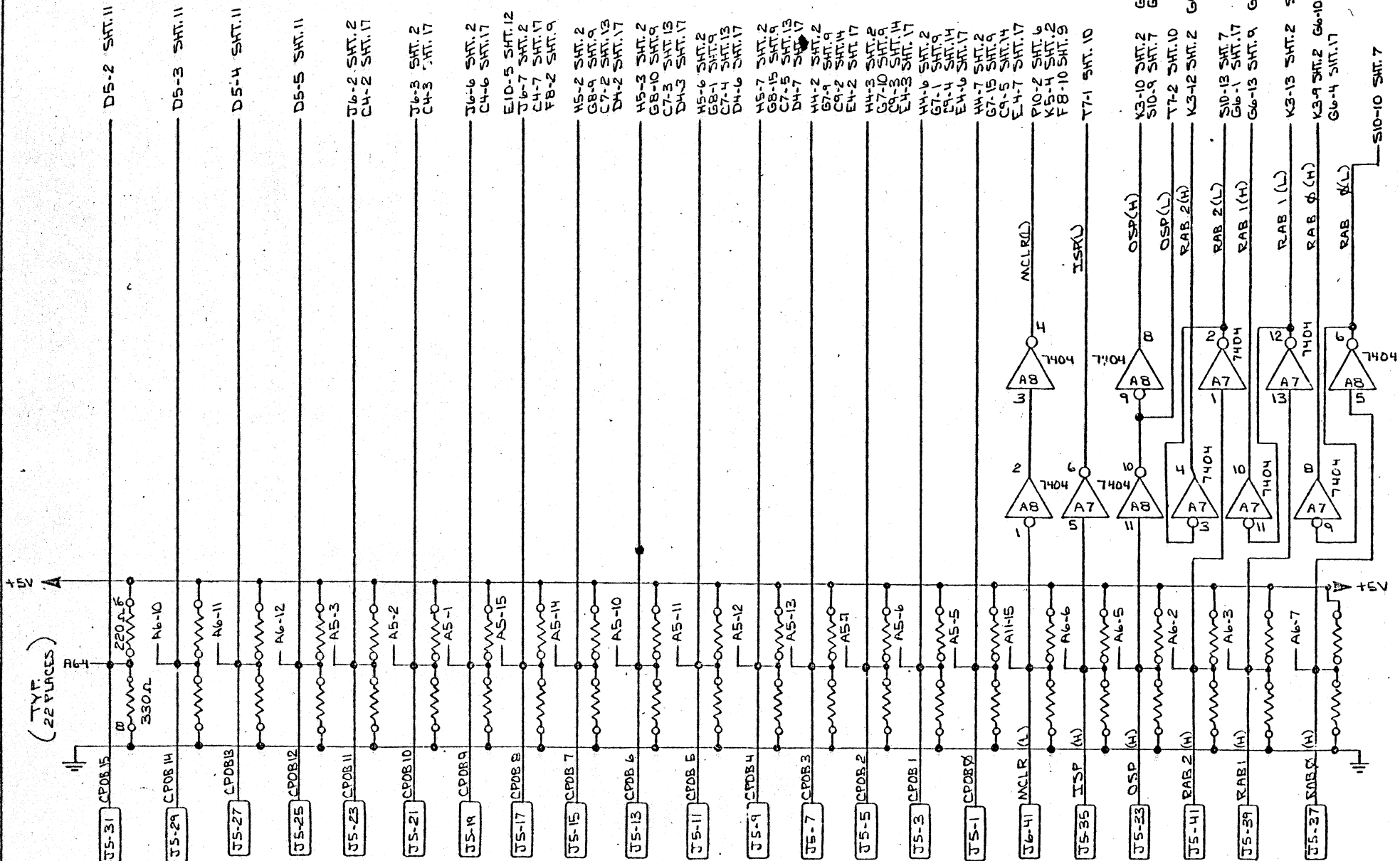
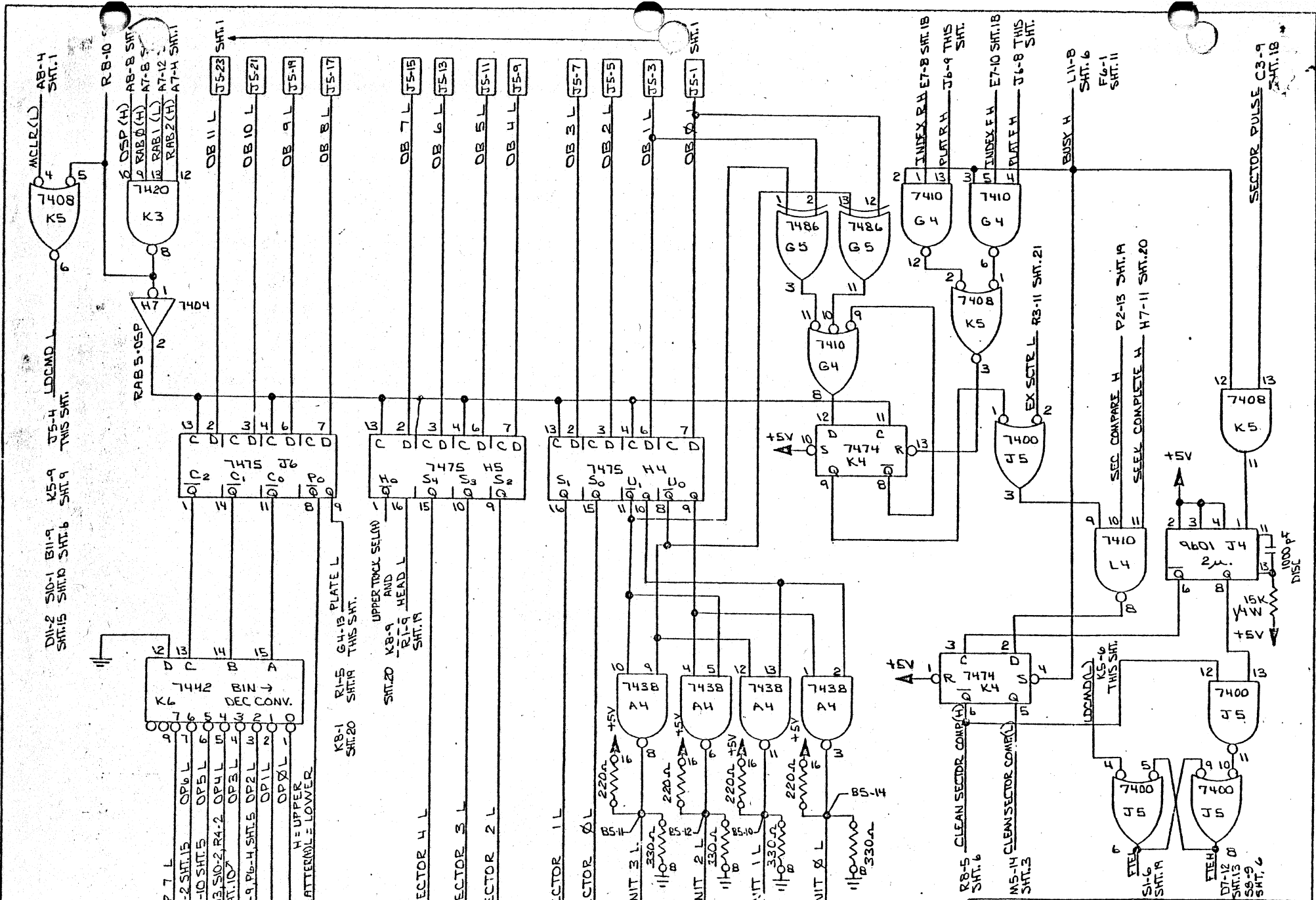


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REV. K ECN 400 7-30-73
 REV. J ECN 386 7-18-73
 REV. H ECN 382 6-3-73
 REV. G ECN 372 5-16-73
 REV. F ECN #352 3-20-73
 REV. E 1-25-73
 REV. D 11-13-72
 REV. C 10-5-72
 REV. B 9-26-72

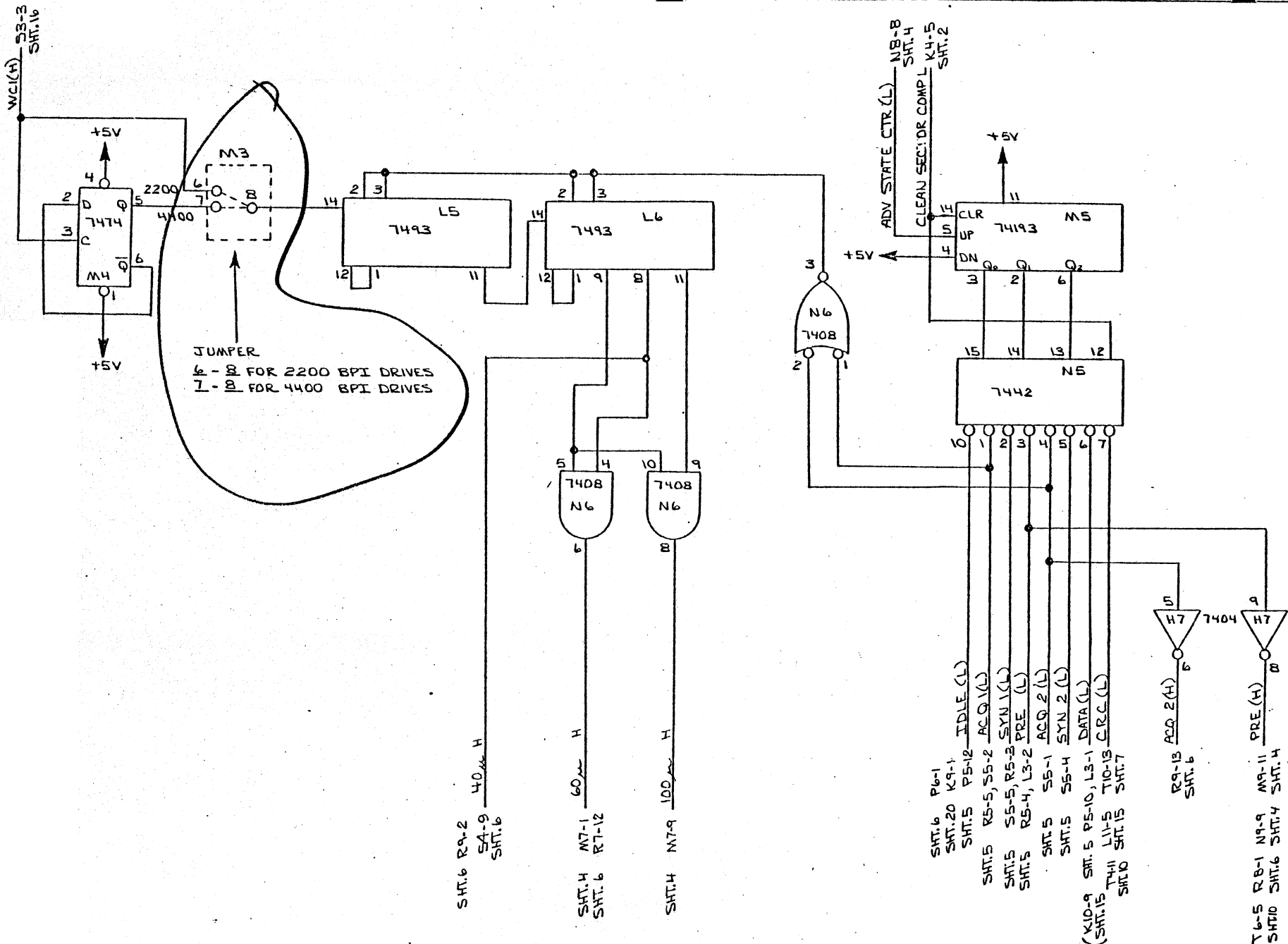
XEBEC SYSTEMS INC		
SCALE: NONE	APPROVED BY:	DRAWN: S.V.
DATE: 5-12-72		REVISED:
XDF-50		
SMT 1 OF 22	DRAWING NO. 100650-E	



XEBEC SYSTEMS INC

SCALE: NONE	APPROVED BY:	DRAWN: S.V.
DATE: 5-18-72		REVISED:
XDF-50		
COMMAND REG & DECODE UNIT SELECT.	SHT. 2 OF 22	DRAWING NO. 100650-E

