

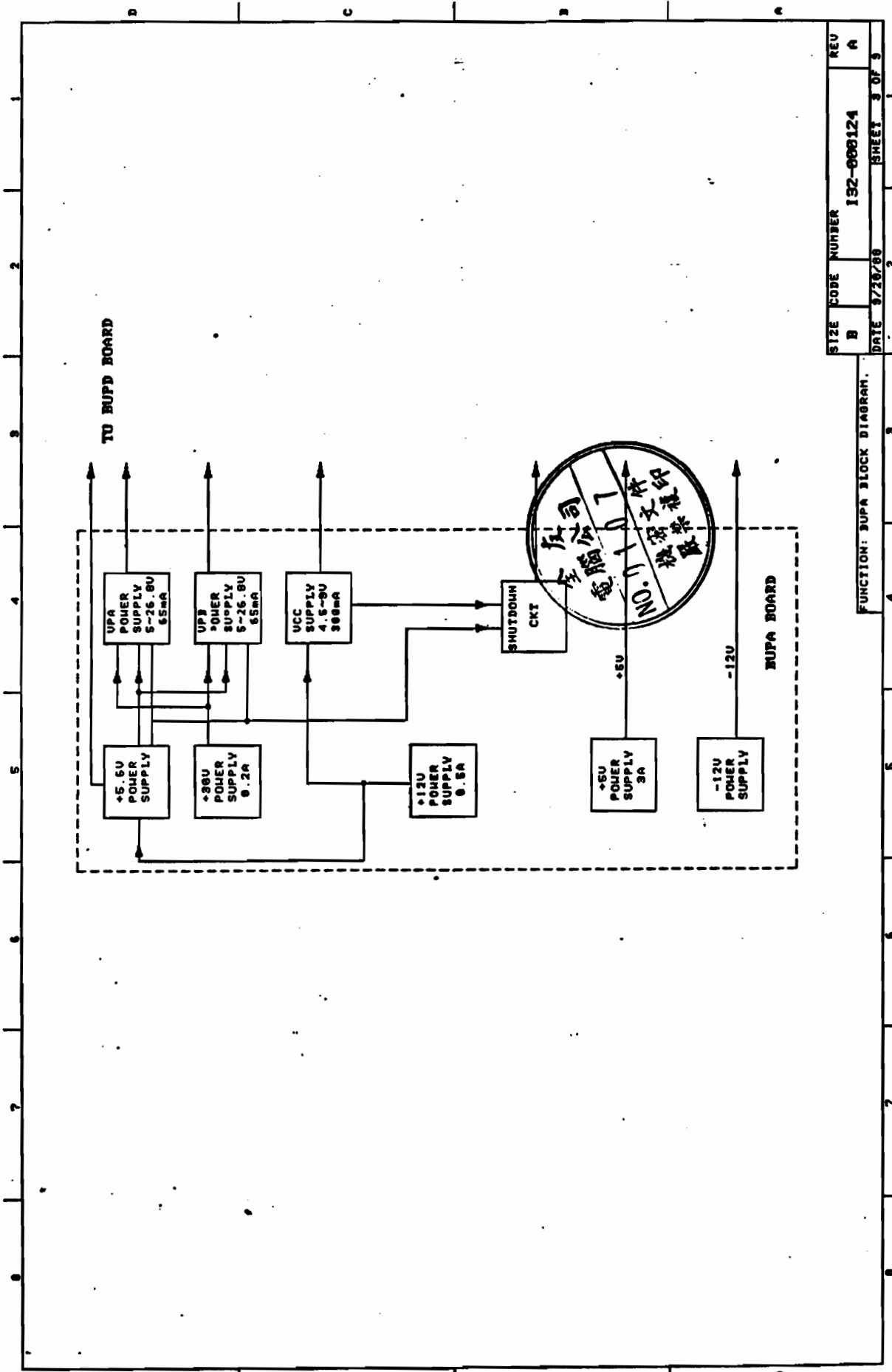
PIER REV.	PCB REV.	ECO	ZONE	LTR	DESCRIPTION	DATE	APPROVED
A1	A		A		RELEASE FOR PRODUCTION	1988 5.15.88	王志明
B	B		B		CHANGE R13.48 FROM S.1A TO S.1a.	1988 5.15.88	王志明

*BusX board
Andrew Board*

— : MEANS BUS.
 — : MEANS WIRE.
 (XX) : XX IN THE BRACKET IS PAGE NO. THE SIGNAL CONNECTS TO/FROM.
 <XX> : XX IN THE PARENTHESIS IS THE LOCATION(AREA) ON THE SAME PAGE
 THE SIGNAL CONNECTS TO.



DRAIN / 10/15/88		DATE	
CHECK / 10/15/88	10/15/88	10/15/88	10/15/88
DESIGN / 10/17/88	10/17/88	10/17/88	10/17/88
APPROVE / 10/17/88	10/17/88	10/17/88	10/17/88
TITLE		ANDRUX INTERNATIONAL INC.	
SIZE CODE NUMBER		132-081124	
DATE		10/15/88	
SHEET		1 OF 1	

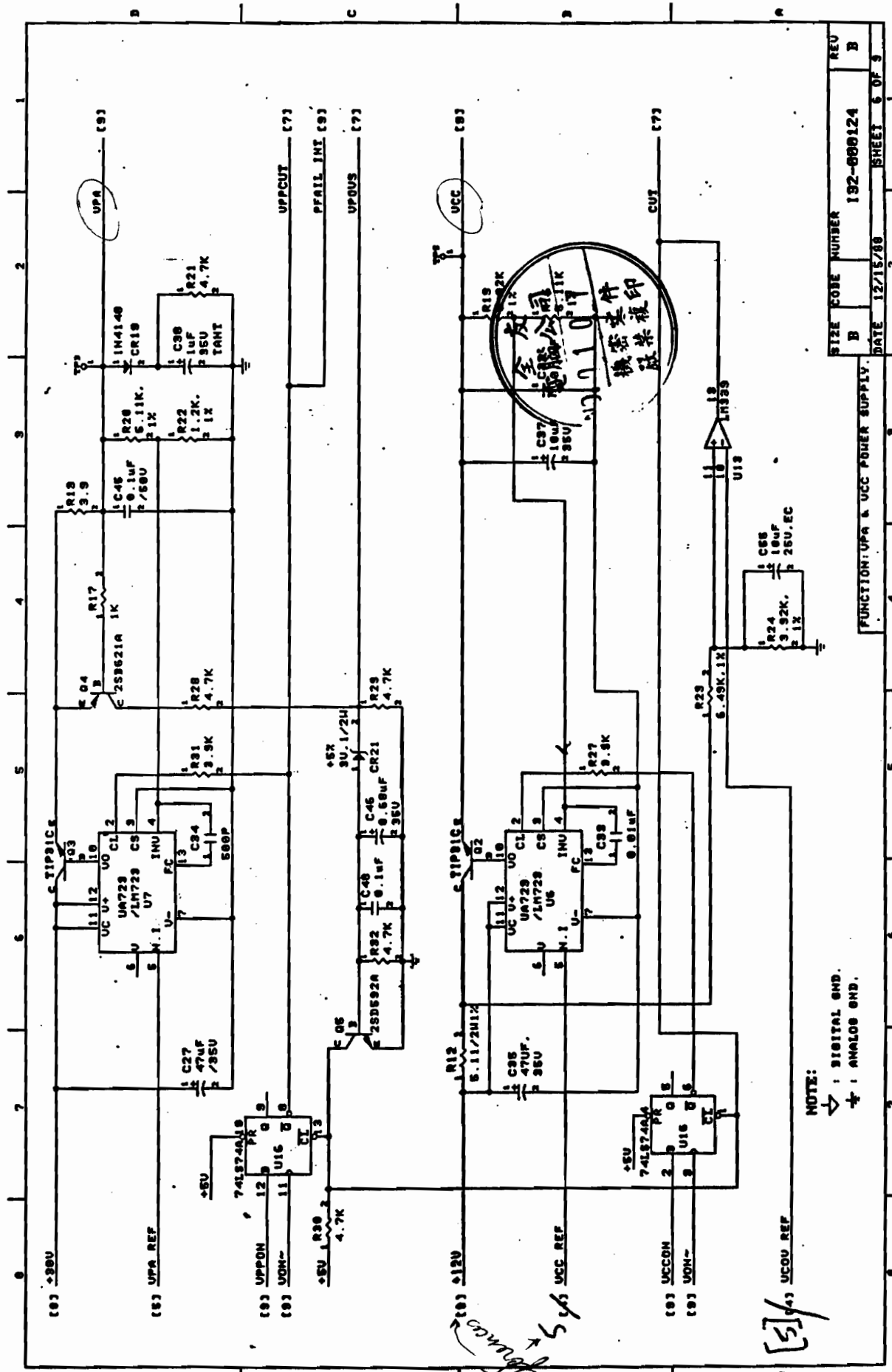


TU BUYP BOARD

BUPA BOARD

SIZE	CODE	NUMBER	REV
B		152-000124	A
DATE	9726/99	SHEET 3 OF 3	

FUNCTION: BUPA BLOCK DIAGRAM.



