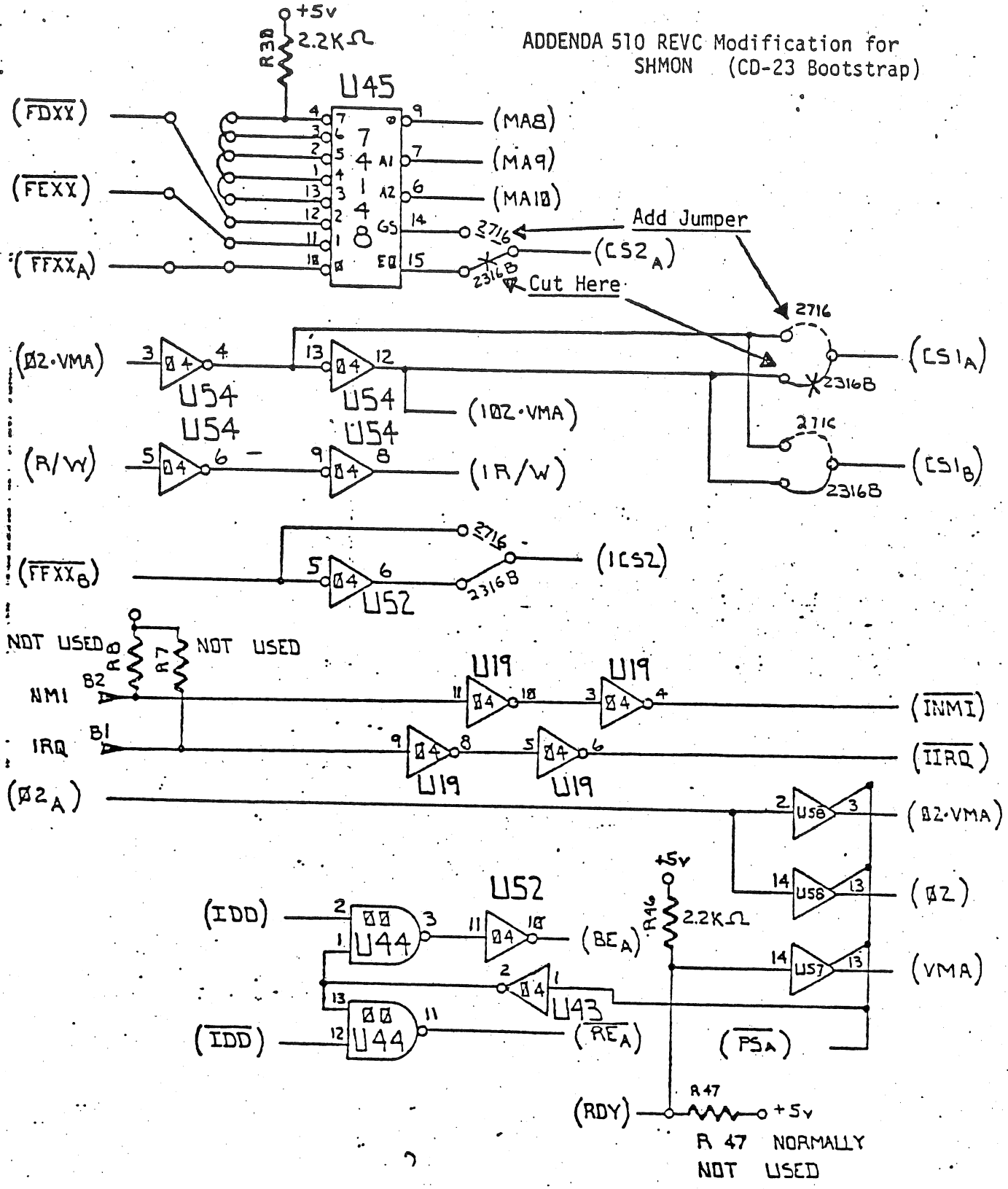
copy

OHIO SCIENTIFIC TECHNICAL NEWSLETTER #3

NOTE: Note that any references to the OS-65D copy utility on Track 01, Sector 2 should be changed to Track 13, Sector 1 for Mini-Floppy Systems

ADDENDA 510 REVC Modification for
SHMON (CD-23 Bootstrap)



OHIO SCIENTIFIC			product name/number MODEL 510 REV C	
date 24 APR 1979 DRAWN ~ J.L.K.	revision	page	status	sheet 2 of 11

OS-65U COPYFI FIX V1.0 THROUGH V1.1

THE CHANGES BELOW SHOULD BE MADE TO COPYFI. THIS CORRECTS THE PROBLEM OF OCCASSIONAL INCOMPLETE COPYING.

CHANGE LINE 350 FROM 350 END

TO: 350 GOTO 1230

CHANGE LINE 1260 FROM 1260 END

TO: 1260 CLOSE: END

OS-65U V1.1 CD-23

CREATE FIX:
HANDLES PROBLEM OF FILE BEING CREATED WITH TYPE AS OTHER WHEN USER ANSWERS 'N' TO THE QUESTION 'IS THIS CORRECT?' (IF THE FILE WAS DEFINED BY THE USER AS BEING A BASIC FILE TYPE.)

CHANGE LINE NUMBER 5260 FROM:

5260 AT=AT+(T*4): REM TYPE BASED AT BIT 2
TO:

5260 AT=0: AT=AT+(T*4): REM TYPE BASED BIT 2

OS-65U V1.1 CREATE FIX FOR MULTIPLE CREATES
CD-74 VERSION (OR FLOPPY VERSION WITH CD-74 DRIVERS)
CHANGE LINE 40000 FROM

40000 PRINT: PRINT "ANOTHER (A)" PRINT "DIRECTORY (D)"
TO

40000 CLOSE: PRINT "ANOTHER (A)": PRINT "DIRECTORY (D)"

OS-65U V1. 1 Update

A problem has been found in the proper setting of the write bias current in the Track Zero Write Routine. The change below will correct this:

```
RUN"CHANGE","PASS

DISK CHANGE UTILITY

MODE:  HEX(H), DEC(D) ? H
UNIT ?A
ADDRESS OFFSET ? C00
ADDRESS ? 3112
00003112  19 ? 18
00003113  18 ? .
ADDRESS ? 311F
0000311F  19 ? 18
00003120  D0 ? X

OK
CLOSE

OK
```

ADDENDA TO WRITE FAULT FIX IN TECH LETTER NUMBER ONE
CONCERNING OS-65U V1.1 CD-23 VERSION

AS THINGS NOW STAND, THE FIX FOR CLEARING THE WRITE FAULTS ON THE CD-23 CREATED A PROBLEM IN THE PROCESS OF FIXING A PROBLEM. SHUGART SAYS THAT A WRITE FAULT SHOULD NEVER OCCUR, HOWEVER, IT NOW APPEARS THAT THE CD-23 CAN 'COME UP' WITH THE WRITE FAULT STATUS BIT TRUE. THEREFORE THE SOFTWARE SHOULD ACTUALLY CLEAR ANY WRITE FAULTS THAT EXIST ON BOOT UP AND THEN DISABLE ITSELF FROM ANY FURTHER CLEARING OF WRITE FAULTS. THE EASIEST WAY TO ACCOMPLISH THIS IS TO RESTORE THE SYSTEM TO IT'S ORIGINAL FORM AND ADD ONE LINE TO BEXEC*. THIS WILL PERMIT THE CLEARING OF WRITE FAULTS ON BOOT UP AND WILL ALSO PREVENT ANY FURTHER CLEARING OF THE WRITE FAULT STATUS BIT. THE CHANGE CONVERSATION IS SHOWN BELOW ALONG WITH THE LINE TO BE ADDED TO BEXEC*

```
RUN "CHANGE","PASS


DISK CHANGE UTILITY

MODE: HEX(H), DEC(D) ? H
UNIT ? E
ADDRESS OFFSET ? C00
ADDRESS ? 345C          May be a 20 depending on the system
0000345C , 2C ? 20
0000345D   B3 ? X

OK
CLOSE

OK
```

ALSO ADD THIS LINE TO BEXEC*

```
91 POKE 13404,44: REM DISABLE WRITE FAULT CLRS 5/79 R.W. R1*
```

OS-65U V1.1 CD-23 VERSION
FIX FOR CREATE UTILITY

THIS CORRECTION TO OS-65U V1.1 CD-23 HANDLES TWO POSSIBLE PROBLEM AREAS. THE FIRST PROBLEM COULD OCCUR IF THE DEFECTIVE SECTORS LIST FILE DEFILE DOES NOT EXIST ON THE HARD DISC. CREATE IS SMART ENOUGH TO TRY AN ACCESS THE A DRIVE IF IT DID NOT FIND DEFILE ON THE HARD DISC.

HOWEVER, THIS COULD CAUSE TWO PROBLEMS, ONE, IF THE DRIVE DID NOT CONTAIN A DISKETTE THEN A 'DRIVE NOT READY' ERROR WOULD OCCUR AND TWO, CREATE WOULD NOT SWITCH DEVICES BACK TO THE HARD DISC. THIS MEANS THAT THE FILE WOULD BE PLACED ON THE FLOPPY IN DRIVE A. THE SECOND POSSIBLE AREA OF TROUBLE OCCURS WHEN ONE IS CREATING A FILE ON A FLOPPY. THE PROBLEM BEING THAT CREATE WOULD ACCESS DEFILE AND CREATE DUMMY FILES TO COVER BAD SECTORS EVEN THOUGH THE FILE WAS BEING CREATED ON A FLOPPY (AS OPPOSSED TO THE HARD DISC). THE LINES TO BE ADDED OR CHANGED ARE SHOWN BELOW. NOTE THAT CREATE MUST FIT INTO AN 8K WORK SPACE. THEREFORE ONE SHOULD ENTER THE LINES EXACTLY AS SHOWN OR CREATE WILL NOT FIT INTO AN 8K WORK SPACE!

```
CREATE FIX
OS-65U V1.1 CD-23   5/2/79

1 PRINT: PRINT "CREATE FILE UTILITY"
2 REM  (C) OSI 1979  *R1 1/79 FOR CD-23   *R3 5/79

3 REM                *R2 1/79 FOR DFCTV SCTR FILE
4 HS = 23166976: REM  72898560 FOR CD-74  *R1

5851 IF PEEK(9832)>3 GOTO 42000:REM GO CHK DFCTVE SCTRS FILE *R2 *R3

42030 FLAG 9:DV=PEEK(9832):REM READ DFCT FILE  *R3
42040 OPEN"DEFILE",1:FLAG 10:FD=PEEK(9832):REM CATCH ERS *R3

42090 POKE 9832,DV:IF DF=FA GOTO 42130:REM ONLY NEED DEF SCT FILE *R3

42160 POKE 9832,FD:GOTO 42050:REM *R3

42180 CLOSE 1:POKE 9832,DV:GOTO 5860:REM GO CREATE IT!  *R3

50015 IF PEEK(10226)=1 GOTO 50050: REM FLOPPY EMPTY *R3

50070 IF LEFT$(A$;1)<>"Y" THEN PRINT:POKE 9832,DV:GOTO 5880:REM NO *R3
```

OS-65U FIX - ALL VERSION 1.1's

PROBLEM: IF NO FILES ARE DEFINED THEN THE SIZE OF THE FIRST FILE IN THE DIRECOTRY AREA ON DISK IS 0. THIS IS TAKEN AS THE SIZE OF THE DIRECTORY FILE. HOWEVER, THE LOCATE FILE ROUTINE EXPECTS A NON-ZERO DIRECTORY FILE SIZE AND FAILS TO TERMINATE A DIRECTORY SCAN WHEN THE SIZE IS ZERO. THIS PROBLEM IS ONLY ENCOUNTERED WHEN RECREATING A LARGER DIRECTORY AFTER INITIALIZING THE DISK.

SOLUTION:

```
RUN "CHANGE","PASS

DISK CHANGE UTILITY

MODE: HEX(H), DEC(D) ? H
UNIT ? A
ADDRESS OFFSET ? C00
ADDRESS   ?  2AB8
00002AB8      A2 ? CE
00002AB9      00 ? AE
00002ABA      A0 ? 26
00002ABB      03 ? 30
00002ABC      18 ? 05
00002ABD      BD ? EE
00002ABE      AB ? AF
00002ABF  &   26 ? 26
00002AC0  )   7D ? D0
00002AC1      AE ? C4
00002AC2  &   26 ? AD
00002AC3  )   5D ? AF
00002AC4      A3 ? 26
00002AC5  &   26 ? 8D
00002AC6      D0 ? AE
00002AC7      BE ? 26
00002AC8      E8 ? EA
00002AC9      88 ? EA
00002ACA      D0 ? EA
00002ACB      F1 ? EA
00002ACC      A9 ? X

OK
CLOSE

OK
```

NOTE: WITH THIS FIX THE MAXIMUM DIRECTORY FILE SIZE IS 65,280 BYTES WHICH WILL HOLD 4,079 FILES.

OS-65D V3.0 Mini-Floppy Fix

The following change to OS-65D for mini-floppies will greatly improve drive-to-drive compatibility.

Resident RAM Location	Disk Location Track	Relative Address	Old Contents	New Contents
27AØ	Ø	5AØ	Ø1	ØA
Ø638	13	438	Ø1	ØA

A procedure that can be used on dual mini-floppy systems to permanently install these changes follows. Remember to press the RETURN key after each entry that you type. If you make a mistake while typing, you can correct it anytime before pressing the RETURN key. To do so type a SHIFT-O (hold the SHIFT key down while typing an O) to backspace over and delete each previous character typed in error. Then type the correct characters and press the RETURN key to complete the entry.

1. Boot the system and type UNLOCK in response to the "FUNCTION?" question.

   SYSTEM OPEN

   OK

   will be output.

2. Type EXIT and press the RETURN key.

   Ø1 TRACK

   A*

   will be output.

3. Type EM to call the Extended Monitor.

   EM V2.0

   :

   will be output.

4. Type !CA Ø2ØØ=13,1 to call in the Diskette Utilities. The Diskette Utilities will be transferred to RAM and

   :

   will be output.

