

D80D0WQ EEPROM ERASER/PROGRAMMER

User's Guide

Table of contents

1. Introduction	3
2. Check list and requirements	3
3. Installing	3
4. Quick start	5
4.1 ERASE MODE D80D0WQ	5
4.2 TEST MODE D80D0WQ / M35080	6
4.3 ERASE MODE M35080-3; M35080-6	7
5. PC link	8
5.1 “RDINC” Incremental Registers command button	8
5.2 “READ” command button	9
5.3 “WRINC” Incremental Registers command button	9
5.4 “WRITE” command button	10
6. Memory viewer	10
Appendix 1	12

1. Introduction

This manual will guide you through the installation of the D80D0WQ eraser/programmer, referenced hereafter as the D80D0WQ programmer. The D80D0WQ programmer has been designed for on-board access via PC control operation for reading all EEPROM data, incremental area EEPROM writing, EEPROM writing and stand alone access for erasing incremental registers of D80D0WQ memory to delivery state of incremental registers area.

D80D0WQ features

- RS232 interface to PC for programming
- 8 - pin socket for D80D0WQ and M35080-3; M35080-6 devices
- Two push buttons for stand alone control
- Two 7-segments LED indicators and three LED's for indication modes of operate

2. Check list and Requirements

Hardware requirements

Host	- A 32-bit x86 based with a free Serial port (Com1, 2) a hard-disk system.
Memory	- Minimum 16 Mbytes
Display	- Color VGA display recommended
Power supply	- A 12-14 volt/500 mA linear power supply source
Tool	- D80D0WQ eraser/programmer board*
Cable	- An RS232C "straight-thru" cable*
Adapters	- four 8-pins SMD adapters*

Software checklist

OS	- MS-Windows (Win95, Win98, Win2000, WinXP)
Software tool -	- ETL D80D0WQ control software*

** Package check list*

Contents of D80D0WQ eraser/ programmer kit:

- D80D0WQ eraser/programmer board **
- 9-pin "straight-thru" cable **
- (4 pc.) 8 pins SMD adapters **
- CD (included control software) **
- This manual **