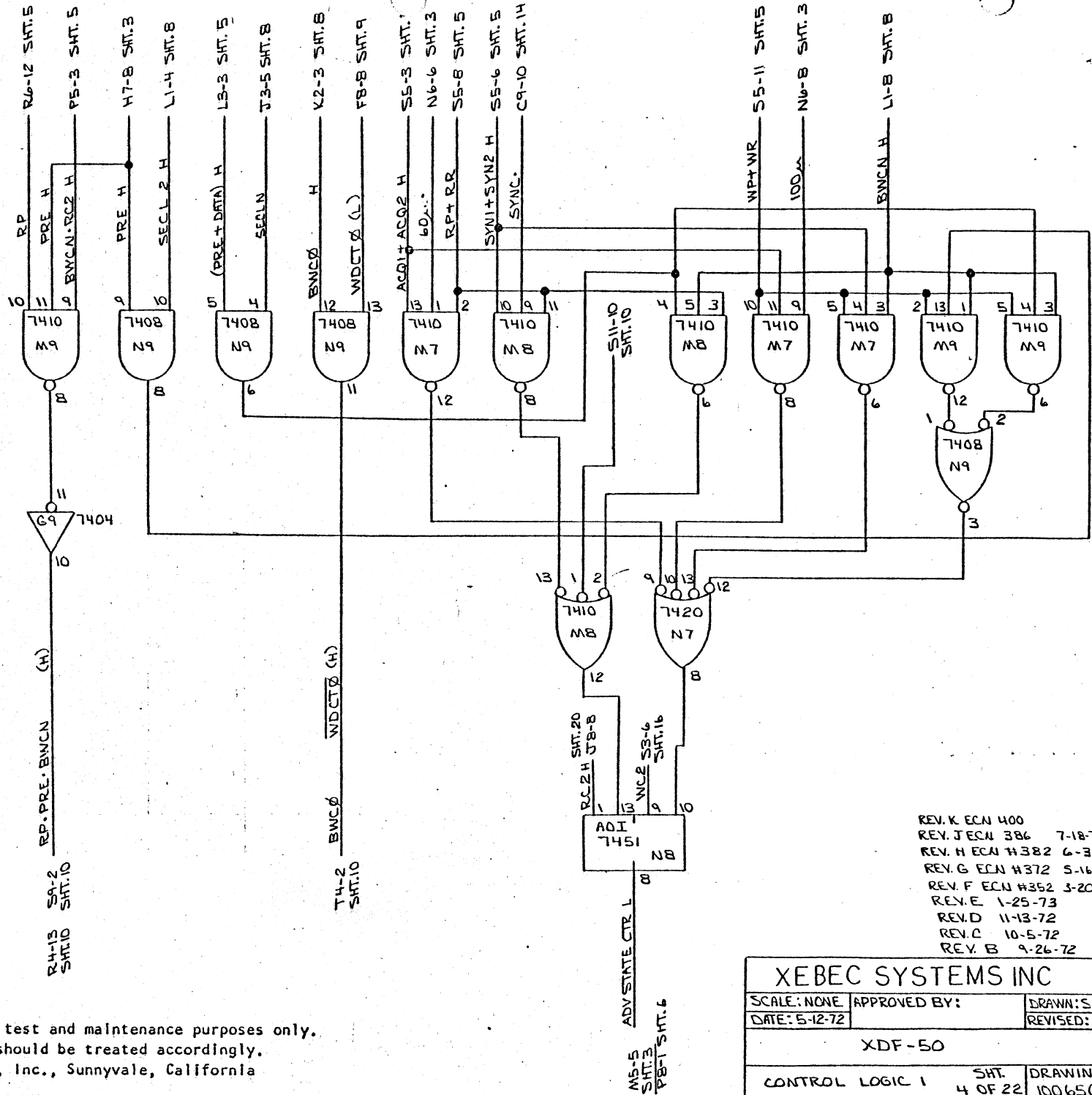
RA-1 SHT. 10 (SHT. 10 SHT. 5) (SHT. 4 RS-2 SHT. 5, RT-1 SHT. 5, R5-10 SHT. 5, R5-1 SHT. 5, R5-13 SHT. 5, R7-4 SHT. 5, R7-2 SHT. 5, P10-4 SHT. 6)
 C1-14 SHT. 18 (G4-4 THIS SHT.)
 R1-2 SHT. 19
 M1-5 SHT. 19
 M1-2 SHT. 19
 N2-5 SHT. 19
 N2-2 SHT. 19
 REV. H ECN 382 6-3-73
 REV. D 11-13-72
 REV. G ECN 4372 9-15-73
 REV. F ECN 4352 5-26-73
 REV. E 1-25-73
 REV. C 10-5-72
 REV. B 9-26-72



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REV. K ECN 400
 REV. J ECN 386 7-18-73
 REV. H ECN #382 6-3-73
 REV. G ECN #372 5-16-73
 REV. F ECN #352 3-20-73
 REV. E 1-25-73
 REV. D 11-13-72
 REV. C 10-5-72
 REV. B 9-26-72

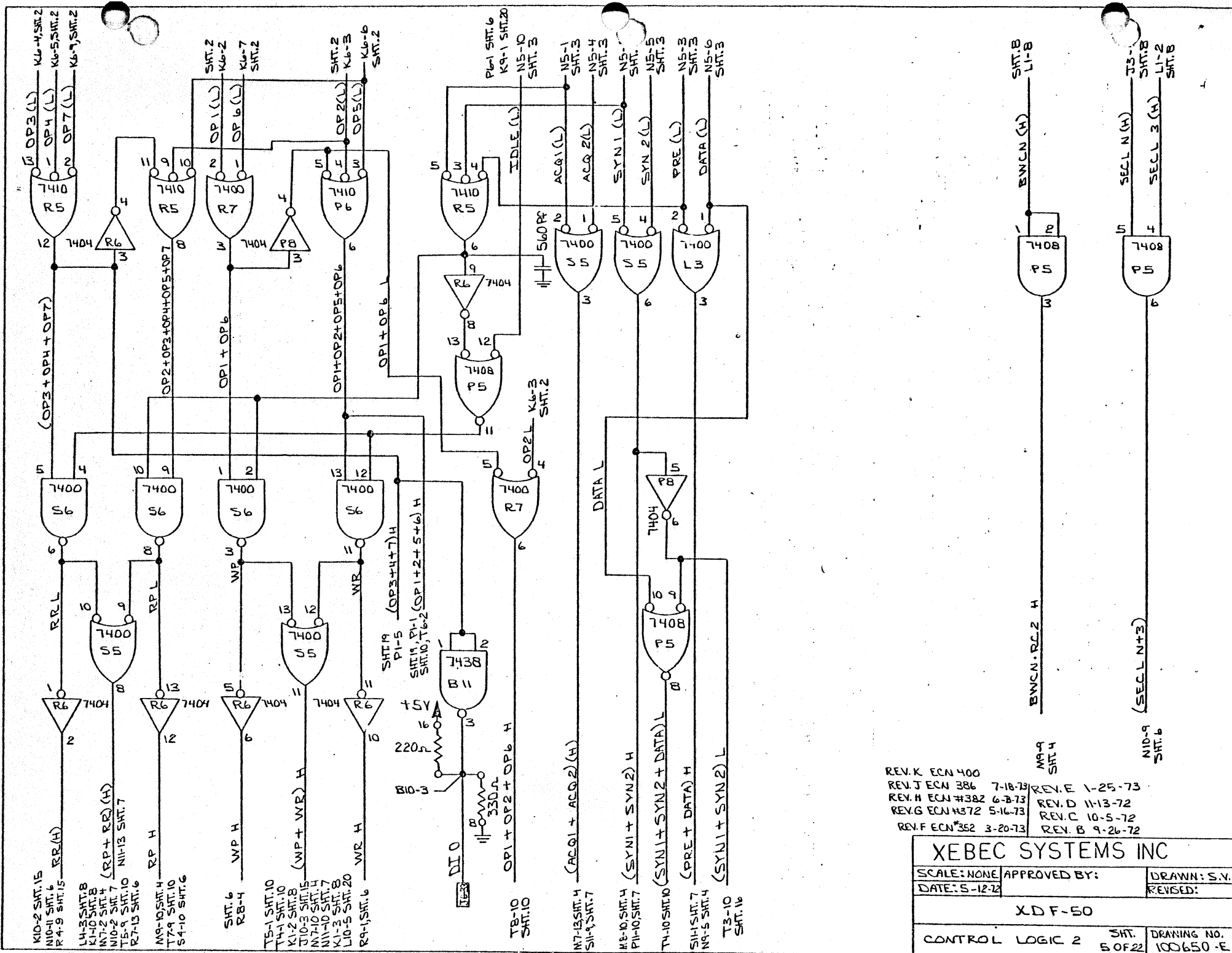
XEBEC SYSTEMS INC		
DATE: 6-15-72	APPROVED BY:	DRAWN: S.V.
SCALE: NONE		REVISED:
XDF-50		
SMT. 3 OF 22		DRAWING NO. 100650-E



REV. K ECN 400
 REV. J ECN 386 7-18-73
 REV. H ECN H382 6-3-73
 REV. G ECN H372 5-16-73
 REV. F ECN H352 3-20-73
 REV. E 1-25-73
 REV. D 11-13-72
 REV. C 10-5-72
 REV. B 9-26-72

XEBEC SYSTEMS INC		
SCALE: NONE	APPROVED BY:	DRAWN: S.V.
DATE: 5-12-72		REVISED:
XDF-50		
CONTROL LOGIC 1	SMT. 4 OF 22	DRAWING NO. 100650-E

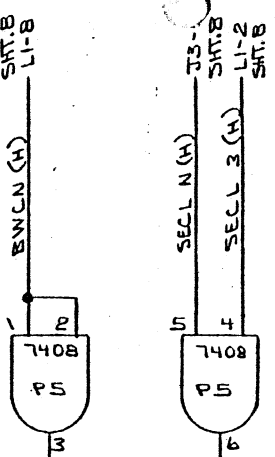
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REV. K ECN 400
 REV. J ECN 386 7-18-73
 REV. H ECN #382 6-8-73
 REV. G ECN #372 5-16-73
 REV. F ECN #352 3-20-73

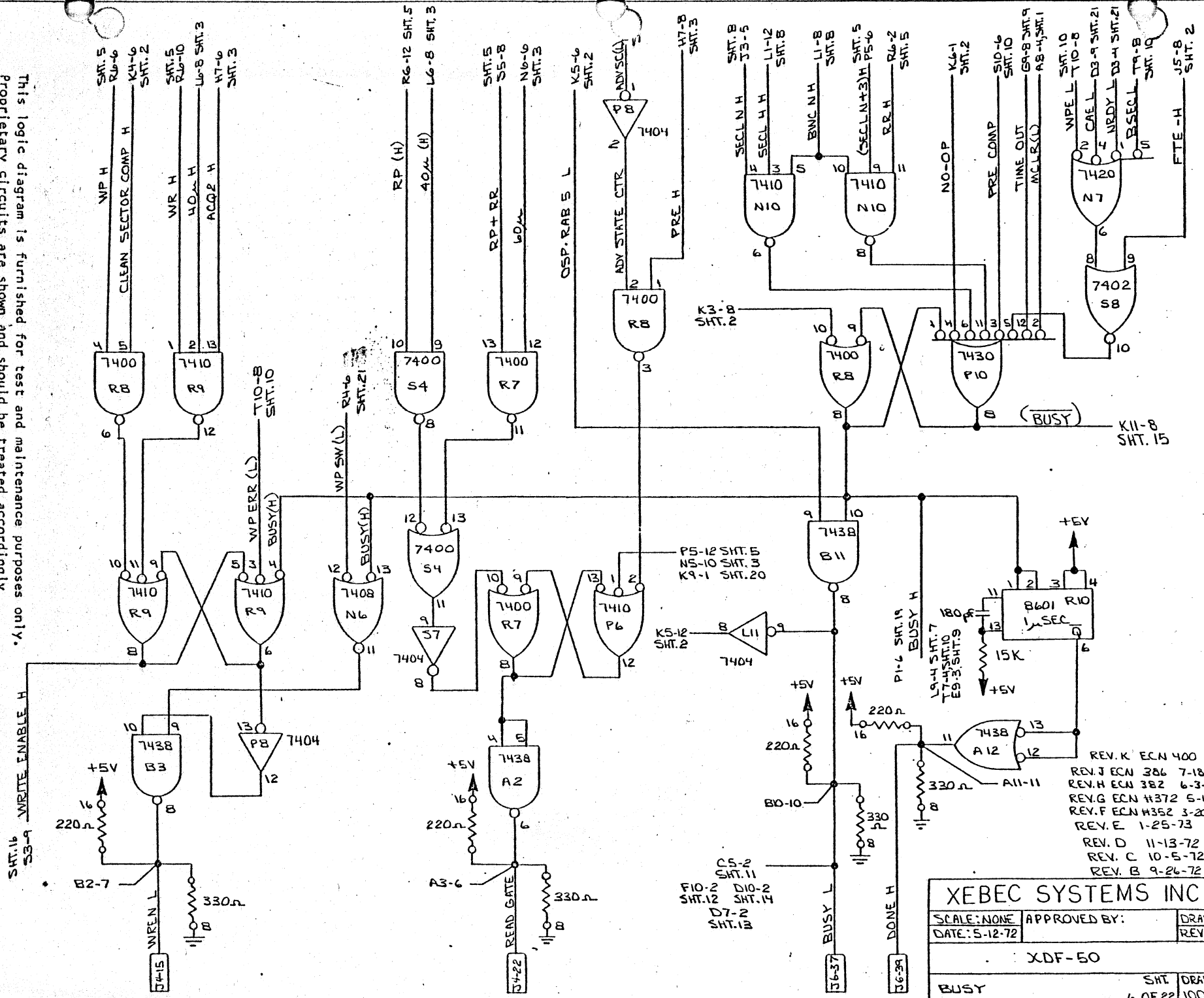
REV. E 1-25-73
 REV. D 11-13-72
 REV. C 10-5-72
 REV. B 9-26-72

