV</b> A
---	--	-----------------



MAPPING MEMORY VIDEO OUTPUT

SHT-6

BISHOP GRAPHICS/ACCUPRESS  
BIRMINGHAM, ALA. 35202

A

B

C

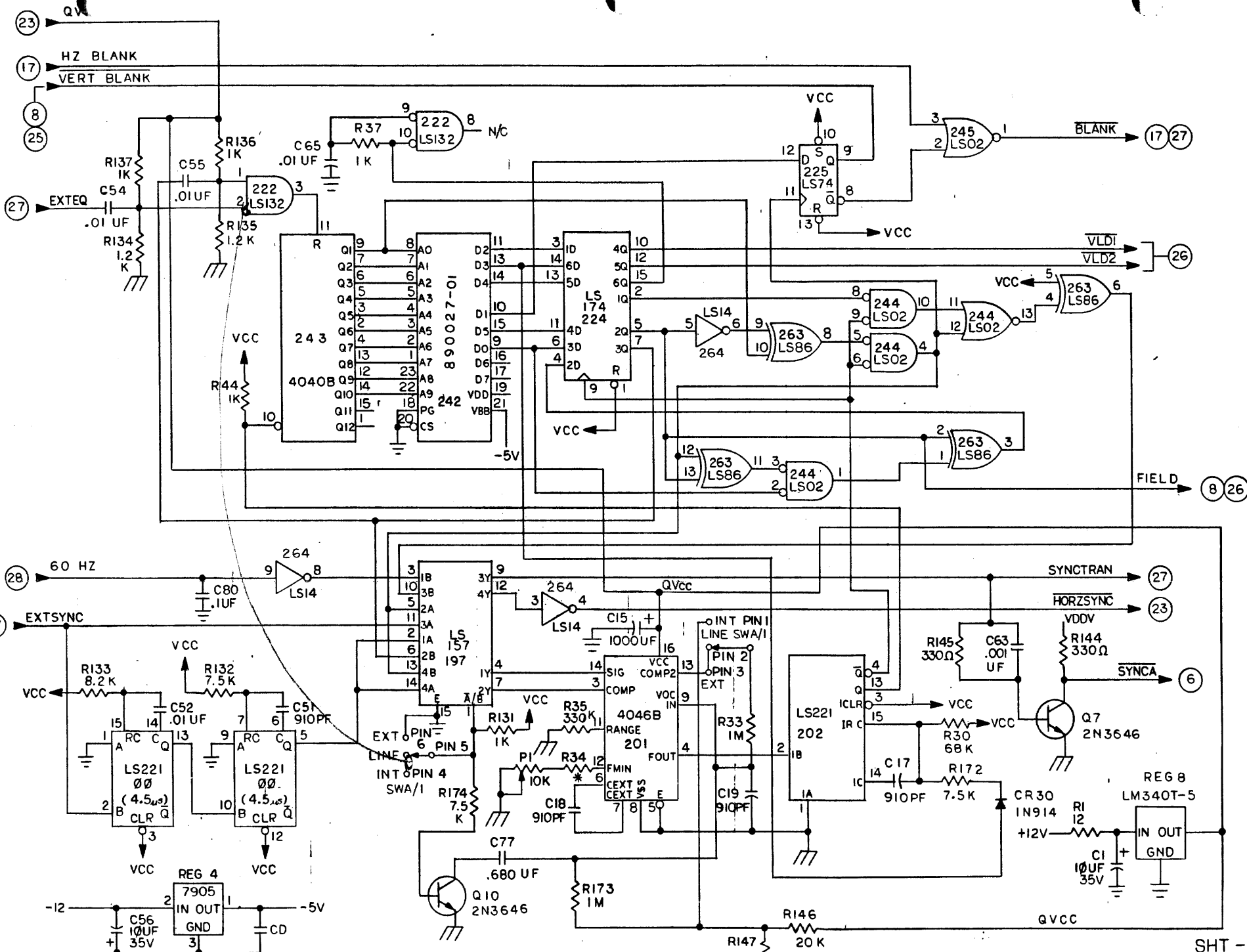
D

A

B

C

D

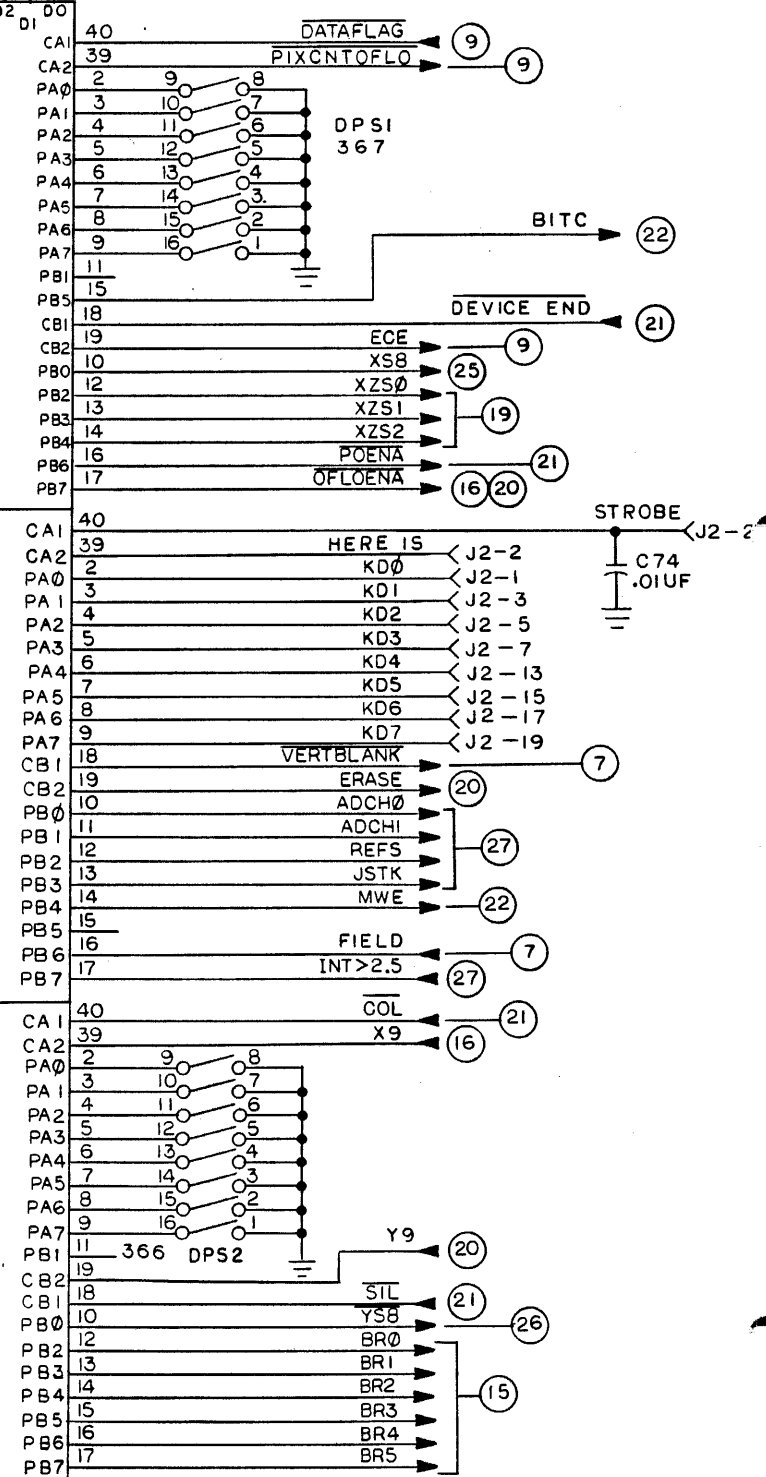
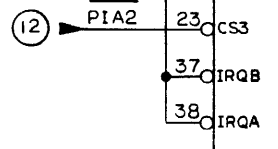
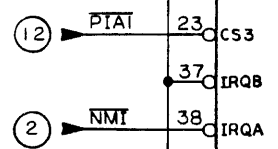
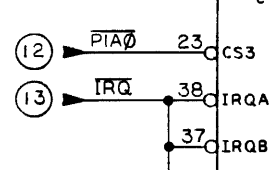
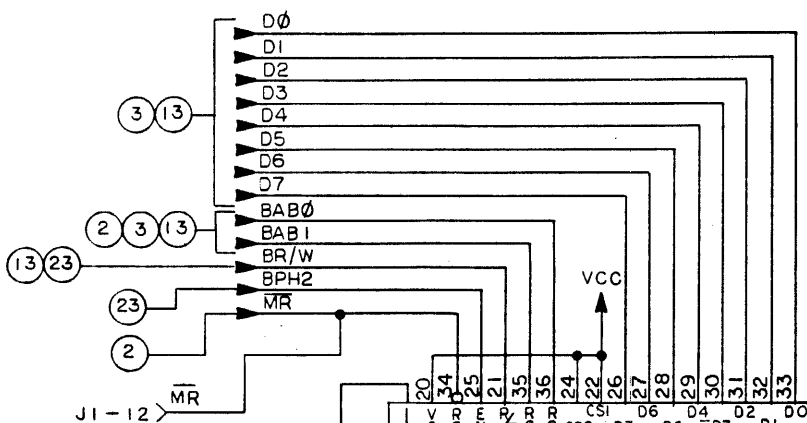


\*-VALUE TO BE DETERMINED IN TEST  
(27-39K)

SHT - 7

	<b>ADVANCED ELECTRONICS DESIGN, INC.</b> SUNNYVALE, CALIF. 94088		<b>DRAWING NUMBER</b> 120102-01	<b>REV</b> A
	SHEET 7 OF 31			

9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
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23  
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30  
31  
32  
33