****NOTE:** See D80D0WQ eraser/programmer package check list

3. Installing

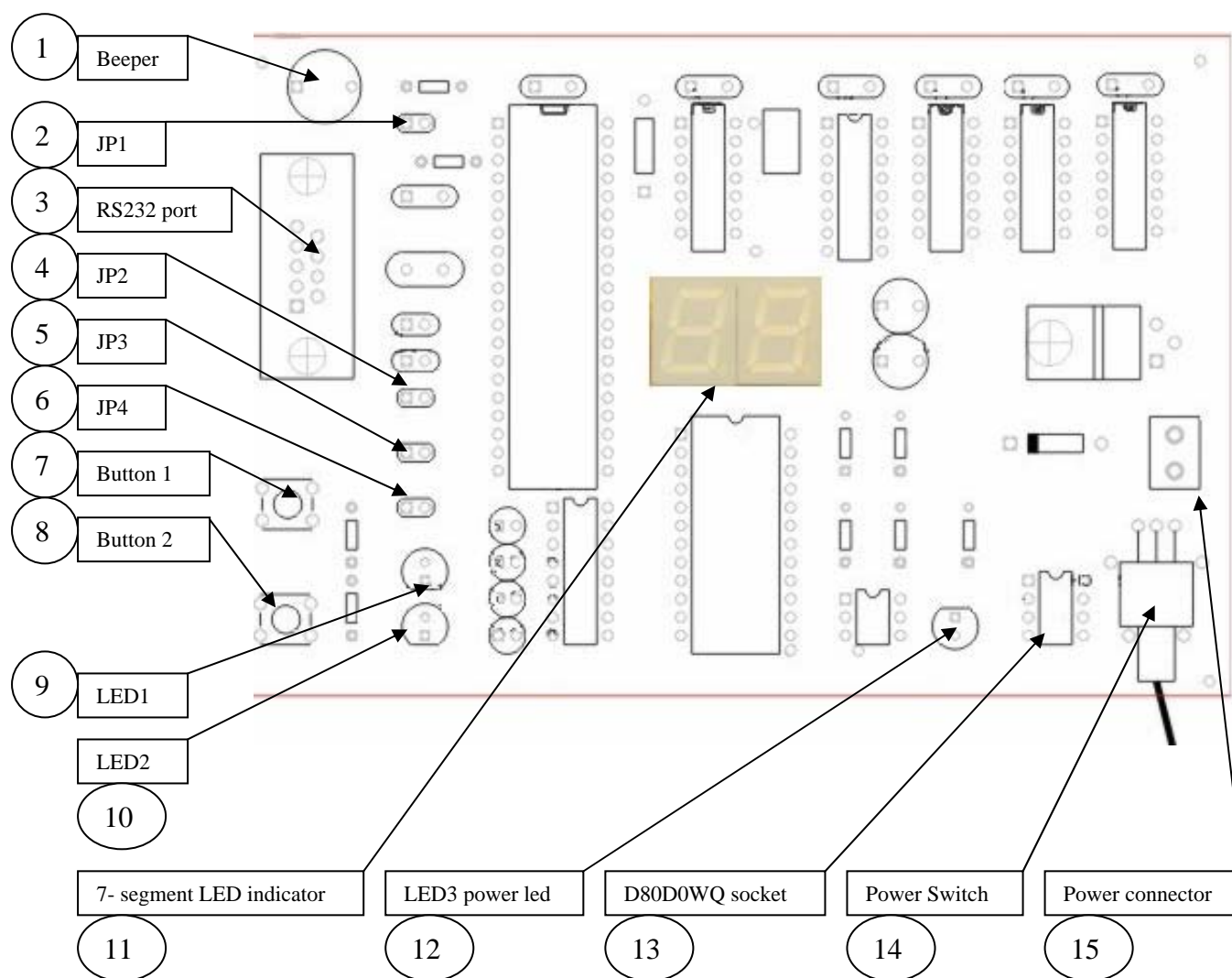
The D80D0WQ programmer is designed to access the D80D0WQ device (M35080 protocol compatible) 8 Kbit Serial SPI Bus EEPROM with Incremental Registers. D80D0WQ Programmer support 4..10 MHz Clock Rates devices (See Appendix1). To understand D80D0WQ Programmer components meaning see figure below.

To install and use the D80D0WQ programmer, follow these steps:

- Install D80D0WQ control software. Insert the supplied ETL CD-ROM into a CD drive and navigate to “Install Software” > “Install D80D0WQ Prog.”, then execute the “Setup.exe” file; this will guide you through the setup process.
- Connect D80D0WQ programmer to the power supply source (12-14 V \geq 500 mA).
- Attach D80D0WQ programmer to computer. Use the 9-pin RS232C cable that is shipped with the D80D0WQ programmer.

NOTE: D80D0WQ can not be ERASE in PC link mode, for this case switch hardware (JP1 must be not mounted) to stand alone mode

- Install D80D0WQ or M35080 device into a target socket.
- D80D0WQ control software can now be started. However do not run control software until power supply not apply to D80D0WQ programmer.
- Turn ON power supply switch. LED 3 became to green color, telling that power is present and D80D0WQ programmer ready to operate.