XEBEC SYSTEMS INC		
SCALE: NONE	APPROVED BY:	DRAWN: S.V.
DATE: 5-12-74		REVISED:
XDF-50		
CONTROL LOGIC 2	SMT. 5 OF 22	DRAWING NO. 100650-E



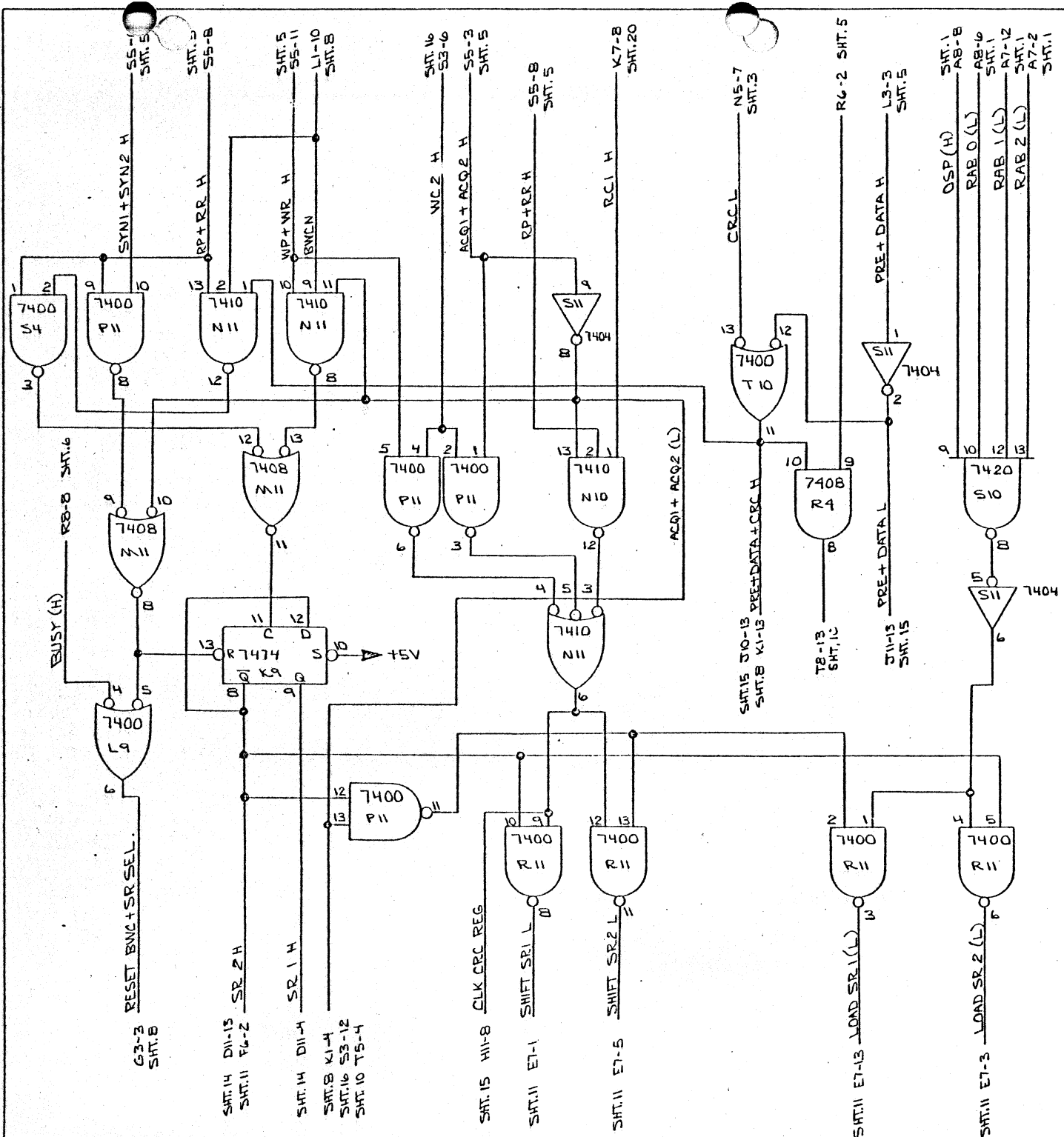
REV. A 1-25-72

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REV. K ECN 400
 REV. J ECN 386 7-18-73
 REV. H ECN 382 6-3-73
 REV. G ECN #372 5-16-73
 REV. F ECN #352 3-20-73
 REV. E 1-25-73
 REV. D 11-13-72
 REV. C 10-5-72
 REV. B 9-24-72

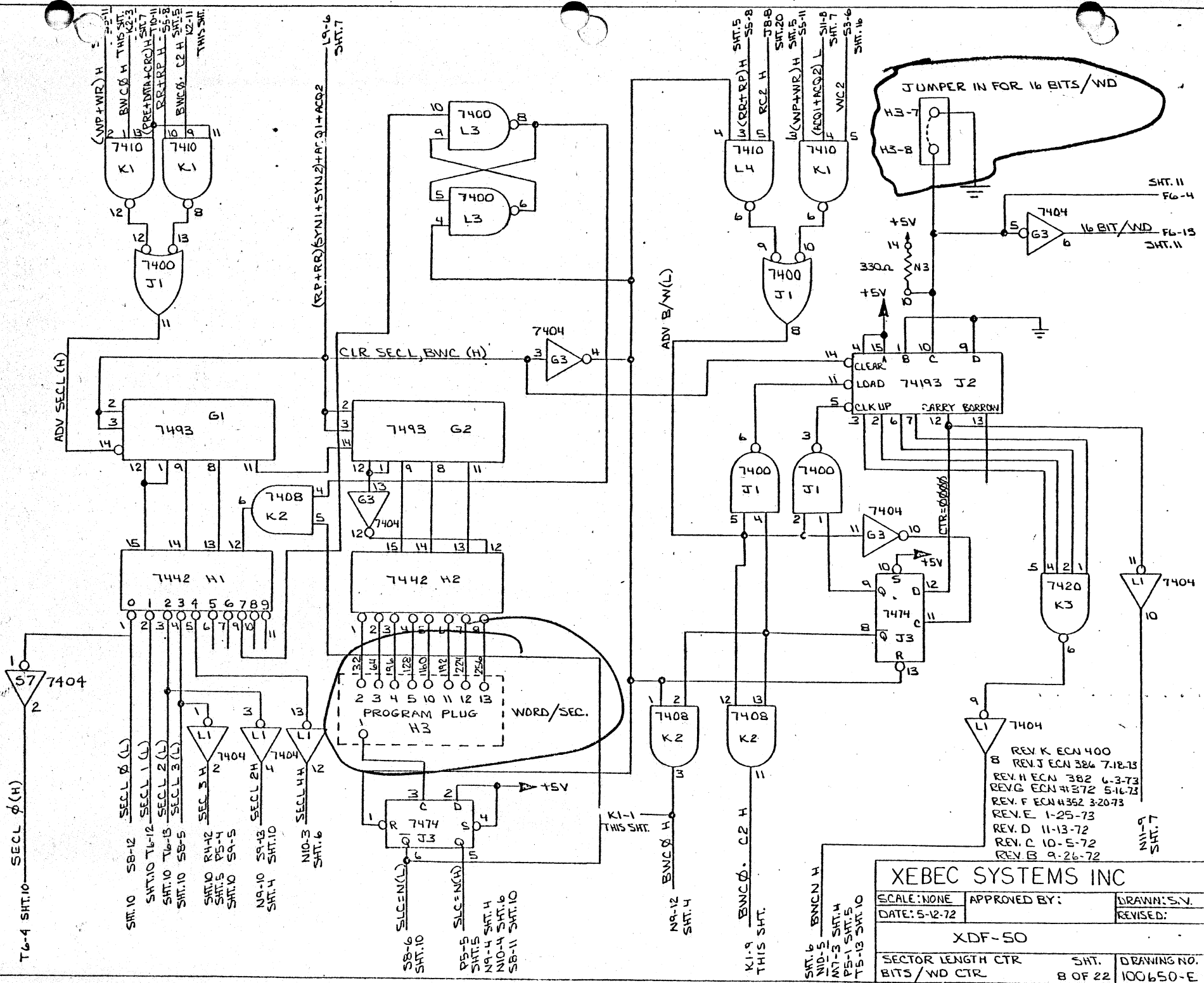
XEBEC SYSTEMS INC		
SCALE: NONE	APPROVED BY:	DRAWN: S.V.
DATE: 5-12-72		REVISED:
XDF-50		
BUSY	SHT 6 OF 22	DRAWING NO. 100650-E



XEBEC SYSTEMS INC		
SCALE: NONE	APPROVED BY:	DRAWN: S.V.
DATE: 5-12-72		REVISEL:
XDF-50		
SHIFT REG. CONTROL	SMT. 7 OF 22	DRAWING NO. 100550-1

REV. K ECM 400
 REV. J ECM 386 7-18-73
 REV. H ECM 382 6-3-73
 REV. G ECM 372 5-16-73
 REV. F ECM 352 3-20-73
 REV. E 1-25-73
 REV. D 11-13-72
 REV. C 10-5-72
 REV. B 9-21-72

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REV. K ECN 400
 REV. J ECN 386 7-18-73
 REV. H ECN 382 6-3-73
 REV. G ECN #1372 5-16-73
 REV. F ECN #352 3-20-73
 REV. E 1-25-73
 REV. D 11-13-72
 REV. C 10-5-72
 REV. B 9-26-72

XEBEC SYSTEMS INC

SCALE: NONE	APPROVED BY:	DRAWN: S.V.
DATE: 5-12-72		REVISED:

XDF-50

SECTOR LENGTH CTR BITS / WD CTR	SHT. 8 OF 22	DRAWING NO. 100650-E
------------------------------------	-----------------	-------------------------

T6-4 SHT.10 SECL 0 (H)

SHT.10 SB-12 SECL 0 (L)
 SHT.10 T6-12 SECL 1 (L)
 SHT.10 T6-13 SECL 2 (L)
 SHT.10 SB-5 SECL 3 (L)
 SHT.10 RH-2 SECL 3 H
 SHT.10 PS-4
 SHT.10 SA-5

NA-10 SA-13 SECL 2 H
 SHT.4 SHT.10
 NI0-3 SECL 4 H
 SHT.6

SB-6 SHT.10 SLC=N(L)
 PS-5 SHT.5 SLC=N(H)
 NA-4 SHT.4
 NI0-4 SHT.6
 SB-11 SHT.10

K1-1 THIS SHT.