5. Type @Ø638 to display the contents of this location. (Note: @ is entered by typing SHIFT P.)

   Ø638/Ø1

   will be output.

6. Type ØA to enter the new contents of the location.

   :

   will be output.

7. Type !SA 13,1=Ø2ØØ/5 to save the corrected copy of the Diskette Utilities back onto the disk.

   :

   will be output.

8. Type EXIT to exit the Extended Monitor.

   A*

   will be output.

9. Type GO Ø2ØØ to enter the Diskette Utilities.

   - DISKETTE UTILITIES -

   1) COPIER

   2) TRACK Ø READ/WRITE

   ?

   will be output.

10. Type 2 to specify the Track Ø Read/Write Utility.

    - TRACK ZERO READ/WRITE UTILITY -

    COMMANDS:

    Rnnnn - READ INTO LOCATION nnnn

    Wnnnn/gggg,p - WRITE FROM nnnn FOR p PAGES
    WITH gggg AS THE LOAD VECTOR

E - EXIT TO OS-65D

COMMAND?

will be output.

11. Type R4200 to read track 0.

    The above output is repeated.

12. Type E to exit the Diskette Utilities.

    A*

    is output.

13. Type RE EM to return to the Extended Monitor.

    EM V2.0

    :

    will be output.

14. Type @47A0 to display the contents of this location.

    47A0/01

    will be output.

15. Type 0A to enter the new contents of the location.

    :

    will be output.

16. Type EXIT to exit the Extended Monitor.

    A*

    will be output.

17. Type GO 0200 to enter the Diskette Utilities.

    The output will be as shown under step 9, above.

18. Type 2 to specify the Track 0 Read/Write Utility.

    The output will be as shown under step 10, above.

19. Type W4200/2200,8 to write the correction back onto track zero on the disk.

20. Type E to exit the Diskette Utilities.

    A*

    will be output.

21. Place a new diskette into the B mini-floppy drive.

22. Type SE B to select the B drive.

    B*

    will be output.

23. Type IN to initialize the diskette in the B drive.

    ARE YOU SURE?

    will be output.

24. Type Y. (This is the only time the RETURN key need not be pressed after you type an entry. However, if you inadvertently do press the RETURN key no harm will result.)

    B*

    will be output when the initialization is complete.

25. Type GO Ø2ØØ to enter the Diskette Utilities. The output will be as shown under step 9, above.

26. Type 1 to specify the Copier Utility.

    - DISKETTE COPIER -

    FROM DRIVE (A/B/C/D)?

    will be output.

27. Type A to specify the A drive.

    TO DRIVE (A/B/C/D)?

    will be output.

28. Type B to specify the B drive.

    STARTING TRACK?

    will be output.

29. Type Ø to specify track Ø.

    ENDING TRACK (INCLUSIVE)?

    will be output.

3Ø. Type 39 to specify track 39.

    READY (Y/N)?

    will be output.

31. Type Y.

    The contents of the diskette in the A drive will be copied to the diskette in the B drive. At completion,

    ANOTHER (Y/N)?

    is output.

32. Label the diskette in the B drive as the A drive diskette was labeled and add the notation "1/79 MF FIX." Discontinue use of the old diskette until it is reinitialized and recopied from a new one.

This completes the implementation of the changes for a given diskette. All new diskettes created by initialization and copying from the new diskette will include the changes and should be usable on any functional OSI mini-floppy disk drive. This procedure should be followed for each of the different mini-floppy diskettes you have for either 1P or 2P computers.

OS-65D V3.0 through V3.1 8" or 5" FLOPPIES

THIS CONVERSATION CORRECTS A PROBLEM WITH THE DISC WRITE ROUTINES. THE PROBLEM MANIFESTED ITSELF AS SYSTEM FAILURE IF A RETRY OCCURRED ON A WRITE TO DISC.

```
BASIC EXECUTIVE FOR OS-65D VERSION 3.0

13 OCT 1978 RELEASE

FUNCTIONS AVAILABLE:
  CHANGE - ALTER WORKSPACE LIMITS
  DIR    - PRINT DIRECTORY
  UNLOCK - UNLOCK SYSTEM FROM END USER MODIFICATIONS

FUNCTION? UNLOCK

SYSTEM OPEN

OK
EXIT
01 TRACK
A*EM

:EXIT

A*CALL 0200=01,2

A*GO 0200

-DISKETTE UTILITIES-

SELECT ONE:
1) COPIER
2) TRACK 0 READ/WRITE
? 2

-TRACK ZERO READ/WRITE UTILITY-

COMMANDS:
RNNNN - READ INTO LOCATION NNNN
WNNNN/GGGG,P - WRITE FROM NNNN FOR P PAGES
               WITH GGGG AS THE LOAD VECTOR
E - EXIT TO OS-65D

COMMAND? R4200

-TRACK ZERO READ/WRITE UTILITY-

COMMANDS:
RNNNN-READ INTO LOCATION NNNN
WNNNN/GGGG,P - WRITE FROM NNNN FOR P PAGES
               WITH GGGG AS THE LOAD VECTOR
E - EXIT TO OS-65D

COMMAND? E

A*RE EM
```

```
@4886

4886/13 28
:@4898/D0 4C
4899/6F 09
489A/60 28
:EXIT

A*GO 0200

-DISKETTE UTILITIES-

SELECT ONE:
1) COPIER
2) TRACK 0 READ/WRITE
? 2

-TRACK ZERO READ/WRITE UTILITY-

COMMANDS:
RNNNN-READ INTO LOCATION NNNN
WNNNN/GGGG,P-WRITE FROM NNNN FOR P PAGES
             WITH GGGG AS THE LOAD VECTOR
E-EXIT TO OS-65D

COMMAND? W4200/2200,8

-TRACK ZERO READ/WRITE UTILITY-

COMMANDS:
RNNNN-READ INTO LOCATION NNNN
WNNNN/GGGG,P - WRITE FROM NNNN FOR P PAGES
               WITH GGGG AS THE LOAD VECTOR
E-EXIT TO OS-65D

COMMAND? E

A*BASIC

OSI 9 DIGIT BASIC
COPYRIGHT 1977 BY MICROSOFT
 36481 BYTES FREE

OK
```

OS-65D V3.0 through V3.1
RANDOM ACCESS FILE FIX FOR
ACCESS BEYOND RECORD #383

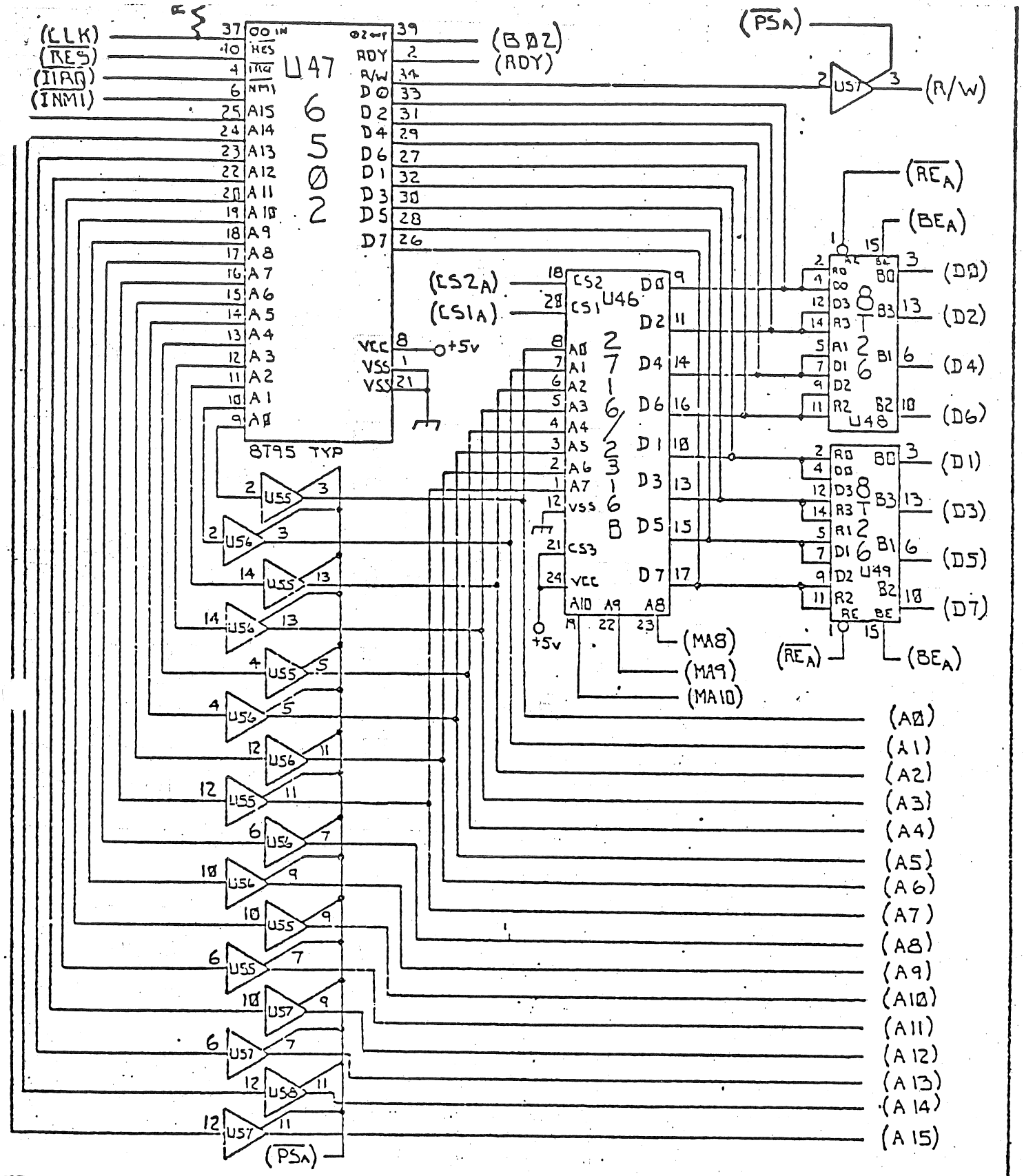
```
BASIC EXECUTIVE FOR OS-65D VERSION 3.0

13 OCT 1978 RELEASE

FUNCTIONS AVAILABLE:
  CHANGE - ALTER WORKSPACE LIMITS
  DIR    - PRINT DIRECTORY
  UNLOCK - UNLOCK SYSTEM FROM END USER MODIFICATIONS

FUNCTION? UNLOCK

OK
EXIT
01 TRACK
A*EM

:!CALL 4E79=08,4       FOR MINI FLOPPY SYSTEM :!CALL 4E79=12,4

:@4F00

4F00/30 30
4F01/16 65
:@4F18
4F18/AD EA
4F19/92 EA
4F1A/2F EA
4F1B/18 F8
4F1C/F8 18
:@4F67
4F67/00 AD
4F68/00 92
4F69/00 2F
4F6A/00 F0
4F6B/00 AF
4F6C/00 F8
4F6D/00 18
4F6E/00 AA
4F6F/00 A9
4F70/00 00
4F71/00 69
4F72/00 01
4F73/00 CA
4F74/00 D0
4F75/00 FB
4F76/00 F0
4F77/00 A4
:EXIT
A*SAVE 08,4=4E79/1       FOR MINI FLOPPY SYSTEMS A*SAVE 12,4=4E79/1
```

ALL UNMARKED CAPACITORS = .1 uF BYPASS

ALL DIODES, IN-914

031 510 REV C

U1 6820 PIA
U2 6850 ACIA
U3 6810 RAM
U4 2716/2316B
U5 7476
U7 6800
U8 8126
U9 8126
U10 8126
U11 8126
U12 555
U13 7404
U14 7473
U15 8T95
U16 8T95
U17 8T95
U18 8T95
U20 8T95
U21 7493
U22 7493
U23 7400
U24 74163
U25 7420
U26 7404
U27 8T95
U28 Z-80
U29 8T26
U30 8T26
U31 7400
U32 74123
U33 7404
U34 7410
U35 7400
U36 7404
U37 7410
U38 7415A
U39 8T95
U40 8T95
U41 74155
U42 7475
U43 7404
U44 7400
U45 7414B
U46 2716/2316B
U47 6502
U48 8T26
U49 8T26
U50 8T95
U51 74123
U52 7404
U53 7400
U54 7404
U55 8T95
U56 8T95
U57 8T95
U58 8T95
C27 33uF
C26 33uF
R30 2.2K
R24 2.2K
R25 NU
R26 220
R47 NU
R46 2.2K
R31 NU
R27 NU
R37 NU
D3
D4 NU
CRYSTAL
J3
J4



