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ELAN MICROELECTRONICS CORP.

Contents

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Chapter 1 Introduction

This user manual introduces the ELAN Display WRITER's hardware, PC software for window version , and how to use it. Display WRITER is a very user-friendly and highly portable programmer used to program the all 8-bit family OTP (One Time Programmable) EM78P153S/ P156E/ P156N/ P257/ P447S/ P447N/ P451/ P451S/ P458/ P459/ P468N microcontrollers and other EM78 family's OTP microcontrollers in the future. It communicates with IBM PCs or compatibles through a printer port. Moreover, the window version software ELAN supplies is very easy to use and is available either in the compact disk or on the ELAN's website. Due to the result of its fast and accurate programming, the writer is quite suitable for pilot run, and mass production as well.

1. Features

- Easy-To-Use
- LCM Display status
- Internal RC frequency auto trim
- One fits all programming (Multi-programming)
- Either Corporate with PC or program by itself
- File saved in binary format [filename.cds]
- Offer versatile function: Read, Blank Check, Verify, Program, Save, Protect, and Auto-Program
- Self-diagnosis as power on
- Search for printer port automatically
- Portable, durable, and nice-looking
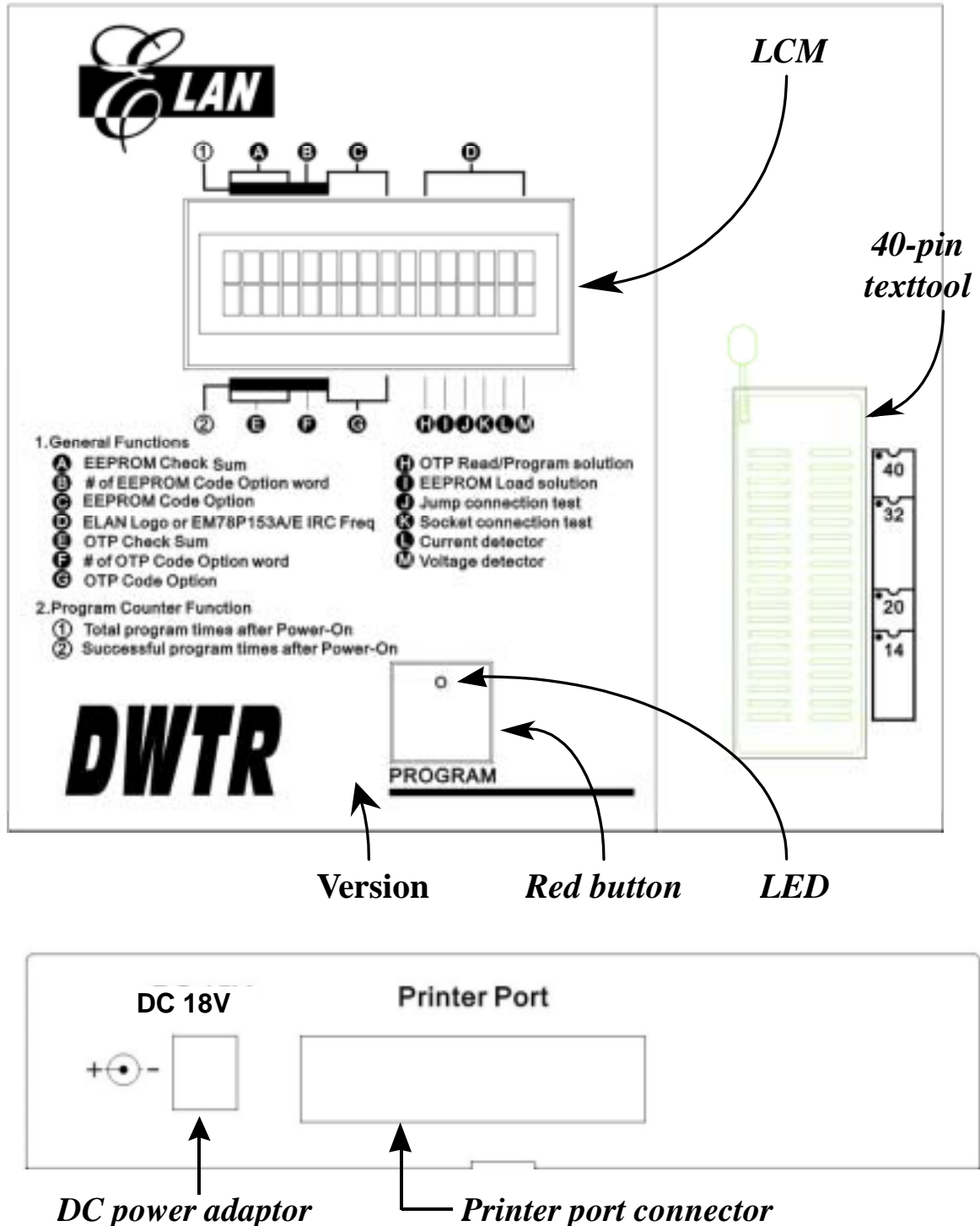- Clear indication between processes