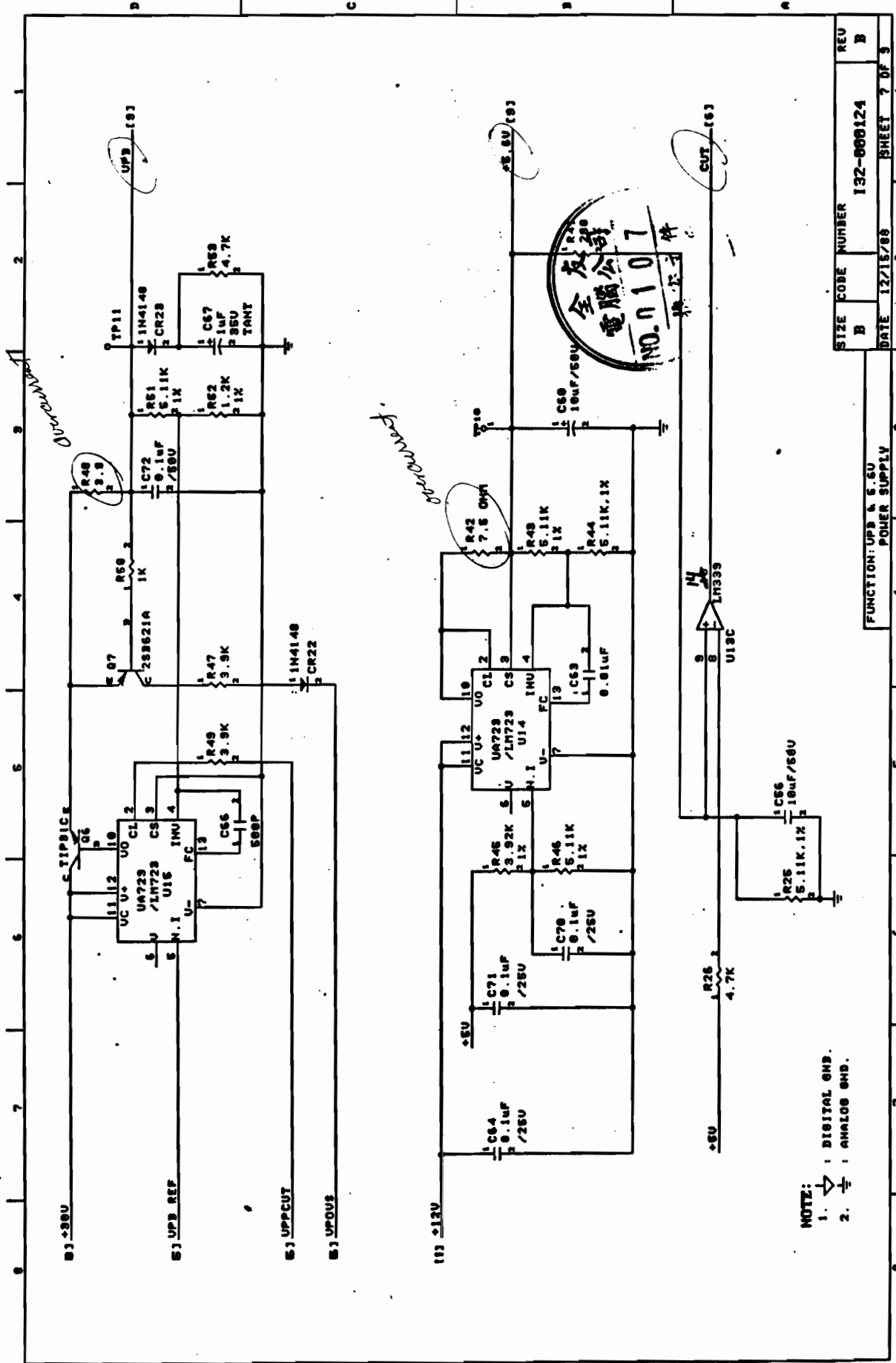
NOTE:
 ↗ : DIGITAL END.
 ↘ : ANALOG END.

SIZE	CODE NUMBER	REV
B	192-000124	B
DATE	12/15/88	SHEET 6 OF 9

FUNCTION: UPA & UCC POWER SUPPLY.

Sheet 6 of 9

[5]

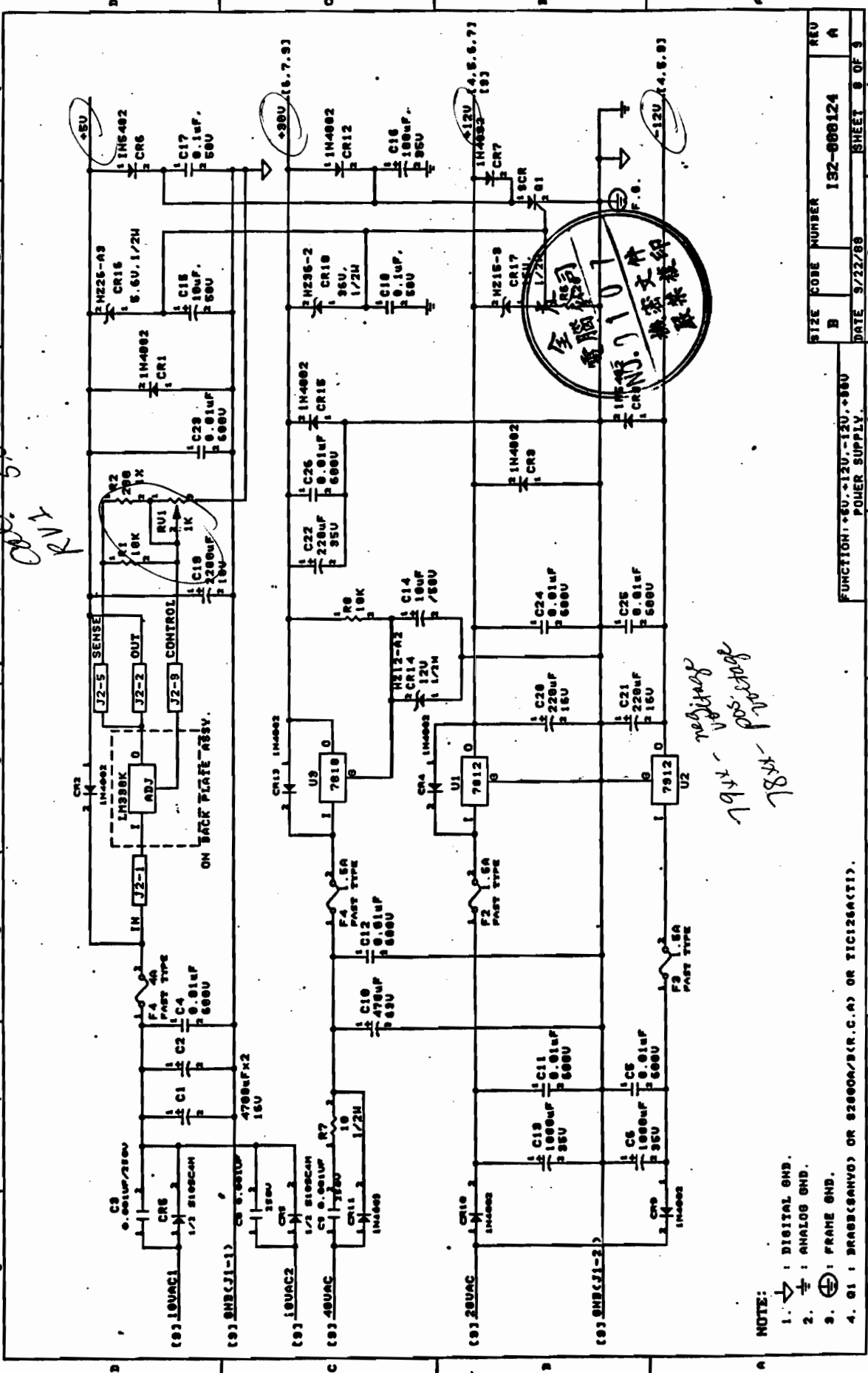


NOTE:
 1. : DIGITAL GND.
 2. : ANALOG GND.

SIZE	CODE NUMBER	REV
B	132-000124	B
DATE	12/15/88	SHEET 7 OF 9

FUNCTION: UPS & 5.6V POWER SUPPLY

Handwritten notes:
 V.S.P. →
 D.D. →
 S.S. →
 R.V.R.



NOTE:
 1. ∇ : DIGITAL GND.
 2. \oplus : ANALOG GND.
 3. \ominus : FRAME GND.
 4. 01 : BRASS(SANVO) OR S2000A/B(R.C.A) OR TIC126(ATT).

Handwritten notes:
 194x - regulator
 78x - pos. stage

SIZE	CODE NUMBER	REV
B	192-000124	A
DATE	9/22/69	SHEET 9 OF 9
FUNCTION: +5U, +12U, -12U, +50U POWER SUPPLY.		

FIRM PCB PART. STII		ECO	ZONE	LTP	DESCRIPTION	DATE	APPROVED
HL. BI	A. B			4	RELEASE FOR PRODUCTION	1/2/80	[Signature]
C. CI. CE	CROSS			B	ADDITION OF ROM CARD INSERT. PULL OUT RESIST FUNCTION.	1/16/80	[Signature]

File

Board

BUVD

BUVD

全腦公司
ID. 0107
IND. ELECTRONICS INTERNATIONAL, INC.

DESIGN	DATE	10/5/80
CHECK	DATE	10/5/80
DESIGN	DATE	10/7/80
APPROVE	DATE	10/7/80

BUVD
BUVD
BUVD
BUVD

MEMS BUS
MEMS WIRE

XXX IN THE BRACKET IS PANE NO THE SIGNAL CONNECTS TO/FROM.
XXX IN THE PARENTHESIS IS THE LOCATION/REN. ON THE SAME PANE
XXX THE SIGNAL CONNECTS TO

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

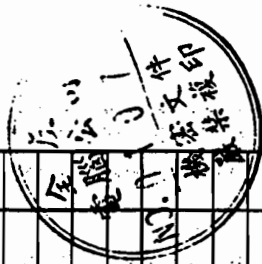
PAGE NO.	FUNCTION
2	PAGE UPDATE LISTING
3	DUPD BLOCK DIAGRAM
4	CPU & BUS DRIVER
5	SYSTEM MEMORY AND DECODER
6	DRAM CONTROL CKT.
7	DRAM CKT.
8	I/O CONTROL PORT
9	INTERRUPT, KEYBOARD AND TIMER CONTROLLER
10	RS-232 CKT.
11	UCC SWITCH AND CENTRONICS INTERFACE

PAGE NO	FUNCTION
12	VOLTAGE CHECK CKT AND BUZZER CONTROL
13	READ & THRESHOLD VOLTAGE CHECK CKT.
14	READ & THRESHOLD VOLTAGE CHECK CKT.
15	ADDRESS BUS DRIVER
16	PINOUT SELECTOR
17	UPA SWITCH
18	UPB SWITCH
19	VOLTAGE FEEDBACK CKT.
20	DEVICE CHECK CKT AND UCC SWITCH
21	CONNECTOR PIN DEFINITION & BYPASS CAP.
22	IC LISTING AND SPARE GATE

REV	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
A																							
B																							