NA-12 SHT.4 BANC 0 H

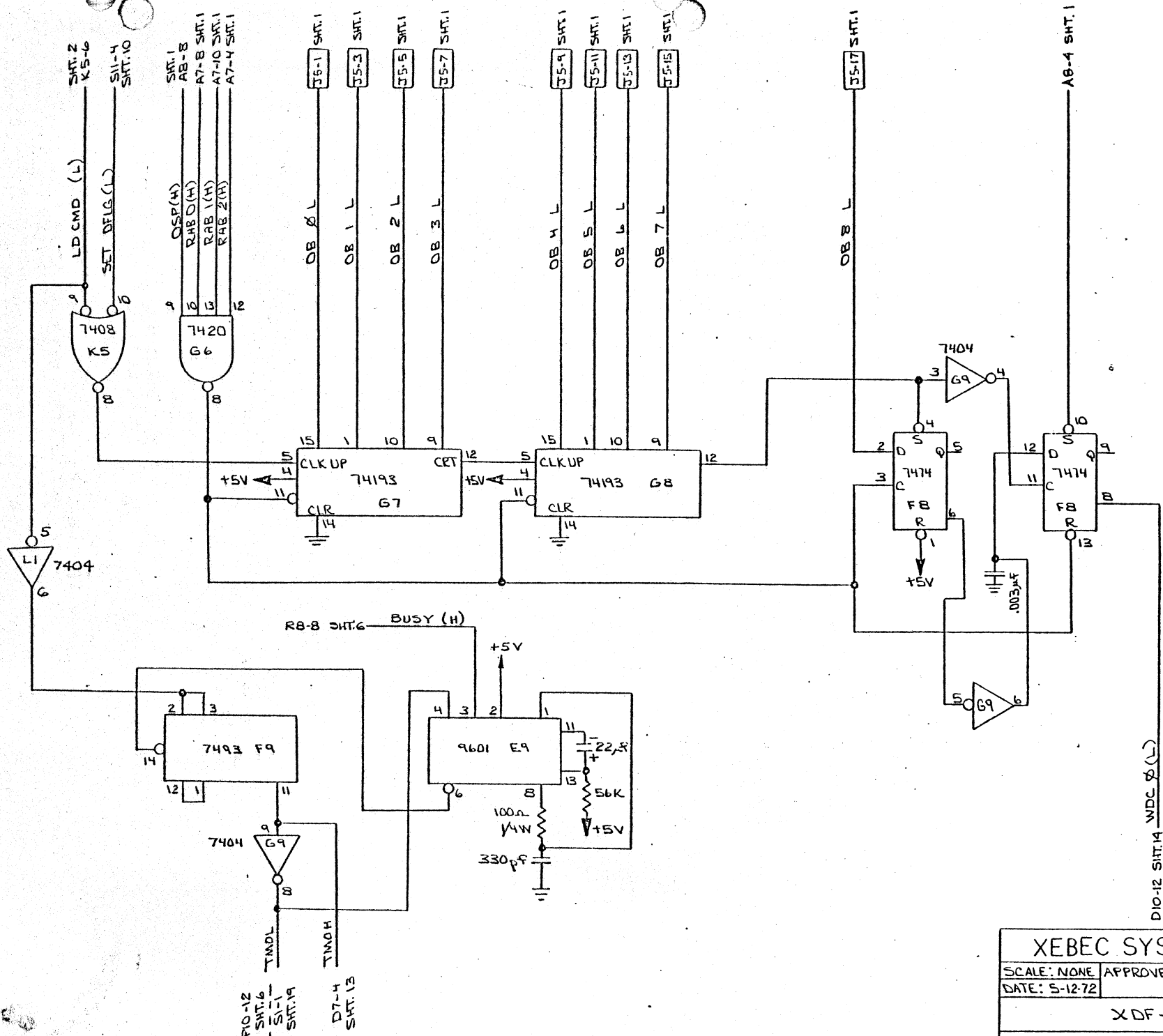
K1-9 THIS SHT. BANC 0 C2 H

SHT.6 BANC N H
 NI0-5 SHT.4
 NI1-3 SHT.4
 PS-1 SHT.5
 TS-13 SHT.10

NI1-9 SHT.7

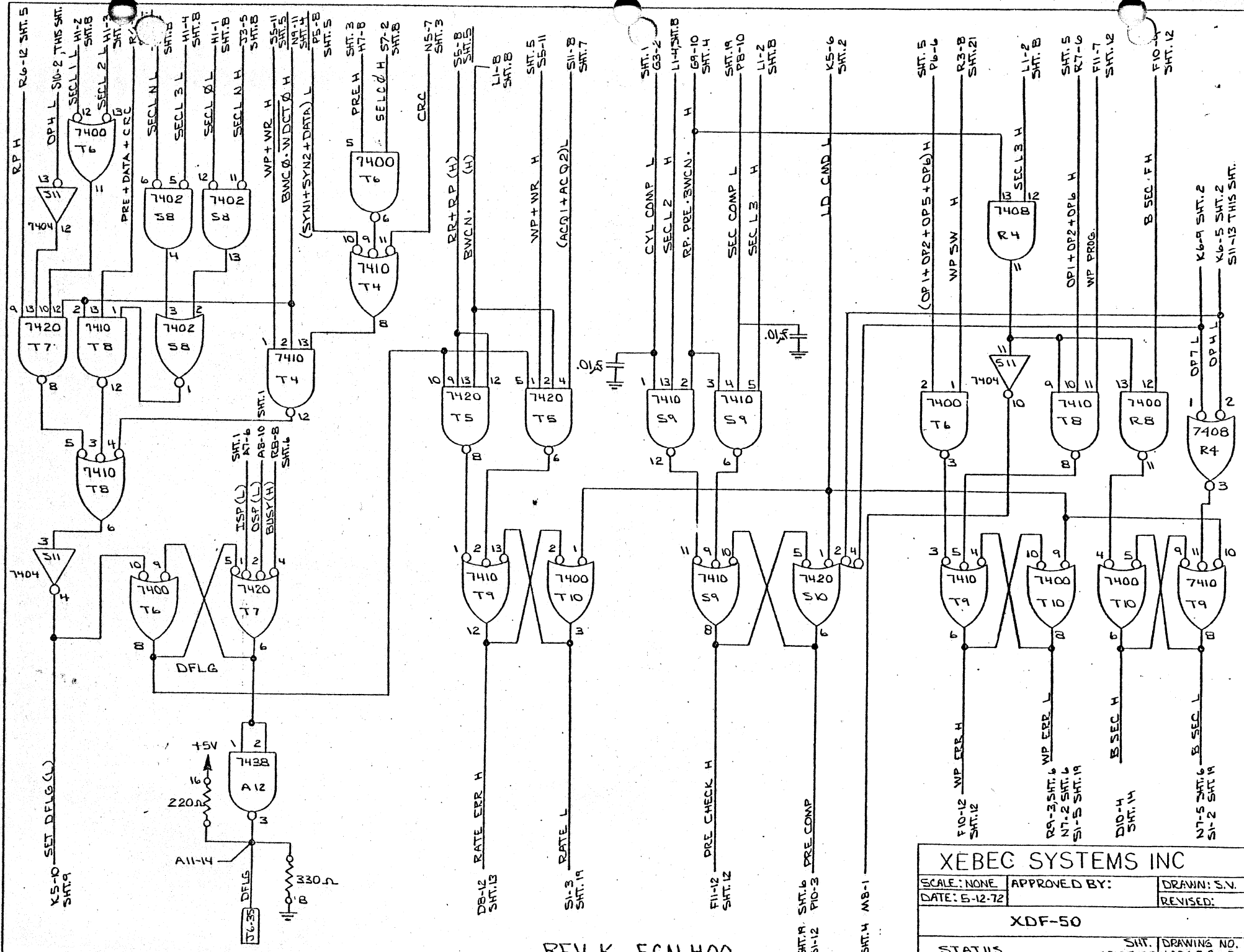
SHT.11 F6-4
 SHT.11 F6-15
 SHT.11

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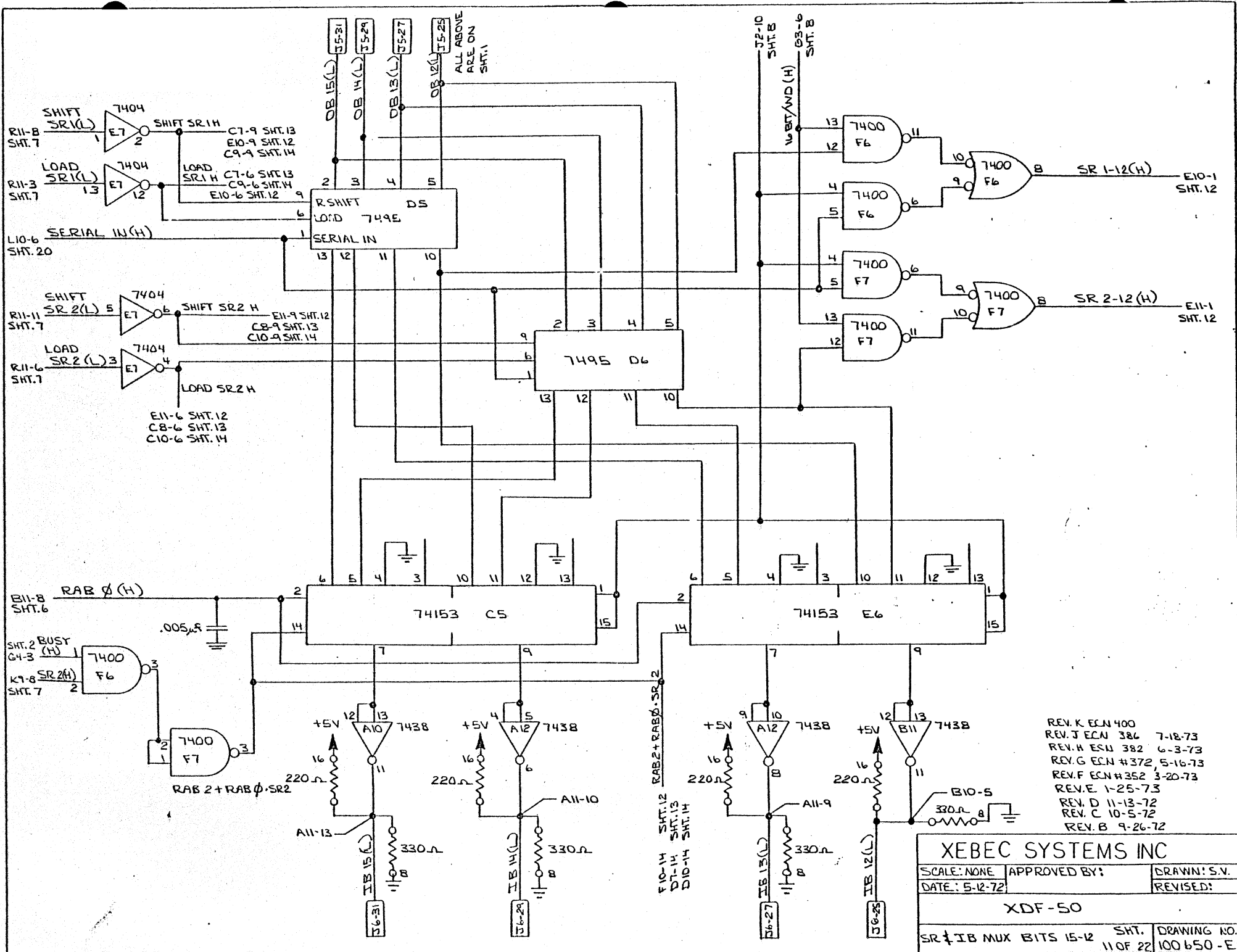
REV. K ECN 400
 REV. J ECN 386 7-18-73
 REV. H ECN 382 6-8-73
 REV. G ECN 41372 5-16-73
 REV. F ECN 4352 3-20-73
 REV. E 1-25-73
 REV. D 11-13-72
 REV. C 10-5-72
 REV. B 9-26-72

XEBEC SYSTEMS INC		
SCALE: NONE	APPROVED BY:	DRAWN: S.V.
DATE: 5-12-72		REVISED:
XDF-50		
WORD COUNTER	SHT. 9 OF 22	DRAWING NO. 100650-E



REV. K ECN 400

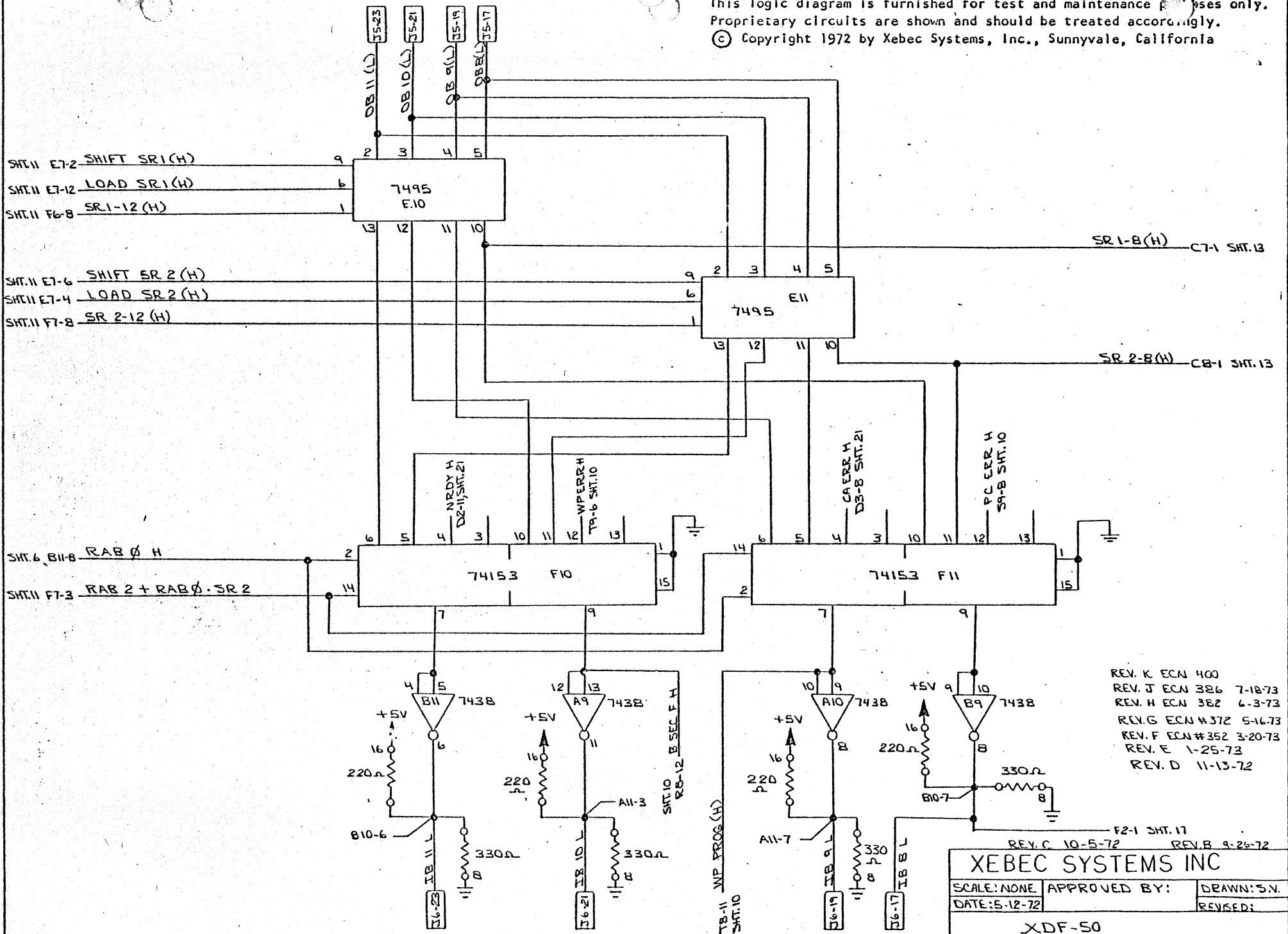
XEBEC SYSTEMS INC		
SCALE: NONE	APPROVED BY:	DRAWN: S.N.
DATE: 5-12-72		REVISED:
XDF-50		
STATUS	SHT. 10 OF 22	DRAWING NO. 100650-E



