Versafloppy II manual rev A to rev B
Herb Johnson June 2013
thanks to John Monahan for rev A manual

The Rev A manual supports the VF II with a PPL and
trimmer capacitor adjustment for data separator.
The Rev B and later manuals support a VCO and opamp and
trim potentiomenter adjustment for data separator.

Rev A page 6 2-13 output port 63

5. Bit 7 - Wait State Enable

Rev B page 6 2-13 output port 63

5. Bit 7 - Wait State Enable, /INUSE STB

The /INUSE STB when set low during drive select activation or
deactivitation will lock or unlock the drive dor if that option
is incorporated on the drive. this function can be disabled by
cutting the etch between E11 and E12.

Rev A page 6-7,

2-18 Data Separator, Phase Locked Loop

The Data Separator circuit divides the composite FM and MFM
Read Data into separated Data and CLock signals required by
the FD1791B-1 controller chip. The data separator uses the NE564
phase locked loop circuit to reconstruct the clock from the raw
data stream.

2-19 Oscillator

The Oscillator circuit provides a crystal controlled squarewave
(16MHZ) used by the Data Separator and FD1791B-1.

Rev B page 6-7,

2-18 Data Separator

The Data Separator circuit divides the composite FM and MFM
Read Data into separated Data and CLock signals required by
the FD1791B-1 controller chip. The data separator uses the
74LS124 VCO coupled with a LM301 OpAmp to dynamically reconstruct
the clock from the input raw data stream.

2-19 Oscillator

The Oscillator circuit provides a crystal controlled squarewave
(16MHZ) divided down to provide the proper clock frequence to the
FD1791B-1 for 8" or 5-14" operation.

Rev A does not have sub-section 3-7 Format Routine.

The Rev A manual I have, does not have section IV - Construction,
or Section V - Interrupt Options. Note there are parts differences

between Rev A's board and Rev B's.

Rev A has a section 7-6 for PPL adjustment as follows below. Rev B's board has section 4-4 for PPL adjustment of trimpot R-19.

7-6 PHASE LOCKED LOOP FINAL ADJUSTMENT

IN order to fine-tune the data separator for best performance, the following procedure should be followed.

1) Execute teh read test using VDFIAG (Section VIII) on a previously formatted diskette. Use double density Read and Format type codes.

2) While listening to the step rate of the Drive, adjust C3 slightly clockwise until hesitation again occurs.

3) set C3 adjustment in the middle of the range in step 2.

4) Allow test to run one full sweep through diskette. If heistation occurs make very slight adjustments to minimize the hesitation.

5) After above adjustments the test should run with no error printouts.

Rev A manual I have has this Addendum:

Sept 11 1979 Addendum Versaloppy II Operations Manual

The following changes must be noted when assembling

1_ R12 is a 100K ohm resistor
2) add a 330pf cap to ground from pin 38 end of R12.
3) add a 47K ohm resistor to ground from pin 1 of U10.

Note: if your board in your kit is REV C, the following changes must also be made.

4) Cut the etch between pins 3 and 4 of IC U3.
5) Add jumpers between the pins 14, 3, 7 and 10.

POST OFFICE BOX 28810
DALLAS, TEXAS 75228

SD SYSTEMS

3017 LINCOLN
GARLAND, TEXAS 75041

September 11, 1979

ADDENDUM VERSAFLOPPY II
OPERATIONS MANUAL

The following changes must be noted when assembling the Versafloppy II Kit.

1) R 12 is a 100 K OHM resistor.
2) You must add a 330 pf. cap to GND from pin 38 end of R12.
3) You must add a 47K OHM resistor to ground from pin 1 of U10.

Note: If the board in your kit is REV. C (see the silk screen on the board) the following changes must also be made.

4) Cut the etch between pins 3 and 4 of IC U3.
5) Add jumpers between pins 14, 3, 7 and 10.