RELEASE

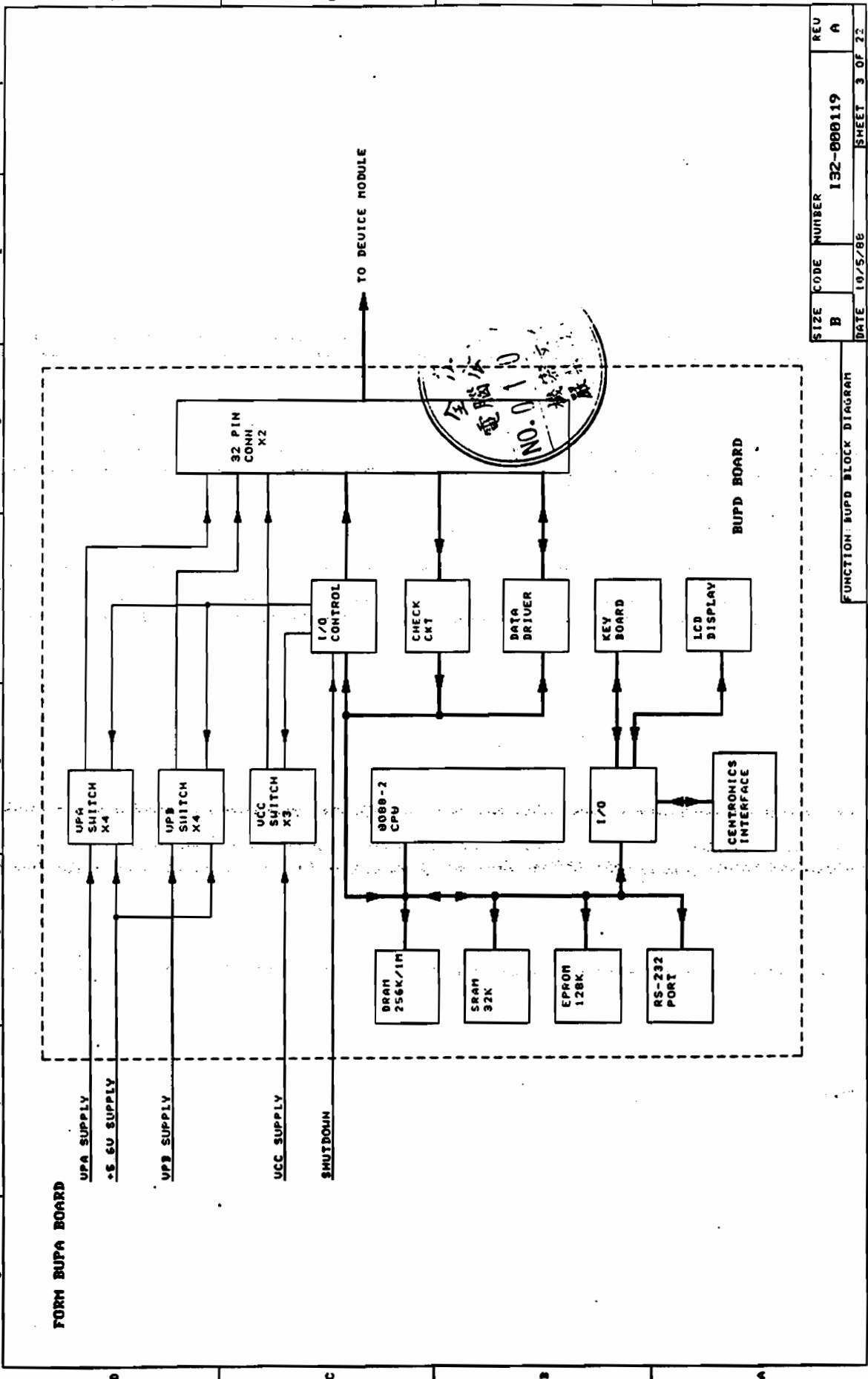
CHANGE



SIZE CODE NUMBER
B 132-000119
REV B

DATE 12/15/88
SHEET 2 OF 22

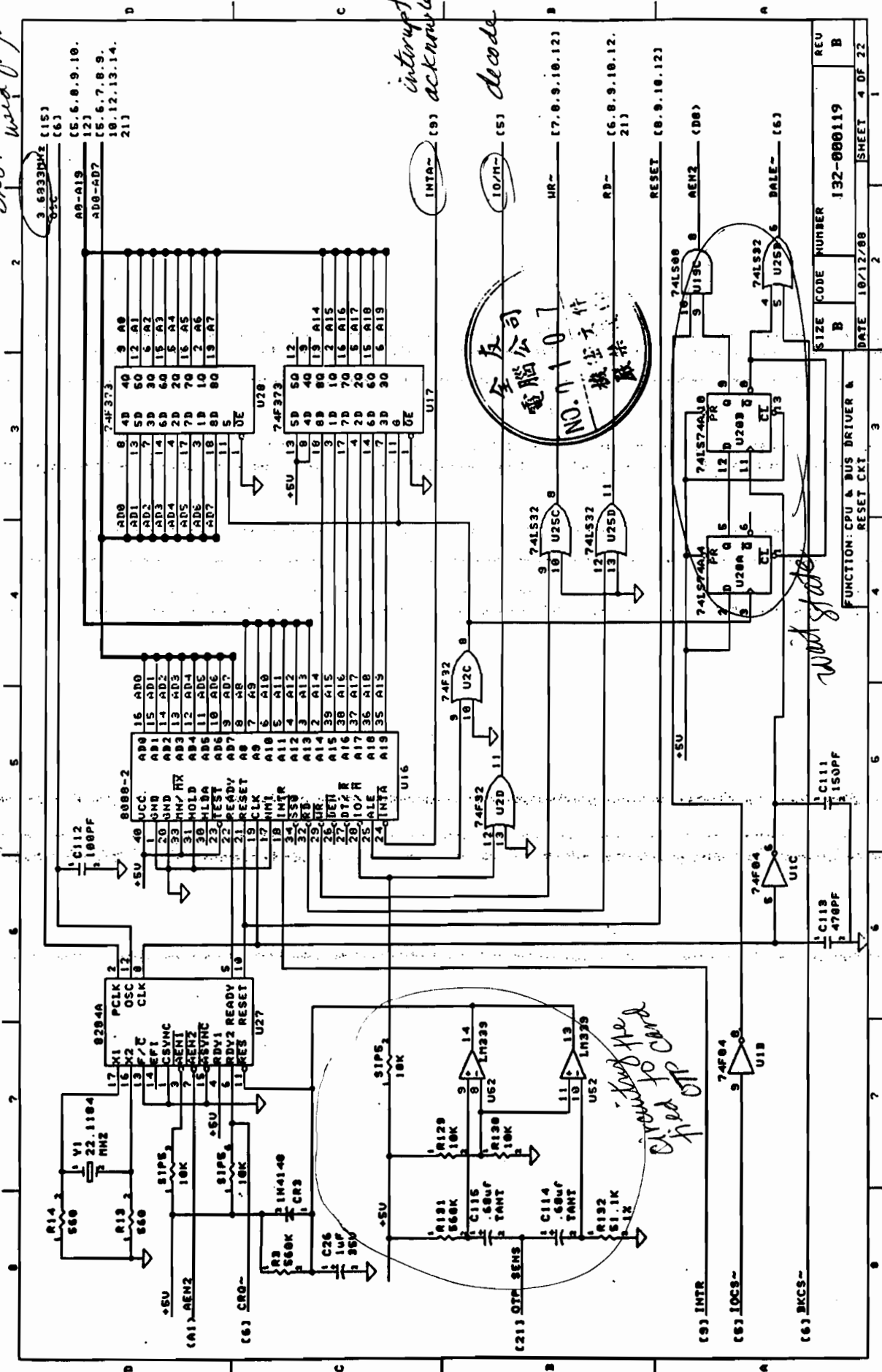
FUNCTION PAGE UPDATE LISTING



SIZE	CODE NUMBER	REV
B	132-000119	A
DATE	10/5/86	SHEET 3 OF 22

FUNCTION: BUPD BLOCK DIAGRAM

3.68 MHz clock deriv
used for μ



interrupt acknowledge

IO/M decode

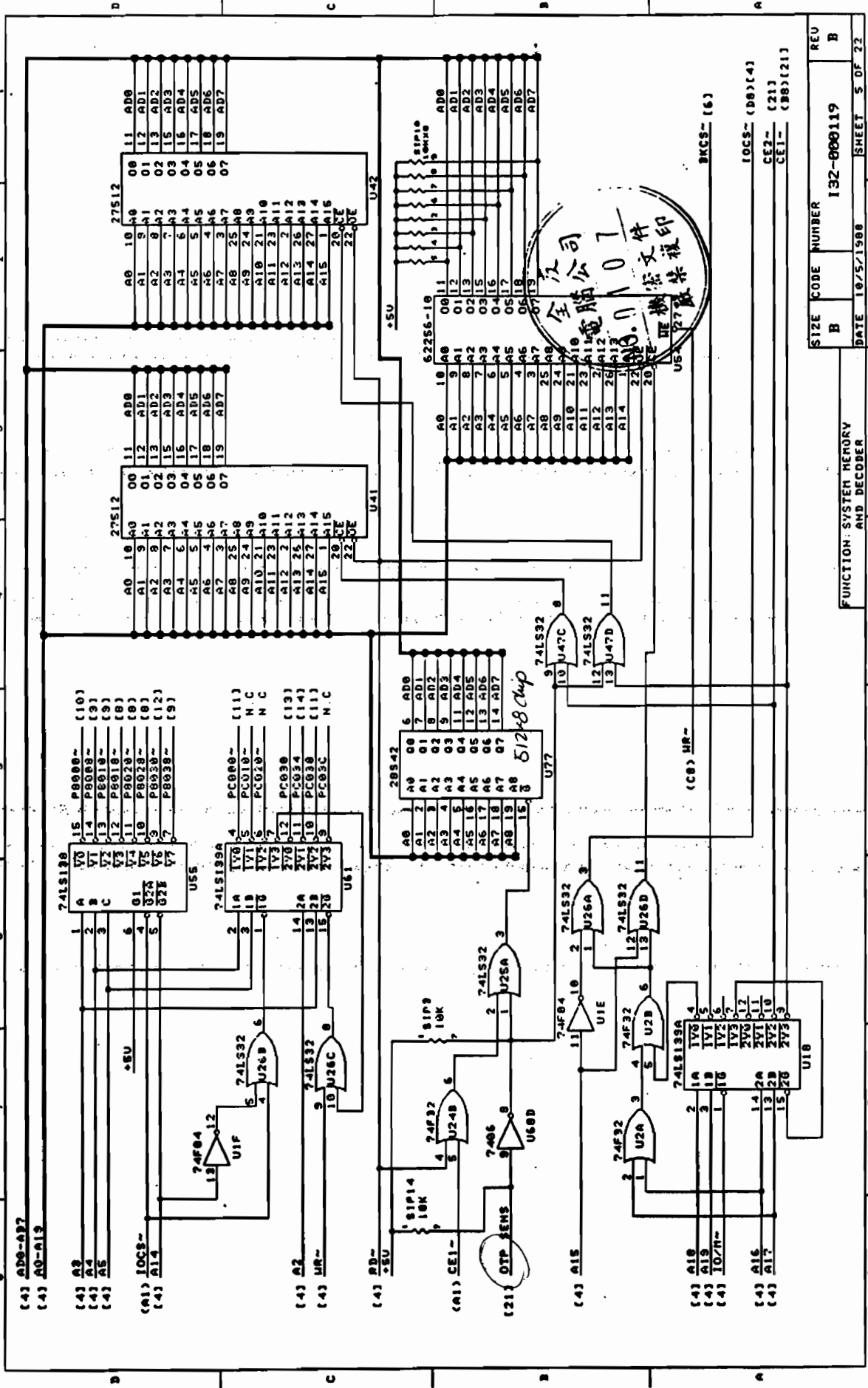


Ward state

keep the circuit to card + add OTP

SIZE	CODE NUMBER	REV
B	132-000119	B
DATE	10/12/88	SHEET 4 OF 22

FUNCTION: CPU & BUS DRIVER & RESET CKT



(4) A0-A13

(4) A0-A13

(4) A0-A13

(4) A0-A13

(4) A0-A13

(4) A0-A13

(4) A0-A13