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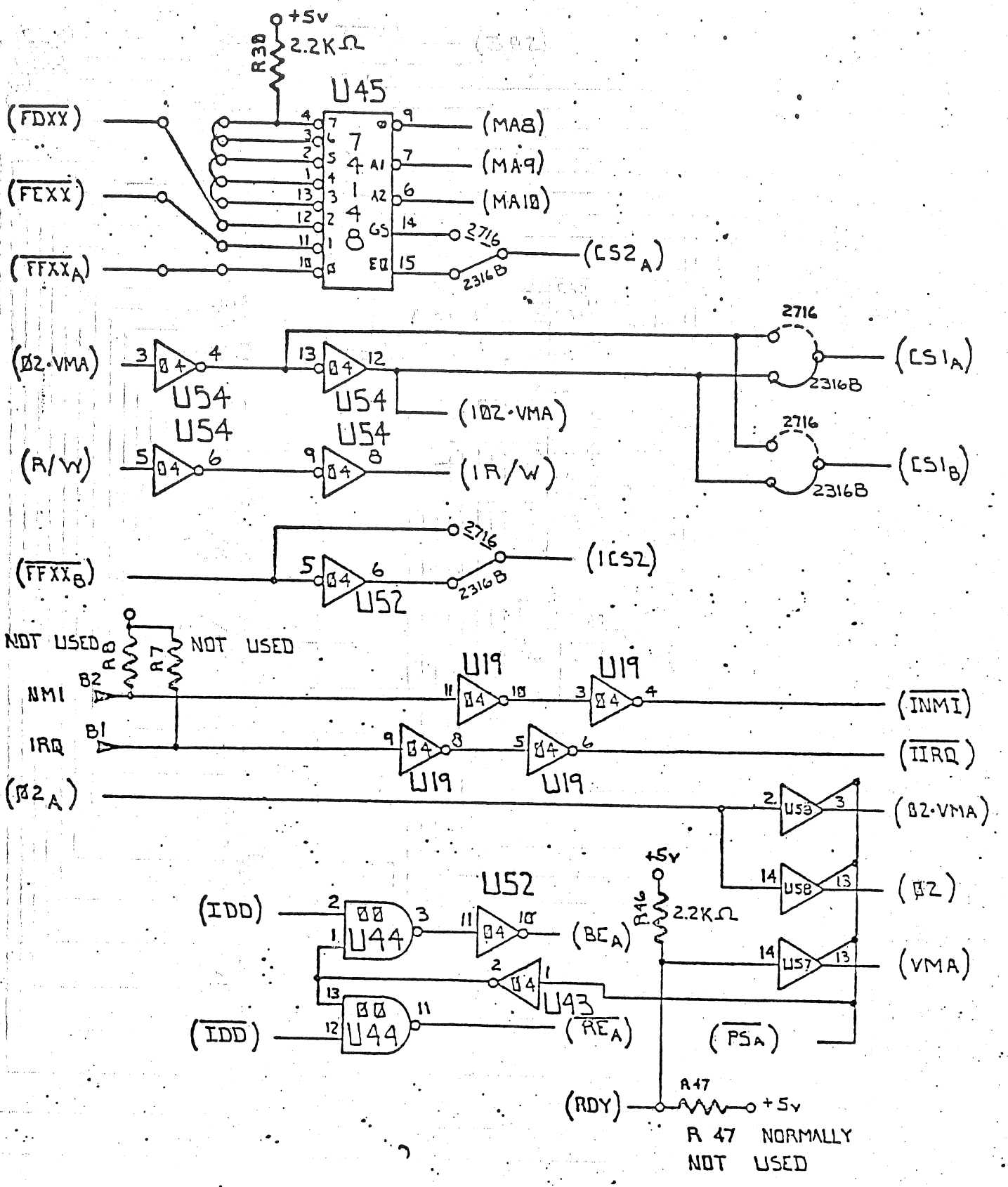
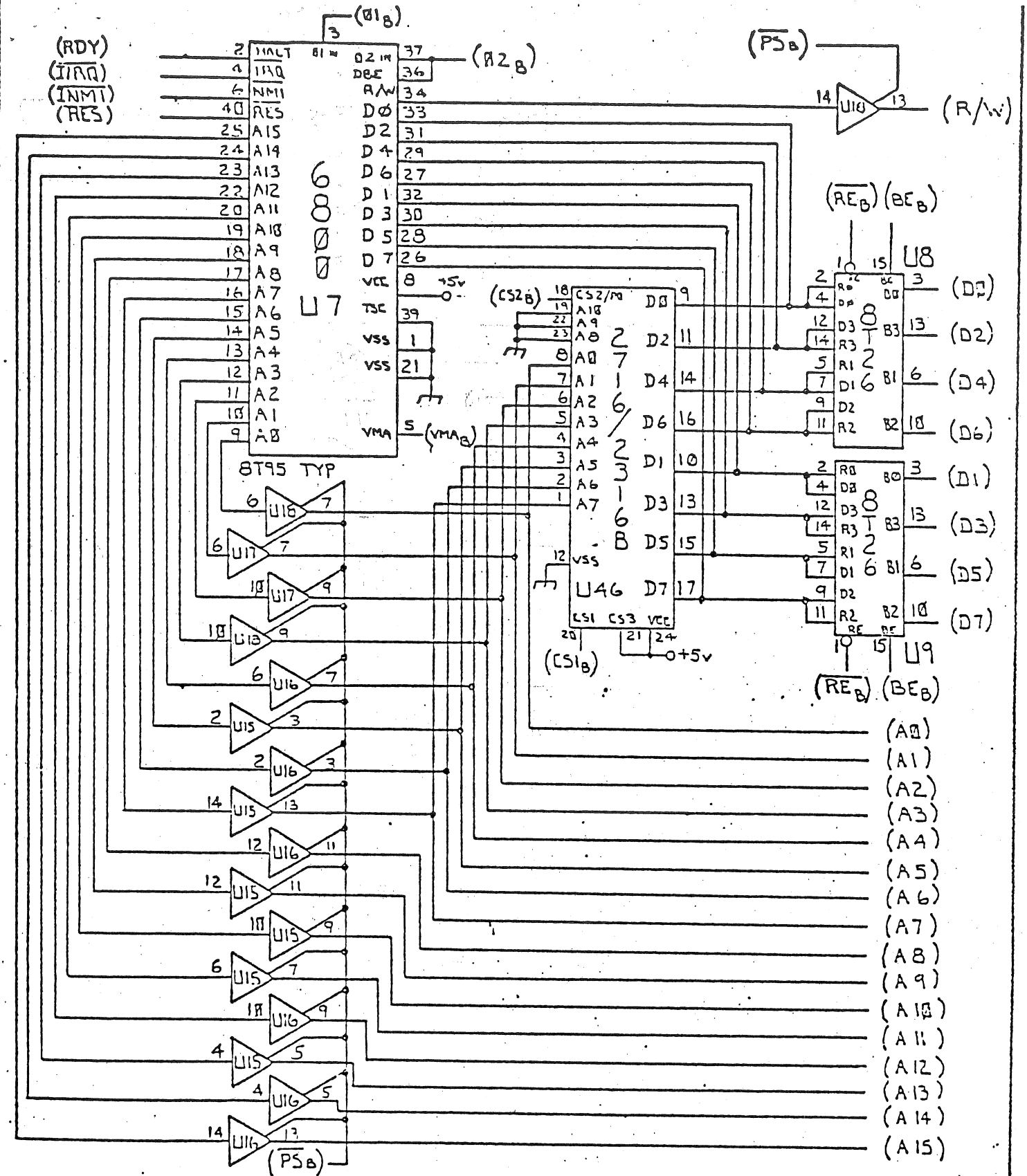
date 24 APR 1979 DRAWN~ J.L.K.	revision ..	page	status	sheet 1 of 11



OHIO SCIENTIFIC			product name/number MODEL 510 REV C	
date 24 APR 1974 DRAWN ~ J.L.K.	revision	page	status	sheet 2 of 11



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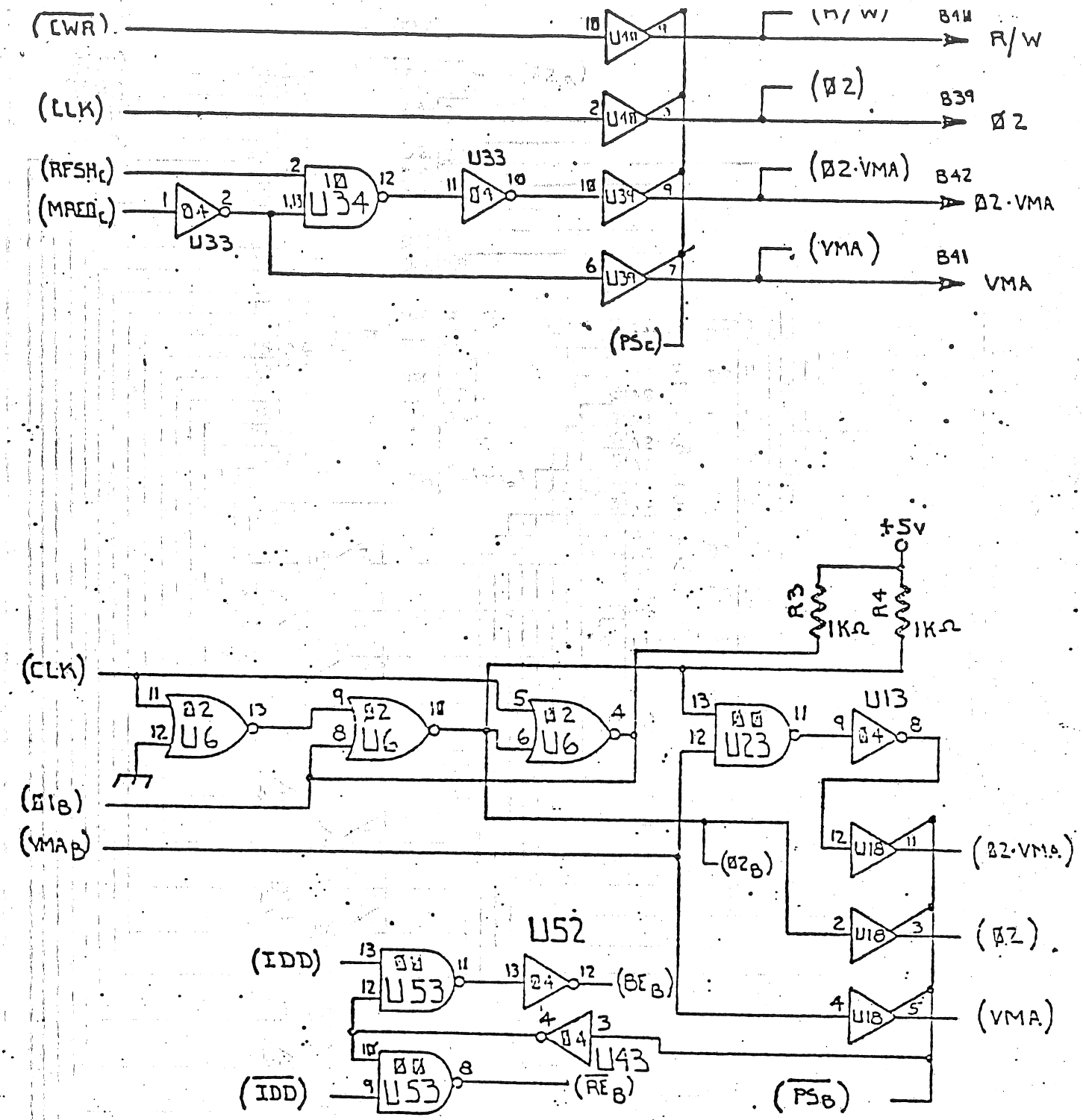
date 24 APR 1977 DRAWN~ J.L.K.	revision	page	status	sheet 3 of 11



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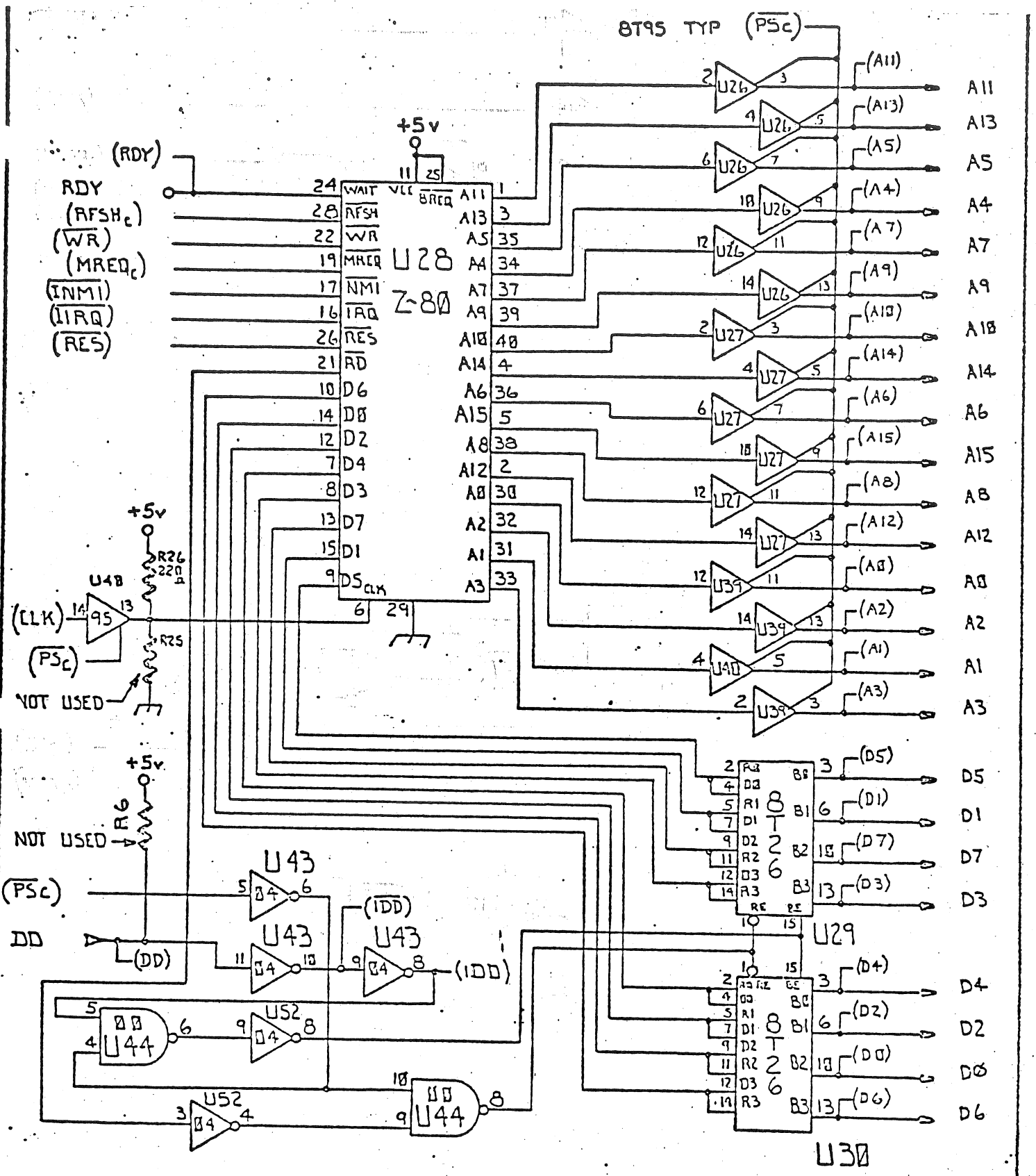
date 24 APR 1981 DRAWN -- J.L.K.	revision	page	status	sheet 4 of 11