ADVANCED ELECTRONICS  
DESIGN, INC.  
SUNNYVALE, CALIF. 94086  
DRAWING NUMBER  
120102-01  
REV  
A

SHT-8



1 2 3 4

A

A

B

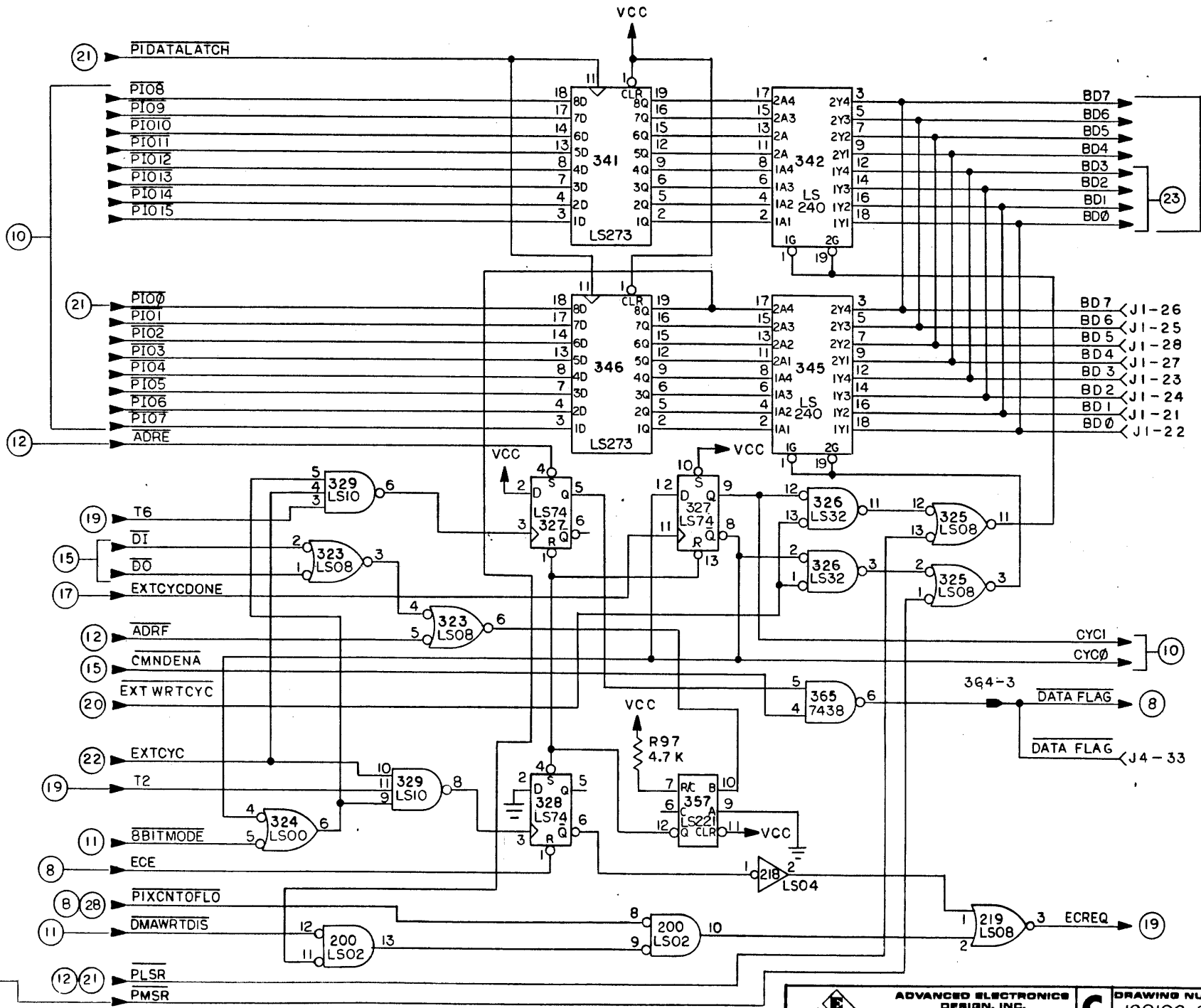
B

C

C

D

D



SHT-9

ADVANCED ELECTRONICS DESIGN, INC. SUNNYVALE, CALIF. 94088

DRAWING NUMBER 120102-01

REV A

1

2

3

4

A

B

C

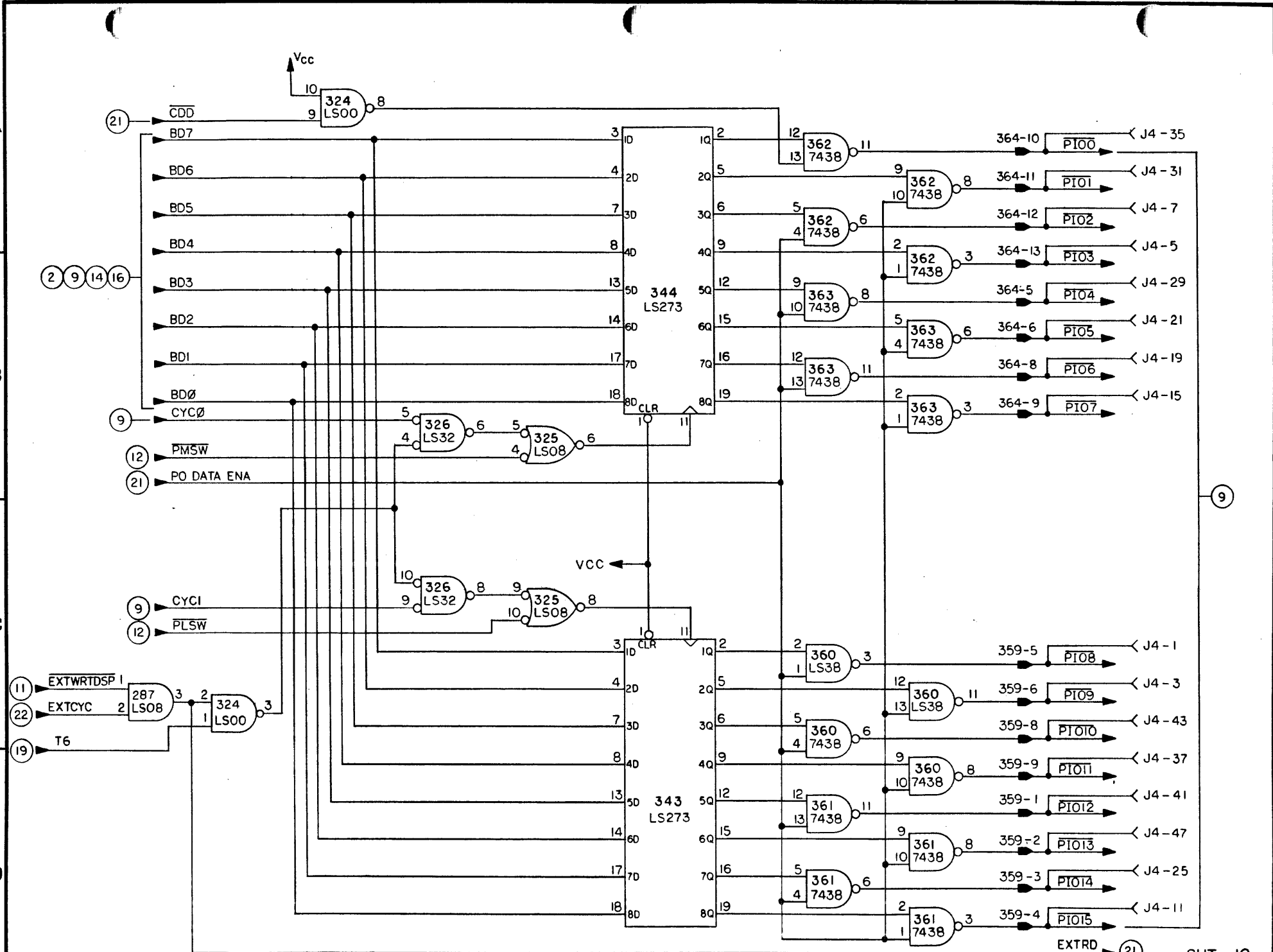
D

A

B

C

D



9

EXTRD (21)