(4) A0-A13

(4) A0-A13

(4) A0-A13

(4) A0-A13

(4) A0-A13

(4) A0-A13

(4) A0-A13

(4) A0-A13

(4) A0-A13

(4) A0-A13

(4) A0-A13

(4) A0-A13

(4) A0-A13

(4) A0-A13

(4) A0-A13

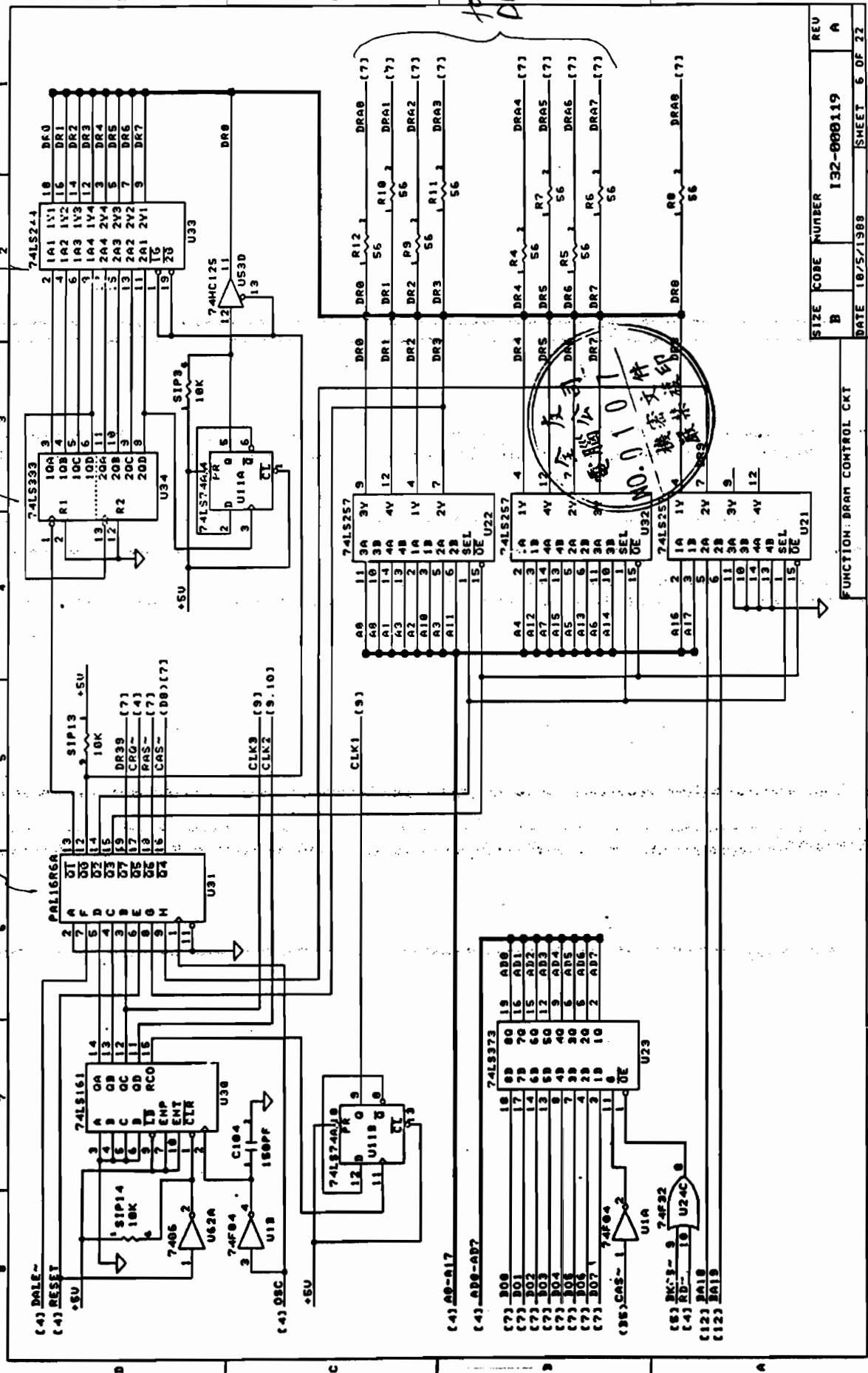
SIZE CODE NUMBER 132-000119
 DATE 10/5/1988
 SHEET 5 OF 22

FUNCTION: SYSTEM MEMORY AND DECODER

REVISION B

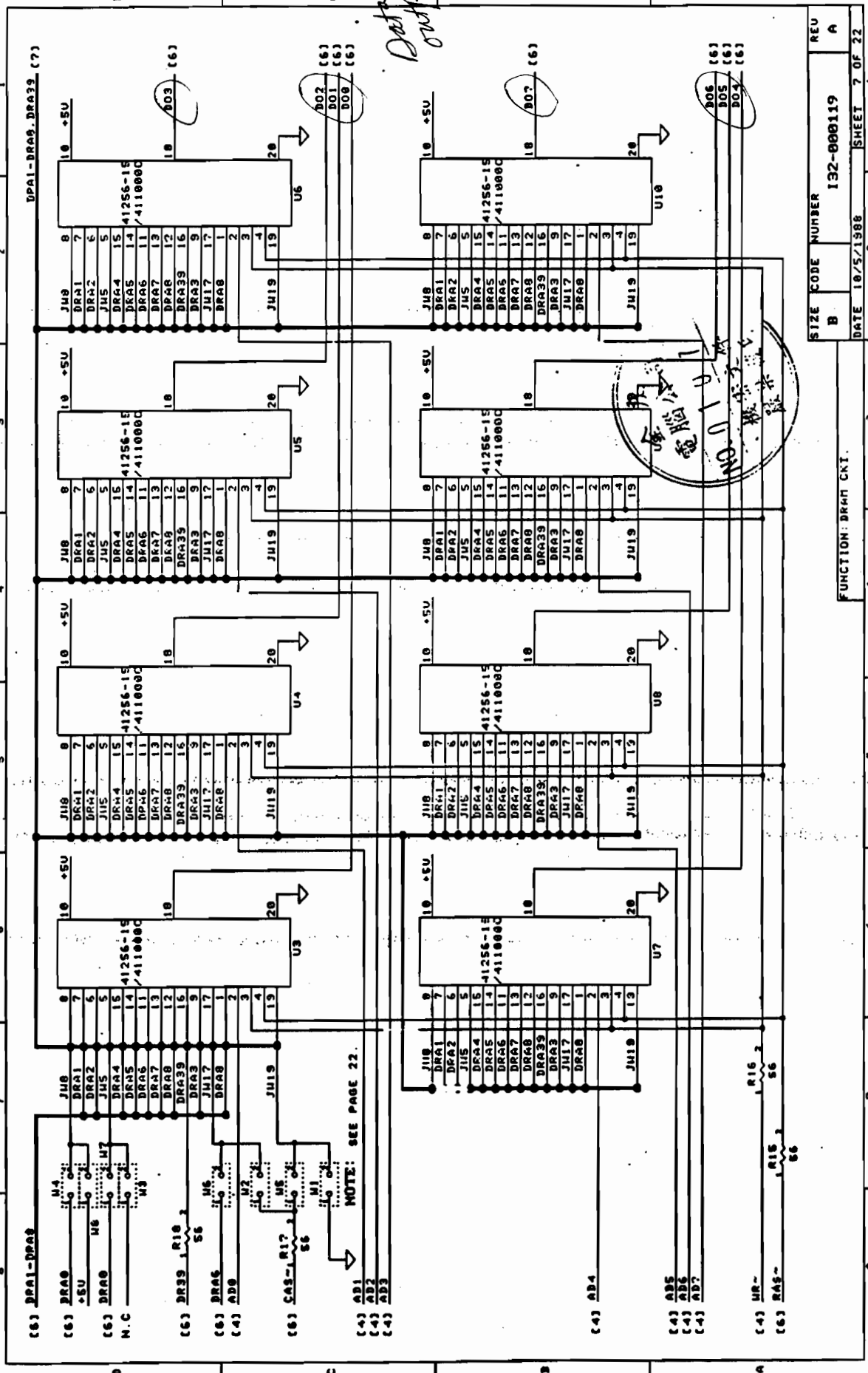
reference
address generator

DRAM



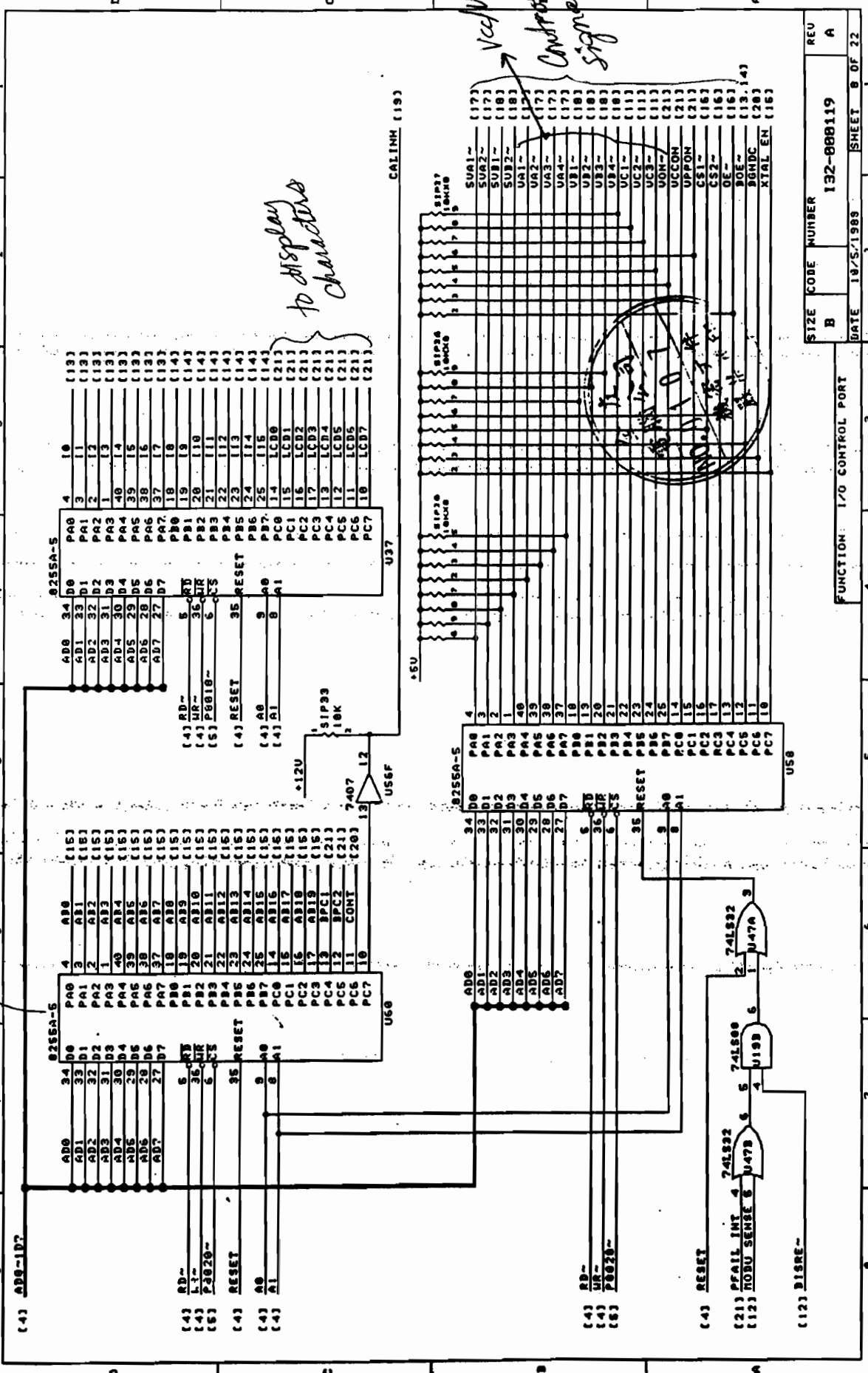
SIZE	B	CODE NUMBER	132-000119	REV	A
DATE	10/5/1988	SHEET	6 OF 22		

FUNCTION: DRAM CONTROL CKT



DPAL-DRA6-DRA39 (7)	REV A
SIZE CODE NUMBER 192-000119	REV A
DATE 10/5/1988	SHEET 7 OF 22
FUNCTION: DRA6 CRT.	