D80D0WQ ERASER/PROGRAMMER components

- 1 - Beeper: Internal buzzer sound duplicate control
- 2 - Jumper 1 (JP1): PC-link / Stand alone control
- 3 - RS232 port : Serial host connector
- 4 - Jumper 2 (JP2): select D80D0QW device*
- 5 - Jumper 3 (JP3): select Self Test mode
- 6 - Jumper 4 (JP4): Select M35080 (old) device*
- 7 - Button 1: TEST/READ button
- 8 - Button 2: ERASE/WRINC button
- 9 - LED 1: control led (green color led)
- 10 - LED2: program led (red color led)
- 11 - 7 segment LED indicator: 2 digit 7 segment LED status display
- 12 - LED3 power led: power status led (green color)
- 13 - D80D0WQ socket: 8-PIN IC header (socket) for target IC adapter
- 14 - Power Switch: Power supply switch
- 15 - Power connector: Power supply connector

***NOTE:D80D0WQ and M35080-3; M35080-6 devices supported only. For M35080V6 or M35080VP use appropriate M35080V6 ERASER/ PROGRAMMER (see APPENDIX 1)**

4. Quick Start

Follow the procedure described below to configure D80D0WQ eraser/ programmer:

- Select mode of operate PC – link or Stand Alone mode:

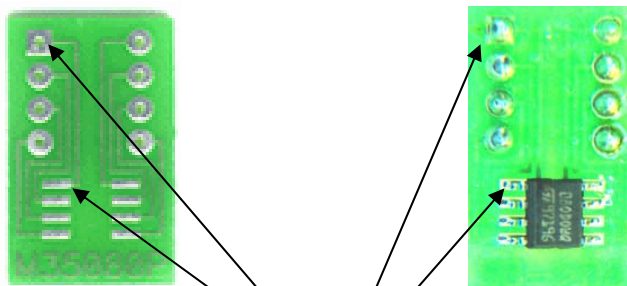
PC-link: JP1 must be mounted. LED display message: “**PC**” (Personal Computer) /*

STATUS DISPLAY :



Stand Alone: JP1 must be not mounted. LED display message: “**JU**” (Jumper unmounted) /*

STATUS DISPLAY :



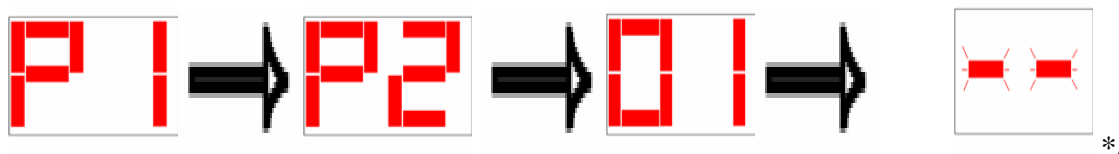
1-ST PIN ORIENTATION

4.1 ERASE MODE D80D0WQ (STAND ALONE)

1. Switch power OFF
2. Place the device to erase in its socket. When inserting a device in the socket notice the 1-st pin orientation of the device
3. Unmount Jumper 1 (JP1)
4. Mount Jumper 2 (JP2) to select D80D0WQ device
5. Switch power ON
6. Ensure that “**JU**” message is appear on status display
7. Press Button 2 (ERASE) to enter erase mode then ensure that “**P1**” message is appear on status display
8. During erasing procedure status display will change according to phases of erasing procedure follow by :/*

“**P1**” -> “**P2**” -> “**01**” -> “**02**” -> “**03**” -> “**04**” -> “**05**” ->
 “**06**” -> “**07**” -> “**08**” -> “**09**” -> “**10**” -> “**11**” -> “**12**” -> “**13**”
 -> “**14**” -> “**15**” -> “**16**” -> “**--**”

STATUS DISPLAY:



In the finish phase the 7 segment LED indicator will turn “G” segments flashing, that mean all incremental registers is clear from now.

9. Switch power OFF

Note: Pass procedure start before erase operation - “**P1**”: phase 1; “**P2**”: phase 2. The internal buzzer duplicate each erased register by sound signal.