SHT - 10



ADVANCED ELECTRONICS  
DESIGN, INC.  
SUNNYVALE, CALIF. 94086

DRAWING NUMBER  
C 120102-01

REV  
A

1

2

3

4

A

A

B

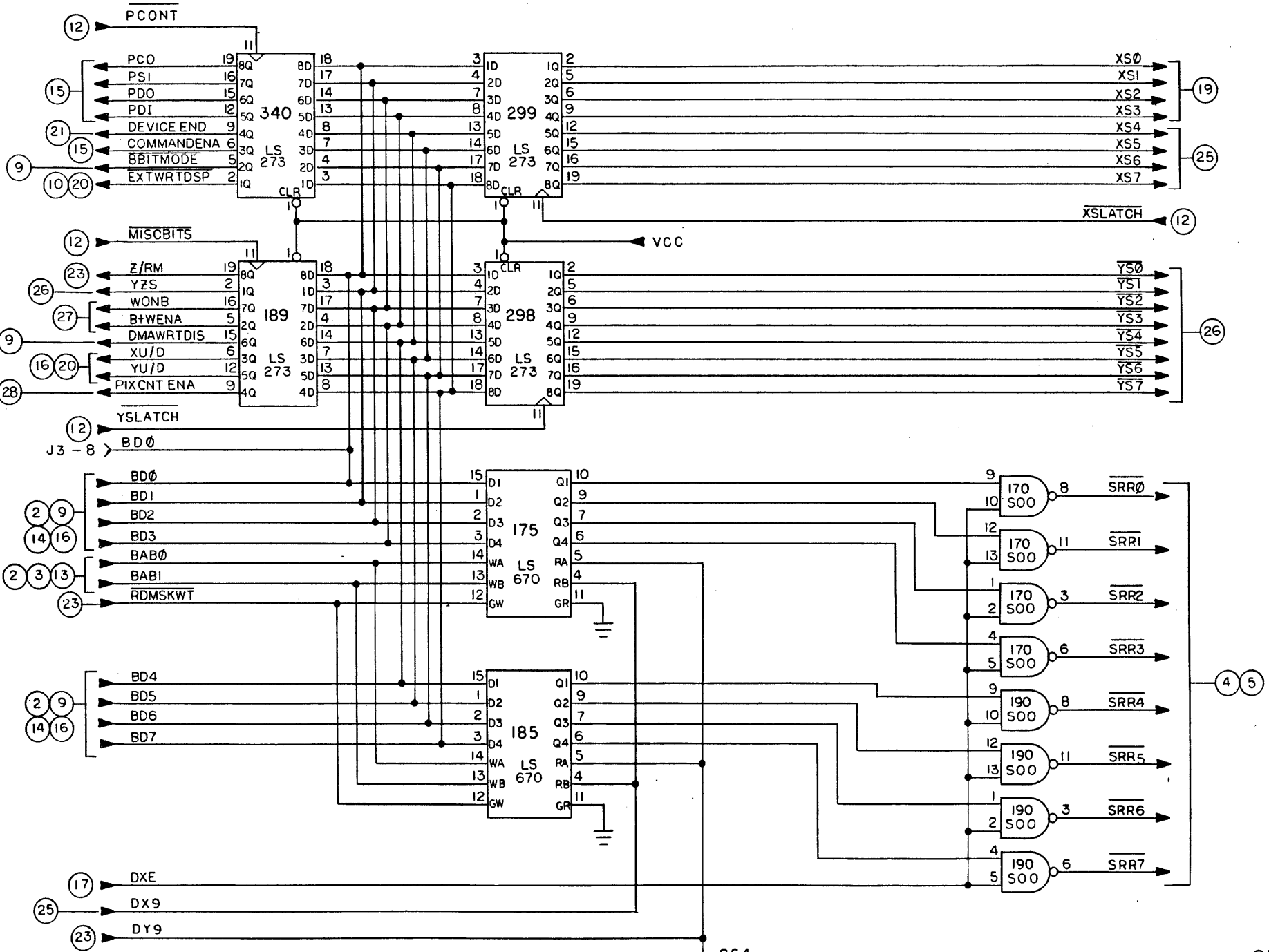
B

C

C


D

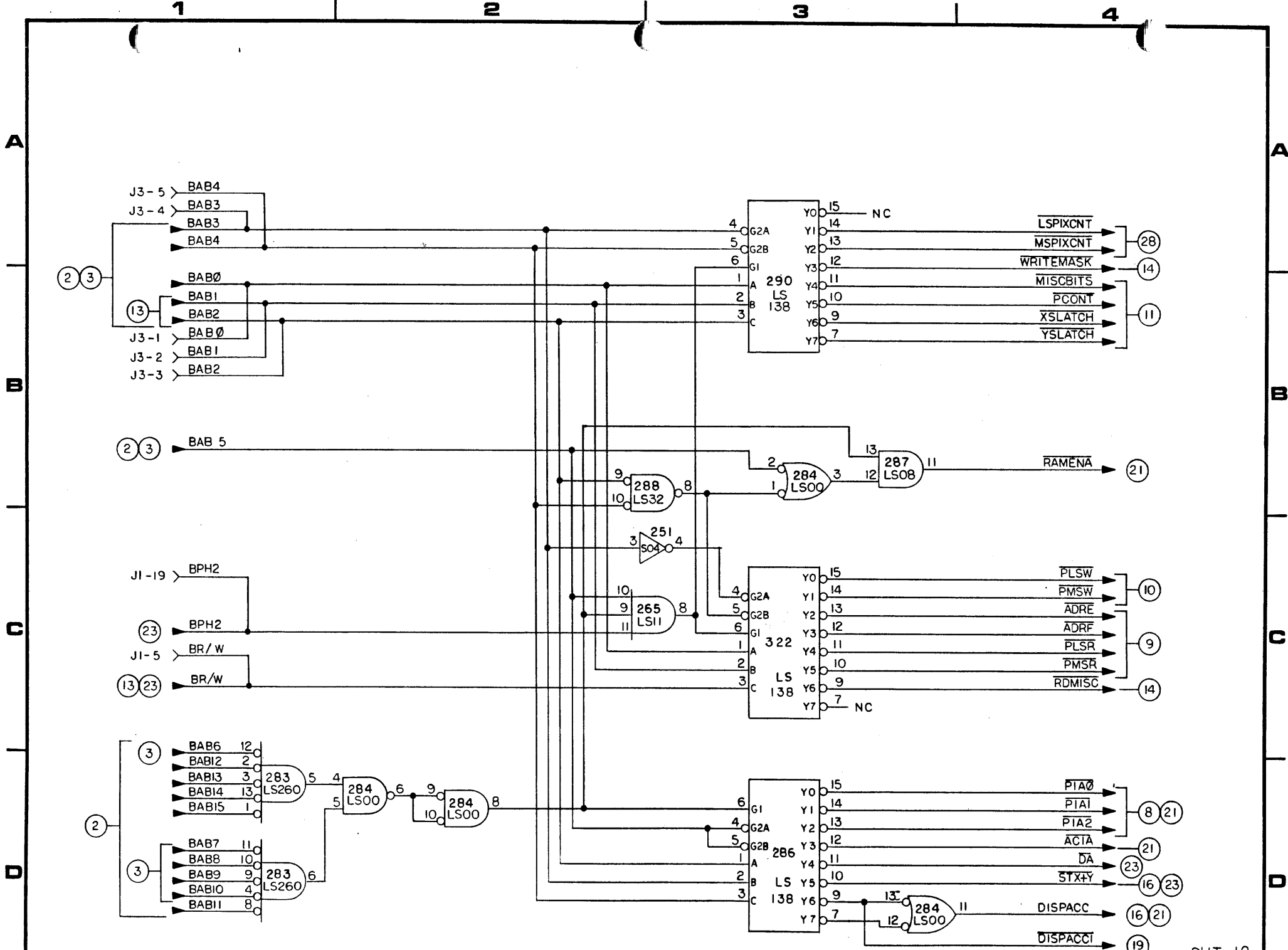
D



C64  
30PF

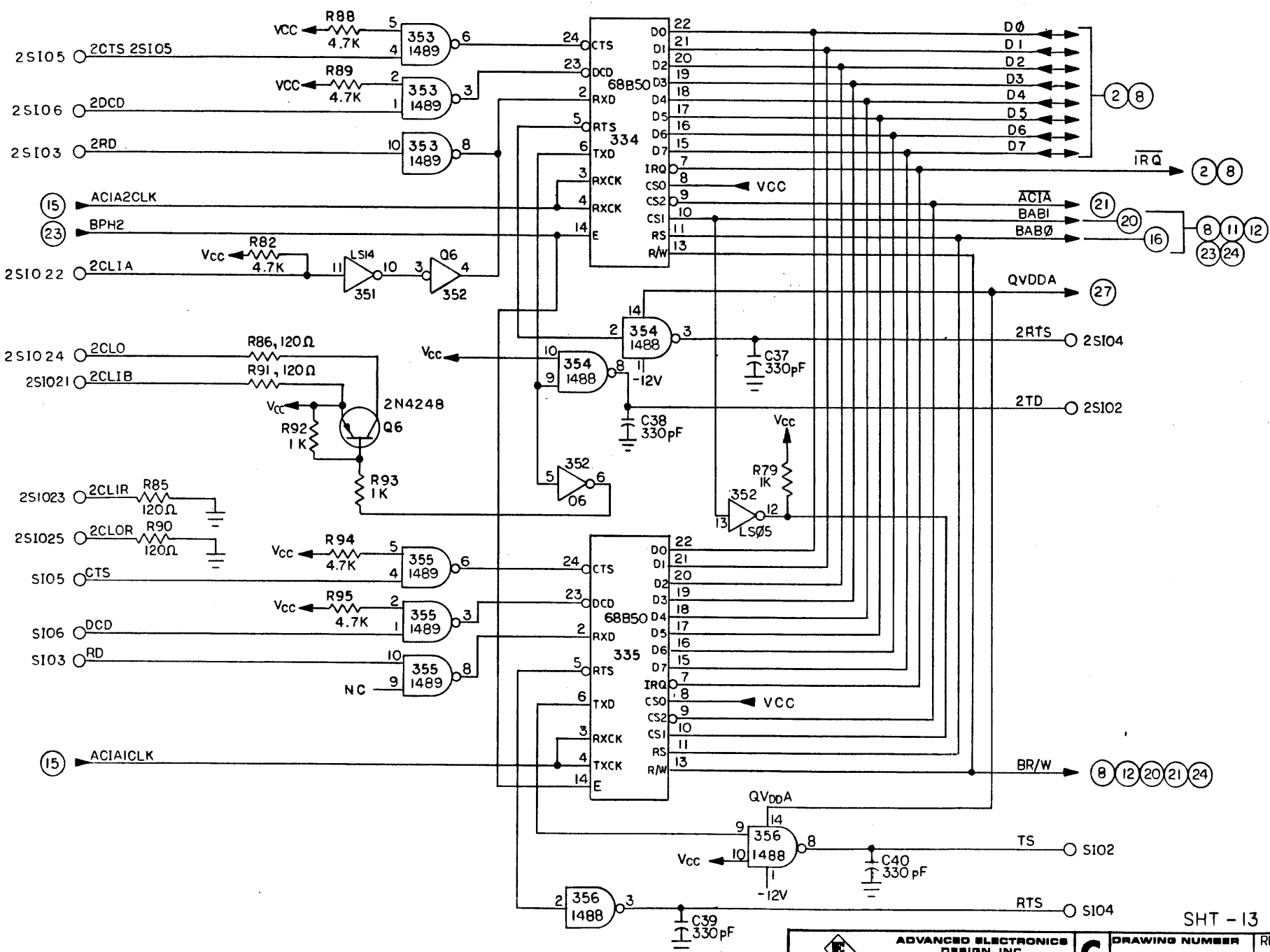
SHT-11

	<b>ADVANCED ELECTRONICS DESIGN, INC.</b> SUNNYVALE, CALIF. 94088		<b>C</b>	DRAWING NUMBER <b>120102-01</b>	REV <b>A</b>
	SHEET 11 OF 21				