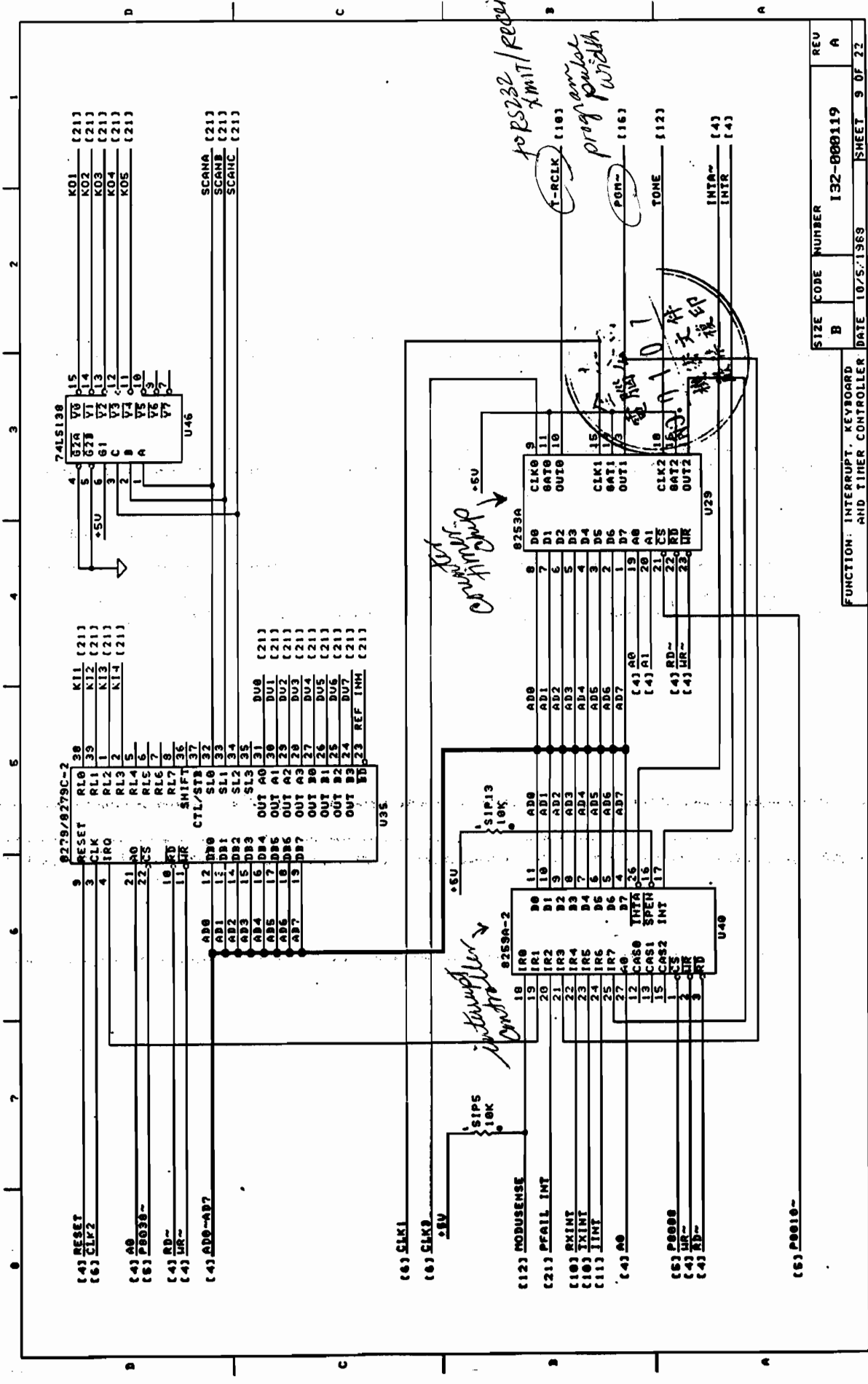
DWT



SIZE	CODE NUMBER	REV
B	132-008119	A

DATE	18/5/1989	SHEET	8 OF 22
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FUNCTION	I/O CONTROL PORT
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(4) RESET
 (6) CLK2
 (4) AB
 (6) P0030-
 (4) RD-
 (4) UR-
 (4) AD0-AB7
 (6) CLK1
 (6) CLK2
 (12) MODUSENSE
 (2) PEALL INT
 (10) RXINT
 (10) TXINT
 (1) IINT
 (4) AB
 (6) P0000
 (4) UR-
 (4) RD-

9 RESET
 3 CLK
 4 IRQ
 21 NO
 22 CS
 10 RD
 11 UR
 12 DB0
 13 DB1
 14 DB2
 15 DB3
 16 DB4
 17 DB5
 18 DB6
 19 DB7
 18 IR0
 19 IR1
 20 IR2
 21 IR3
 22 IR4
 23 IR5
 24 IR6
 25 IR7
 27 AG
 12 CAS0
 13 CAS1
 15 CAS2
 1 CS
 2 UR
 3 RD

8279/8279C-2
 RLO 38
 RLI 39
 RL2 40
 RL3 41
 RL4 5
 RL5 6
 RL6 7
 RL7 8
 SHIFT 36
 CTL/STB 37
 SLO 32
 SL1 33
 SL2 34
 SL3 35
 OUT A0 31
 OUT A1 30
 OUT A2 29
 OUT A3 28
 OUT A4 27
 OUT A5 26
 OUT A6 25
 OUT A7 24
 OUT B0 23
 REF IMM 21

74LS138
 4 B2A V0
 5 B2B V1
 6 B1 V2
 7 C V3
 8 B V4
 9 A V5
 10 V6
 11 V7
 12 V8

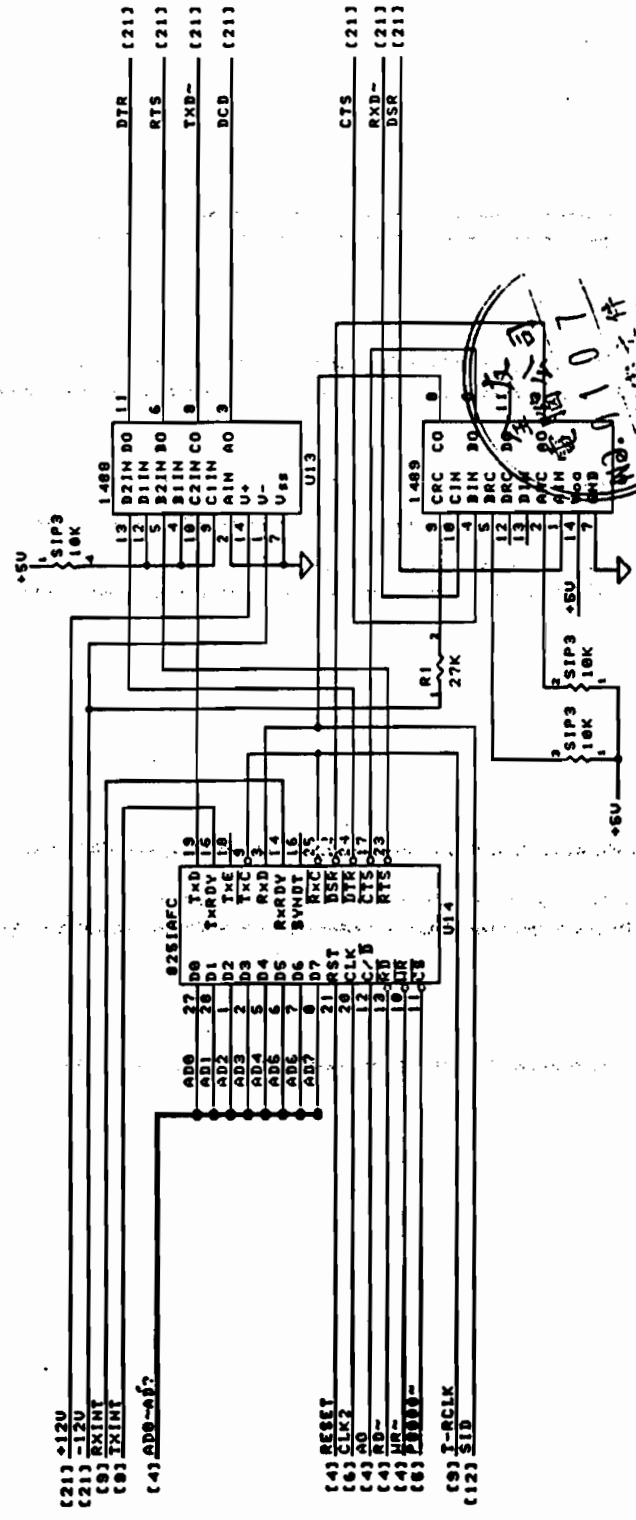
K01 (21)
 K02 (21)
 K03 (21)
 K04 (21)
 K05 (21)
 SCANA (21)
 SCANB (21)
 SCANH (21)