2. Package checklist

- ELAN DWTR 40-pin texttool (socket)
- Compact Disk (Including MTP WRITER window version software, user's manual, Spec.)
- 18VDC switching power adaptor
- WRITER User's Guide
- Printer cable

Chapter 2 Installation

1. ELAN Display writer

LCM

40-pin texttool

1.General Functions
- Ⓐ EEPROM Check Sum
- Ⓑ # of EEPROM Code Option word
- Ⓒ EEPROM Code Option
- Ⓓ ELAN Logo or EM78P153A/E IRC Freq
- Ⓔ OTP Check Sum
- Ⓕ # of OTP Code Option word
- Ⓖ OTP Code Option

- Ⓗ OTP Read/Program solution
- Ⓘ EEPROM Load solution
- Ⓙ Jump connection test
- Ⓚ Socket connection test
- Ⓛ Current detector
- Ⓜ Voltage detector

2.Program Counter Function
- ① Total program times after Power-On
- ② Successful program times after Power-On

40
32
20
14

PROGRAM

Version   *Red button*   *LED*

DC 18V   Printer Port

+⊙-

DC power adaptor   *Printer port connector*

Definition

ELAN Logo or EM78P153A/E IRC Freq:
Display,only for EM78P153A/E IRC mode,"Current Frequency",
as write operation is accomplished.Otherwise,display company logo
"ELAN".Moreover,"......"means"out of detect range" .

EEPROM loading solution:
Display"O",if load/read is accomplished.
If not, display"X".

OTP read/program solution:
Read :Display"O",if read is accomplished. If not, display"X".
Program :Display "O",if program is accomplished. If not, display"X".

Socket connection test:
Display "O",If the connection between socket and IC which will be
programmed is OK. If not, display"X".

Mode slots

CON6   CON5   CON4   CON3   CON2   CON1

Fig. 1: EM78 DWRITER

Table 1: Jumper corresponding table

Jumper connection position	EM78PXXX
CON1	**EM78P153S**
CON2	**EM78P156E/ EM78P156N** **EM78P257**
CON3	**EM78P447S/ EM78P447N**
CON4	**EM78P451/ EM78P451S** **EM78P468N**
CON5	**EM78P458/ EM78P459**

◆ ***Power indicator*** The LCM is on as power is supplied to the writer.

◆ ***Program Indication***

    ◇ General function: If using internal RC oscillator mode, there will be the IRC frequency displayed on the LCM as DWTR works alone.

    ◇ Programming Counter function. This function will be active if users keep pressing the red button for three seconds. The LCM will switch to the programming counter function page for five seconds as users release the red button and will then return back to the general function page.

◆ ***LCM information*** The LCM shows 2 kinds of funcion:

    ◇ General function:
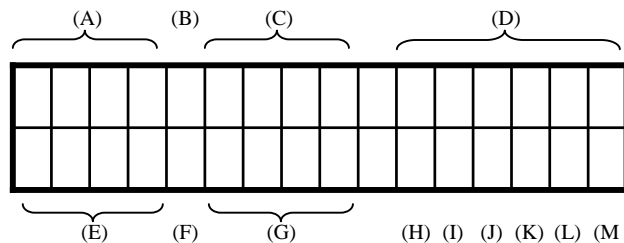
(A) **EEPROM Check Sum.**