4.2 TEST MODE D80D0WQ / M35080 (STAND ALONE)

1. Switch power OFF
2. Switch power ON
3. Unmount Jumper 1 (JP1)
4. Mount Jumper 3 (JP3) to select test mode
5. Press Button 1 (TEST) to start verify procedure
- 5a. Press Button 2 (WRINC) to start write incremental area (See Note)
6. Switch power OFF when test completed

On success: “**oo**” will turn now, that mean test is passed and all incremental registers clear:/*



STATUS DISPLAY :

On error: “**EE**” will now turn flashing, that mean incremental registers is not clear:/*



STATUS DISPLAY :

Note: Press Button 2 (ERASE/WRINC) to write **\$AA55** pattern to the incremental area

4.3 ERASE MODE M35080 -3; M35080-6 (STAND ALONE)

1. Switch power OFF
2. Place the device to erase in its socket. When inserting a device in the socket notice the 1-st pin orientation of the device
3. Unmount Jumper 1 (JP1)
4. Mount Jumper 4 (JP4) to select M35080 device
5. Switch power ON
6. Ensure that “**JU**” message is appear on status display
7. Press Button 2 (ERASE) to enter erase mode then status display will appear to “**oo**” message, that telling all incremental registers is clear:/*



STATUS DISPLAY :

8. Switch power OFF



On error: LED3 (program LED) will flashing (non stop):/*

STAND ALONE jumper configuration table:

STAND ALONE OPERATE MODE:	ERASE MODE FOR D80D0WQ ONLY	TEST MODE FOR D80D0WQ/M35080	ERASE MODE FOR M35080-3; M35080-6
JP1	JP1	JP1	JP1
JP2	JP2	JP2	JP2
JP3	JP3	JP3	JP3
JP4	JP4	JP4	JP4

***NOTE:D80D0WQ and M35080-3; M35080-6 devices supported only. For M35080V6 or M35080VP use appropriate M35080V6 ERASER/ PROGRAMMER (see APPENDIX 1)**

5. PC link

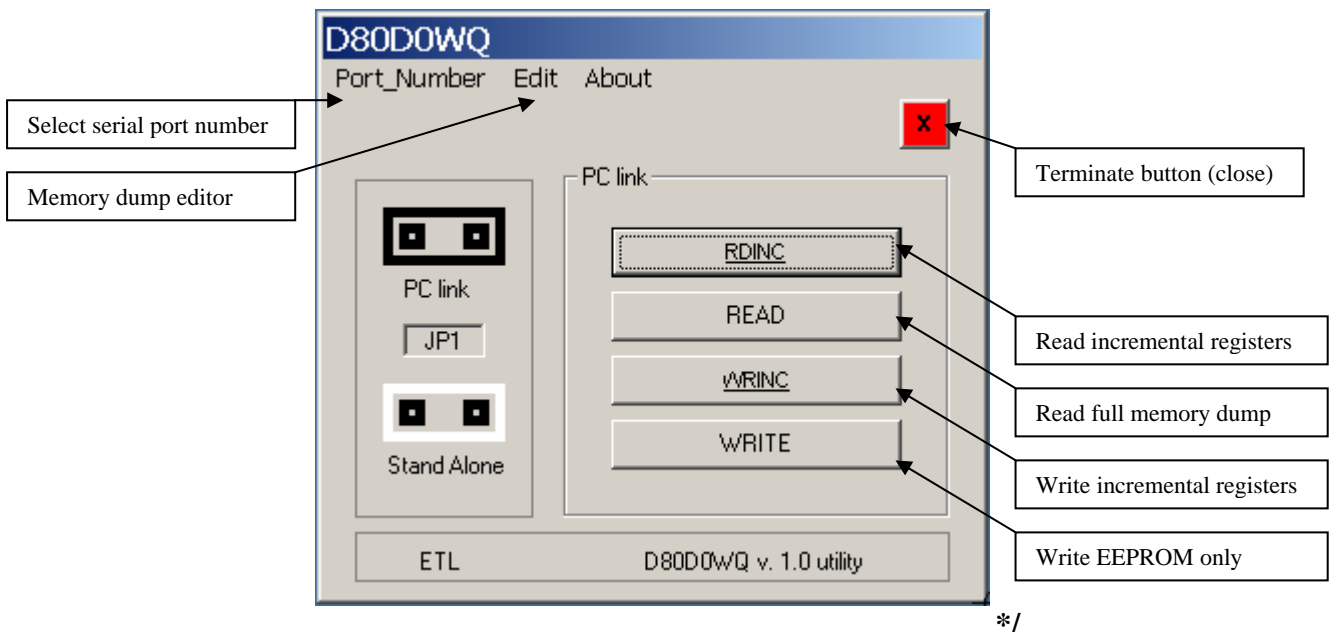
- Select PC-link mode of operate, follow to the next steps:
 1. Switch power OFF
 2. Place the device to access in its socket. When inserting a device in the socket notice the 1-st pin orientation of the device
 3. Mount Jumper 1 (JP1)/*