for RS232 transmit/Receive
 programmed width
 control signal



SIZE	CODE NUMBER	REV
B	132-000119	A
FUNCTION: INTERRUPT KEYBOARD AND TIMER CONTROLLER		SHEET 9 OF 22
DATE	10/5/1988	

RS232

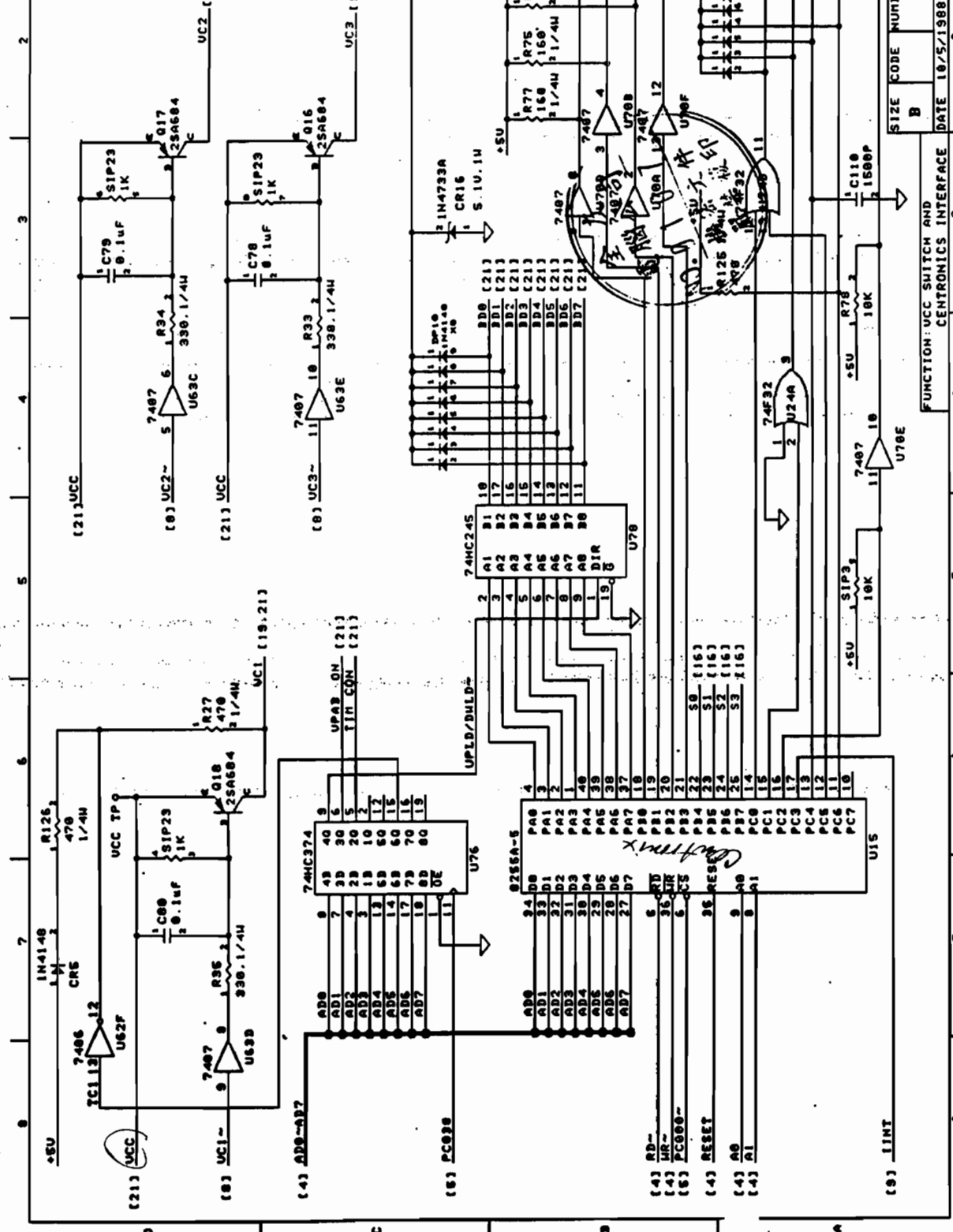


1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---

SIZE	CODE NUMBER	REV
B	132-888119	A
DATE	10/5/1988	SHEET 10 OF 22

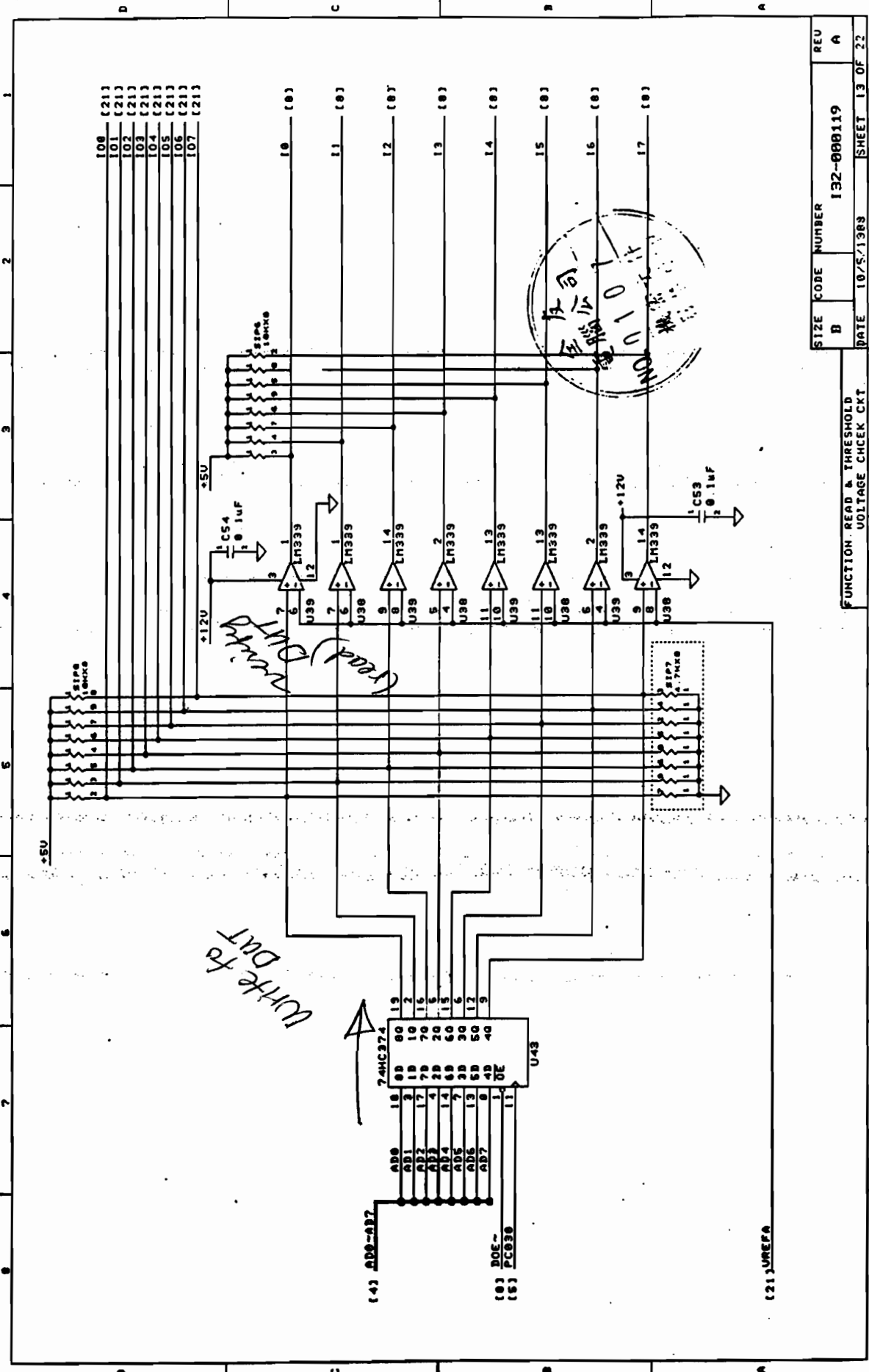
FUNCTION: RS-232 CKT

*Centronics Parallel
(not a part.)
Centronics is a
Centronics part.*



DUT Adapter

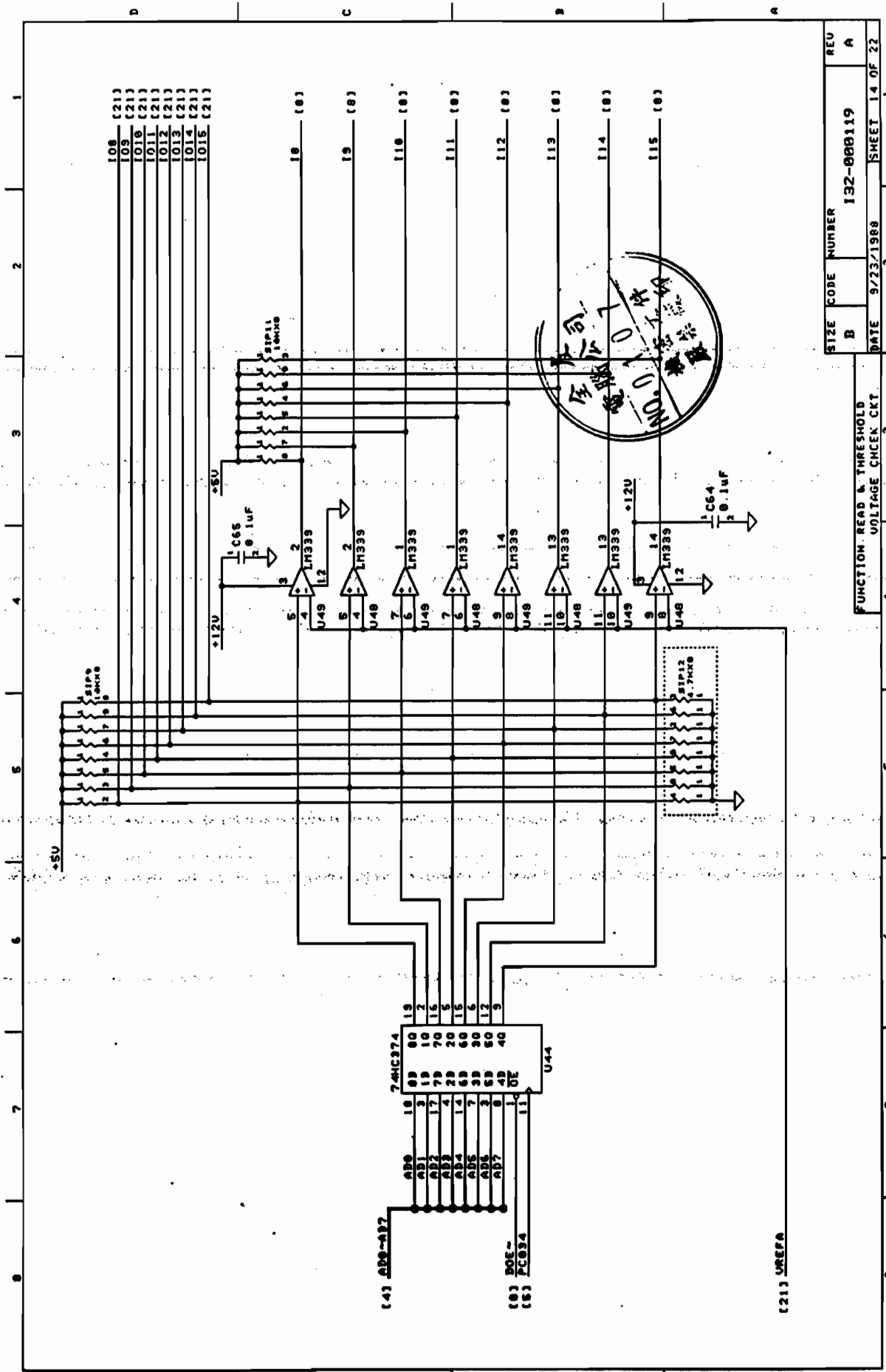
FUNCTION: VCC SWITCH AND CENTRONICS INTERFACE	DATE: 10/5/1988	SHEET 11 OF 32
SIZE: B	CODE: 132-000119	REV: A



SIZE	CODE NUMBER	REV
D	132-088119	A

FUNCTION: READ & THRESHOLD
 VOLTAGE CHECK CKT.