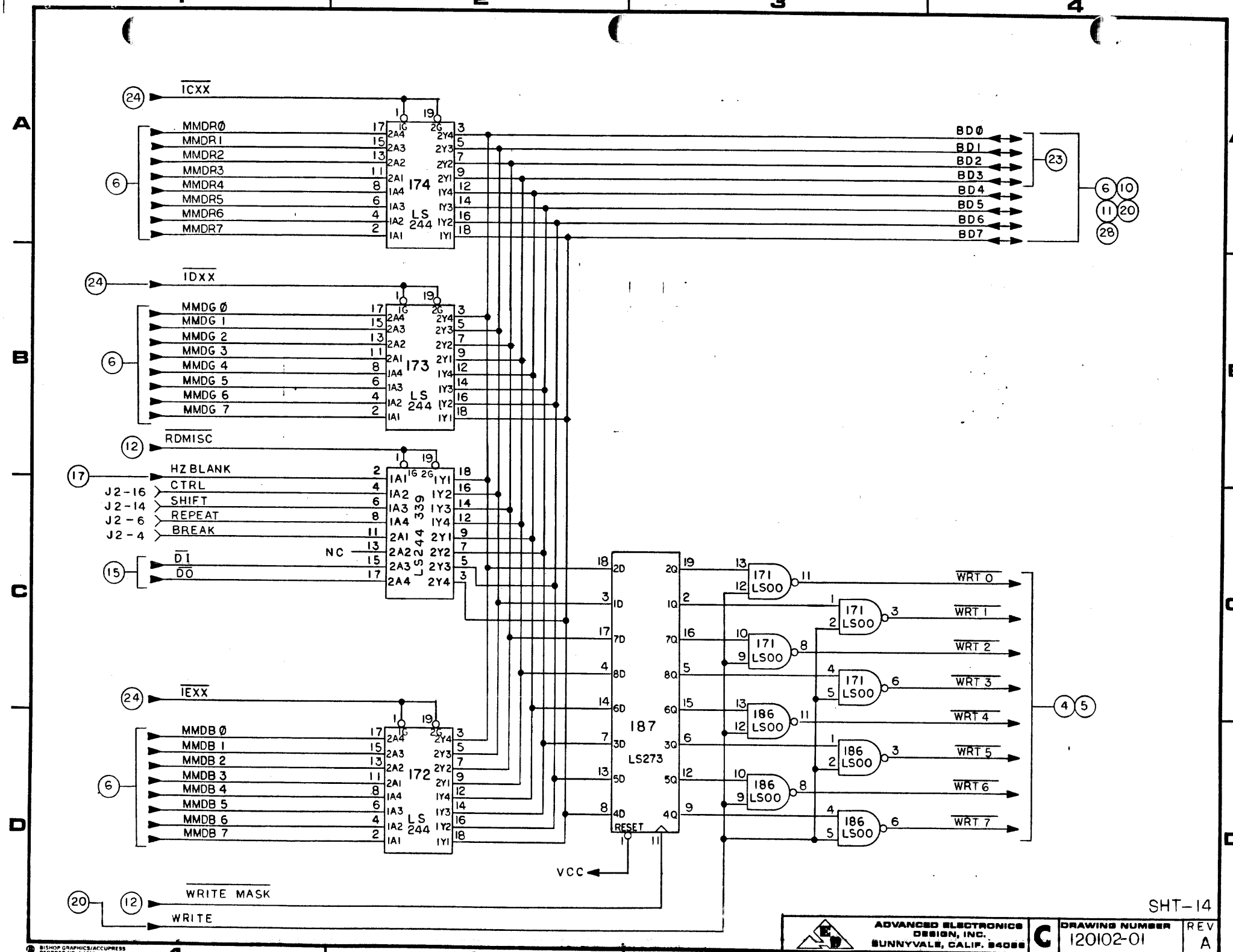
SHT-12

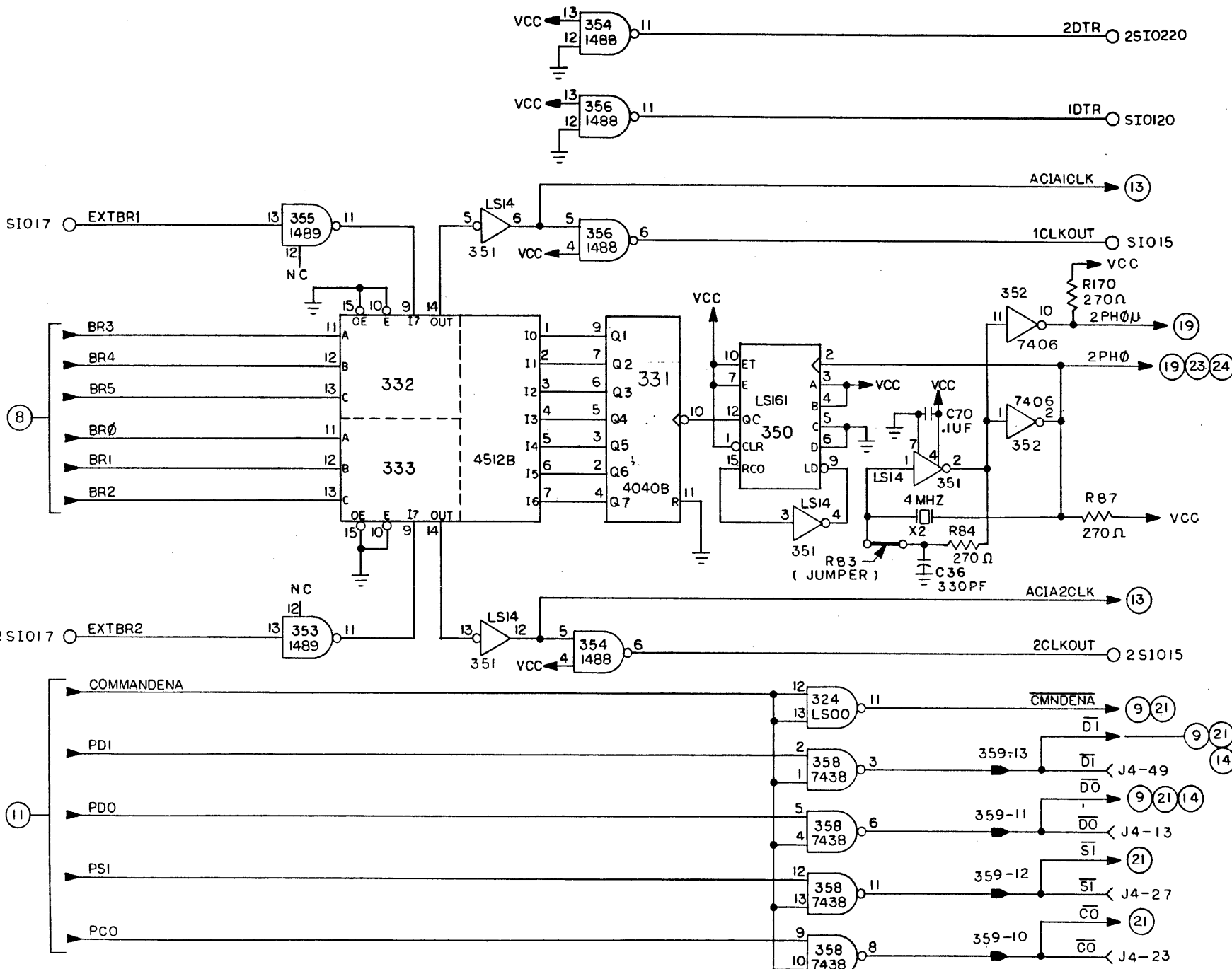
A  
B  
C  
D



SHT - 13

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





A

A

B

B

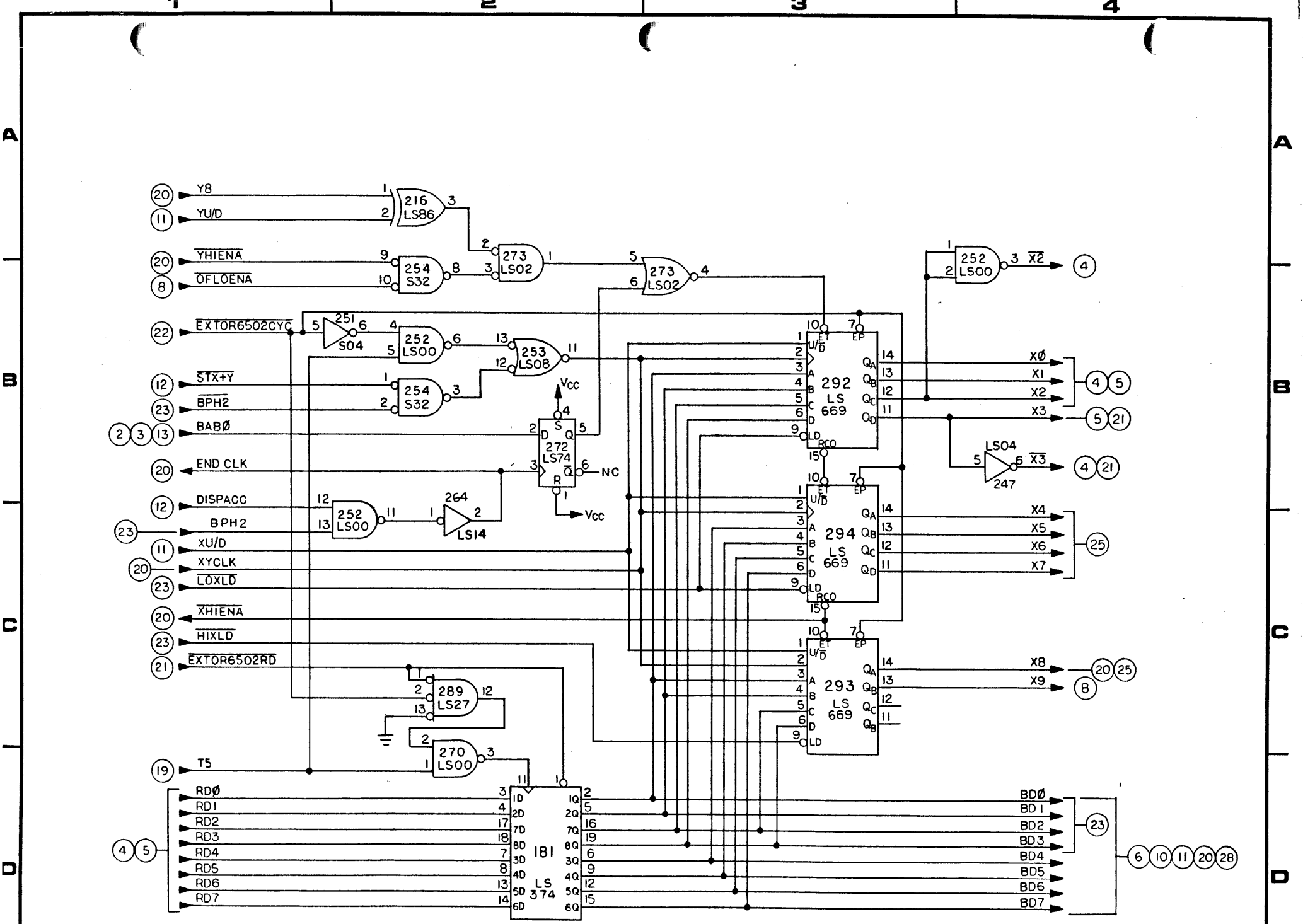
C

C

D

D

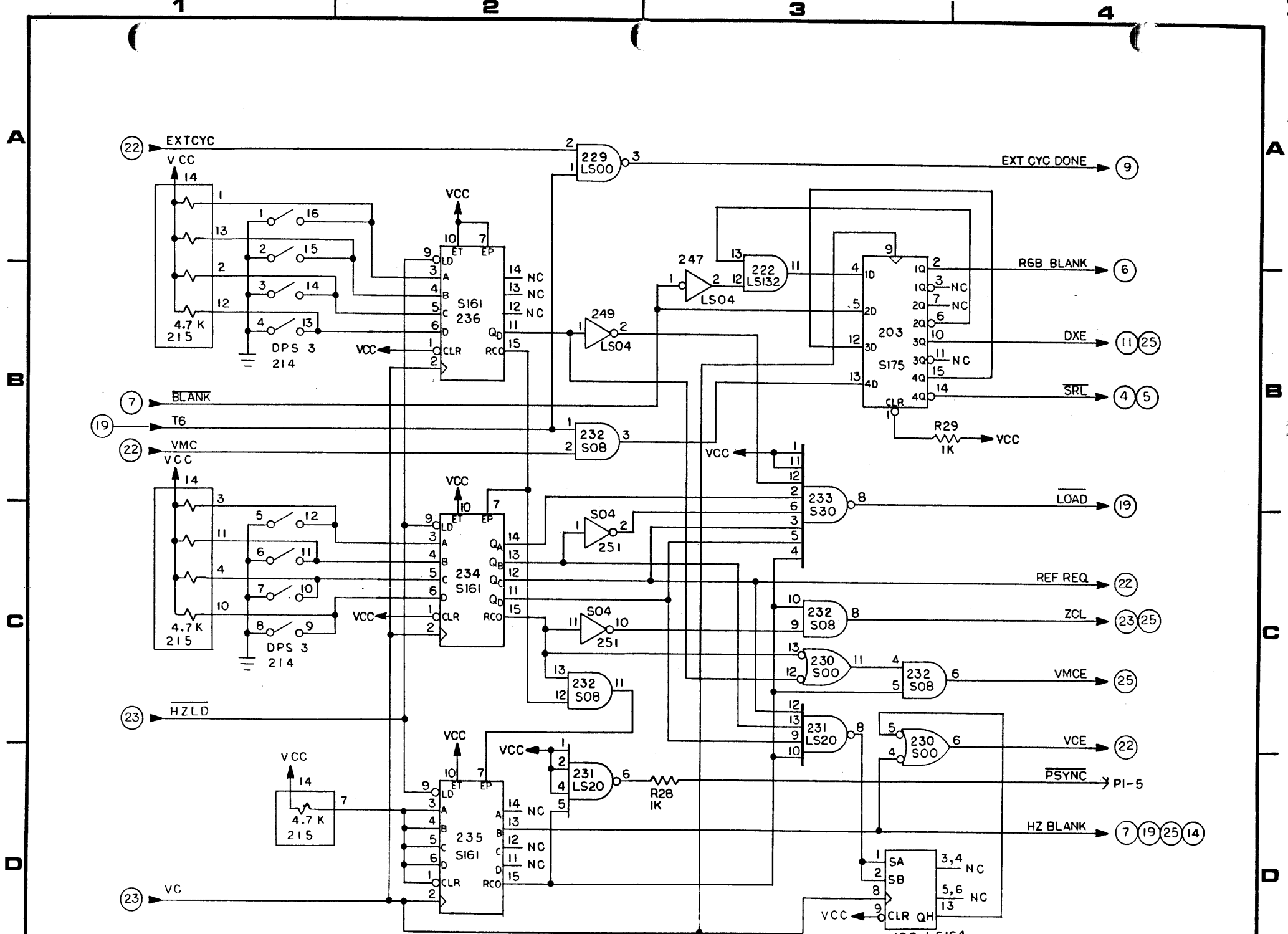
SHT-15



SHT - 16