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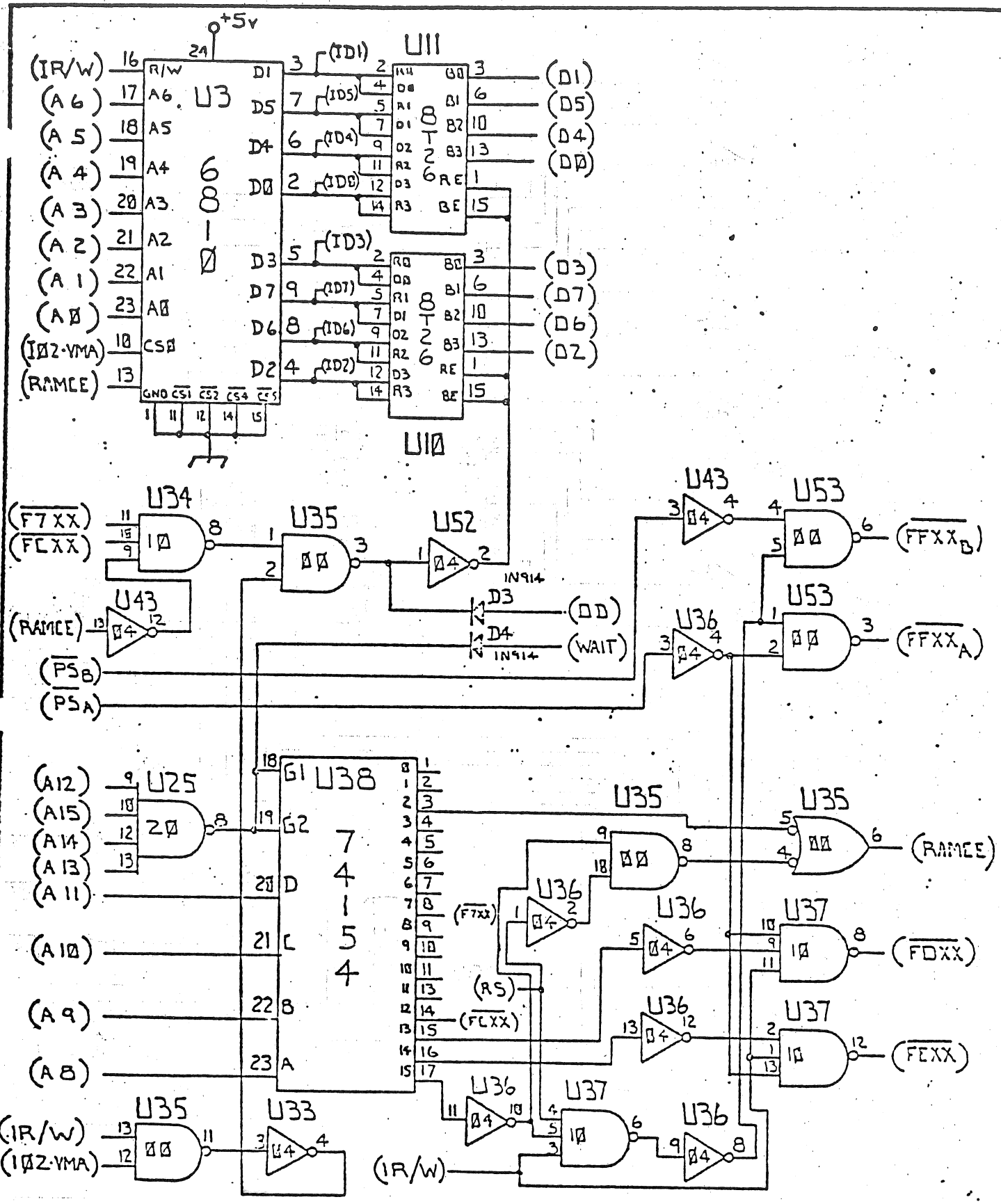
date 24 APR 1979 DRAWN ~ J.L.K.	revision	page	status	sheet 5 of 11



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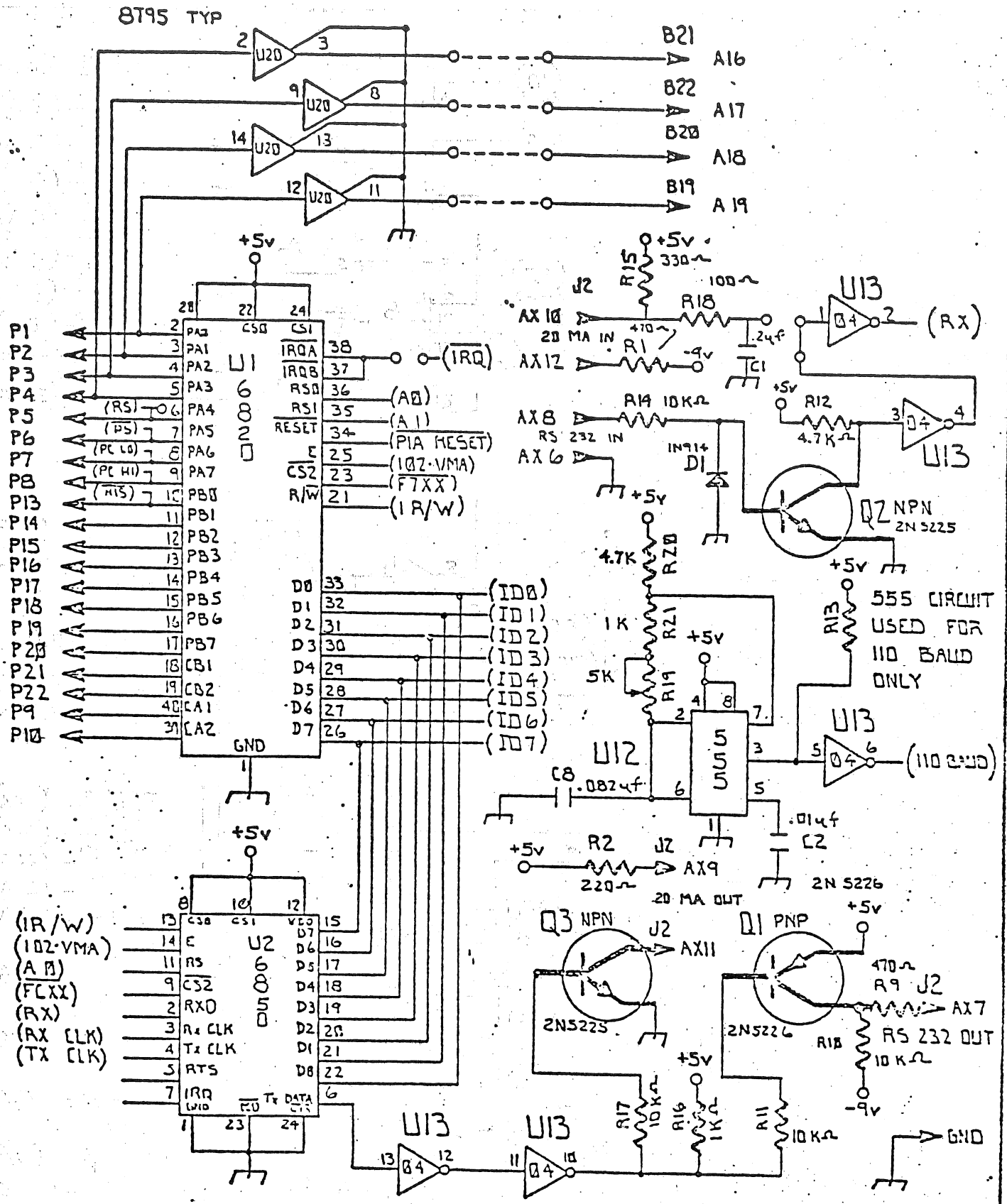
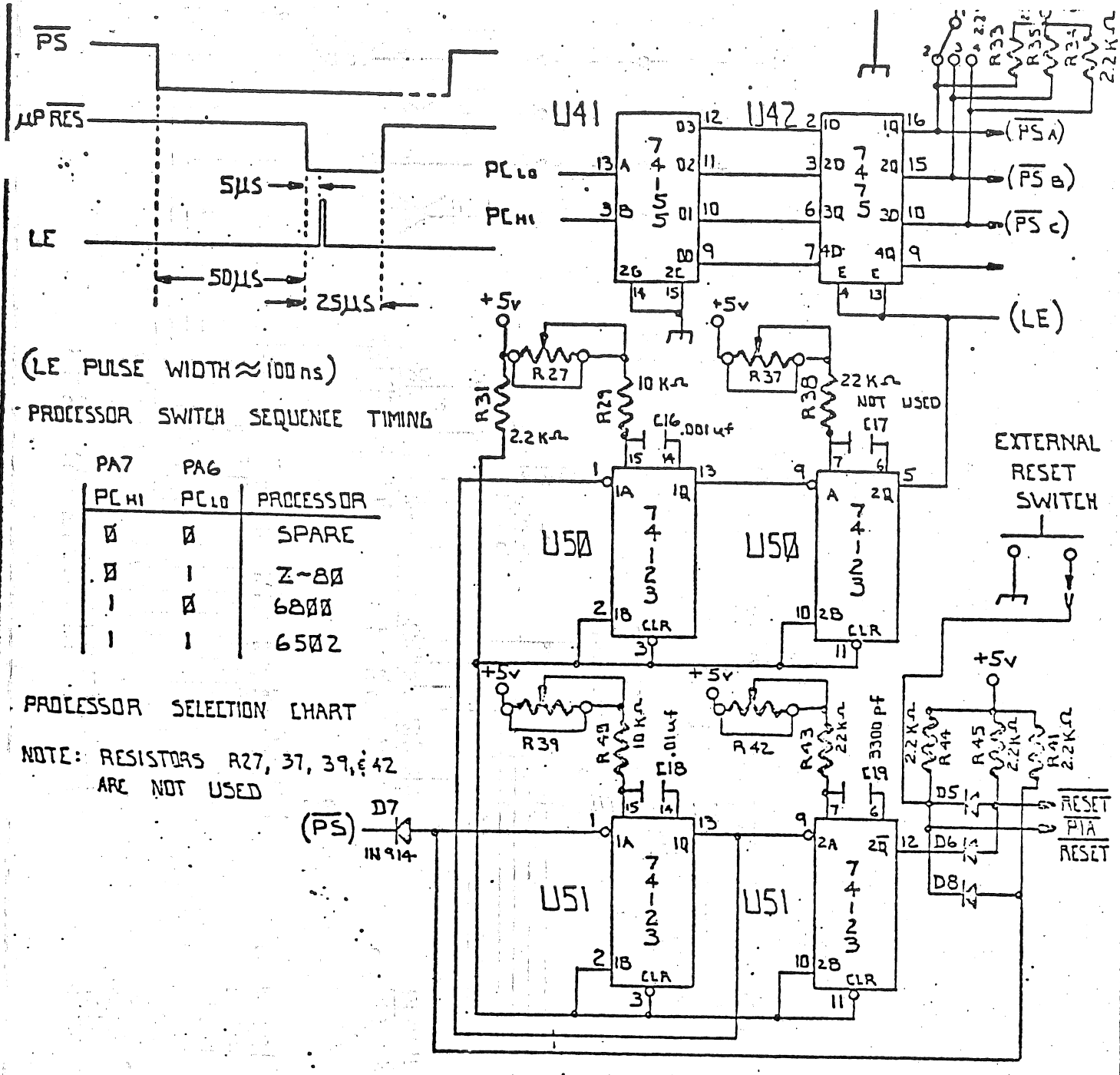
date 24 APR 1979 DRAWN ~ J.L.K.	revision	page	status	sheet 6 of 11