Jumper 1 (JP1) must be mounted:



4. Jumpers 2,3,4 position (JP2, JP3,JP4) don't care
5. Switch power ON
6. Ensure that “**PC**” message is appear on status display
7. Start D80D0WQ.exe control software
8. Select serial port number (default baud rate: 19200; 8 Data bits; No parity; 1 Stop bit)
9. Click one from control buttons to start operation

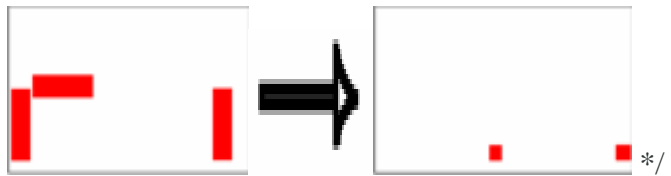
D80D0WQ Interface window meaning see below:/*



5.1 “RDINC” Read Incremental Registers command button

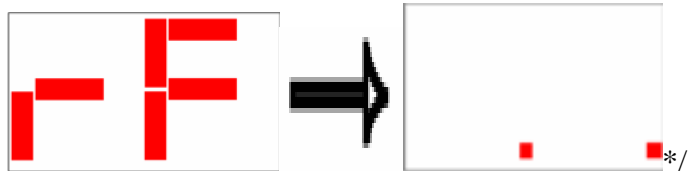
Read Incremental Registers operation will execute every time when user click “RDINC” command button. During this operation “**ri**” message will appear for a limited time, then “..” message will notify stop RDINC operation./*

STATUS DISPLAY :