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





SHT-17

REVISED DRAWING NUMBER 120102-01

1

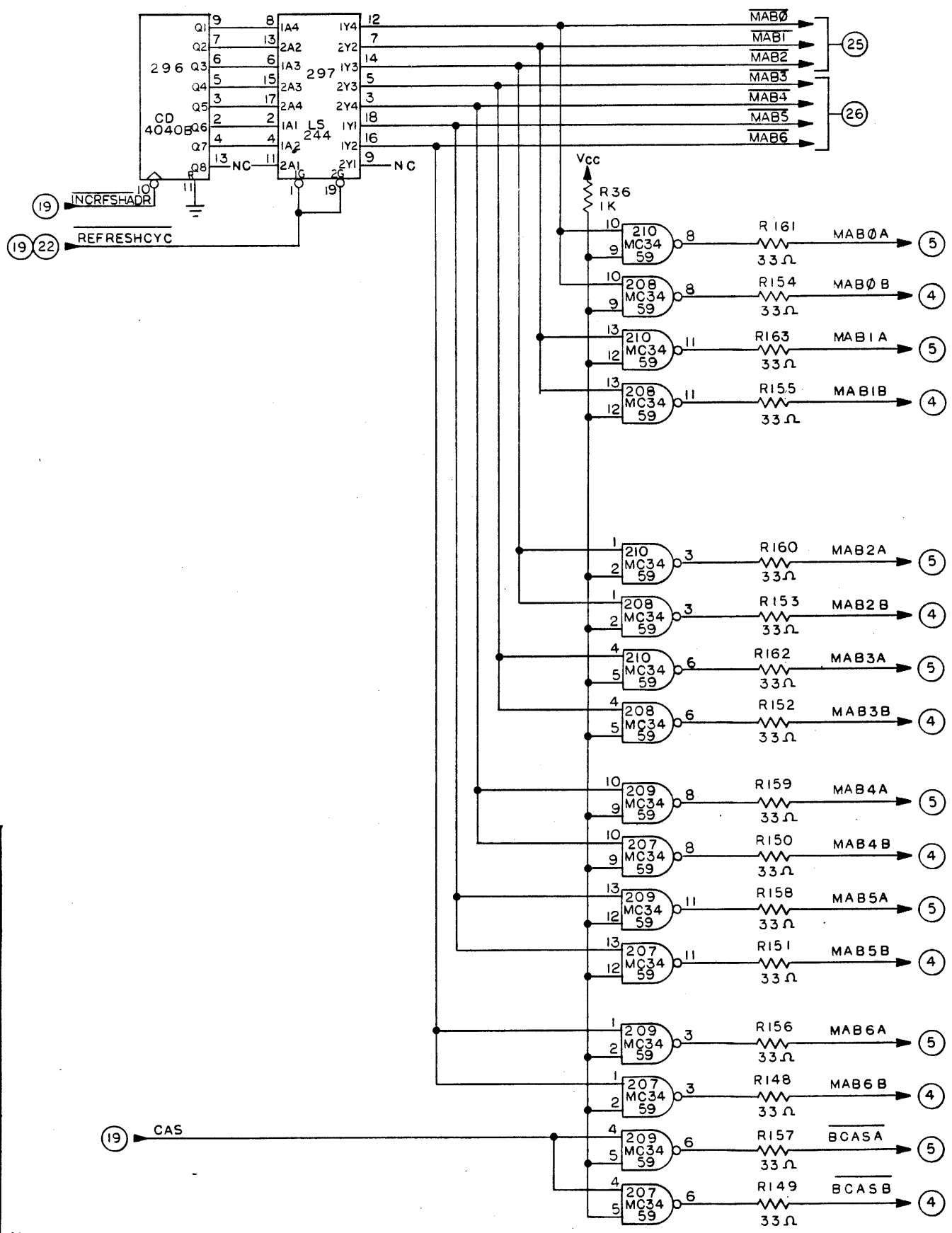
2

3

SHEET 19 OF 31

REV A

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



SHT - 18

1

2

3

4

A

A

B

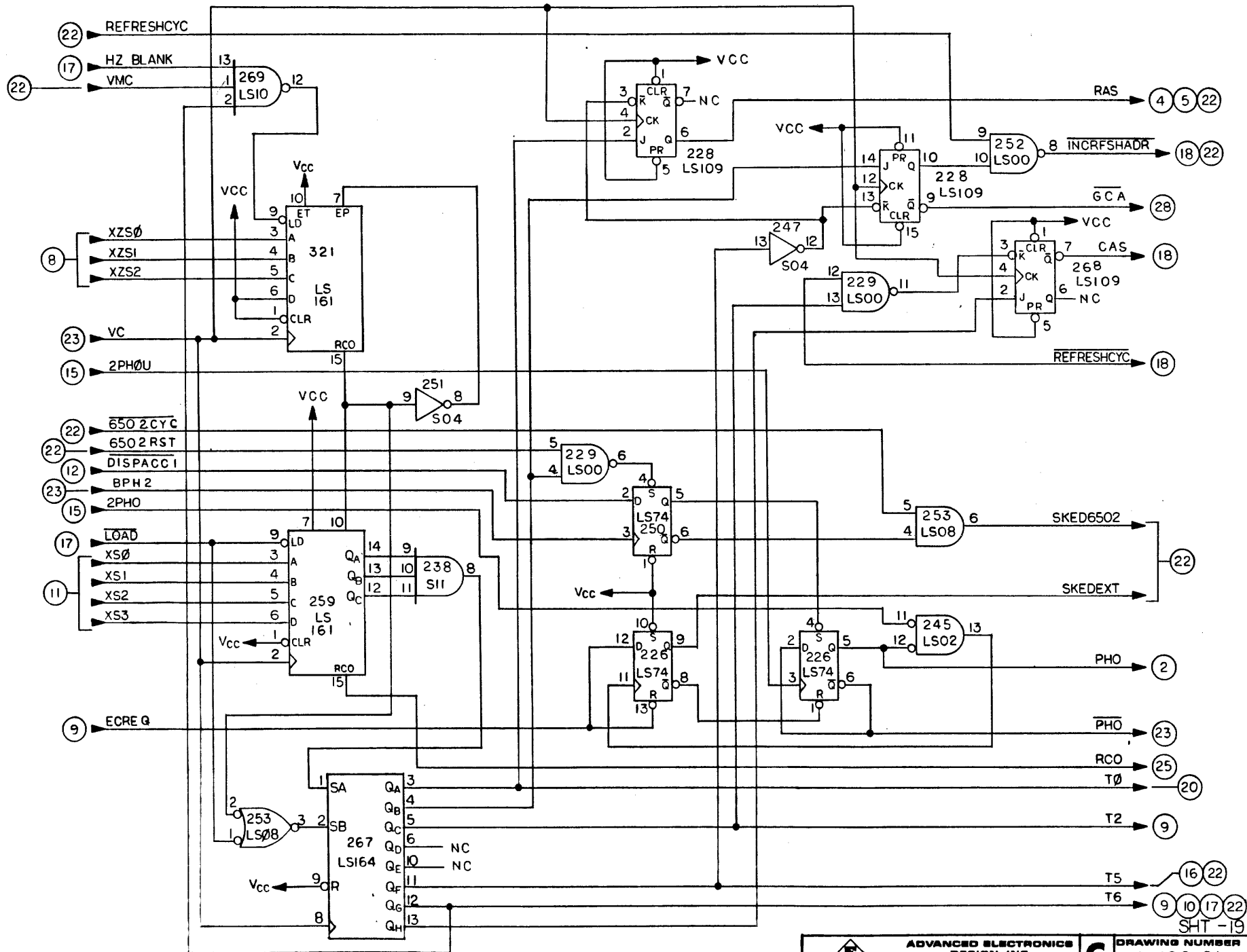
B