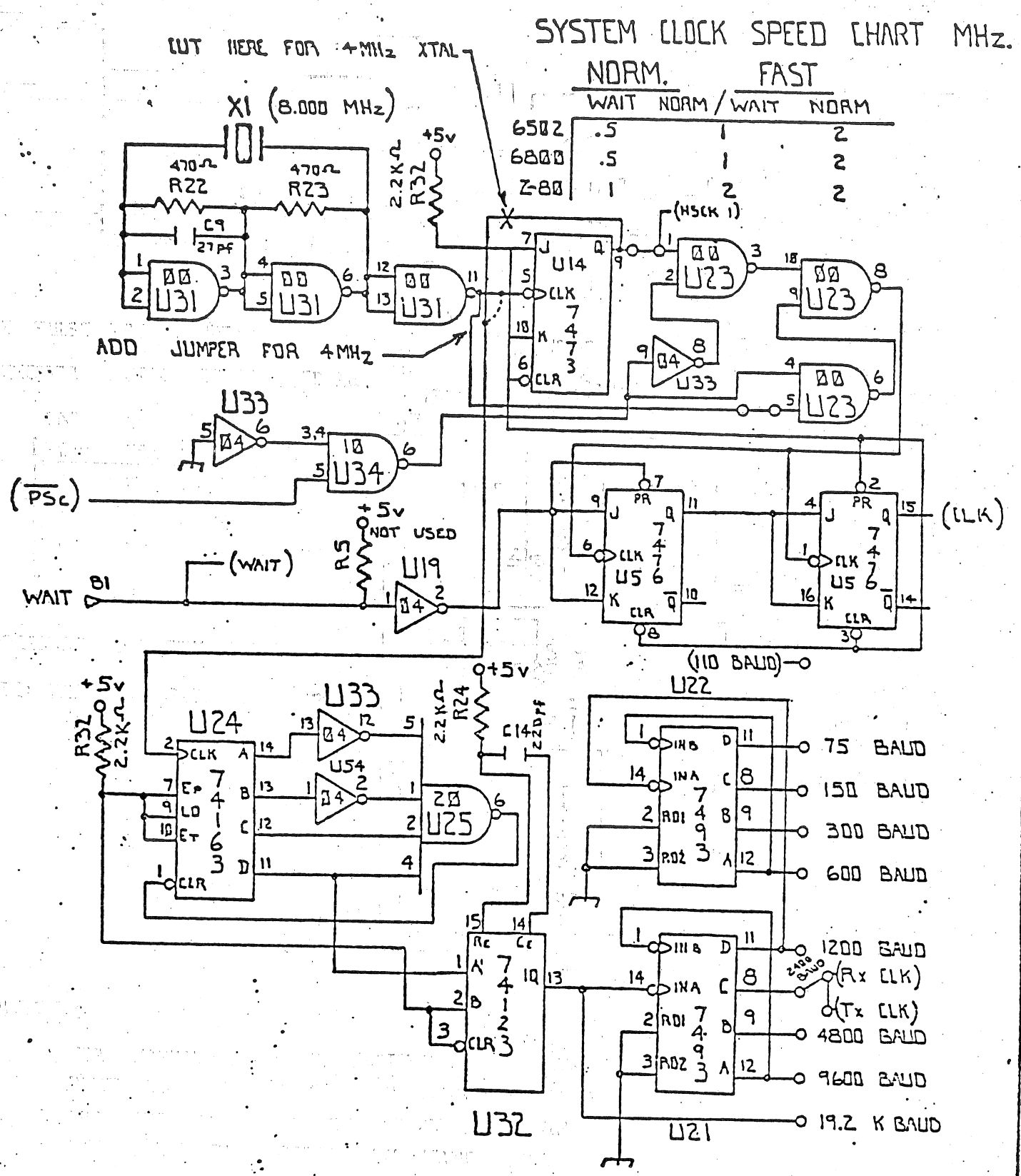
OHIO SCIENTIFIC			product name/number MODEL 510 REV C PIA IMPLEMENTATION	
date 24 APR 1979 DRAWN ~ J.L.K.	revision	page	status	sheet 7 of 11



NOTES:

1. FOR MANUAL PROCESSOR SWITCHING, USE SW-1 AND RESISTORS R33, 34, & 35 OMIT ALL OTHER PARTS ON THIS SCHEMATIC.
   FOR SOFTWARE SWITCHING OMIT SW-1 AND RESISTOR R33, 34, & R35 USE ALL OTHER PARTS INCLUDING PIA.

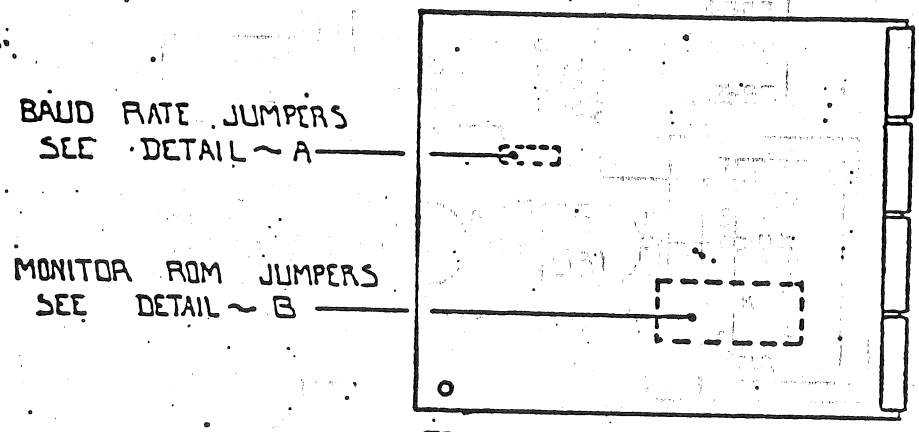
OHIO SCIENTIFIC			product name/number: MODEL 510 REV C PROCESSOR SWITCHING CIRCUITRY	
date: 24 APR 1979 DRAWN - J.L.K.	revision:	page:	status:	sheet 8 of 11



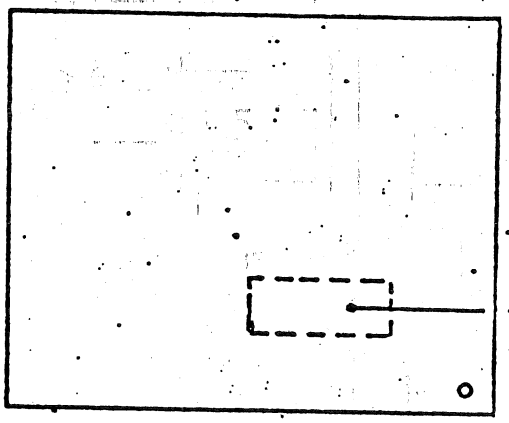
OHIO SCIENTIFIC

product name/number
MODEL ~ 510 REV C
SYSTEM CLOCK AND BAUD RATE GEN.

date 24 APR 1979	revision	page	status	sheet 9 of 11
DRAWN ~ J.L.K.				

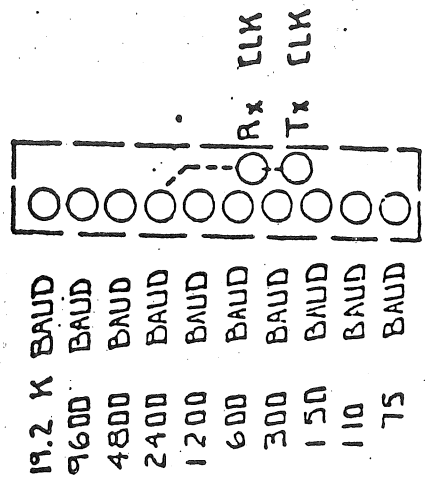


FRONT VIEW OF 510 BOARD



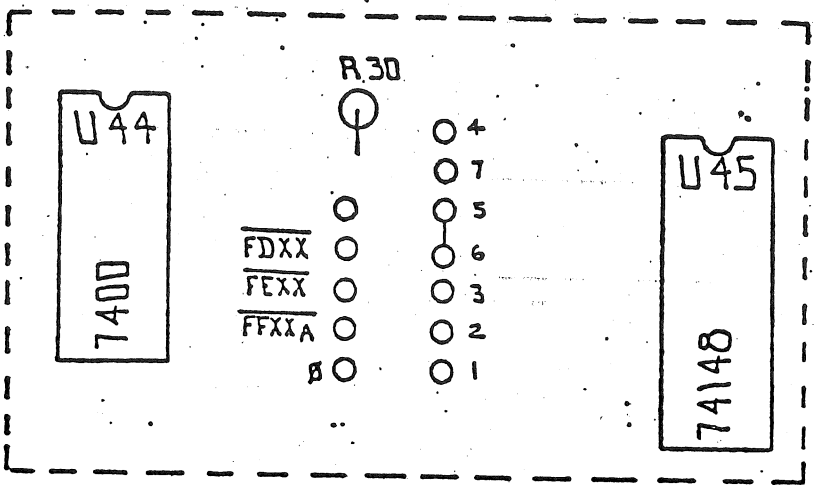
REAR VIEW OF 510 BOARD

OHIO SCIENTIFIC			product name/number MODEL 510 REV L JUMPER DETAILS	
date 24 APR 79	revision	page	status	sheet 10 of 11

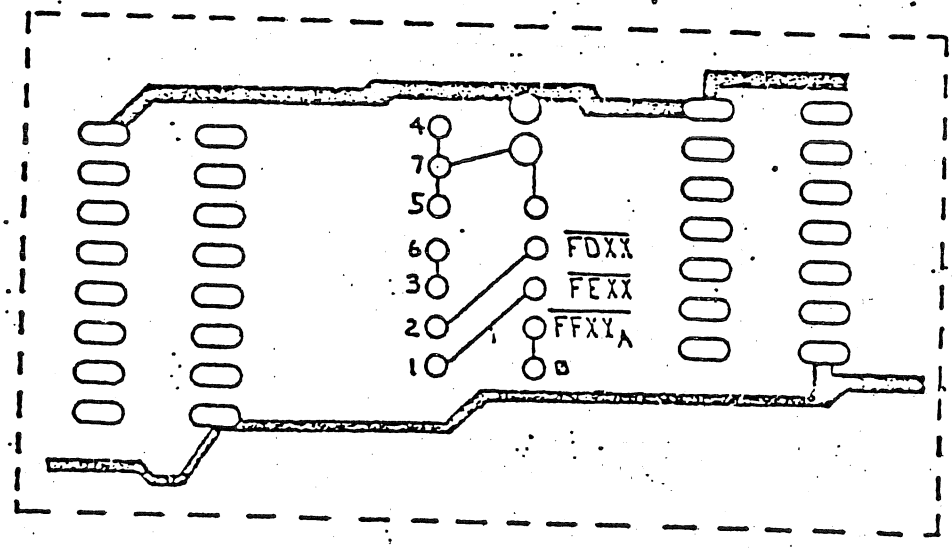


DETAIL~A
FRONT OF 510 BOARD
BAUD RATE JUMPERS

DASHED LINE INDICATES FOIL TRACE ON REAR OF BOARD



DETAIL~B
FRONT OF 510 BOARD
MONITOR ROM JUMPERS



DETAIL~C
REAR OF 510 BOARD
MONITOR ROM JUMPERS

OHIO SCIENTIFIC			product name/number MODEL 510 REV C JUMPER DETAILS	
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ALL DIODES • IN-914
ALL UNMARKED CAPACITORS = .01 uF BYPASS
031 510 REV C
U1 6820 PIA
U2 6850 ACIA
U3 6810 RAM
U4 2716/2316B
U5 7476
U6 6800
U7 6800
U8 8T26
U9 8T26
U10 8T26
U11 8T26
U12 555
U13 7404
U14 7473
U15 8T95
U16 8T95
U17 8T95
U18 8T95
U19 7404
U20 8T95
U21 7493
U22 7493
U23 7400
U24 74163
U25 7420
U26 8T95
U27 8T95
U28 Z-80
U29 8T26
U30 8T26
U31 7400
U32 74123
U33 7404
U34 7410
U35 7400
U36 7404
U37 7410
U38 74154
U39 8T95
U40 8T95
U41 74155
U42 7475
U43 7404
U44 7400
U45 7414B
U46 2716/2316B
U47 6502
U48 8T26
U49 8T26
U50 74123
U51 74123
U52 7404
U53 7400
U54 7404
U55 8T95
U56 8T95
U57 8T95
U58 8T95
C4 27 pF
C13 .01uf
C14 220 pF
C15 .01uf
C16 .01uf
C17 .01uf
C18 .01uf
C19 .01uf
C26 33uf
C27 33uf
R1 1K
R2 1K
R3 1K
R4 1K
R5 1K
R6 1K
R7 1K
R8 1K
R9 1K
R10 10K
R11 10K
R12 10K
R13 10K
R14 10K
R15 10K
R16 10K
R17 10K
R18 10K
R19 10K
R20 5K
R21 1K
R22 470
R23 470
R24 2.2K
R25 NU
R26 220
R27 10K
R28 2.2K
R29 2.2K
R30 2.2K
R31 2.2K
R32 2.2K
R33 2.2K
R34 2.2K
R35 2.2K
R36 2.2K
R37 NU
R38 NU
R39 NU
R40 NU
R41 2.2K
R42 2.2K
R43 2.2K
R44 2.2K
R45 2.2K
R46 2.2K
R47 NU
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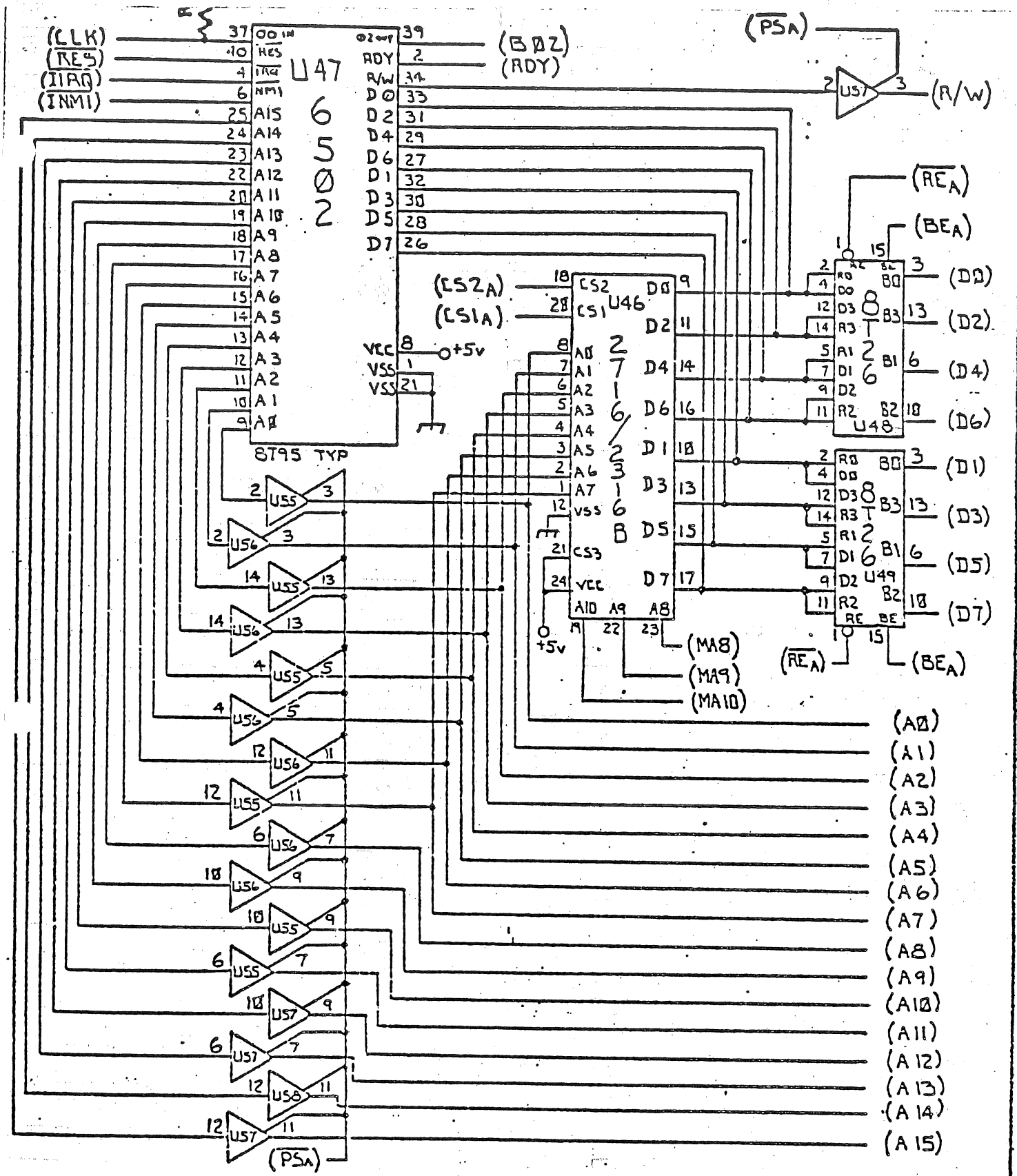
D2
D3
D4 NU
D5
D6
D7
D8
Q1
Q2
CRYSTAL
J3
J4