REV. K ECN 400
 REV. J ECN 386 7-18-73
 REV. H ESU 382 6-3-73
 REV. G ECN #372 5-16-73
 REV. F ECN #352 3-20-73
 REV. E 1-25-73
 REV. D 11-13-72
 REV. C 10-5-72
 REV. B 9-26-72

XEBEC SYSTEMS INC		
SCALE: NONE	APPROVED BY:	DRAWN: S.V.
DATE: 5-12-72		REVISED:
XDF-50		
SR-IB MUX BITS 15-12	SHT. 11 OF 22	DRAWING NO. 100650-E

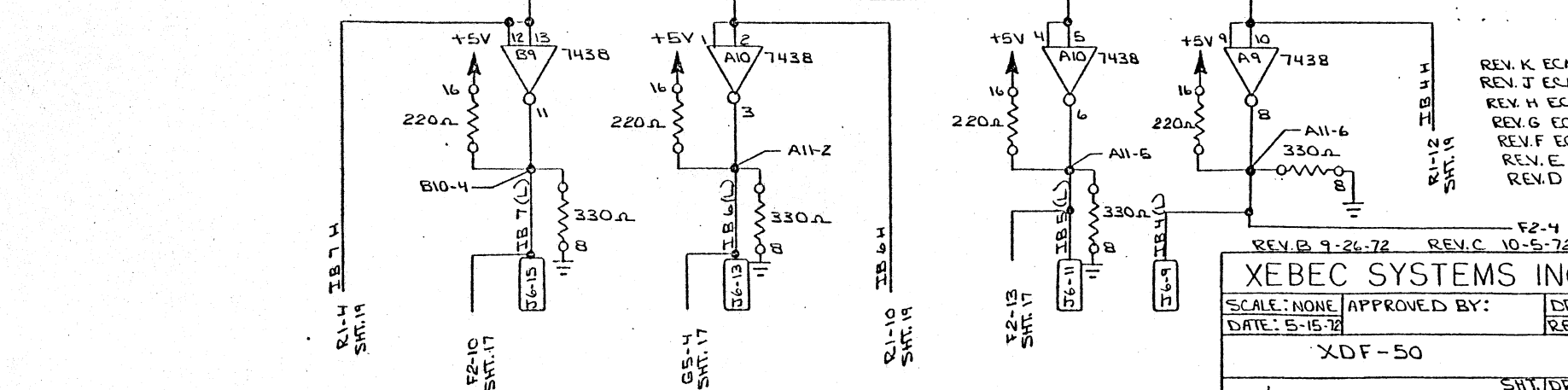
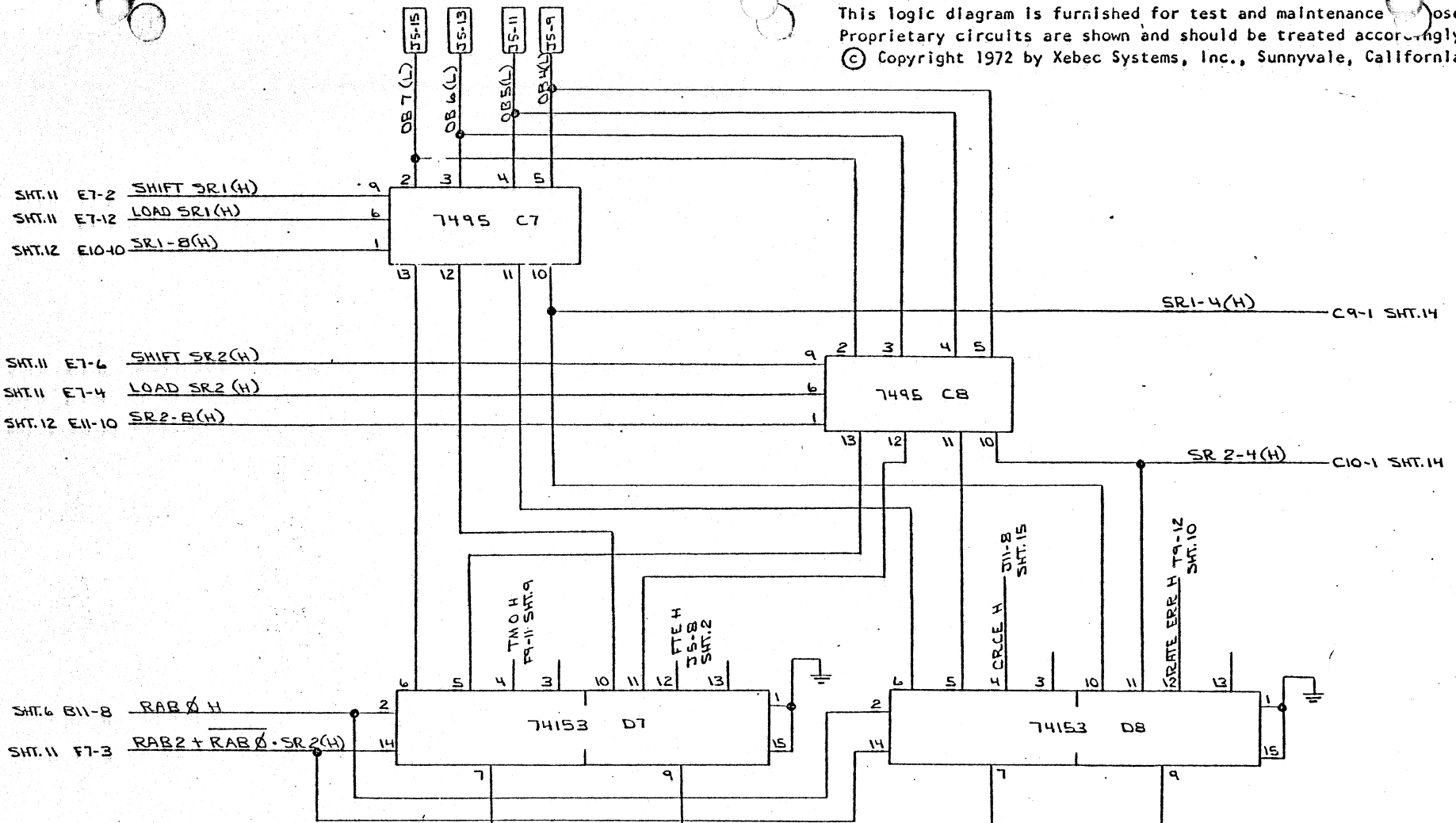
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REV. K ECN 400
 REV. J ECN 386 7-18-73
 REV. H ECN 382 6-3-73
 REV. G ECN #372 5-16-73
 REV. F ECN #352 3-20-73
 REV. E 1-25-73
 REV. D 11-13-72

REV. C 10-5-72			REV. B 9-26-72		
XEBEC SYSTEMS INC					
SCALE: NONE	APPROVED BY:			DRAWN: S.N.	
DATE: 5-12-72				REVISED:	
XDF-50					
SR & IB MUX BITS 11-8			SHT.	DRAWING NO.	
			12 OF 22	100650-E	

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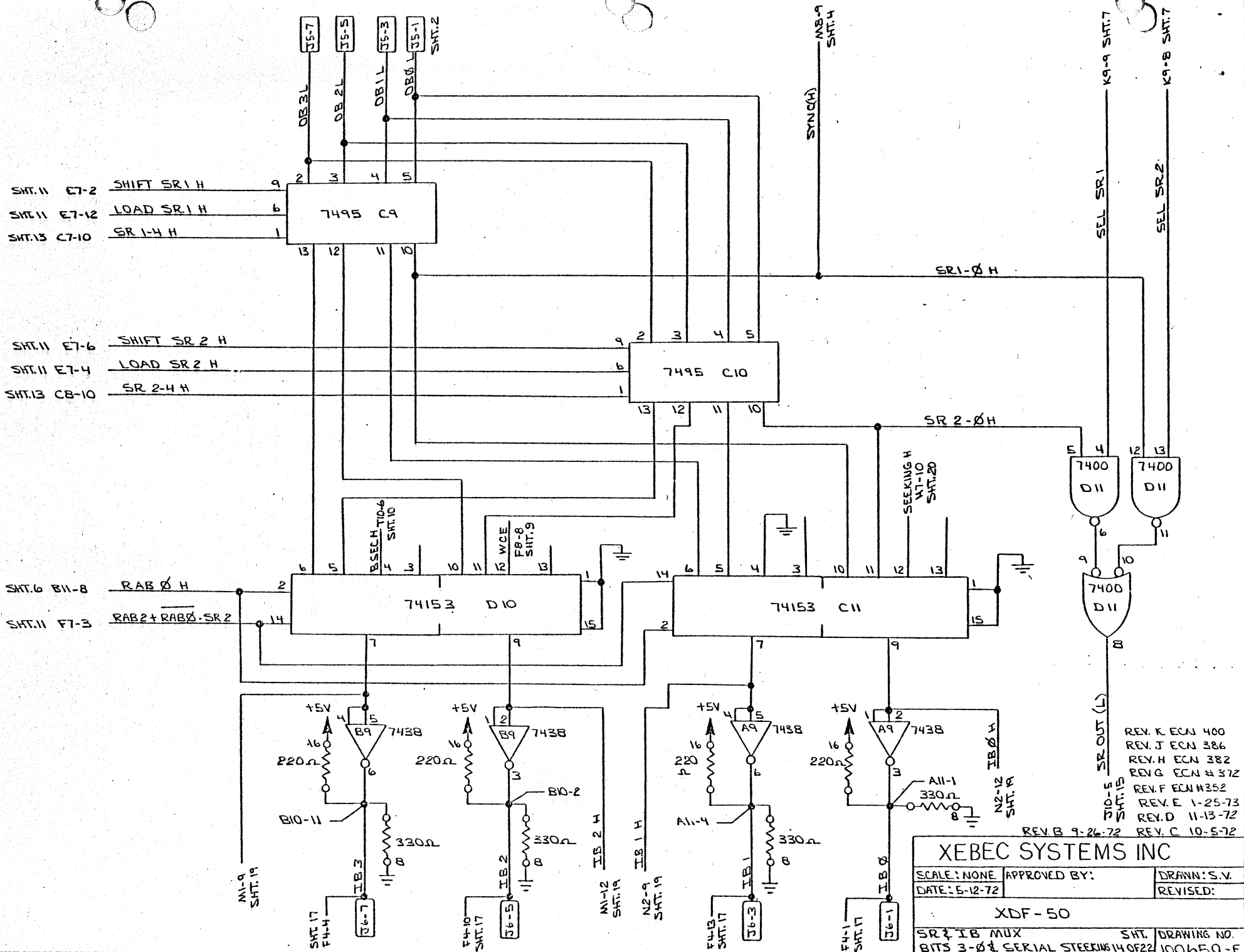