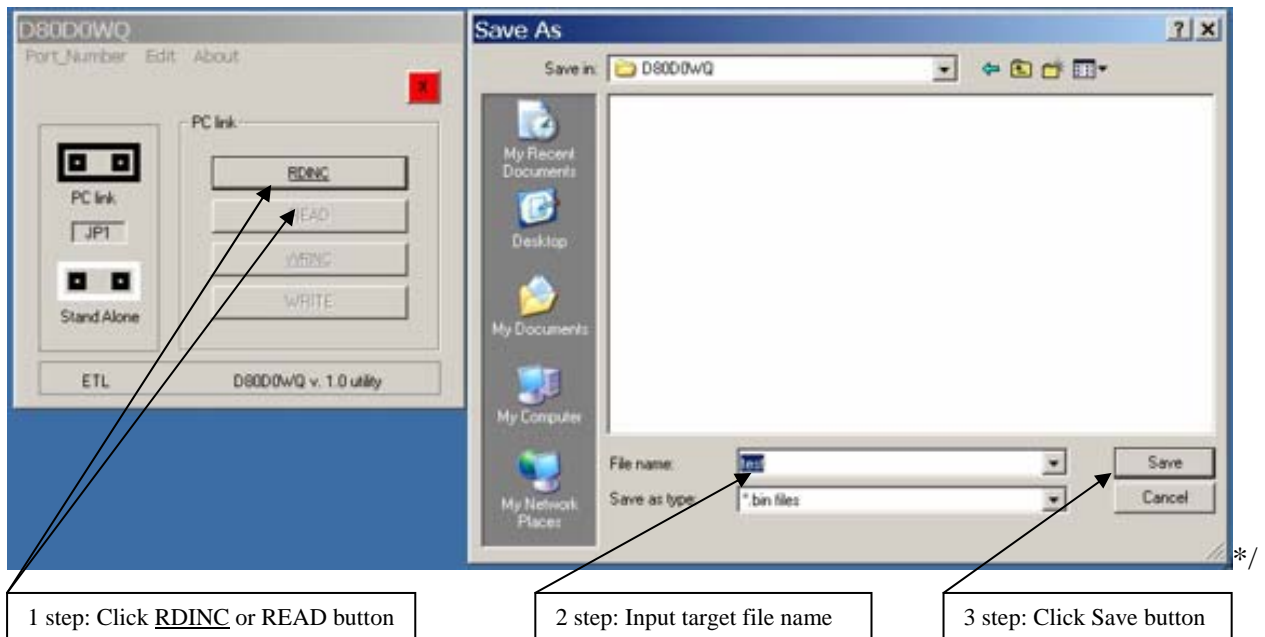
5.2 “READ” EEPROM command button

Read operation will execute every time when user click “READ” command button. During this operation “*rF*” message will appear for the limited time, then “*..*” message will notify stop READ operation./*



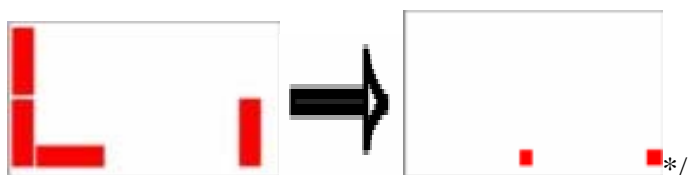
STATUS DISPLAY :

Note: Execution of RDINC command will save 32 bytes only. Execution of READ command will save 1024 bytes. Follow next steps to execute RDINC and READ commands./*



5.3 “WRINC” Incremental Registers command button

Write Incremental Registers operation will execute every time when user click “WRINC” command button. During this operation “*Li*” message will appear for a limited time, then “*..*” message will notify stop WRINC operation./*

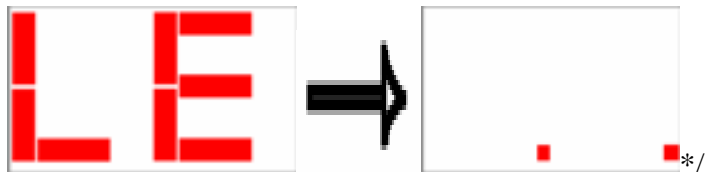


STATUS DISPLAY :

NOTE: Don't forget to save previous data from the D80D0WQ or M35080 to a binary file. Click "READ" data first then save data to a binary file. For writing a lower value to the incremental registers into the D80D0WQ incremental area must be erased always before execute "WRINC" (Write Incremental Registers) command.