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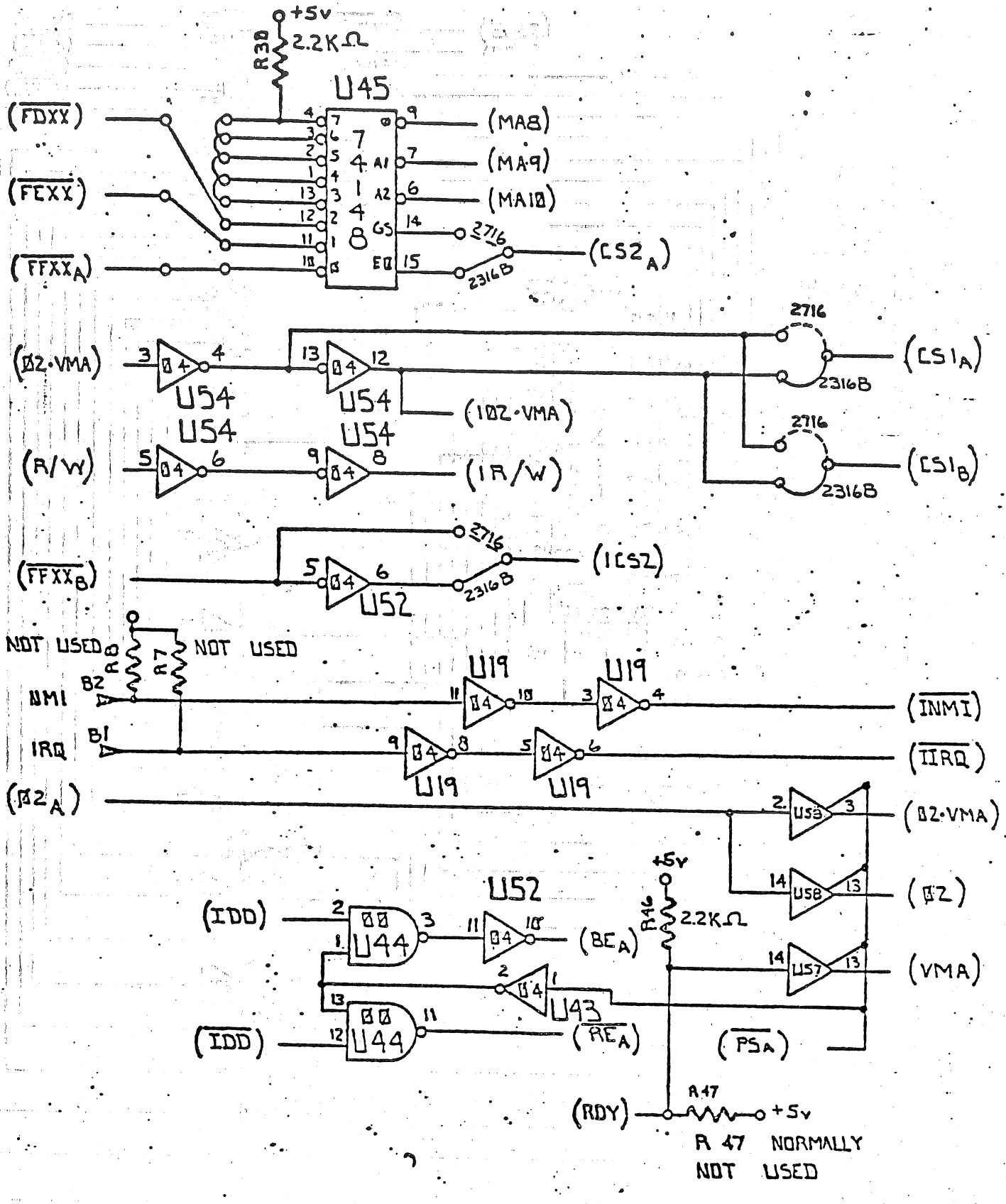
24 APR 1979 DRAWN~ J.L.K.	revision	page	status	sheet 1 of 11



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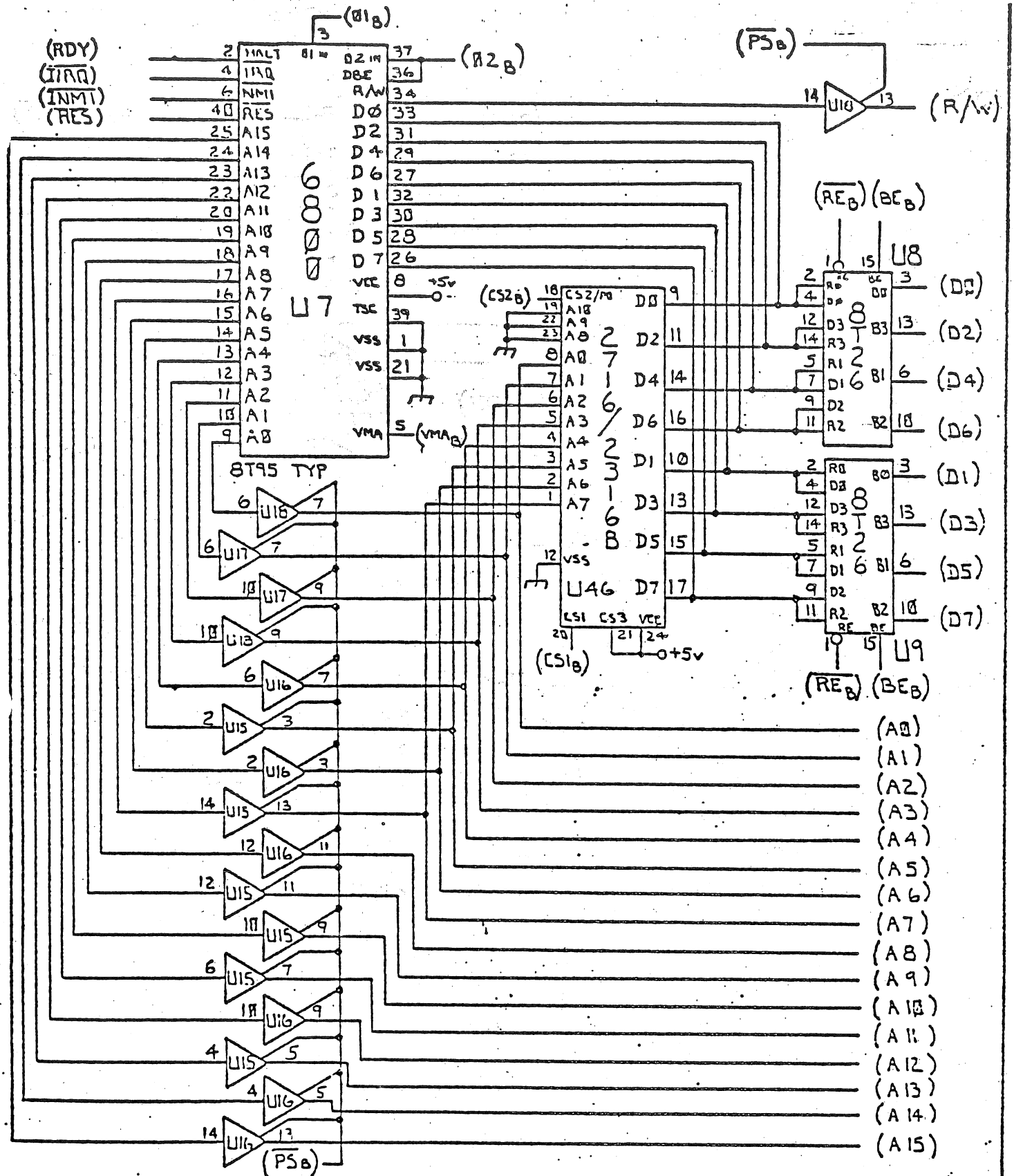

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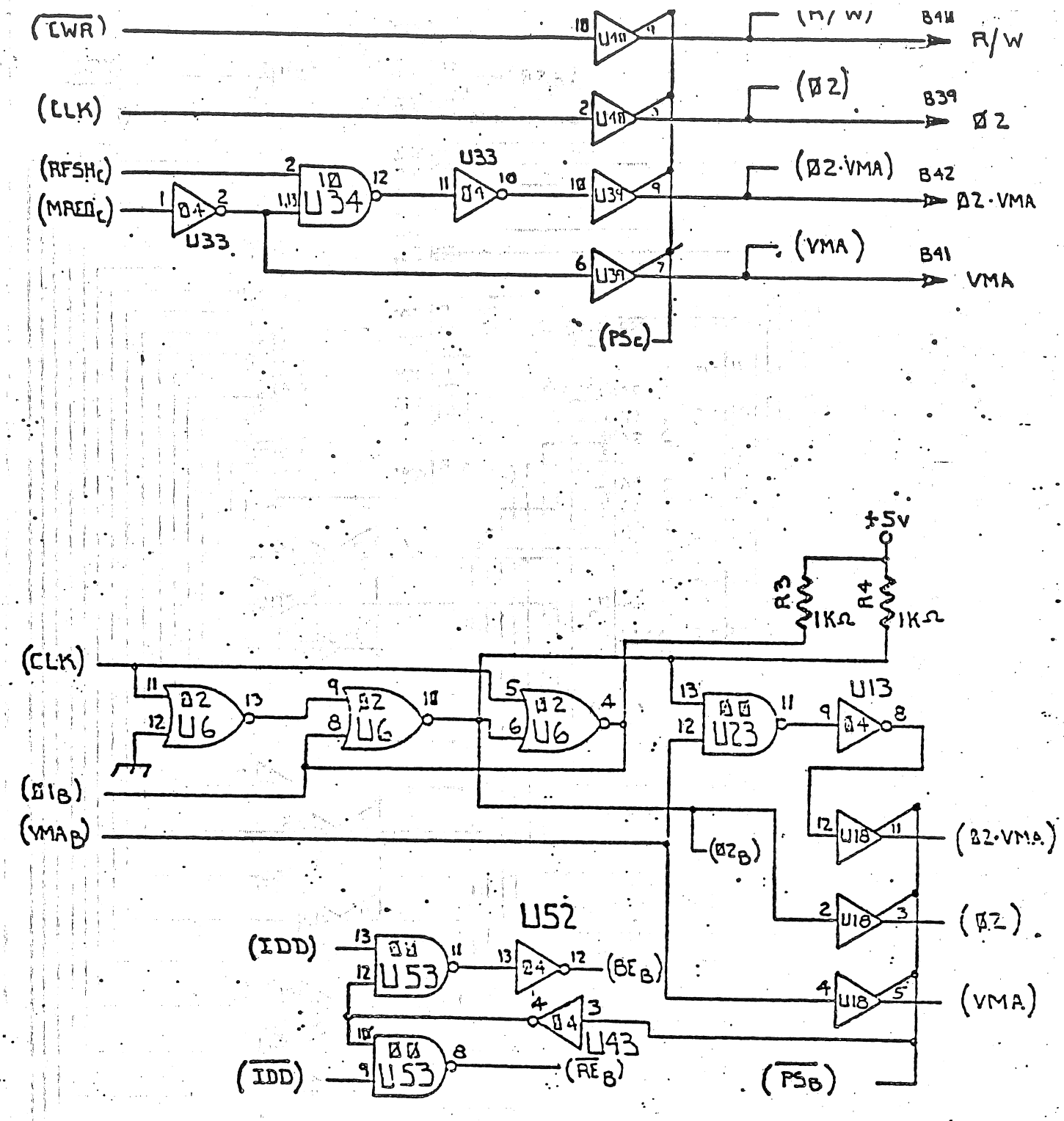