REV. K ECN 400
 REV. J ECN 386 7-18
 REV. H ECN 382
 REV. G ECN # 372
 REV. F ECN 352
 REV. E 1-25-73
 REV. D 11-13-72

F2-4 SHT.17
 REV. B 9-26-72 REV. C 10-5-72

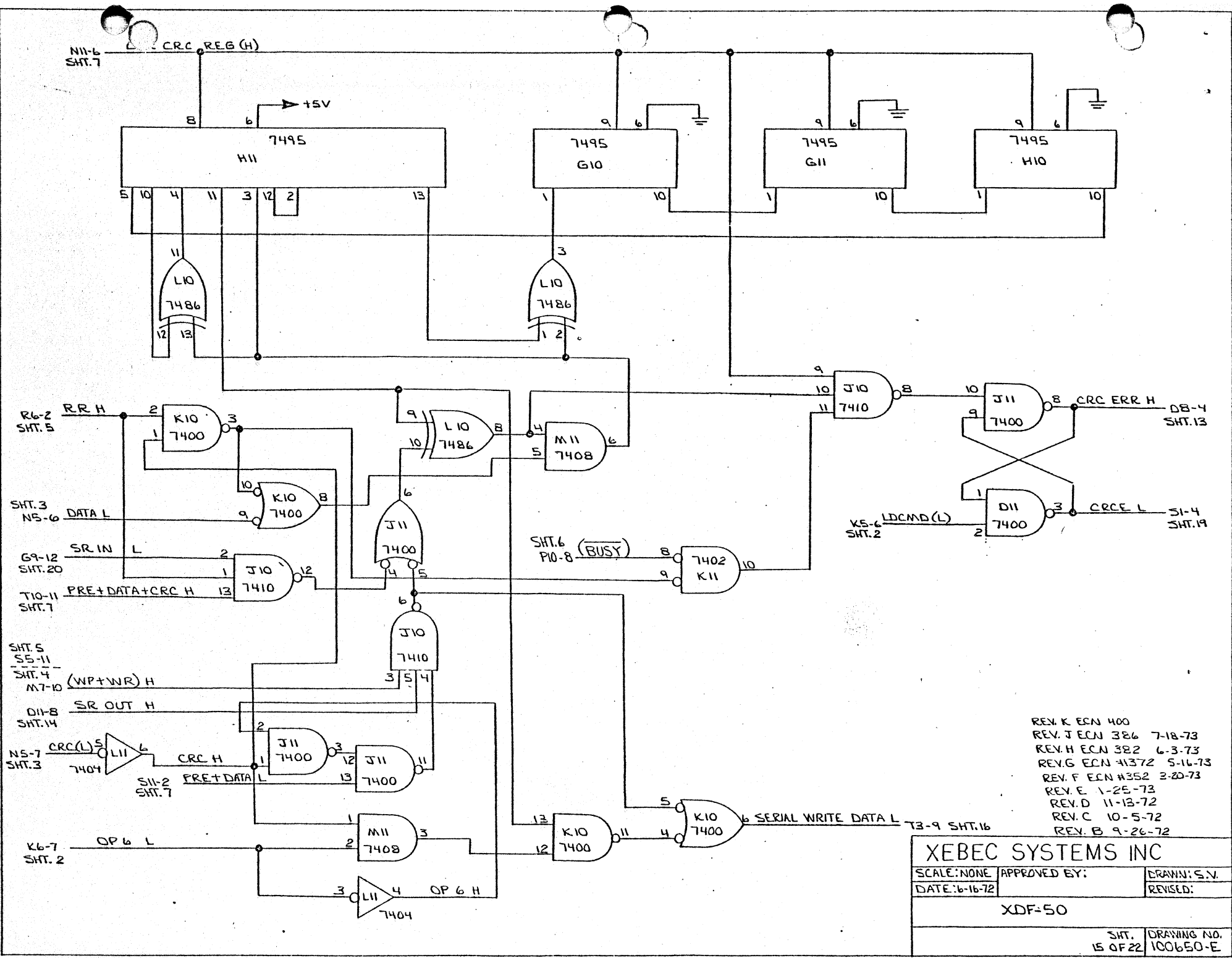
XEBEC SYSTEMS INC		
SCALE: NONE	APPROVED BY:	DRAWN: S.V.
DATE: 5-15-74		REVISED:
XDF-50		
SR 4 IB MUX	BTS 7-4	SHT. 100650-E

13 OF 22



REV. K ECN 400
 REV. J ECN 386
 REV. H ECN 382
 REV. G ECN # 372
 REV. F ECN # 352
 REV. E 1-25-73
 REV. D 11-13-72
 REV. C 10-5-72
 REV. B 9-26-72

XEBEC SYSTEMS INC		
SCALE: NONE	APPROVED BY:	DRAWN: S.V.
DATE: 5-12-72		REVISED:
XDF-50		
SR & IB MUX	SHT.	DRAWING NO.
BITS 3-Ø & SERIAL STEERING	14 OF 22	100650-E

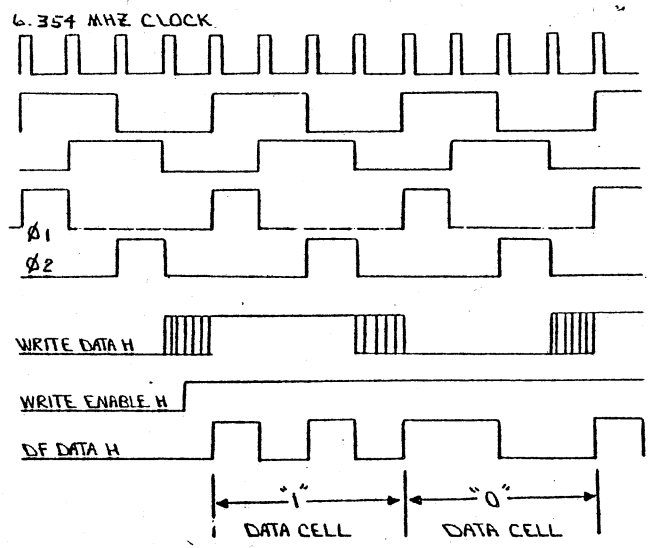
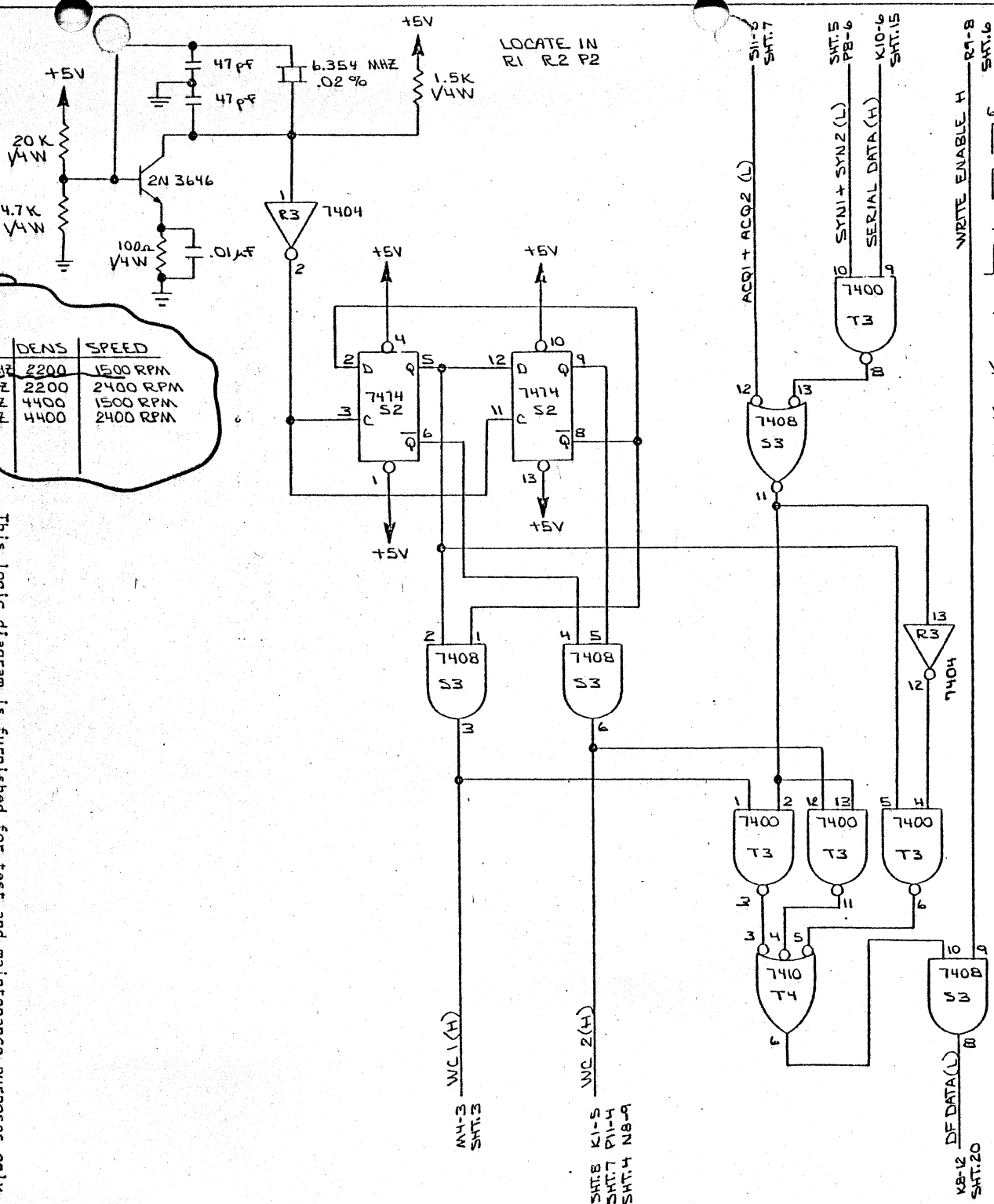


REV. K ECN 400
 REV. J ECN 386 7-18-73
 REV. H ECN 382 6-3-73
 REV. G ECN 41372 5-16-73
 REV. F ECN #352 3-20-73
 REV. E 1-25-73
 REV. D 11-13-72
 REV. C 10-5-72
 REV. B 9-26-72

XEBEC SYSTEMS INC		
SCALE: NONE	APPROVED BY:	DRAWN: S.V.
DATE: 6-16-72		REVISED:
XDF-50		
SHT. 15 OF 22		DRAWING NO. 100650-E

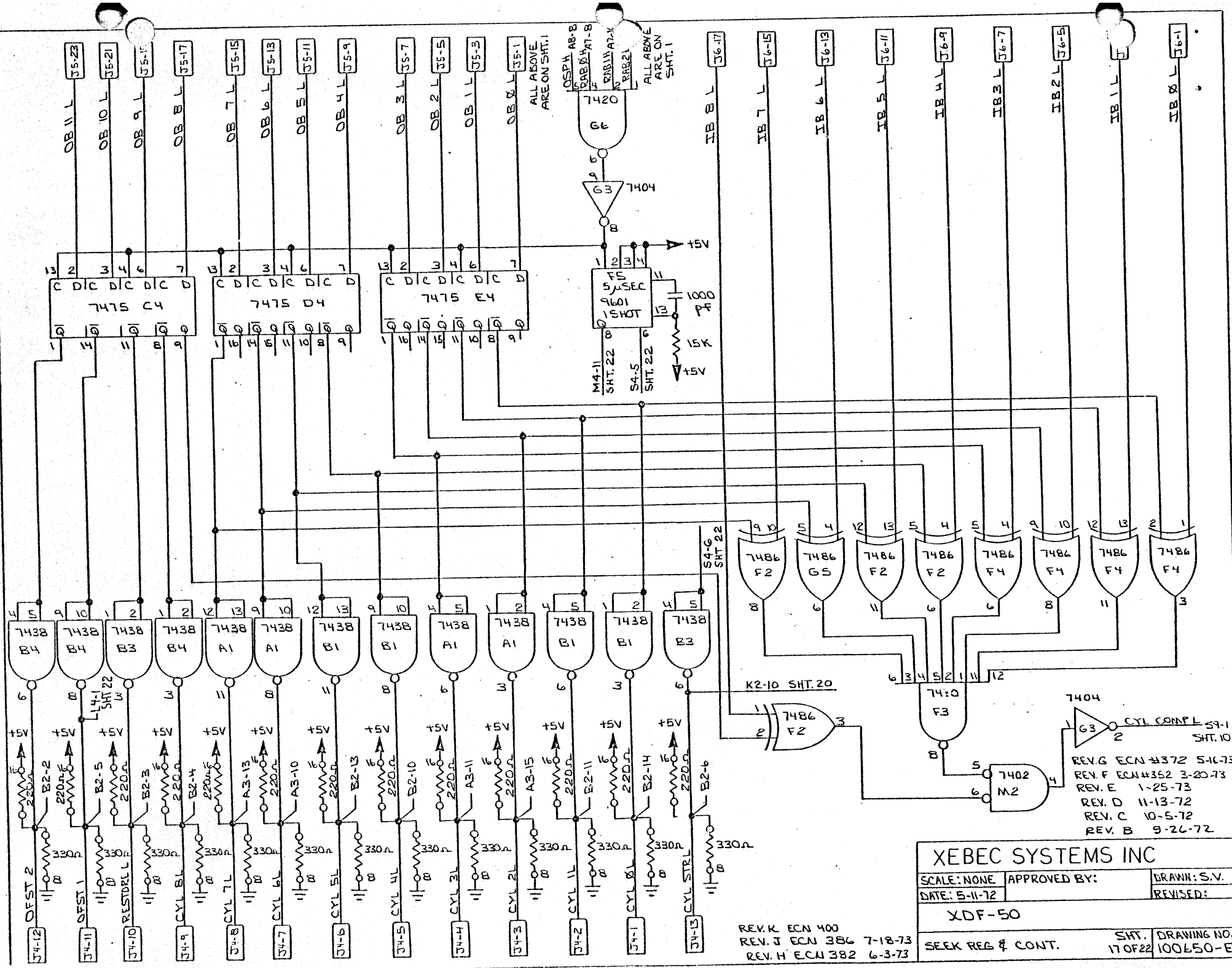
FREQ	DENS	SPEED
6.354MHZ	2200	1500 RPM
10.000MHZ	2200	2400 RPM
12.500MHZ	4400	1500 RPM
20.000MHZ	4400	2400 RPM

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- REV. K ECN 400
- REV. J ECN 384 7-18-73
- REV. H ECN 382 6-3-73
- REV. G ECN #372 6-16-73
- REV. F ECN #352 3-20-73
- REV. E 1-25-73
- REV. D 11-13-72
- REV. C 10-5-72
- REV. B 9-26-72

XEBEC SYSTEMS INC		
SCALE: NONE	APPROVED BY:	DRANN: S.V.
DATE: 5-12-72		REVISED:
XDF-50		
WRITE CLOCK	SAT. 16 OF 22	DRAWING NO. 100650-E
WRITE DATA GEN.		