5.4 "WRITE" EEPROM command button

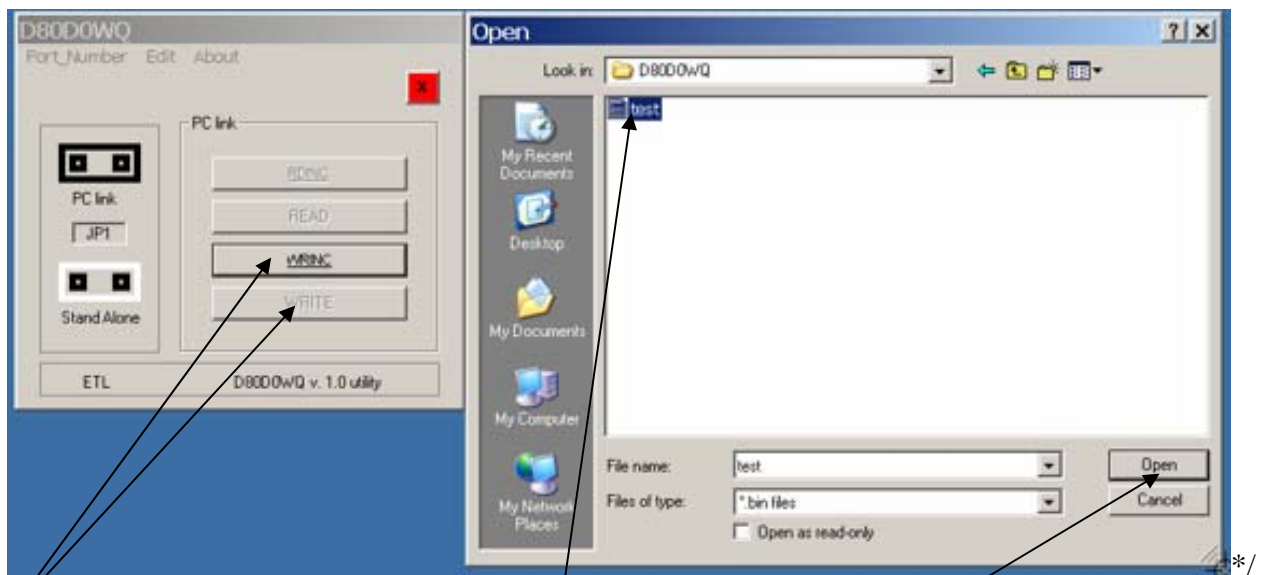
Write operation will execute every time when user click "WRITE" command button. During this operation "LE" message will appear for a limited time, then ". ." message will notify stop WRITE operation./*



STATUS DISPLAY :

NOTE: Don't forget to save previous data from the D80D0WQ or M35080 to a binary file. Click "READ" button first then save original data to a binary file.

Note: Execution of WRINC command will write 32 bytes only. Execution of WRITE command will write EEPROM starts from address \$0020. Follow next steps to execute WRINC and WRITE commands:/*



1 step: Click WRINC or WRITE button

2 step: Choose target file

3 step: Click Open button

6. Memory viewer

Click "Edit" menu item to enter dump viewer mode. Click "File" menu item to review a dump contents. Memory address space display in HEX and DEC formats. Use "Page Up" and "Page Down" PC keyboard buttons to navigate highest addresses. The memory buffer contains the file downloaded from disk into memory. A cursor driven byte positioned to the highlighted area.

As you make changes to the memory buffer, the changes on the current file may be stored at the same file on exit. Click “Done” menu item for return to main window interface then save an edited file in case of necessary /*