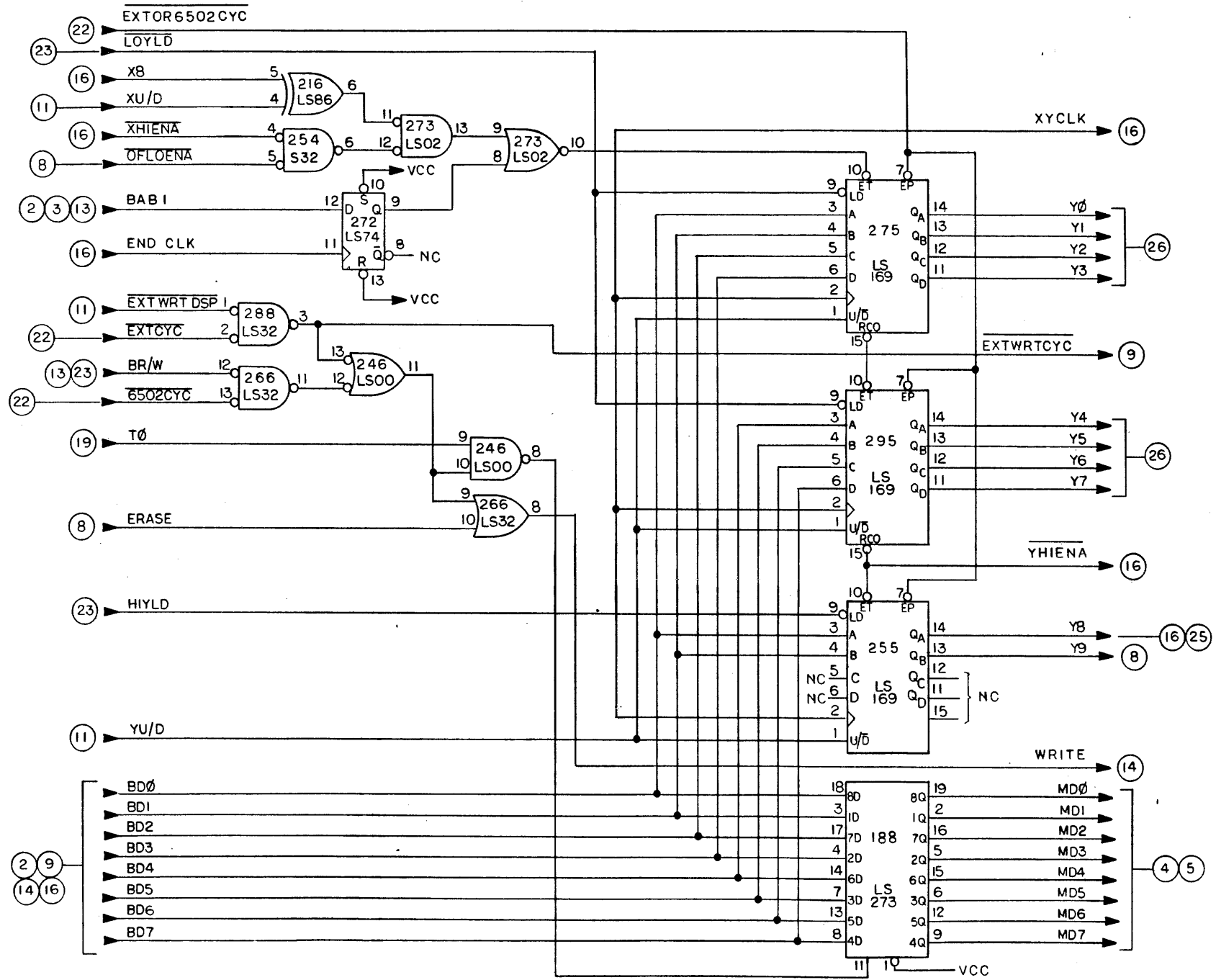
C

C

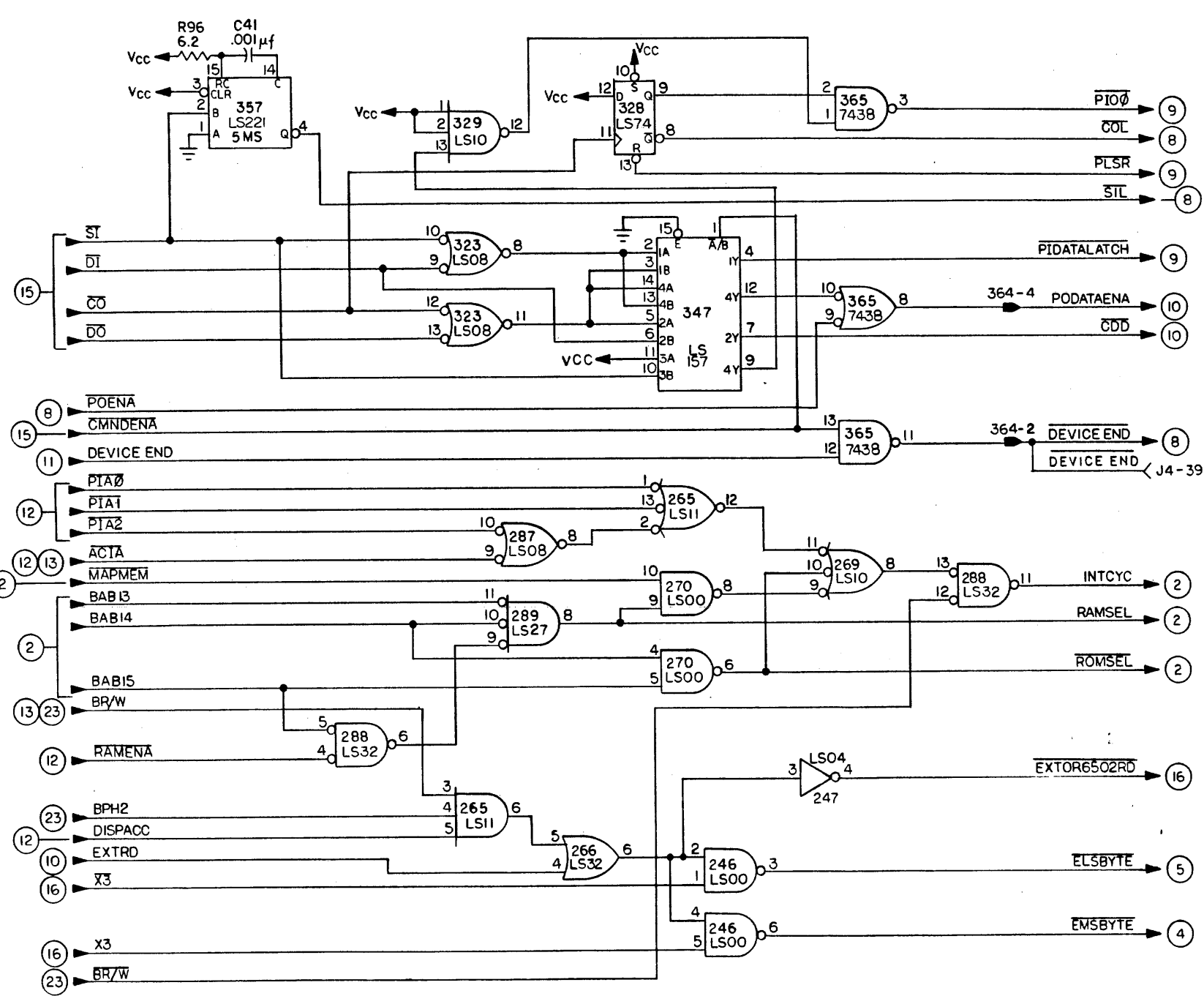
D

D



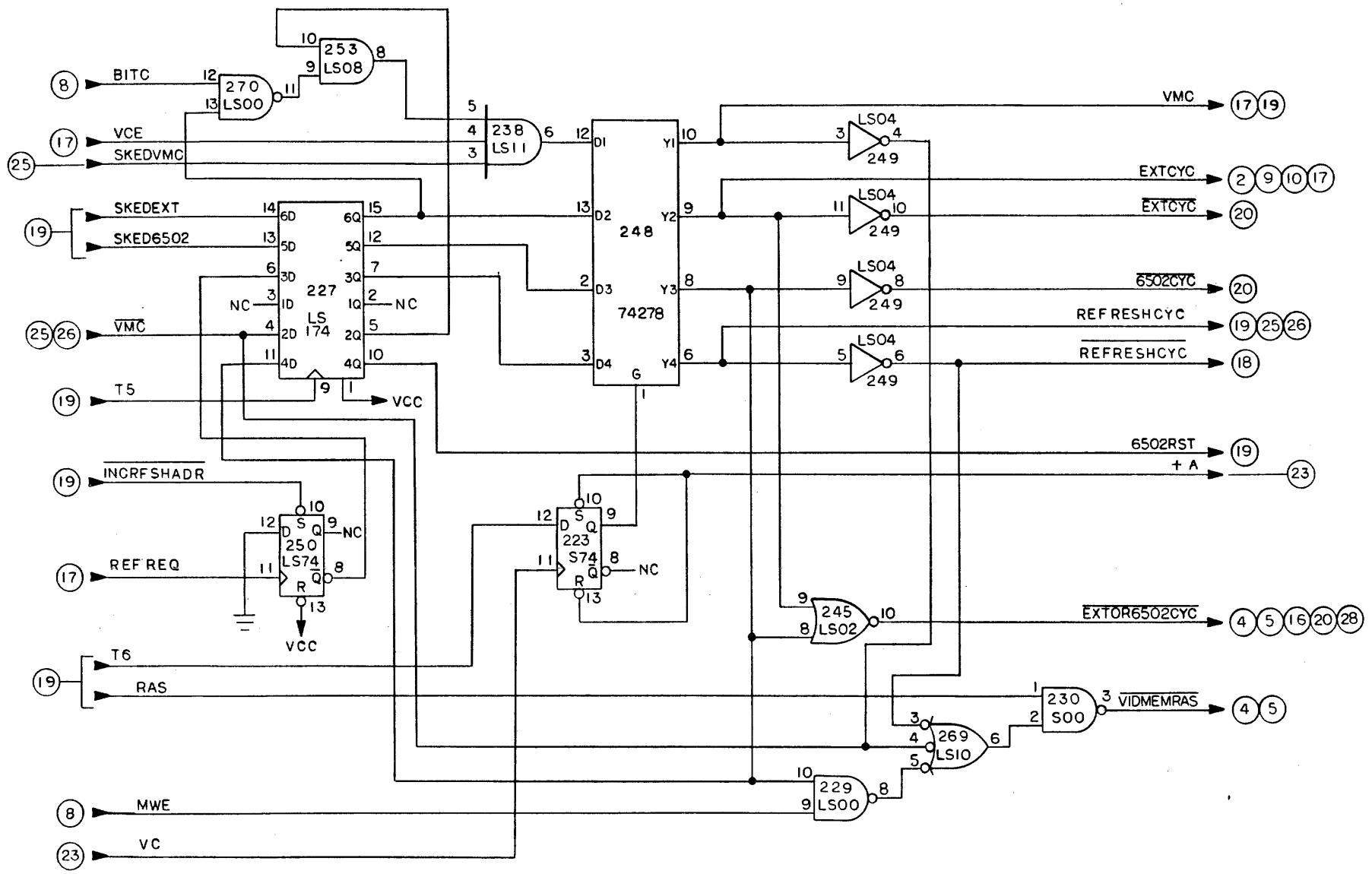


SHT-20



SHT - 21

	<b>ADVANCED ELECTRONICS DESIGN, INC.</b> SUNNYVALE, CALIF. 94086	<b>C</b>	<b>DRAWING NUMBER</b> 120102-01	<b>REV</b> A
	<b>SHEET 21 OF 31</b>			