OSP/A AB-8
DAB/AT-8
LBN/AT-X
N/ABB-1

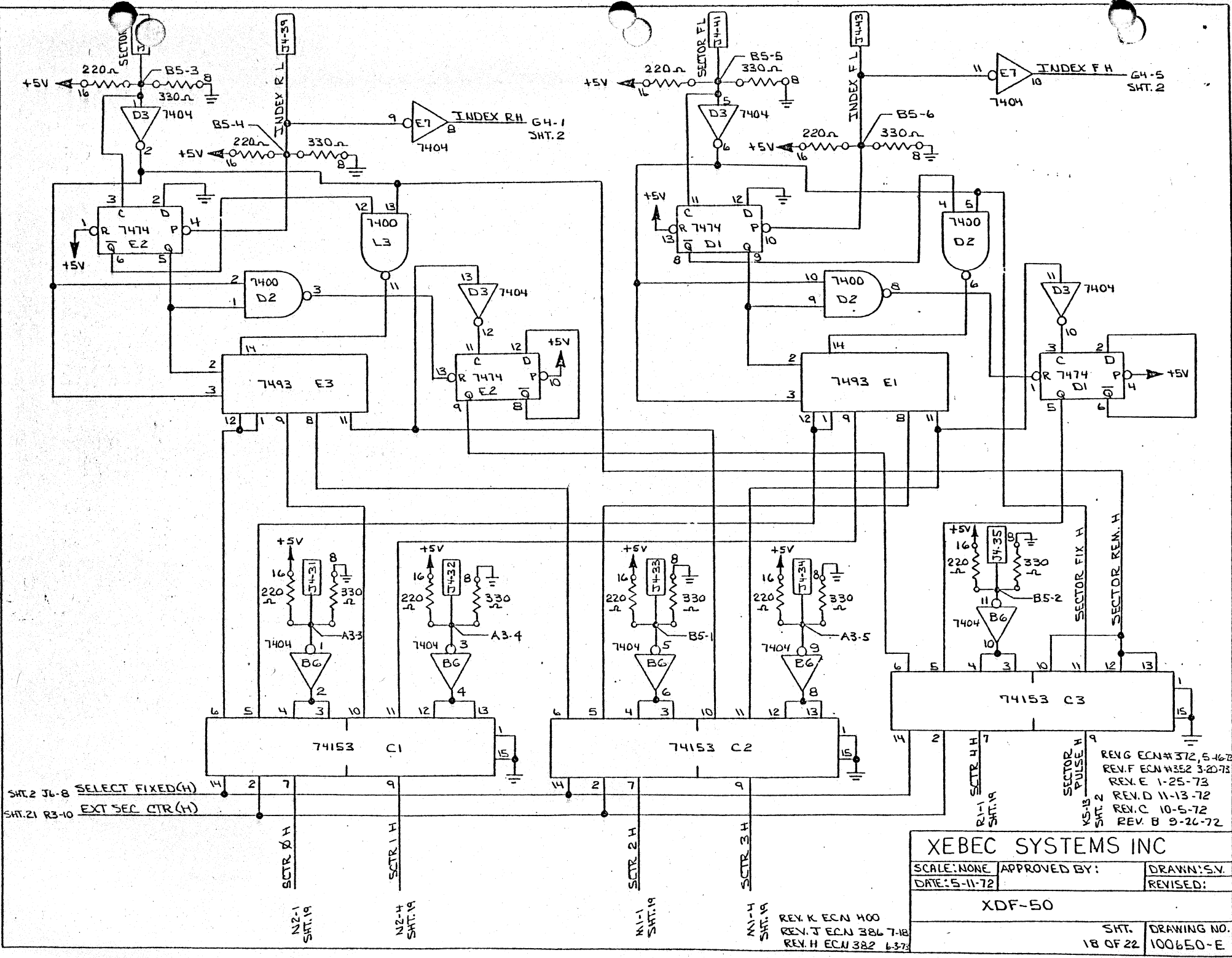
ALL ABOVE
ARE ON SHT. 1

ALL ABOVE
ARE ON
SHT. 1

REV. G ECN #372 5-16-73
REV. F ECN #352 3-20-73
REV. E 1-25-73
REV. D 11-13-72
REV. C 10-5-72
REV. B 9-26-72

XEBEC SYSTEMS INC		
SCALE: NONE	APPROVED BY:	DRAWN: S.V.
DATE: 5-11-72		REVISED:
XDF-50		
SEEK REG & CONT.	SHT. 17 OF 22	DRAWING NO. 100650-E

REV. K ECN 400
REV. J ECN 386 7-18-73
REV. H ECN 382 6-3-73



SHT.2 J6-8 SELECT FIXED(H)
 SHT.21 R3-10 EXT SEC CTR(H)

N2-1
SHT.19

N2-4
SHT.19

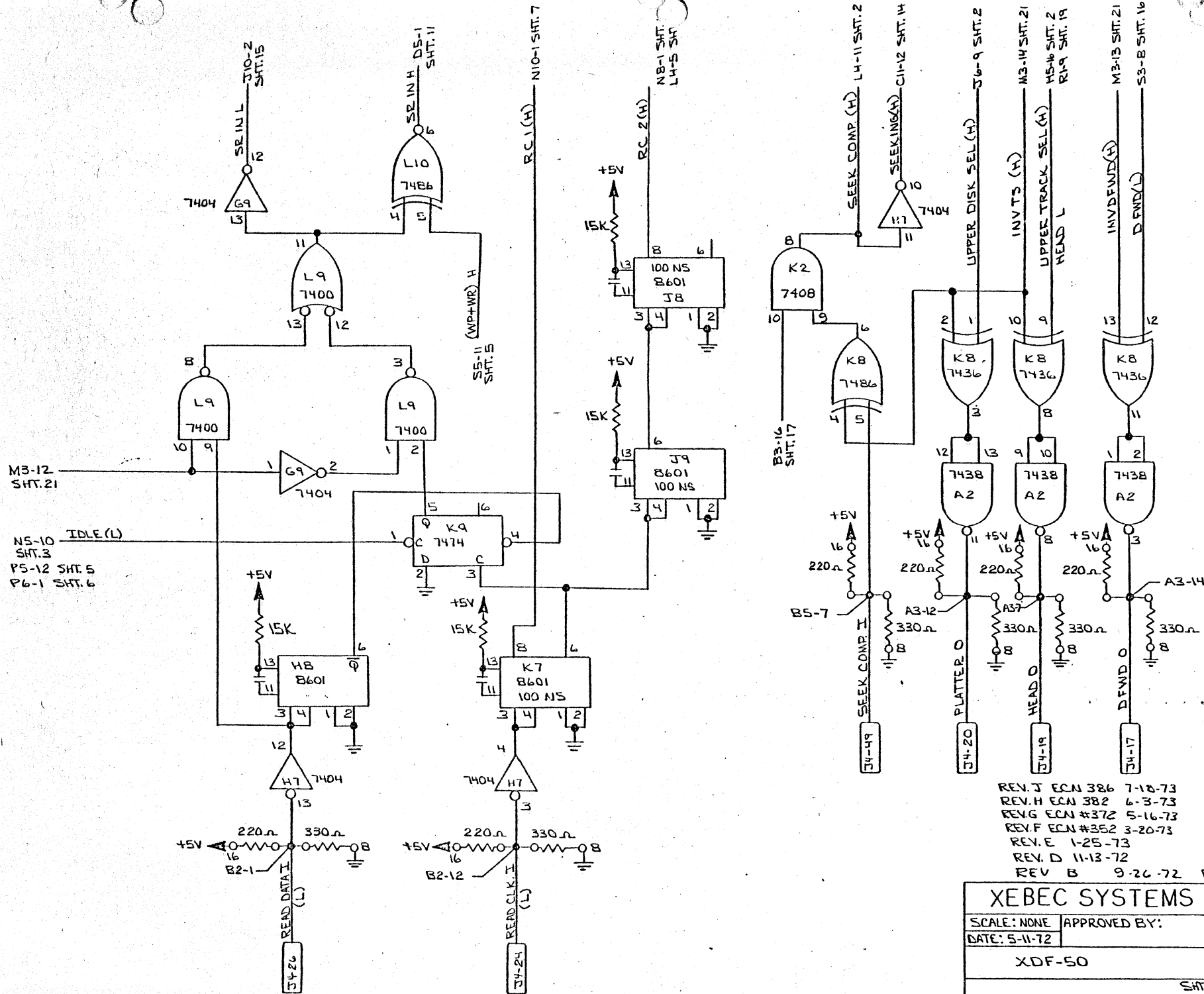
M1-1
SHT.19

M1-4
SHT.19

REV. K ECN 400
 REV. J ECN 386 7-18
 REV. H ECN 382 6-373

RENG ECN 4372, 5-46-72
 REV. F ECN 4352 3-20-73
 REV. E 1-25-73
 REV. D 11-13-72
 REV. C 10-5-72
 REV. B 9-26-72

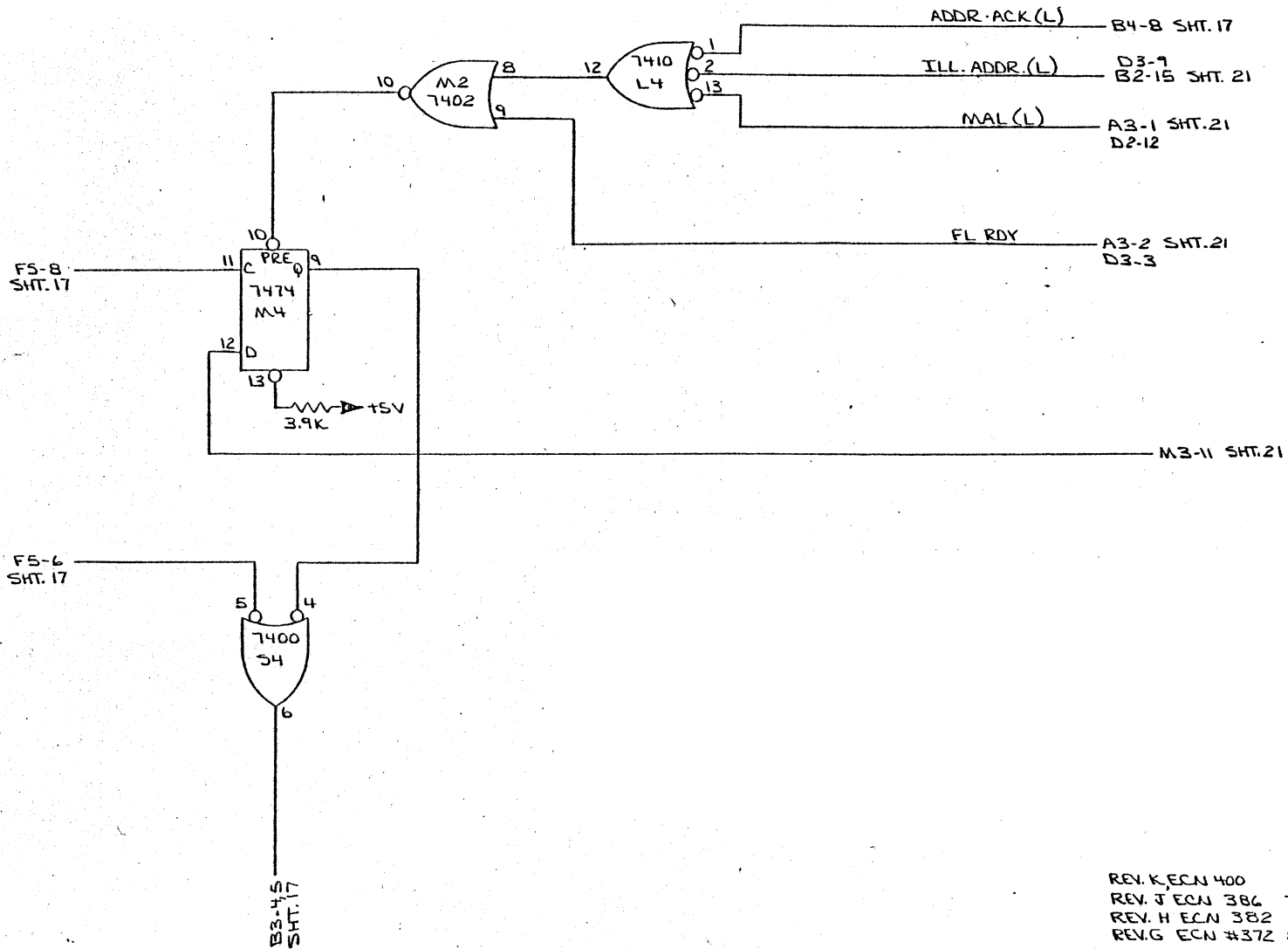
XEBEC SYSTEMS INC	
SCALE: NONE	APPROVED BY:
DATE: 5-11-72	DRAWN: S.V.
	REVISED:
XDF-50	
SHT. 18 OF 22	DRAWING NO. 100650-E