POST OFFICE BOX 28810
DALLAS, TEXAS 75228

SD SYSTEMS

3017 LINCOLN
GARLAND, TEXAS 75041

September 11, 1979

ADDENDUM VERSAFLOPPY II
OPERATIONS MANUAL

Page 1, 1-1
The second paragraph should be followed by:
The versafloppy II is designed for operation with the Z-80 CPU and is not recommended for operation with other processors.

Page 6, 2-18
The letters PPL stand for Phase Locked Loop.

Page 10, 3-2
The last sentence of the first paragraph should read as follows:
"The SEEK and TRINT (section 3-5) subroutines are called to put the read/write head on the requested side and track."

Page 11, 3-3
The last sentence of the second paragraph should read as on page 10(see above).

Page 16, 4-4
Delete item 4

Page 18, 6-1
This paragraph should read as follows:
The standard software for the Versafloppy II is supplied in listing form (Appendix D) and also available in 2716 PROM for an additional charge. This software is called DDBIOS (Double Density Basic I/O System) and is assembled to reside at F000H.

Page 20
Add 7-6 to read as follows:
In order to fine tune the Data Separater for best performance the following procedure should be followed.
1) Execute the read test using VFDIAG (Section VIII) on a previously formatted diskette.(Using Double Density Read and format type codes)
2) While listening to the step rate of the drive, adjust C3 slightly clockwise until hesitation begins to occur. Then adjust counter-clockwise until hesitation again occurs.
3) Set C3 adjustment in the middle of the range in Step 2.
4) Allow test to run 1 full sweep through diskette. If hesitation occurs make very slight adjustments to minimize the hesitations.
5) After above adjustments the test should run with no error printouts.

Page 21, 8-1
The last sentence should read as follows:
The diagnostic uses the DDBIOS and monitor PROMS for disk and con-

POST OFFICE BOX 28810
DALLAS, TEXAS 75228

SD SYSTEMS

3017 LINCOLN
GARLAND, TEXAS 75041

sole I/O.

Page 22, 8-2
After the last sentence add the following:
If the Period(.) is entered instead of a command, control will be transferred to the monitor

Page 23, 8-4
Delete the last sentence.

Page 24,8-8
This paragraph should read as follows:
Test 05 is actually not a diagnostic, but a program which formats a diskette in accordance with drive and density type. This must be done to all diskettes before further use. Note that on the distributed SDOS diskette there is a program which formats a diskette. This program has the filename "FORMAT.COM" and may be run by entering "FORMAT (CR)". BE SURE TO USE A SCRATCH OR UNFORMATTED DISKETTE WHEN FORMATTING A DISKETTE BECAUSE ANY PREVIOUSLY WRITTEN DATA WILL BE LOST.