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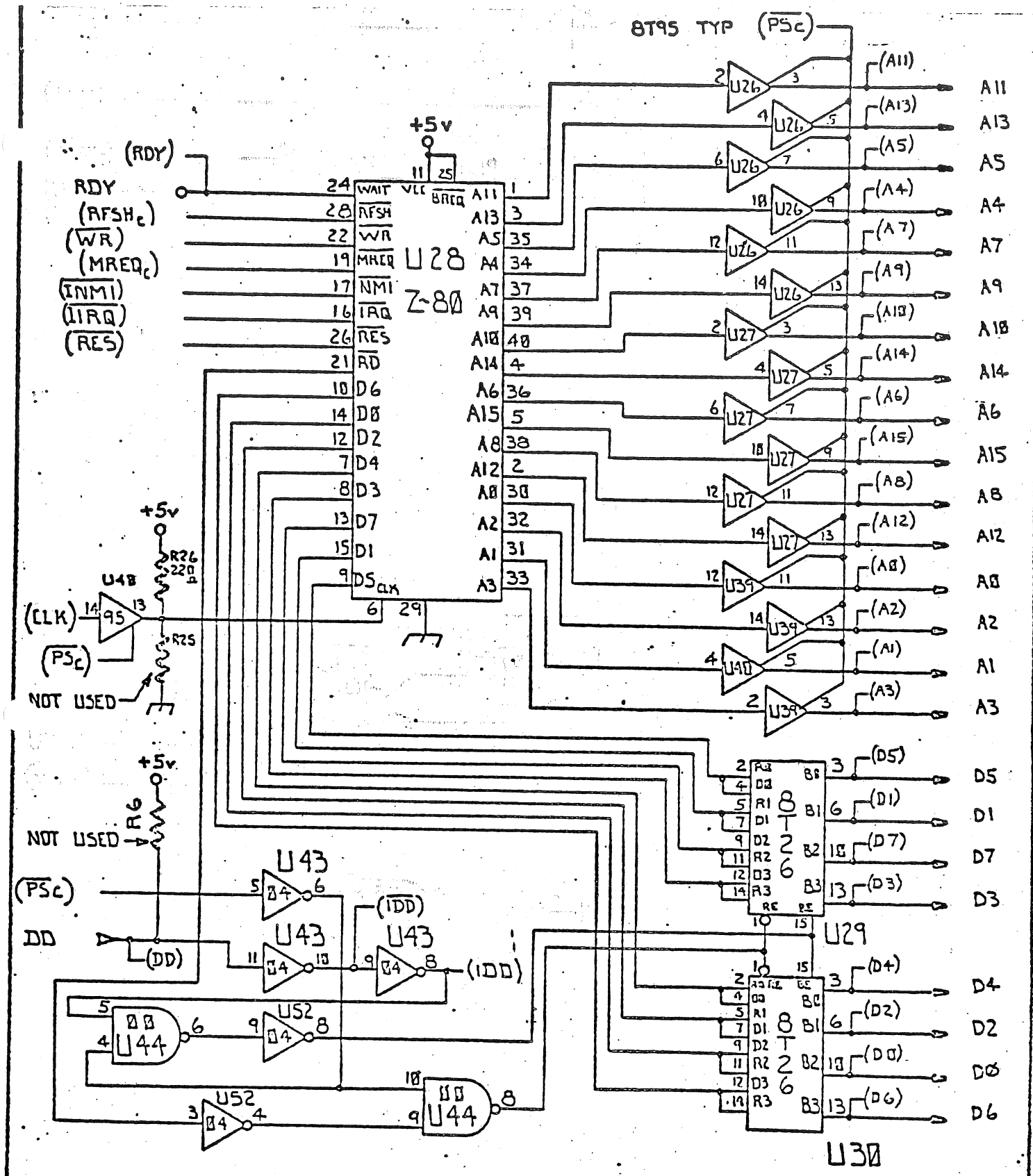
date 24 APR 1979 DRAWN - J.L.K.	revision	page	status	sheet 4 of 11



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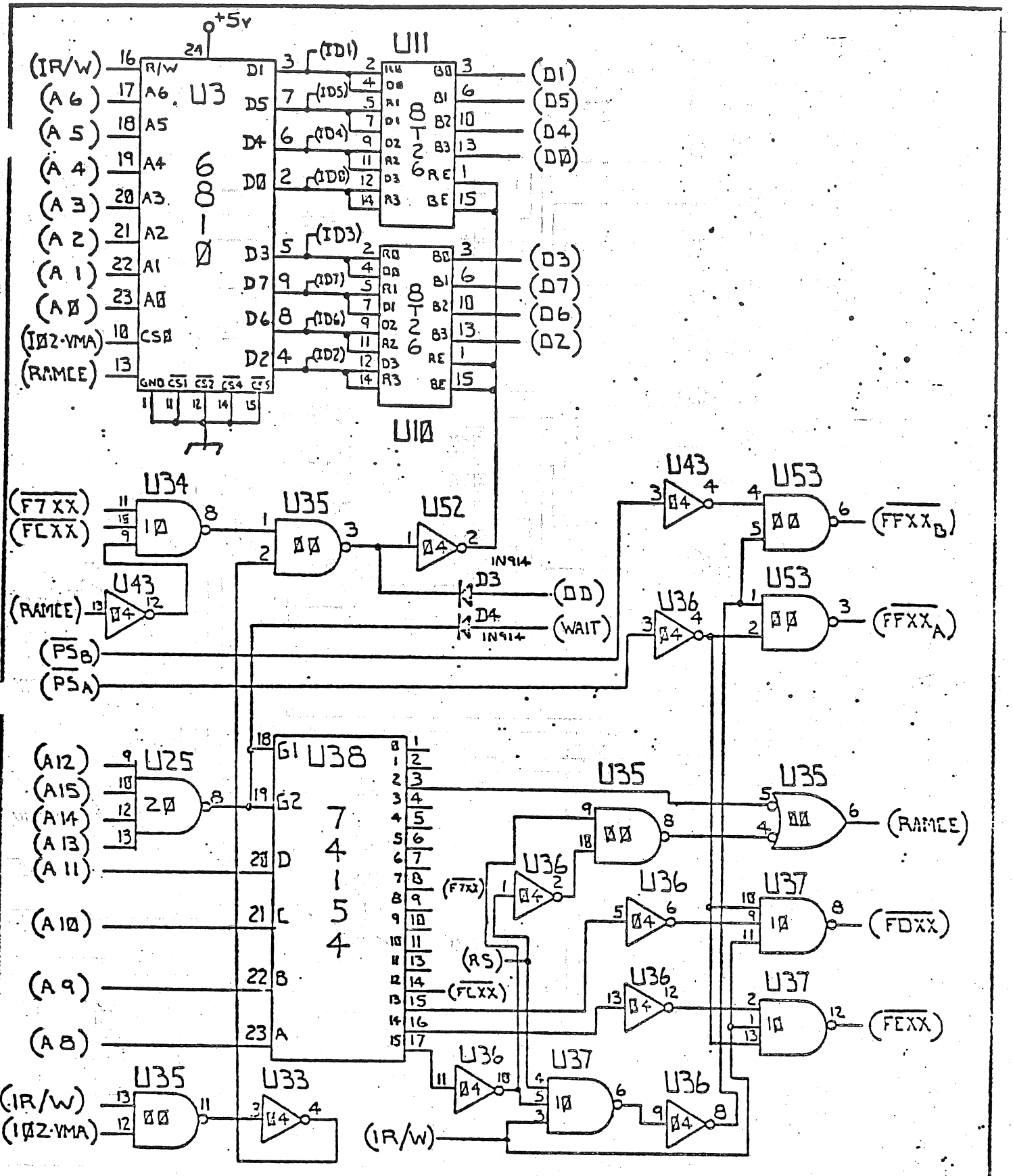
date 24 APR 1979 DRAWN ~ J.L.K.	revision	page	status	sheet 5 of 11



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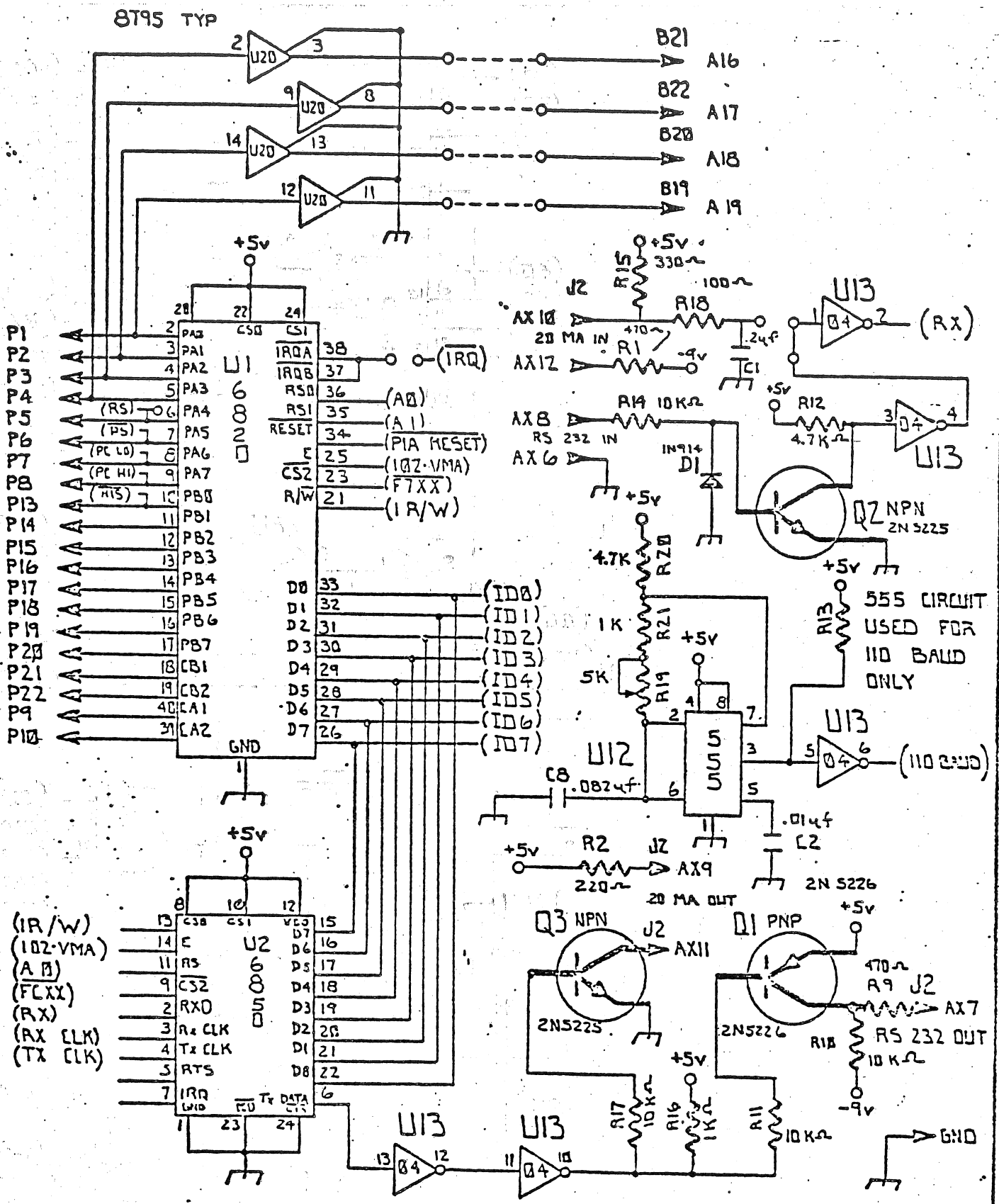
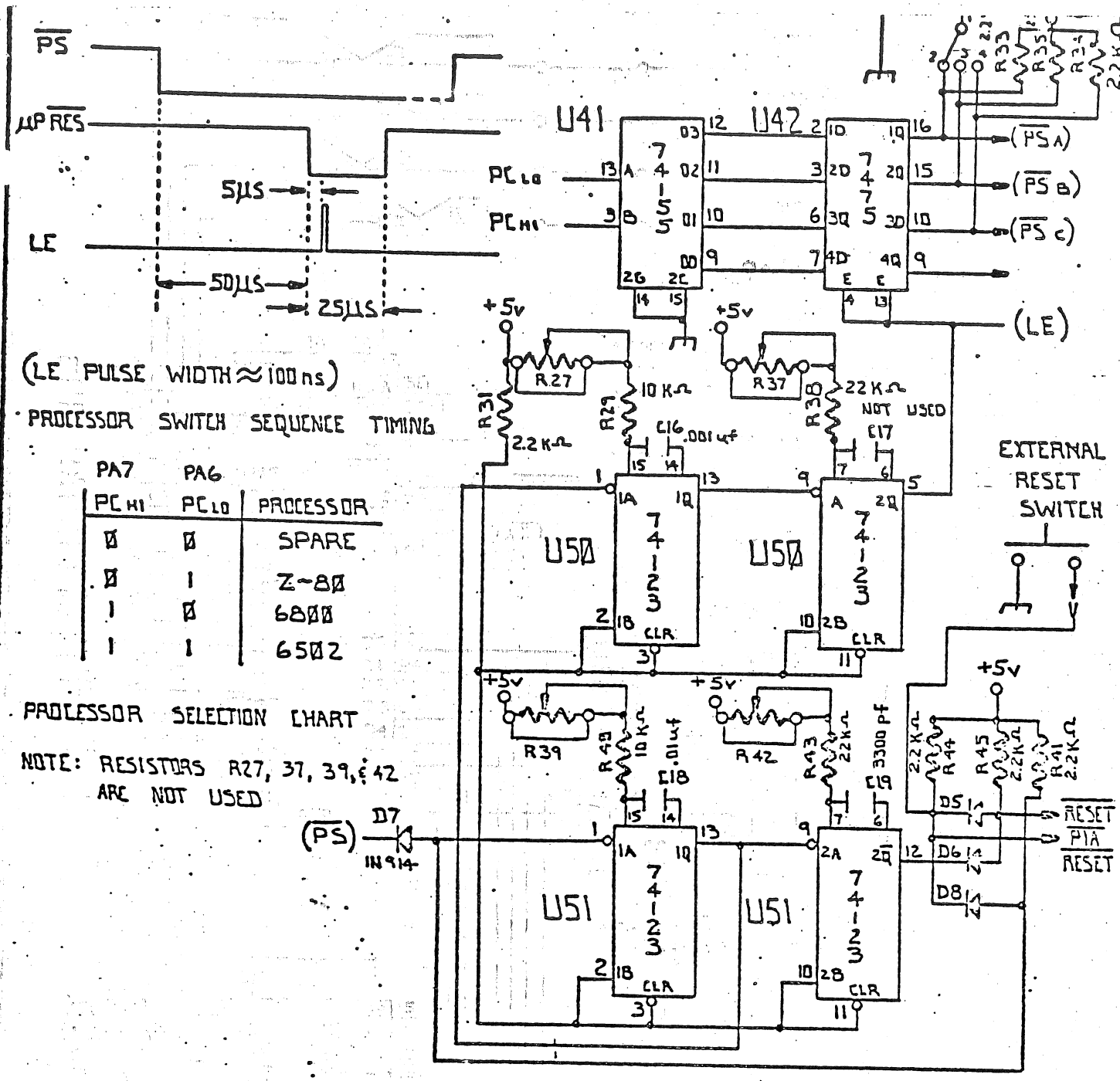
date 24 APR 1979 DRAWN ~ J.L.K.	revision	page	status	sheet 6 of 11