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REV. J ECN 386 7-18-73
 REV. H ECN 382 6-3-73
 REV. G ECN #372 5-16-73
 REV. F ECN #352 3-20-73
 REV. E 1-25-73
 REV. D 11-13-72
 REV. B 9-26-72 REV. C 10-5-72

XEBEC SYSTEMS INC		
SCALE: NONE	APPROVED BY:	DRAWN: S.V.
DATE: 5-11-72		REVISED:
XDF-50		
		SHT. DRAWING NO.
		20 OF 22 100650-E



REV. K ECN 400
 REV. J ECN 386 7-18-73
 REV. H ECN 382 6-3-73
 REV. G ECN #372 5-16-73
 REV. F ECN #352 3-20-73
 REV. E 1-25-73
 REV. D 11-13-72
 REV. B 9-26-72 REV. C 10-5-72

XEBEC SYSTEMS INC		
SCALE: NONE	APPROVED BY:	DRAWN: S.V.
DATE: 9-26-72		REVISED:
XDF-50		
	SHT. 22 OF 22	DRAWING NO. 100650-E

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REASON FOR CHANGE: To Properly Report RATE ERRORS.	XPN 100650	AFFECTS REV K	NEW REV L	TITLE XDF-50	FIELD CHANGES REQUIRED: A/R	
	OTHER DRAWINGS AFFECTED:		MFG'G INSTRUCTIONS:			
	DWG. NO. 100650	SHT. TYPE 10	E	CHANGE ALL INHOUSE AND NEW MANUFACTURE		
INTERCHANGEABILITY AFFECTED FIT? FUNCTION?						

DESCRIPTION OF CHANGE:

1. CUT TRACE T6-8 TO T5-5;10 (TOP OF BOARD AT T5-10)
2. ADD WIRES

P6-8 TO T5-5;10
 T7-6 TO P6-9
 A7-6 TO P6-10 (FEED THRU NEAR T7-13;14)
 A8-10 TO P6-11 (FEED THRU ABOVE T7-1)

REASON FOR CHANGE: <div style="font-size: 1.2em; font-family: cursive;">Change lamp driver to IC 7438</div>	XPN 100650	AFFECTS REV. L	NEW REV. M	TITLE XDF-50	FIELD CHANGES REQUIRED: <div style="font-size: 1.5em; font-family: cursive;">A/R</div>
	OTHER DRAWINGS AFFECTED:		MFG'G INSTRUCTIONS:		
	DWG. NO. 100650-E	SHT. TYPE 19 Logic	All <u>new</u> production		
INTERCHANGEABILITY AFFECTED FIT? NO FUNCTION? NO		Assy. Rev. M ARTWORK Rev. E			

DESCRIPTION OF CHANGE:

1. ~~Remove~~ Install IC 7438 at location P1
2. Cut the following traces:
 - P1-4 (comp side)
 - P1-6 (comp side)
 - P1-6 (ckt side)
 - P1-8 (cktside)
 - P1-10 (comp side)
3. Add the following wires.
 - P1-9 to P1-10
 - P1-4 to P1-2
 - P1-2 to FT off R8-8
 - P1-6 to FT off P1-4
 - P1-8 to FT off P1-10

DRAFTING:

4. On new taping: add 150 Ω resistor to GND on P1-3, 6, 8, 11

REASON FOR CHANGE: To INCORPORATE MODS. 100811, 100812, 100905 ON NEXT B44 OF BOARDS.	XPN 100650	AFFECTS REV M	NEW REV N	TITLE FORMATTER	FIELD CHANGES REQUIRED: A/R	
	OTHER DRAWINGS AFFECTED:		MFG'G INSTRUCTIONS:			
	DWG. NO.	SHT. TYPE	A/R by test.			
100650	LOGIC					
100651	ARTWORK					
	REV. E					
	1 ASSY.					
INTERCHANGEABILITY AFFECTED FIT? FUNCTION?						

DESCRIPTION OF CHANGE:

1. To CONVERT ILLEGAL ADDRESS Pulses to A LEVEL NEEDED FOR STATUS REGISTER.

a) Remove trace B2-15 to D3-9, N7-4, S1-11. (Leave B2-15 connected to L4-2)

b) Remove trace D3-8 to F11-4.

c) Add 'D' FLIPFLOP (SN7474) AT LOCATION F1.

e) ADD TRACE B2-15 to F1-10.

f) ADD TRACE K2-10 to F1-11.

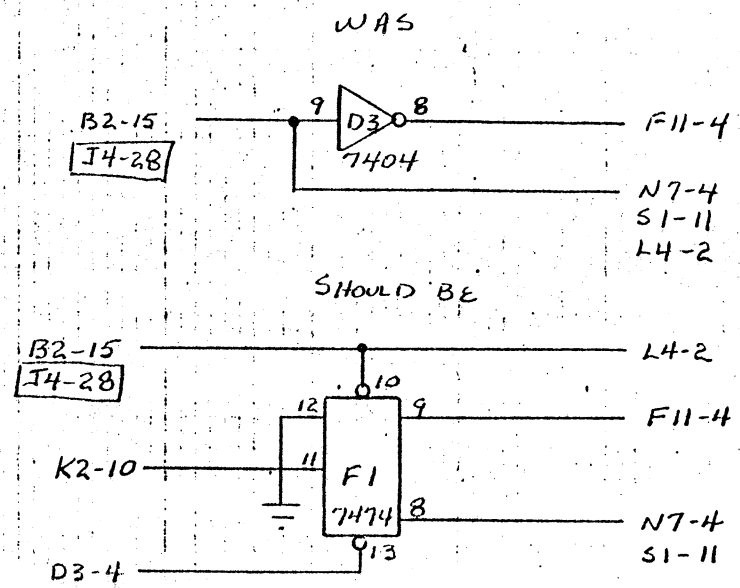
g) ADD TRACE D3-4 to F1-13.

h) ADD TRACE F1-8 to N7-4, S1-11.

i) ADD TRACE F1-9 to F11-4.

j) ADD TRACE GND to F1-7, F1-12.

k) ADD TRACE VCC to F1-14.

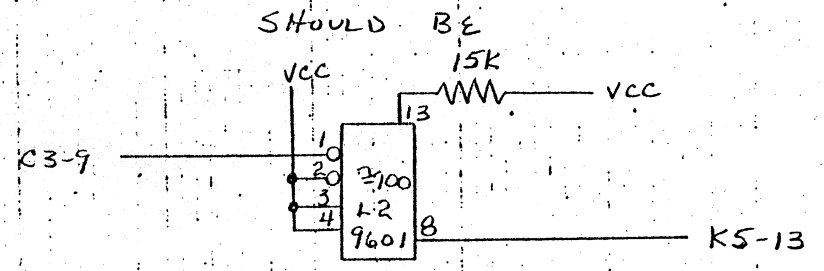


REASON FOR CHANGE:	XPN 100650	AFFECTS REV. M	NEW REV. N	TITLE	FIELD CHANGES REQUIRED:	
	OTHER DRAWINGS AFFECTED:		MFG'G INSTRUCTIONS:			
	DWG. NO.	SHT. TYPE				
INTERCHANGEABILITY AFFECTED FIT? FUNCTION?						

DESCRIPTION OF CHANGE:

2. To shorten sector pulse to $\approx 100\text{nsec}$
- a) Remove trace C3-9 to K5-13
 - b) Add one-shot (9601) AT LOCATION L2.
 - c) Add trace C3-9 to L2-1
 - d) Add trace L2-8 to K5-13
 - e) Add trace L2-13 to 15K resistor.
 - f) Add trace GND to L2-7.
 - g) Add trace VCC to L2-2, L2-3, L2-4, L2-14, 15K resistor.

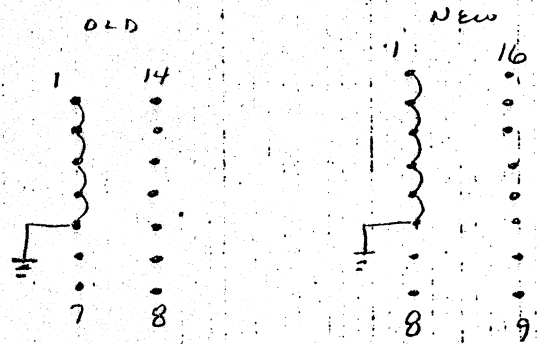
WAS



REASON FOR CHANGE:	XPN 100650	AFFECTS REV. M	NEW REV. N	TITLE	FIELD CHANGES REQUIRED:	
	OTHER DRAWINGS AFFECTED:		MFG'G INSTRUCTIONS:			
	DWG. NO.	SHT. TYPE				
INTERCHANGEABILITY AFFECTED FIT? FUNCTION?						

DESCRIPTION OF CHANGE:

- 3) To Allow SEPARATE HEAD PLATTER AND SEEK COMPLETE INVERSION.
 - a) Change M3 to 16 pin configuration.
 - b) Renumber per diagram
 - c) Remove trace ^{OLD} M3-14 to K8-4. (LEAVE M3-14 connected to K8-2, K8-10, N3-11)
 - d) Add trace ^{NEW} M3-16 to K8-4, N3-6.



NOTE: OLD M3-1 thru 7 becomes New M3-2 thru 8.
 OLD M3-8 thru 14 becomes New M3-9 thru 15.

XEBEC SYSTEMS, INC. 566 San Xavier, Sunnyvale, California		ENGINEERING CHANGE NOTICE			PRODUCT	SHEET 4 OF 4	ECN NO. 467	
REASON FOR CHANGE:	XPIN	AFFECTS REV.	NEW REV.	TITLE		FIELD CHANGES REQUIRED:		
	100650	M	N					
	OTHER DRAWINGS AFFECTED:		MFG'G INSTRUCTIONS:					
	DWG. NO.	SHT. TYPE						
INTERCHANGEABILITY AFFECTED								
FIT? FUNCTION?								
DESCRIPTION OF CHANGE:								
<p>4. To shorten Read clocks and read clock delayed for proper operation @ 2400 rpm.</p> <p>a) change resistor @ K7-13 from 15k to 10k.</p> <p>b) change resistor @ J9-13 from 15k to 5.1k.</p> <p>c) CHANGE RESISTOR @ J8-13 from 15K to 10k.</p> <p>5. To correct malfunction circuit.</p> <p>a) Remove trace A3-1 to L4-13. (LEAVE A3-1 connected to D2-12)</p> <p>b) Add trace B4-6 to L4-13.</p>								
ORIGINATOR:	DATE	ENGRG. APPROVAL:	DATE	MFG'G APPROVAL:	DATE	FIELD SERVICE APPROVAL:	DATE	ECN RELEASE DATE:

REASON FOR CHANGE: TO IMPROVE PRODUCT CONSISTENCY WITH VARYING VENDORS.	XPN 100650	AFFECTS REV. N	NEW REV. P	TITLE XDF-50	FIELD CHANGES REQUIRED:	
	OTHER DRAWINGS AFFECTED:		MFG'G INSTRUCTIONS:			
	DWG. NO.	SHT. TYPE	MODIFY ALL P.C. BDS. IN TEST, STOCK & HOUSE.			
100650-E	20	LOGIC				
100650	1	ASSY.				
INTERCHANGEABILITY AFFECTED FIT? FUNCTION?						

DESCRIPTION OF CHANGE:

1. CHANGE VALUE OF TIMING RESISTOR ON H8-13 TO BE 5.1K
2. ADD 27 PF. CAP. BETWEEN H8-11 & H8-13.
3. CUT TRACE T3-2 TO T3-13.
4. ADD WIRE T3-2 TO T3-1.