SHT-22

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

1

2

3

4

A

A

B

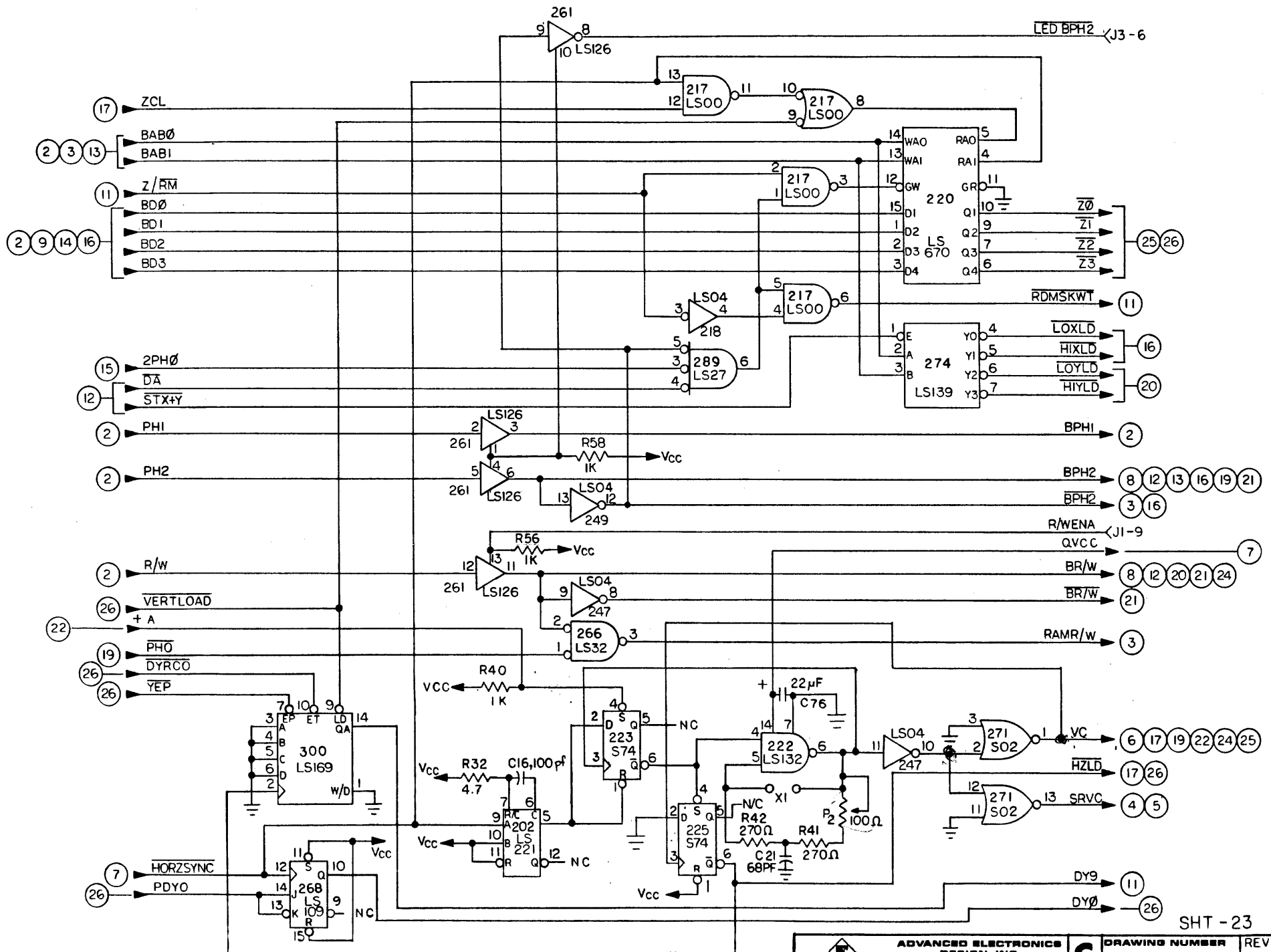
B

C

C

D

D



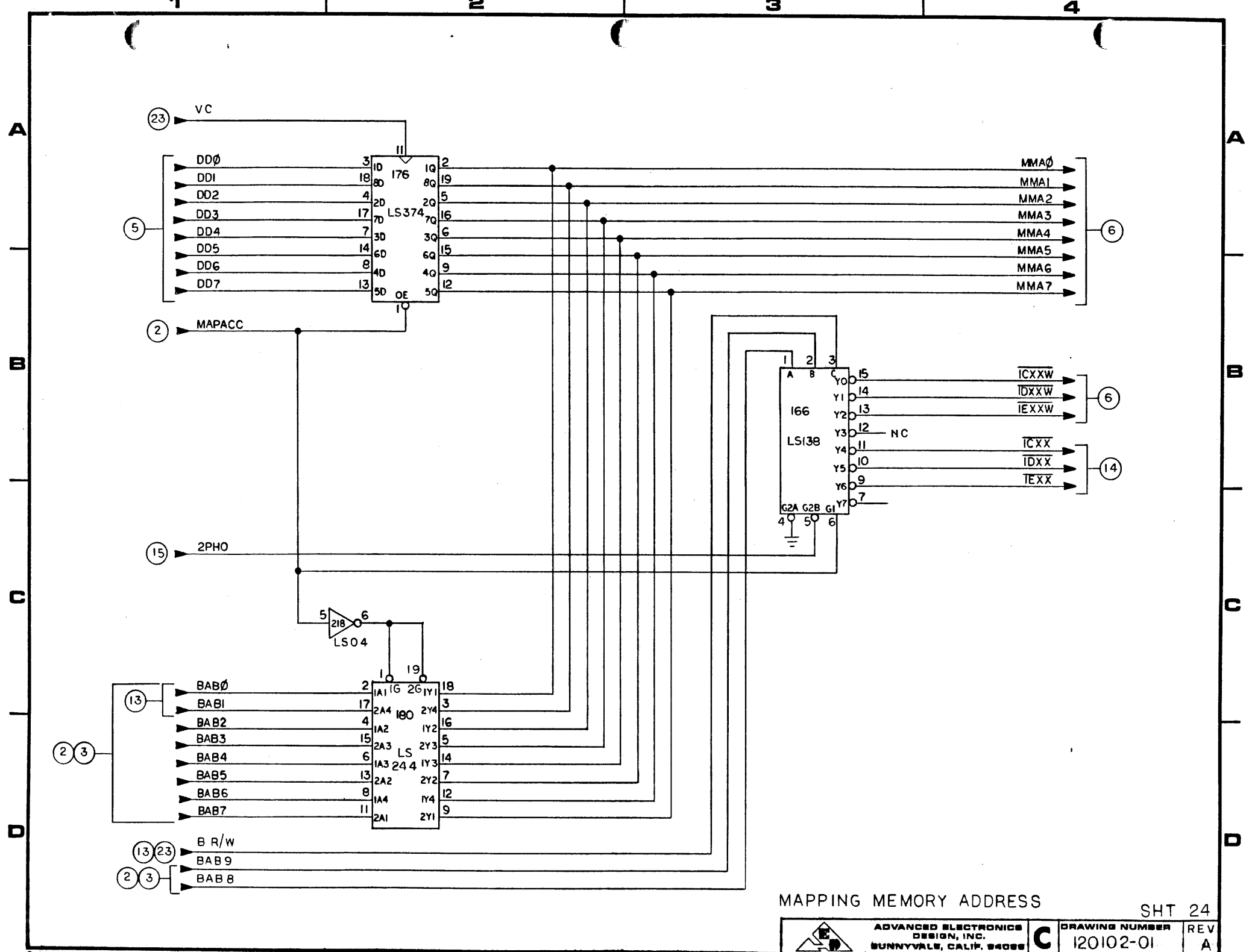
SHT - 23



ADVANCED ELECTRONICS  
DESIGN, INC.  
SUNNYVALE, CALIF. 94088

DRAWING NUMBER  
120102-01

REV  
A



MAPPING MEMORY ADDRESS

SHT 24

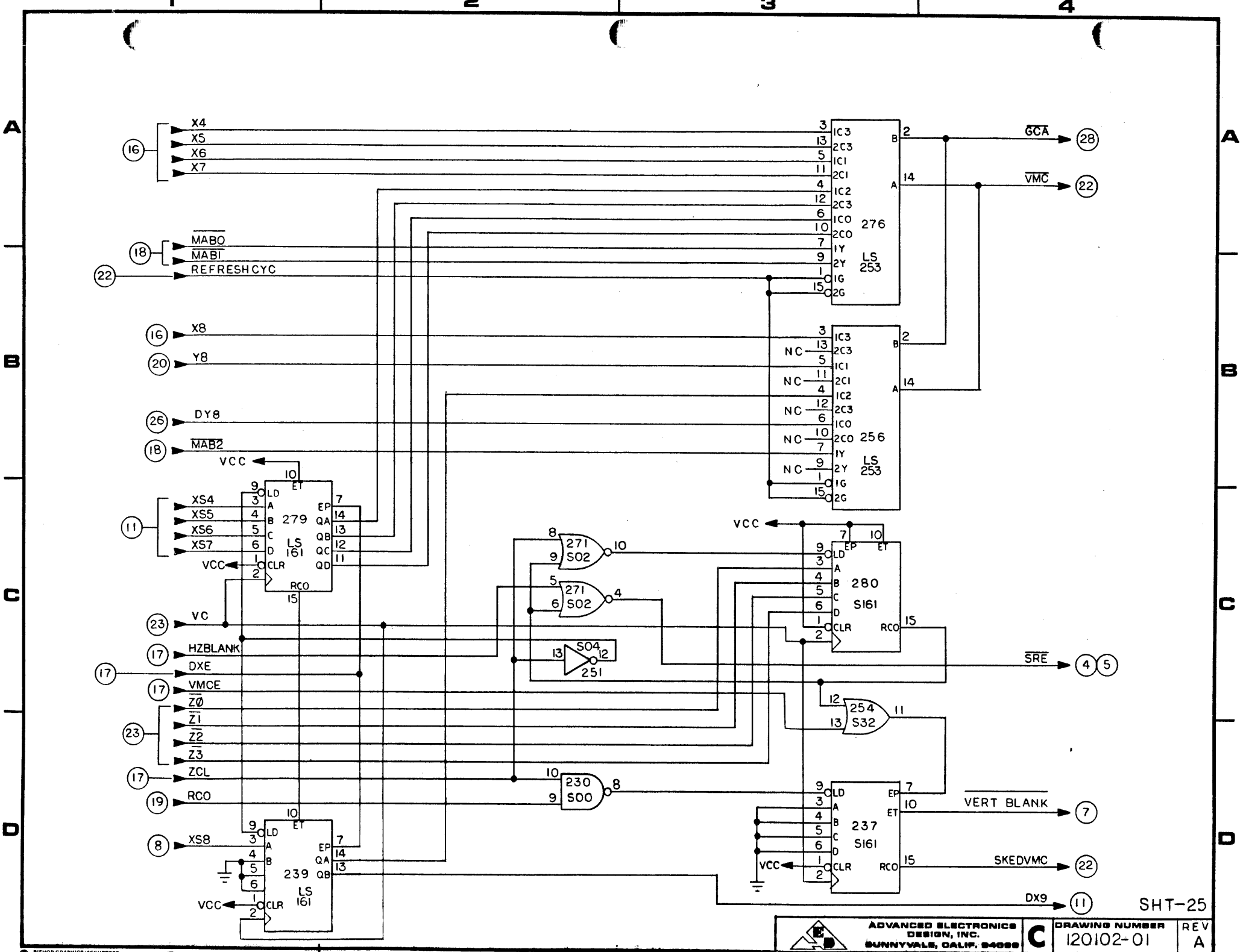


ADVANCED ELECTRONICS  
DESIGN, INC.  
SUNNYVALE, CALIF. 94088

**C** DRAWING NUMBER  
120102-01

REV  
A





1

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A

A

B

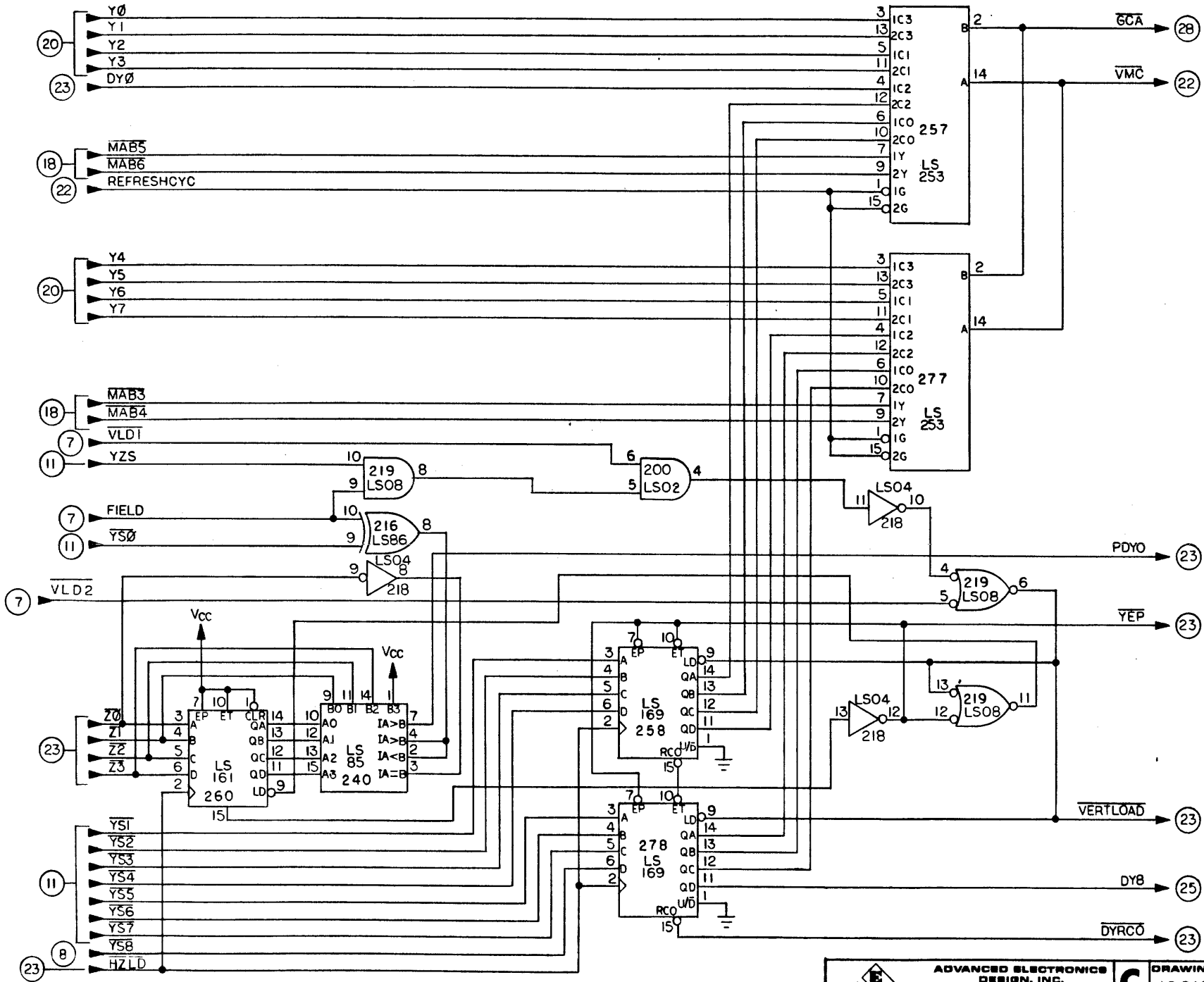
B

C

C

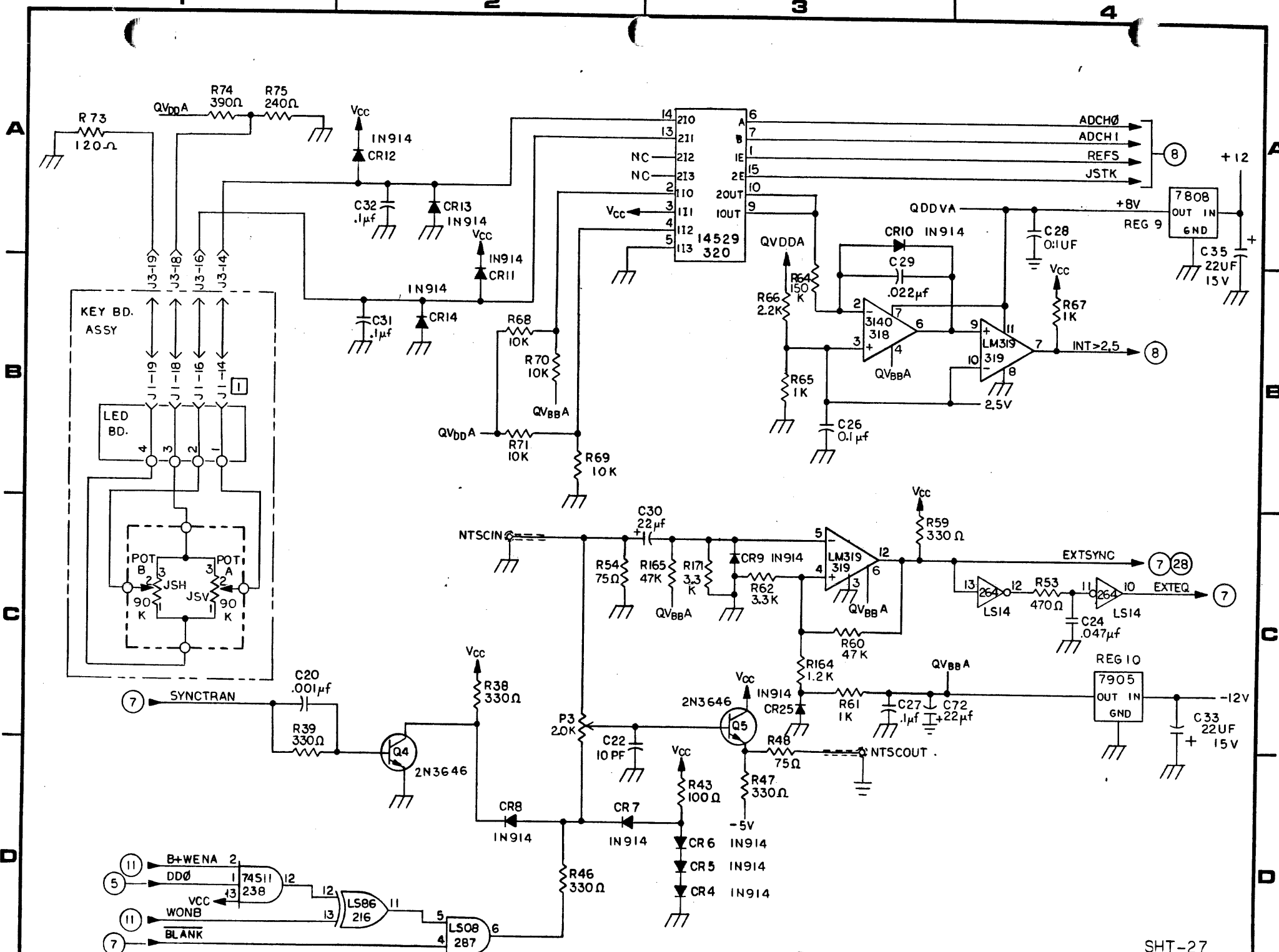
D

D



SHT - 26

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



SHT-27

ADVANCED ELECTRONICS  
DESIGN, INC.  
SUNNYVALE, CALIF. 94088

DRAWING NUMBER  
120102-01

REV  
A

1

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A

A

B

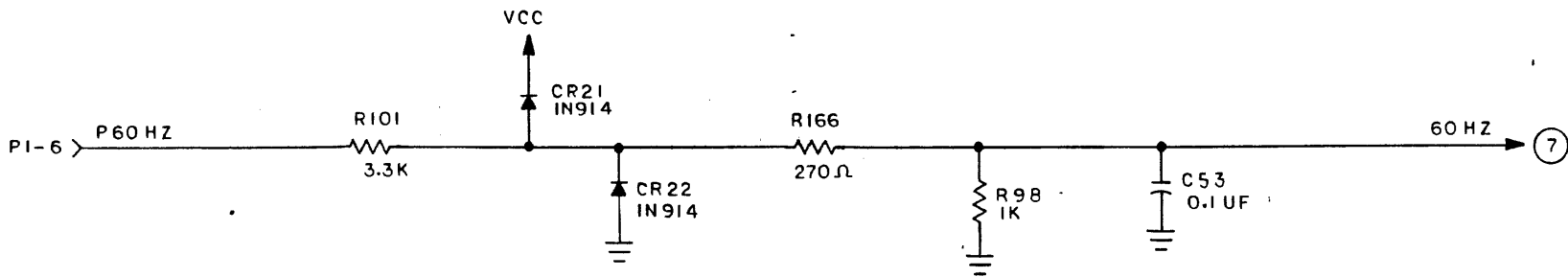
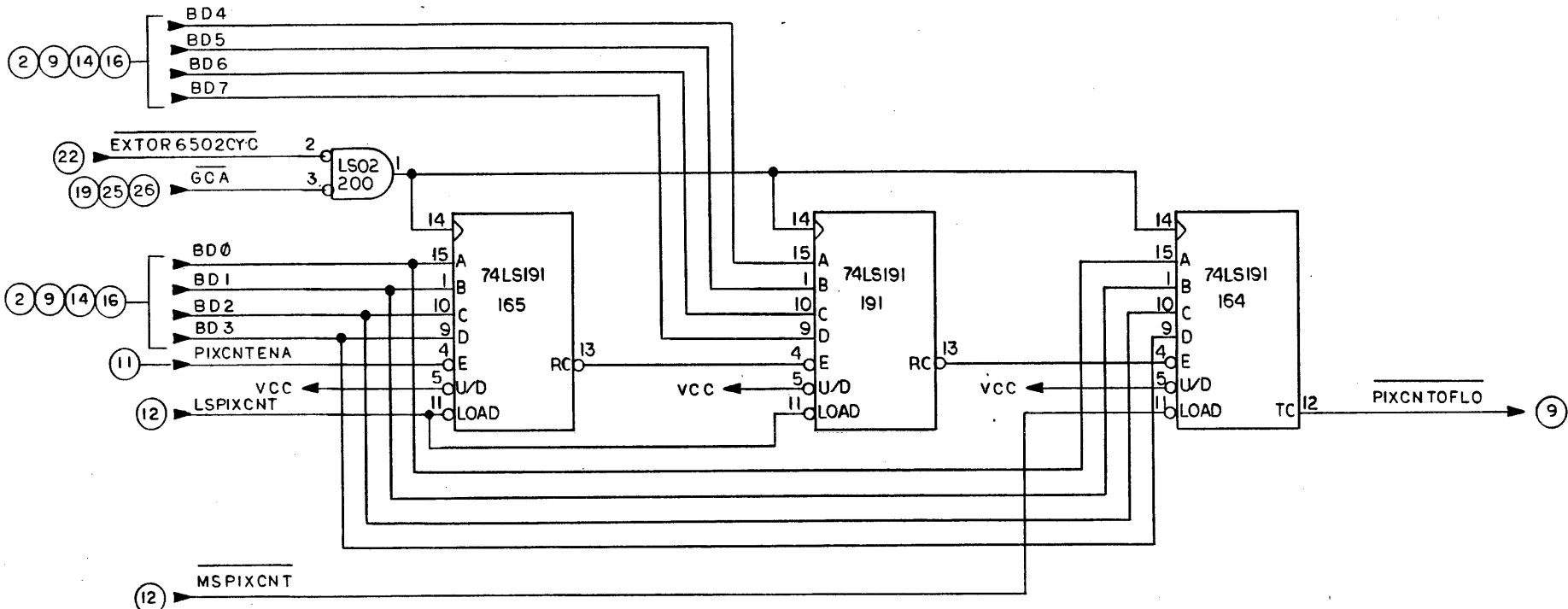
B

C

C

D

D



SHT-28

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

A	00	141	4	121	4	101	4	81	4	61	4	41	4	4	1	4	A	
	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
		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		
B	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													
C	190	185	180	175	170	164	165	191										
	74S00	LS670	LS244	LS670	74S00	LS191	LS191	LS191										
	11	11	11	24	11	11	11	28	28	28								
	11	11				11	11											
D																		

4116-3

74LS251

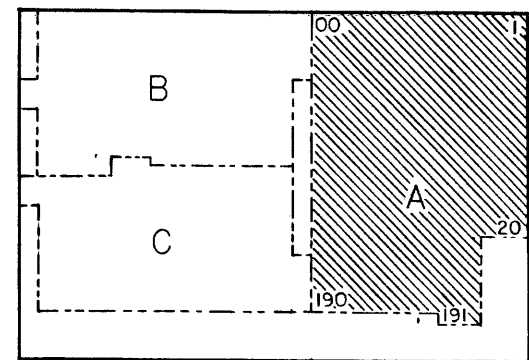
74LS166

4116-3

74LS251

74LS166

4116-3



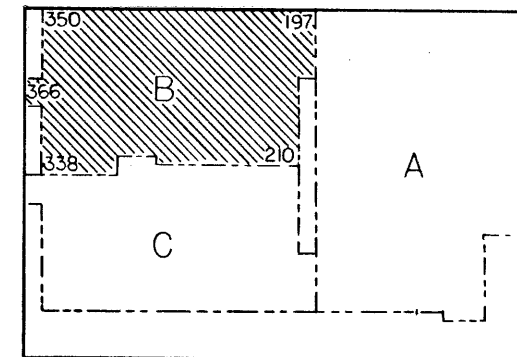
1

2

3

4

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	5175	
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 7	7	4 4	
13 15					7 7				4 4	
				12 12	27 27	7 7			4 4	
354	334	318		303	285	265	245	225	205	
1488	68B50	3140		4118-3	LS138	LS11	LS02	LS74	5138	
13 15	13	27	3	2	21	7 2	23	4		
13					12	22 19	7			
						21				
366	355				286	266	246	226	206	
DPS2	1489	335	LM319	304	LS138	LS32	LS00	LS74	LS08	
8	13 13	68B50	27	4118-3	12	23 21	21 21	19	4 4	
	13 15	13	27	3		20 20	20 20	19	4 4	
							287	267	247	227
356					LS08	LS164	LS04	LS174	3459	
1488						17 21	22	18 18		
13 15	336			305	10 27	16 23		18 18		
13	68B21			4118-3	21 12	23 19				
	8				288	268	248	228	208	
	14529				LS32	LS109	74278	LS109	3459	
					20 21	19	22	19	18 18	
	337	27		306	12 21	23		19	18 18	
	68B21			4118-3						
					289	269	249	229	209	