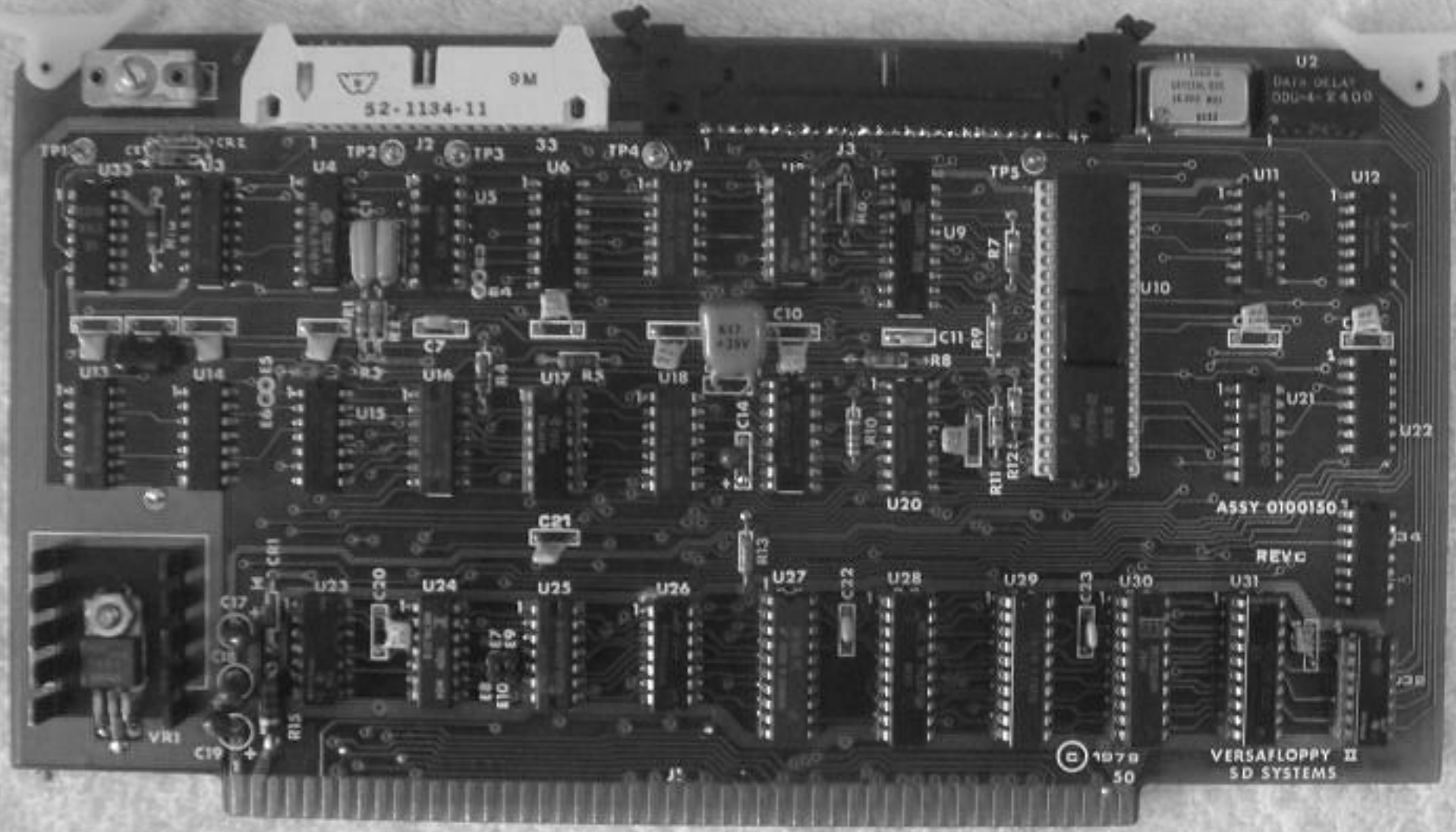
Page 25, Table 8-1
Delete lines 5 & 7. Line 8 changed.