Open File

Back to the main window

Offset DEC/HEX control

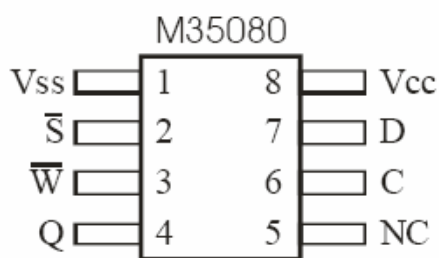
HEX/Character control

Address	HEX	Chr	Information
000000000	AA 44 AA AA AA AA AA AA AA AA AA AA AA AA AA AA	D *****	Edit Hex Text
000000016	12 34 56 78 44 44 55 55 55 55 55 55 55 55 55 55	.4VxDDUUUUUUUUUU	Selected Byte Hex: 00 Dec: 00
000000032	09 09 AA 55 55 55 55 55 55 55 55 55 55 55 55 55	. *UUUUUUUUUUUUUU	Offset Hex: 00 Dec: 00
000000048	AA AA AA AA 55 55 45 AA 05 AA AA 05 AA AA 22 22	***UUE*. *. **"	Page 1 of 2
000000064	AA 55 55 33 33 06 55 55 55 55 AA 55 55 55 22 22	*UU33.UUUU*UUU"	Bytes per Page 320
000000080	AA AA 33 04 44 22 AA 22 77 11 FF FF FF FF 77 22	**3.D**"w. yyyw"	File Size 642
000000096	33 AA 11 22 33 AA AA 22 AA 22 22 22 22 AA 22 22	3*."3***"***"	D80D0WQ ERASER
000000112	AA 11 01 22 22 43 22 FF FF 11 FF 77 FF FF FF FF	*.. "C"yy. yyyyy	
000000128	AA FF 33 22 11 55 AA FF FF 77 44 FF FF FF FF FF	*y3".U*yywDyyyy	
000000144	AA FF AA 23 FF 04 45 66 FF AA 05 11 FF FF FF FF	*y*#y.Ecy*. . yyy	
000000160	AA 44 FF FF 05 11 34 AA FF FF 54 FF FF AA FF FF	*Dyy..4*yyTy*y	
000000176	AA FF 33 AA 06 44 33 FF 22 11 22 05 FF FF FF FF	*y3*.D3y". . yyy	
000000192	AA 55 55 55 55 55 55 06 55 55 55 55 55 55 55 55	*UUUUUU.UUUUUUU	
000000208	AA FF FF FF 55 AA FF FF FF 05 FF FF AA FF FF FF	*yyU*yyy. yy*yyy	
000000224	AA AA 34 FF AA FF FF FF AA 34 FF FF FF FF FF FF	**4y*yy*4yyyy	
000000240	AA FF 33 FF FF FF 66 FF FF FF FF FF FF AA 55	*y3yyfyyyyyy*U	
000000256	AA 12 34 55 55 55 55 FF FF FF FF 05 FF FF FF FF	*.4UUUUyyyy. yyy	
000000272	55 FF 33 FF FF FF FF FF FF FF FF FF FF FF FF FF	Uy3yyyyyyyyyy	
000000288	55 55 33 55 55 55 55 55 55 55 55 04 55 55 55 55	UUUUUUUUUU.UUUU	
000000304	AA AA AA AA AA AA AA AA AA AA AA AA AA AA AA AA	*****	

F:\vms370\51200000.bin

APPENDIX 1

M35080/M35080V6/M35080VP/D80D0WQ pin-out:/*

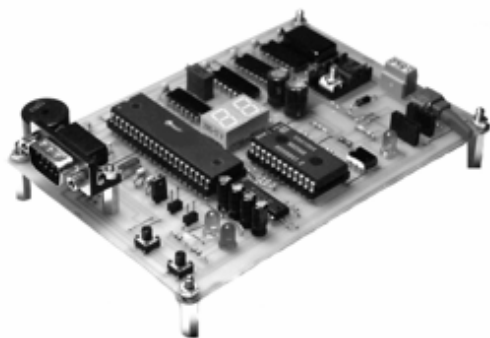


C - Serial Clock
D - Serial Data Input
Q - Serial Data Output
\bar{S} - Chip Select
\bar{W} - Write Protect
Vcc - Supply Voltage
Vss - Ground

*/

D80D0WQ ERASER: left picture

M35080V6; M35080VP ERASER: right picture/*



*/

Old versions of 8 Kbit Serial SPI Bus EEPROM as is M35080-3; M35080-6 supported by D80D0WQ EASER/PROGRAMMER and M35080V6/VP ERASER/PROGRAMMER.

M35080V6 conventional signs:

- 1) 35080VP = ST M35080V6*
- * VP index - clock rates up to 8 Mhz
- 2) 35080V6 = ST M35080V6**
- **V6 index - clock rates up to 6 Mhz

D80D0WQ conventional signs:

- 1) D80D0WQ = protocol compatible M35080 memory*
- *clock rates up to 10Mhz

M35080 conventional signs:

- 1) 35080 - 3 = ST M35080*
- * 3 index - clock rates up to 3 Mhz
- 2) 35080 - 6 = ST M35080**
- ** 6 index - clock rates up tp 6 Mhz