	8				LS27	LS10	LS04	LS00	3459	
					23	22	17 22	17 19	18 18	
					21	21	22 22			
	338				307	16	19	22 23	22 19	18 18
	68B21			4118-3						
					290	270	250	230	210	
	8				LS138	LS00	LS74	500	3459	
						16 21	19	22 17	18 18	
						21 22	22	25 17	18 18	



SHT - 30



ADVANCED ELECTRONICS  
DESIGN, INC.  
BUNNYVALE, CALIF. 94086



DRAWING NUMBER  
120102-01

REV  
A

1

2

3

4

A

A

B

B

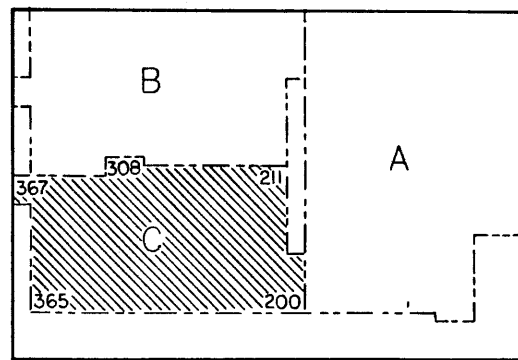
C

C

D

D

				291		271		251		231		211					
				LSI38		74S02		74S04		LS20		LS08					
308				2		23 25		17 12		17		5 5					
890026-01				2		16 19		17		5 5		5 5					
25 23				2		17 25		17		5 5		5 5					
367				3		292		272		252		232		212			
DPSI				3		LS669		LS74		LS00		S08		SI38			
8				3		16		16		16		17 17		5			
21				3		16		16		16		17 17		5			
9				309		16		16		16		17 17		5			
358				3		293		273		253		233		213			
7438				3		LS669		LS02		LS08		74S30		LS08			
15 15				3		16		16 16		19 19		17		5 5			
15 15				310		16		20 20		22 16		17		5 5			
359				890026-03		294		274		254		234		214			
330/390				3		LS669		LSI39		74S32		SI61		DPS3			
10 10 10 10				3		16		23		16 20		17		17			
10 10 10 10				3		16		23		16 25		17		17			
15 15 15 15				3		16		23		16 25		17		17			
360				890026-04		295		275		255		235		215			
LS38				890026-04		LSI69		LSI69		LSI69		SI61		4.7K RN			
10 10				3		20		20		20		17		17 17 17			
10 10				3		20		20		20		17		17 17 17			
10 10				3		20		20		20		17		17 17 17			
361				890026-05		296		276		256		236		216			
7438				890026-05		4040B		LS253		LS253		SI61		LS86			
10 10				3		18		25		25		17		16 20			
10 10				3		18		25		25		17		26 27			
362				890026-06		297		277		257		237		217			
7438				890026-06		LS244		LS253		LS253		74SI61		LS00			
10 10				3		18		26		26		25		23 23			
10 10				3		18		26		26		25		23 23			
363				890026-07		298		278		258		238		218		198	
7438				890026-07		LS273		LSI69		LSI69		74S11		LS04		SPARE	
10 10				3		11		26		26		22		9 23			
10 10				3		11		26		26		19		24 26			
10 10				3		11		26		26		27		26 26			
364				890026-08		299		279		259		239		219		199	
330/390				890026-08		LS273		LSI61		LSI61		LSI61		LS08		LSI64	
21 9 21				3		11		25		19		25		9 26		17	
10 10 10 10				3		11		25		19		25		26 26		17	
10 10 10 10				315		11		25		19		25		26 26		17	
365				890026-08		300		280		260		240		220		200	
7438				890026-08		LSI69		74SI61		LSI61		LS85		LS670		LS02	
21 9				3		23		25		26		26		23		28 26	
21 21				3		23		25		26		26		23		9 9	



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