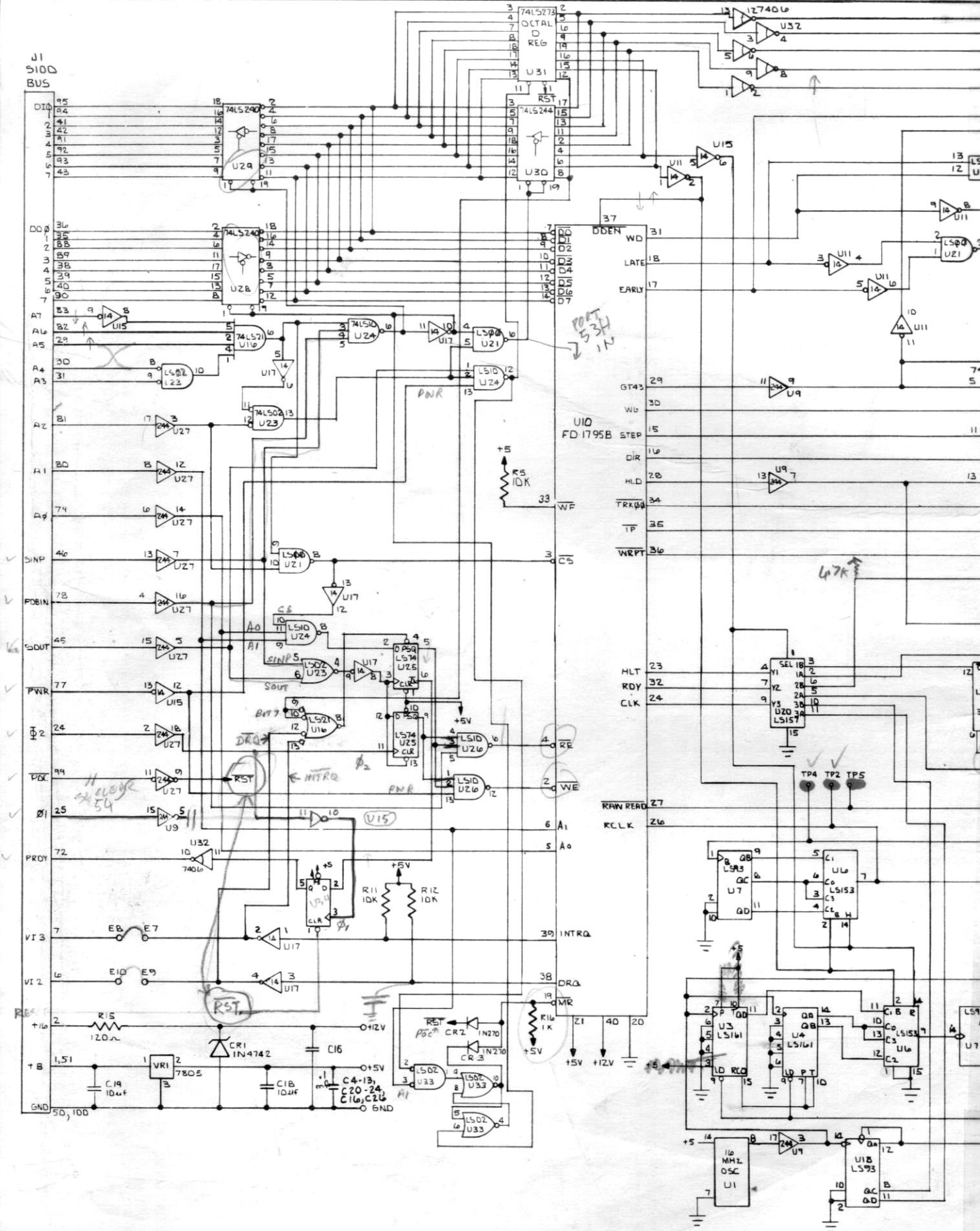
TABLE 8-1

DISK CONTROLLER COMMAND CODES

MINI DISK CMD CODE	FULL SIZE CMD CODE	DESCRIPTION
0B	09	Restore Drive TRK ØØ
13	19	Track Seek with No Verify
F4	F4	Format Track
88	80	Read Sector
A8	AØ	Write Sector
C4	CØ	Read Track Address