OHIO SCIENTIFIC

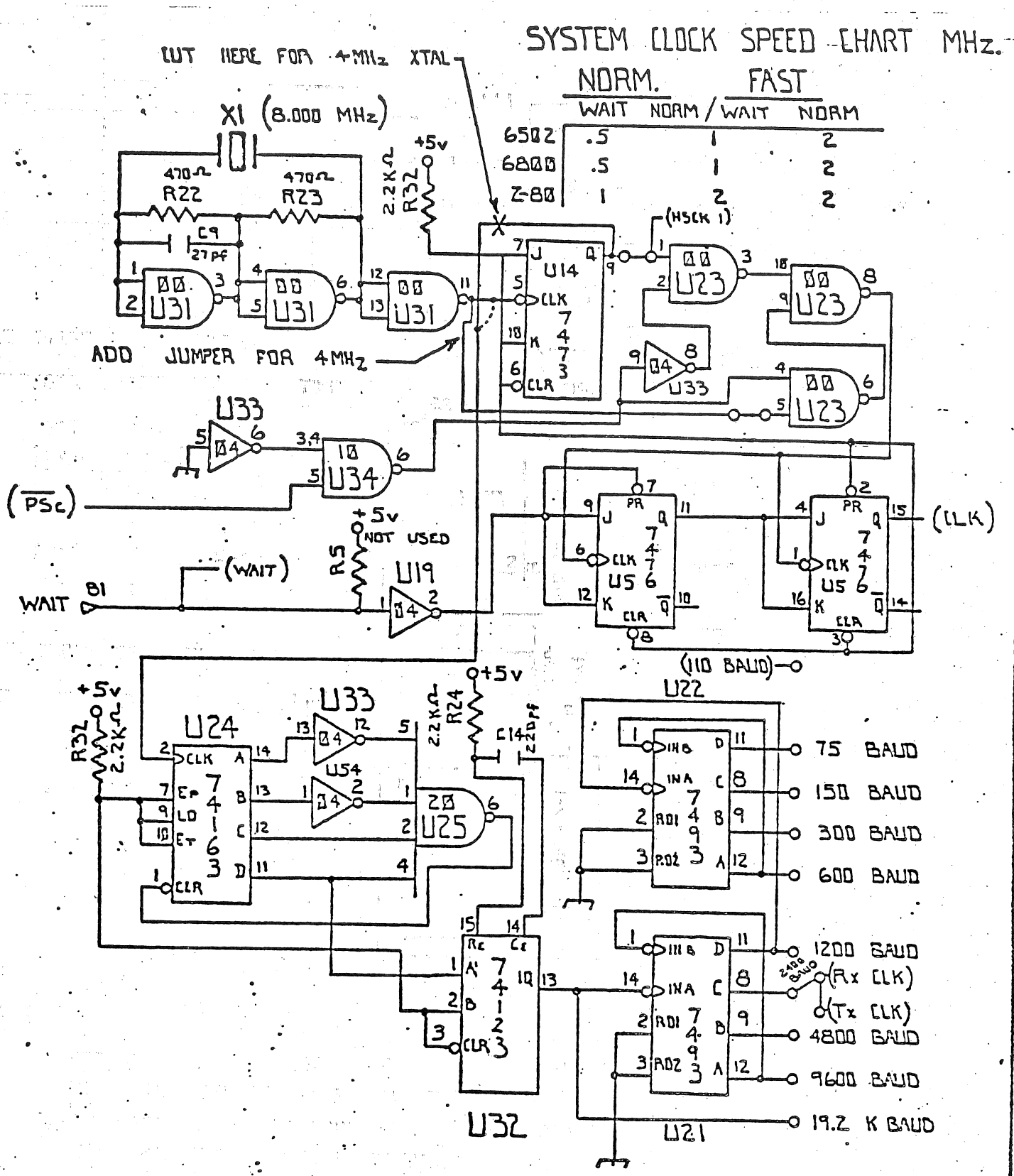
product name/number MODEL S1Ø REV C PIA IMPLEMENTATION				
date 24 APR 1979 DRAWN ~ J.L.K.	revision	page	status	sheet 7 of 11



NOTES:

1. FOR MANUAL PROCESSOR SWITCHING, USE SW-1 AND RESISTORS R33, 34, & 35 OMIT ALL OTHER PARTS ON THIS SCHEMATIC.
   FOR SOFTWARE SWITCHING OMIT SW-1 AND RESISTOR R33, 34, & R35 USE ALL OTHER PARTS INCLUDING PIA.

OHIO SCIENTIFIC			product name/number: MODEL 510 REV C PROCESSOR SWITCHING CIRCUITRY	
TO 24 APR 1979 DRAWN ~ J.L.K.	revision	page	status	sheet 8 of 11



OHIO SCIENTIFIC

product name/number
MODEL ~ 510 REV C
SYSTEM CLOCK AND BAUD RATE GEN.

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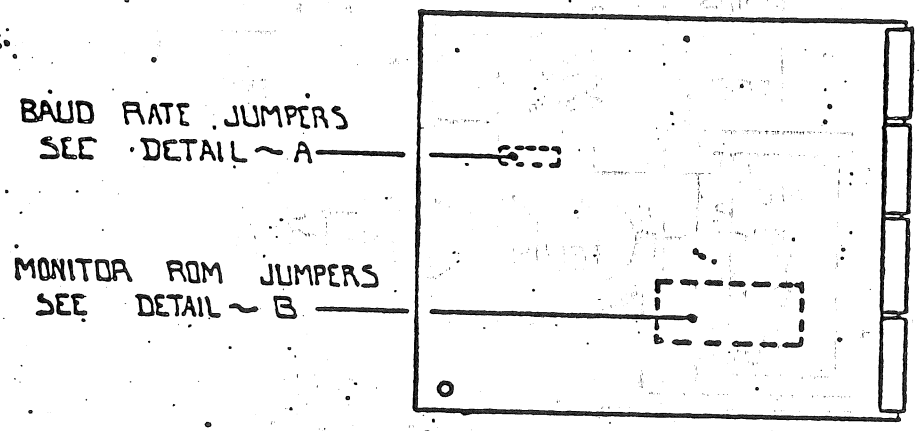
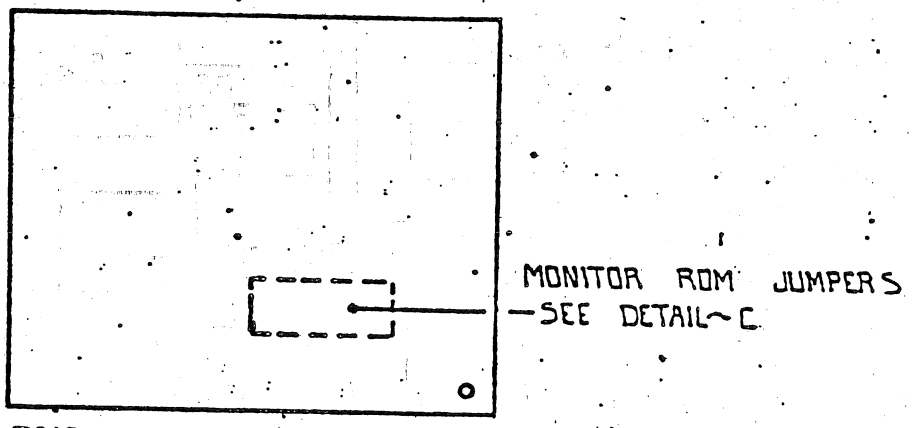


FRONT VIEW OF 510 BOARD



REAR VIEW OF 510 BOARD

OHIO SCIENTIFIC			product name/number MODEL 510 REV C JUMPER DETAILS	
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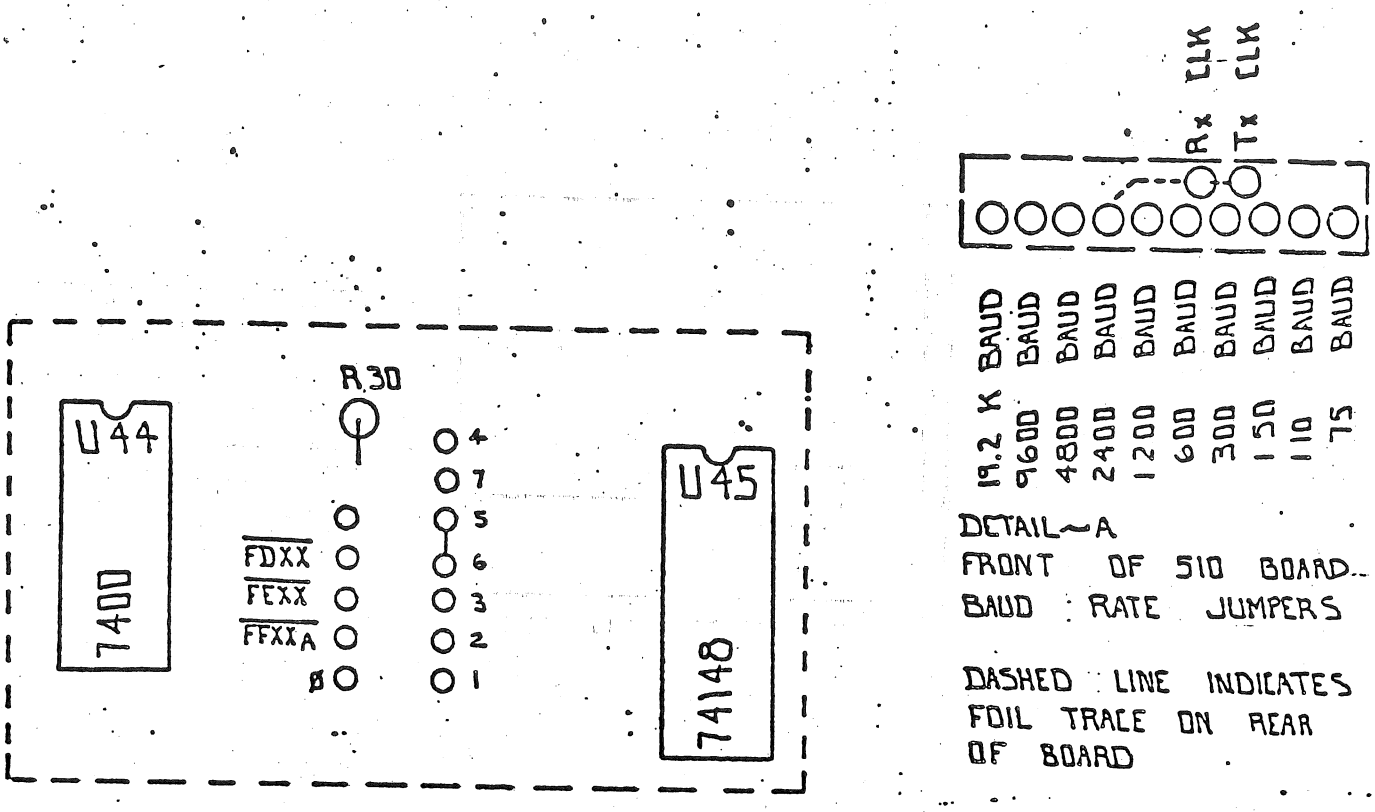
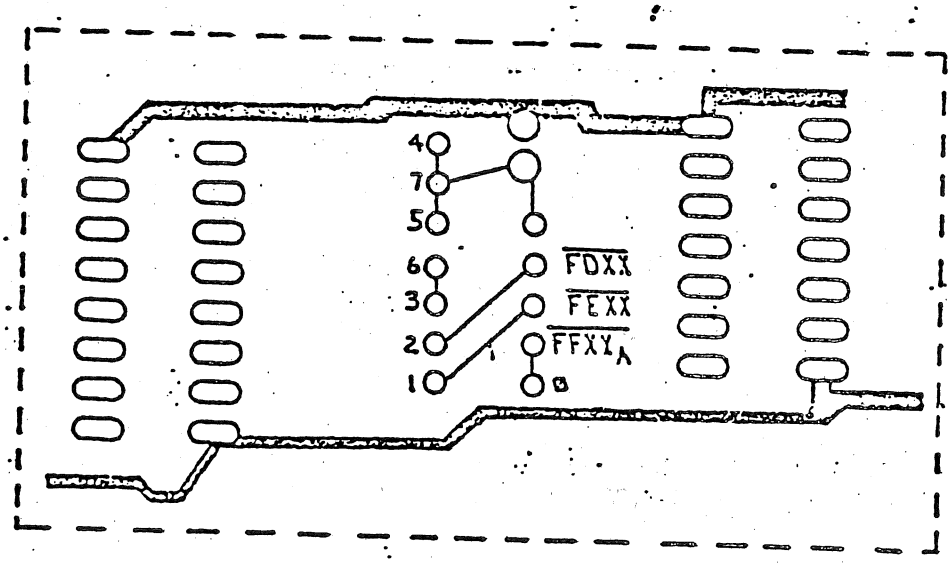


DETAIL~A
FRONT OF 510 BOARD
BAUD RATE JUMPERS

DASHED LINE INDICATES FOIL TRACE ON REAR OF BOARD

DETAIL~B
FRONT OF 510 BOARD
MONITOR ROM JUMPERS



DETAIL~C
REAR OF 510 BOARD
MONITOR ROM JUMPERS

OHIO SCIENTIFIC			product name/number MODEL 510 REV C JUMPER DETAILS	
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