DATE	10/5/1989	SHEET	13 OF 22
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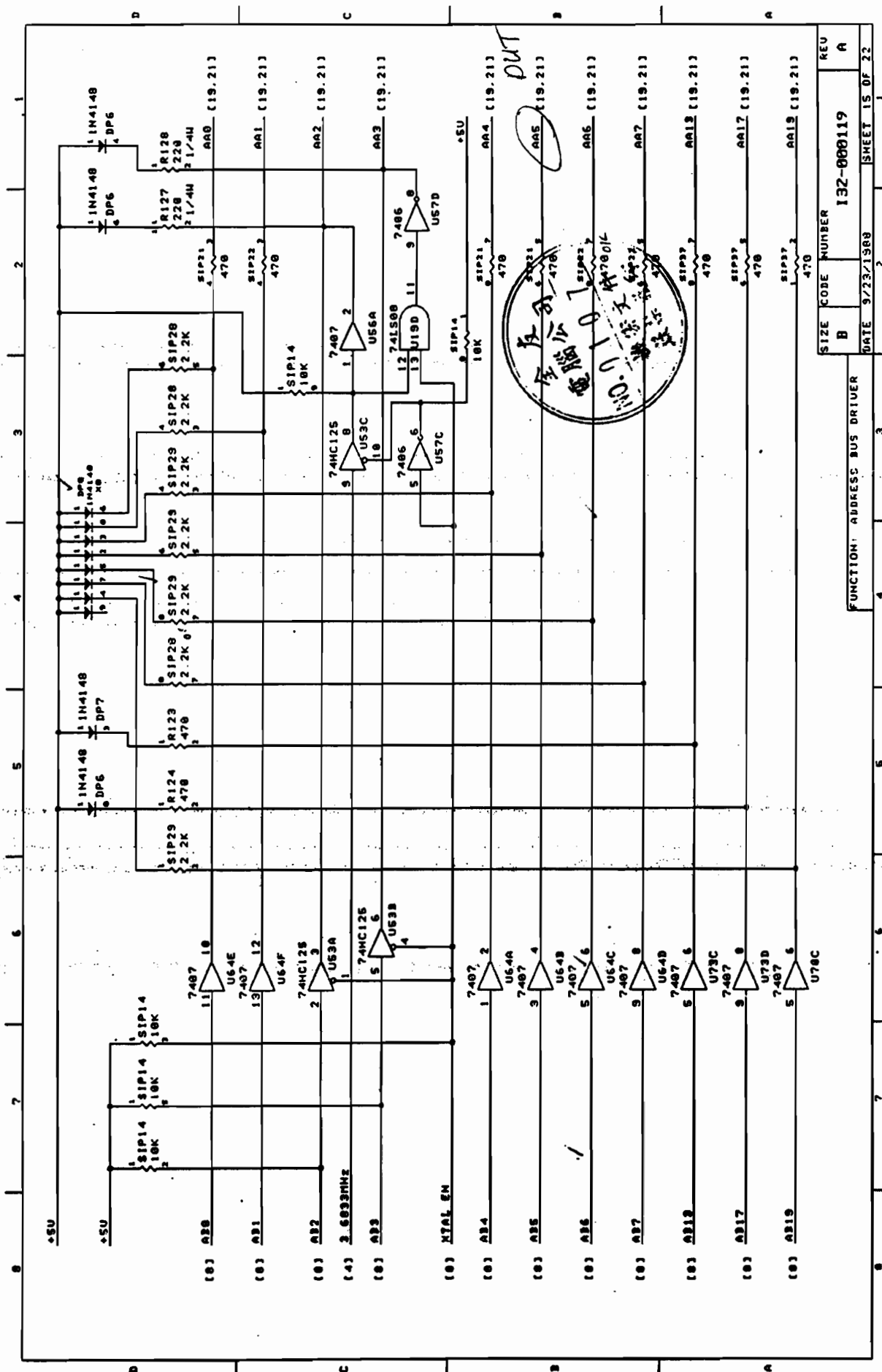


SIZE CODE NUMBER 132-000119 REV A
 B DATE 9/23/1988 SHEET 14 OF 22

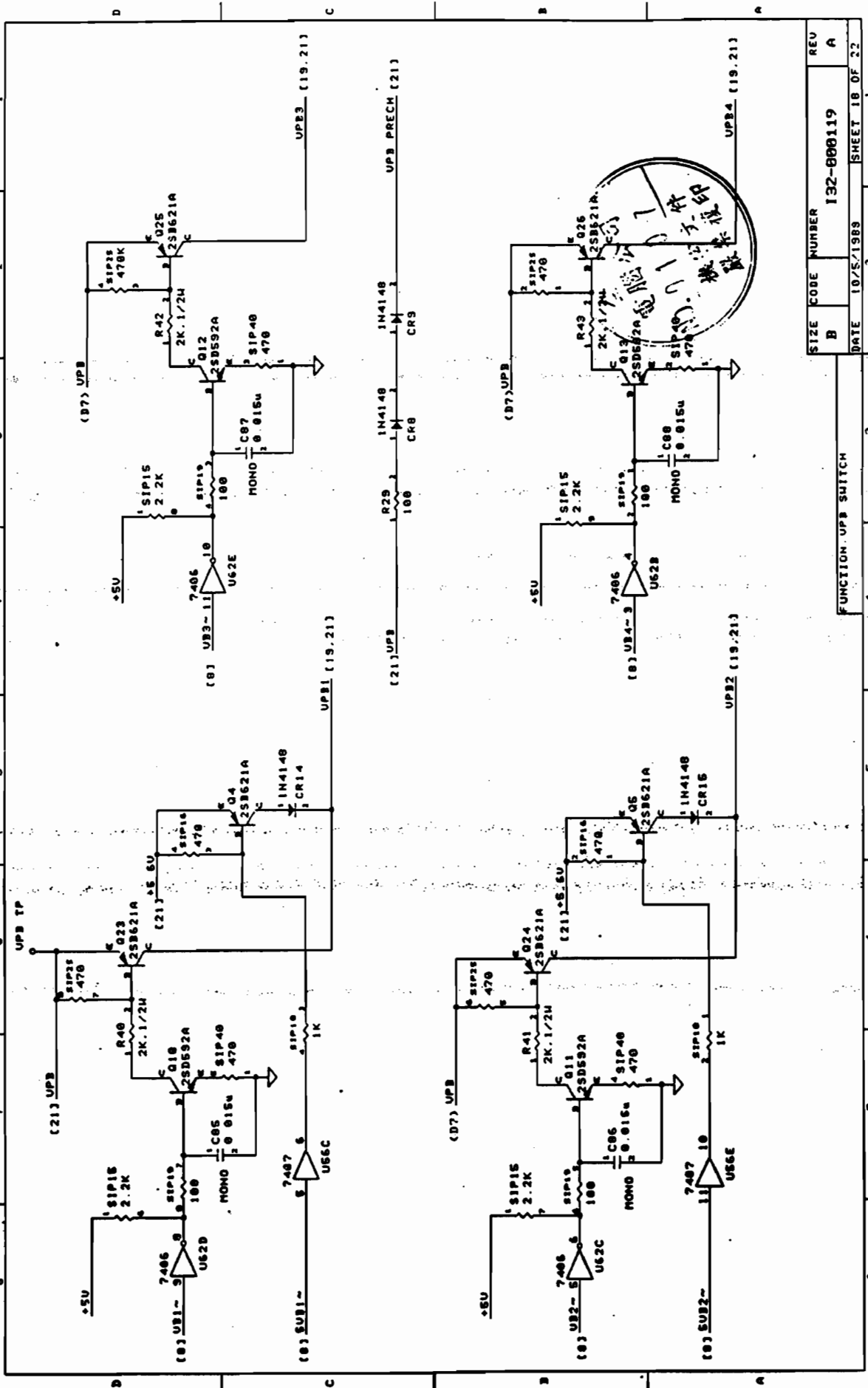
FUNCTION READ & THRESHOLD VOLTAGE CHCKEN CKT.