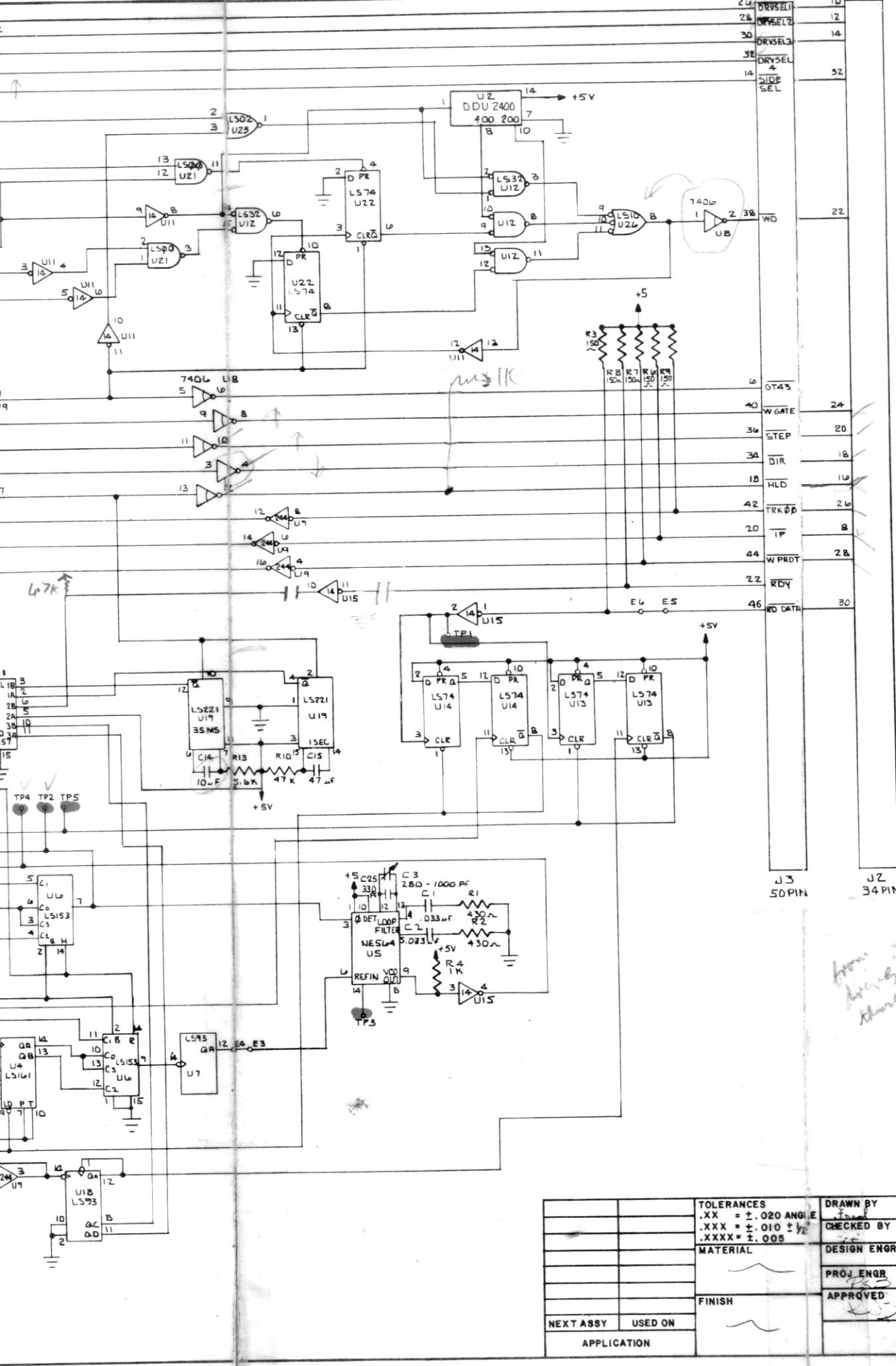
Please see the revised pages attached.


9M
52-1134-11
U2
DATA DELAY
ASSY 0100150
REV C
VERSAFLOPPY II
SD SYSTEMS
© 1978
50



3 ALL RESISTORS ARE 1/4W 5%
2 ALL LS PARTS ARE 74 SERIES
1. ALL 14'S AND 244's ARE LS

NOTES:



		TOLERANCES .XX = ±.020 ANGLE .XXX = ±.010 ± ½° .XXXX = ±.005	DRAWN BY CHECKED BY DESIGN ENGR PROJ ENGR APPROVED
		MATERIAL	
		FINISH	
NEXT ASSY	USED ON		
APPLICATION			