(4) A00-A07
 (8) A08-A09
 (16) A10-A15

(21) U48FA

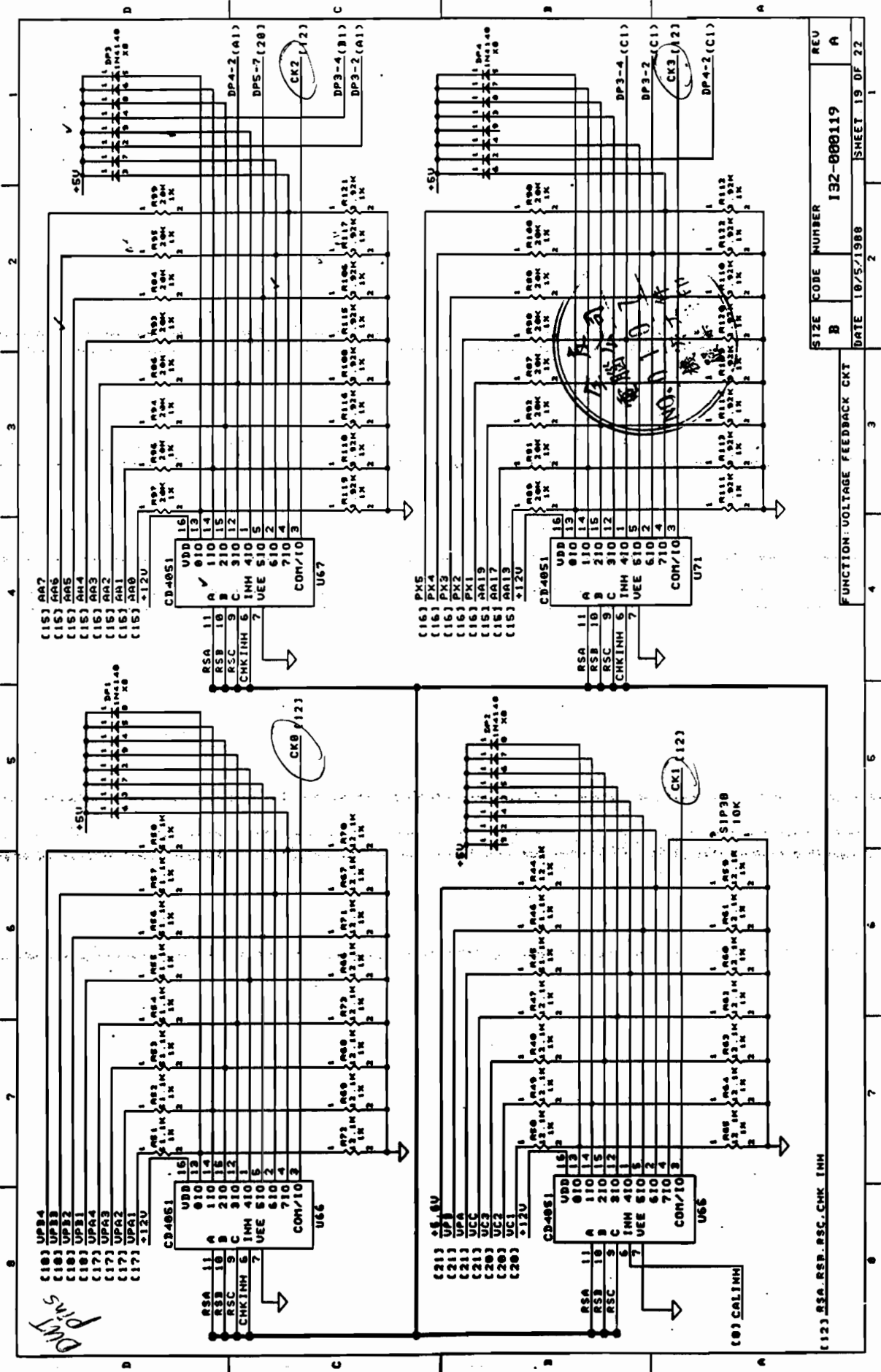


SIZE	CODE NUMBER	REV
B	132-000119	A
DATE	9/23/1988	SHEET 15 OF 22
FUNCTION: ADDRESS BUS DRIVER		



SIZE	CODE	NUMBER	REV
B		132-888119	A

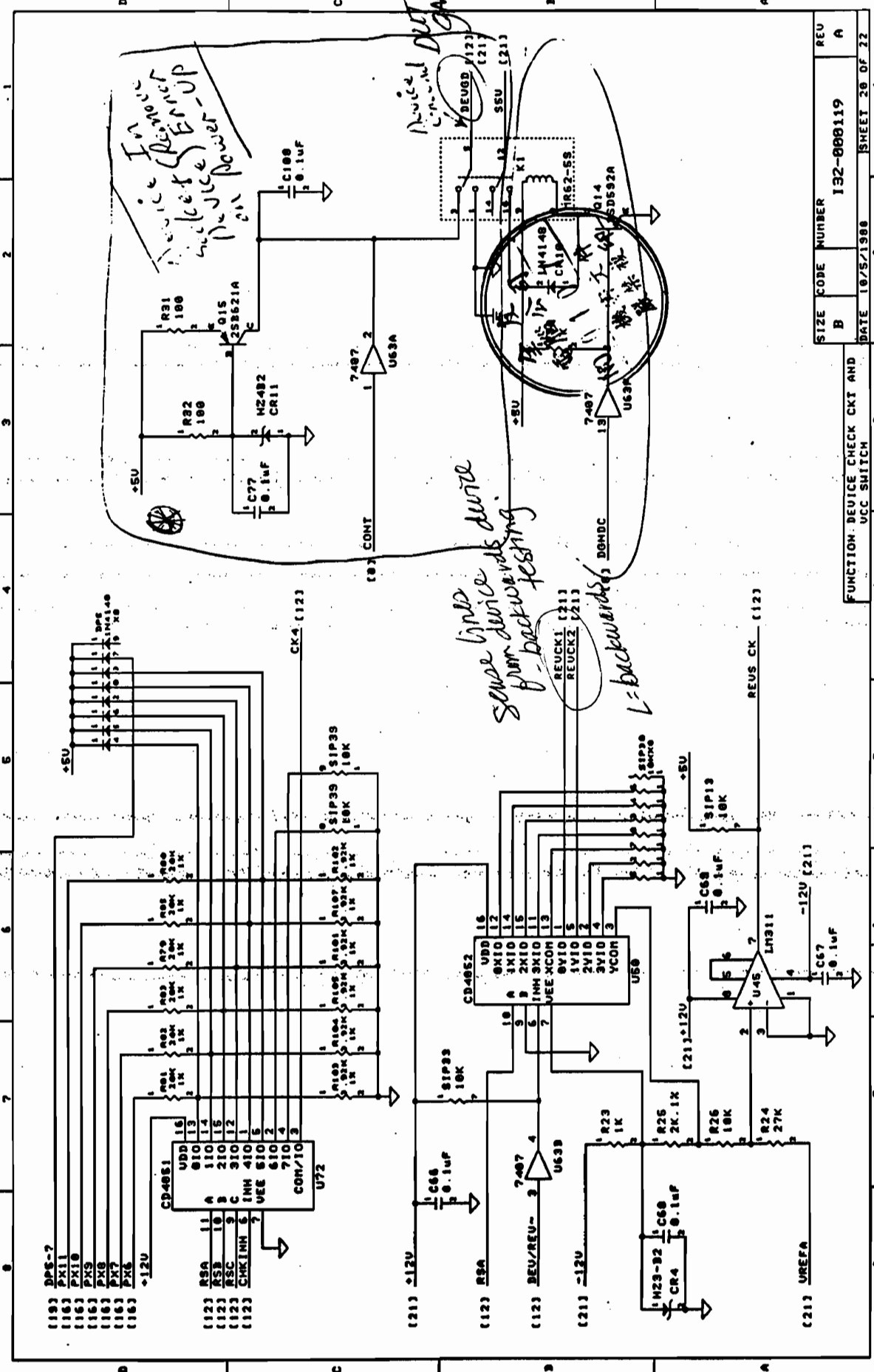
DATE 10/5/1989
 FUNCTION UPB SWITCH
 SHEET 18 OF 22



SIZE	CODE	NUMBER	REV
B		132-000119	A
DATE	10/5/1988		
FUNCTION: VOLTAGE FEEDBACK CKT			
SHEET 19 OF 22			

OUT pins

NO. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.



Device Power-Up
Device Reset
Device Power-UP

Device Power-Up

Some pins device
from device
backwards testing

REUCK1 (21)
REUCK2 (21)
L = backwards

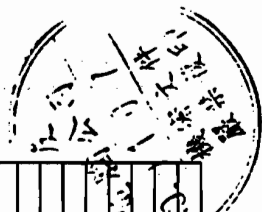
SIZE	CODE	NUMBER	REV
B		132-000119	A
FUNCTION: DEVICE CHECK CKT AND VCC SWITCH			
DATE	10/5/1980	SHEET	20 OF 22

NOTE: SEE PAGE 7 (U3-U10) C: CLOSE
O: OPEN

	256K BIT DRAM	IN BIT DRAM
U1	0	C
U2	0	C
U3	0	C
U4	0	C
U5	0	C
U6	0	C
U7	0	C
U8	0	C
U9	0	C
U10	0	C
U11	0	C
U12	0	C
U13	0	C
U14	0	C
U15	0	C
U16	0	C
U17	0	C
U18	0	C
U19	0	C
U20	0	C
U21	0	C
U22	0	C
U23	0	C
U24	0	C
U25	0	C
U26	0	C
U27	0	C
U28	0	C
U29	0	C
U30	0	C
U31	0	C
U32	0	C
U33	0	C
U34	0	C
U35	0	C
U36	0	C
U37	0	C
U38	0	C
U39	0	C
U40	0	C
U41	0	C
U42	0	C
U43	0	C
U44	0	C
U45	0	C

LOC NO.	PART NO.	PAGE NO.	+5V	GND	SPARE
U46	74LS138	9	16	8	
U47	74LS32	8	14	7	
U48	LM339	14			
U49	LM339	14			
U50	CD4052	20			
U51	LM339	12			
U52	LM339	12			
U53	74HC125	5,15	14	7	
U54	62256-10	5	20	14	
U55	74LS138	5	16	8	
U56	7407	8,15,17,18	14	7	
U57	7406	15,17	14	7	
U58	8255A-5	8	26	7	
U59	8255A-5	12	26	7	
U60	8255A-5	8	26	7	
U61	74LS139A	5	16	8	
U62	7406	5,11,18	14	7	
U63	7407	11,20	14	7	
U64	7407	15	14	7	
U65	CD4051	19			
U66	CD4051	19			
U67	CD4051	19			
U68	7406	5,16	14	7	
U69	PAL1610A	16	20	10	
U70	7407	11,15	14	7	
U71	CD4051	19			
U72	CD4051	20			
U73	7407	12,15	14	7	
U74	7406	16	14	7	
U75	PAL1610A	16	20	10	
U76	74HC374	11	20	10	
U77	28542	5	20	10	
U78	74HC245	11	20	10	

LOC NO.	PART NO.	PAGE NO.	+5V	GND	SPARE
U1	74F84	4,5,6	14	7	
U2	74F82	4,5	14	7	
U3	256K/IN DRAM	7	20	10	
U4	256K/IN DRAM	7	20	10	
U5	256K/IN DRAM	7	20	10	
U6	256K/IN DRAM	7	20	10	
U7	256K/IN DRAM	7	20	10	
U8	256K/IN DRAM	7	20	10	
U9	256K/IN DRAM	7	20	10	
U10	256K/IN DRAM	7	20	10	
U11	74LS74A	6	14	7	
U12	1409	10	14	7	
U13	1409	10	14	7	
U14	82S1AFC	10	26	4	
U15	8255A-5	11	26	7	
U16	8000-2	4			
U17	74F82	4	20	10	
U18	74LS139A	5	16	8	
U19	74LS138	4,8,12,15	14	7	
U20	74LS74A	4	14	7	
U21	74LS257	6	16	8	
U22	74LS257	6	16	8	
U23	74LS273	6	20	10	
U24	74F82	5,8,11	14	7	
U25	74LS32	4,5	14	7	
U26	74LS32	5	14	7	
U27	8284A	4	18	9	
U28	74F82	4	20	10	
U29	8253-5	9	24	12	
U30	74LS161A	6	16	8	
U31	PAL1610A	6	20	10	
U32	74LS257	6	16	8	
U33	74LS244	6	20	10	
U34	74LS93	6	16	8	
U35	8279	9	40	20	
U36	LM555	12			
U37	8255A-5	8	26	7	
U38	LM339	13			
U39	LM339	13			
U40	8255A-2	9	20	14	
U41	27512	5	20	14	
U42	27512	5	20	14	
U43	74HC374	13	20	10	
U44	74HC374	14	20	10	
U45	LM311	20			



FUNCTION: IC LISTING AND SPARE GATE.

SIZE CODE NUMBER 132-800119 REV B

DATE 12/15/1988 SHEET 22 OF 22