(B) **# of EEPROM Code Option word.**

(C) **EEPROM Code Option.**

(D) **ELAN logo or EM78P153S IRC Freq.**
Display, only for EM78P153S IRC mode, "Current Frequency", as write operation is accomplished. Otherwise, display company logo "ELAN". Moreover

(E) **OTP Check Sum.**

(F) **# of OTP Code Option word.**

(G) **OTP Code Option.**

(H) **OTP Read/Program solution.**
Read: Display "O" , if reading is accomplished. If not, display "X"
Program: Display "O", if programming is accomplished. If not, display "X"
Program: Display "O", When burning in internal RC mode, the internal frequency drift must be guaranteed in ±5%. If the display of DWTR show the "X" message, it's means the internal frequency is not of the guaranteed range.(Detail description, please refer to chapter 3.)

(I) **EEPROM Read/Loading solution.**
Display "O", if loading/reading is accomplished. If not, display "X"

(J) Jump connection test.

Display "O", if the connection between Jumpand IC which will be programmed is OK. If not, display "X".

(K) Socket connection test.

Display "O", if the connection between socket and IC which will be programmed is OK. If not, display "X".

(L) Current detector.

(M) Voltage detector.

◇ Programming Counter function. This function will be active if users keep pressing the red button for five seconds. The LCM will switch to the programming counter function page for ten seconds as users release the red button and will then return back to the general function page.

(1)

(2)
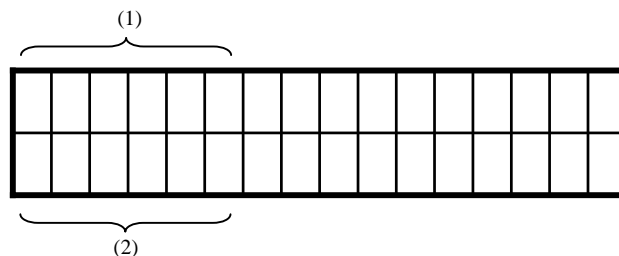
(1) Total programming times after Power-On and /RESET.

(2) Successful programming times after Power-On and /RESET.

(3)

◆ **Busy indicator**   The green LED shows 4 kinds of information:

  ◇ On: under programming. Wait for LED turns off.

  ◇ Off: programming OK, reading OK, Load OK.

  ◇ Slow blinking (1.5 cycles per second): programming failed.

  ◇ Type blinking (2.5 cycle per second): OTP not in socket.

  ◇ Quick blinking (5 cycles per second): buffer reading failed.

  Mode slots   There are 6 mode slots which are EM78P153S/P156E/ P156N/ P257/ P447S /P447N/ P451/ P451S/P458/P459 from the left to the right. Each slot has 17 sets of jumper. Users can short jumpers with a set of jumper cap for a desired mode.

◆ **Program Bottom**   To press the red button to program independently.

◆ **Texttool / Socket**   To line up the bottom of a programmed IC with the bottom of the socket.

◆ **DC power adapter**   To plug with a DC power supply is 18V.

◆ **Printer port Connector**   To communicate with IBM PCs or compatibles with the printer cable.

2. Hardware requirements

◆ IBM PC 486 or above,

◆ 640K RAM,
◆ VGA monitor
◆ Printer cable no longer than 2 meters

3. Hardware Installation

◆ To short the desired mode slot shown in Fig. 1 with the jumper cap
◆ To connect the PC and the unit with a printer cable, if collaboration of PC and the unit is required
◆ To insert the DC power adapter into the wall plug on the left hand side of the unit
✓ **Note:**
  ✧ To connect the printer cable before the power cable,
  ✧ DWTR executes a self diagnosis for a few seconds as the power is supplied,
  ✧ Never ever to put a programmed device on the texttool before the self -diagnosis finishing.

4. Software Installation

Just execute the "setup.exe" file from the disk and then follow the step by step indications to the end.

5. What is the self-diagnosis?

◆ To check the buffer of DWTR. The LED is off if the check succeeds, otherwise it will quickly blink.
◆ To program virtually in order to sink the residual power produced by power-on. It is the reason why users can not put a programmed device on the texttool before the self-diagnosis finishes.

Chapter 3 Introduction of the DWTR environment

1. Getting start

Procedure 1: Start DWTR

To double click the icon of ELAN WRITER on desktop, or to select desktop menu [start]→[ELAN DWRITER] →[ELAN DWRITER].
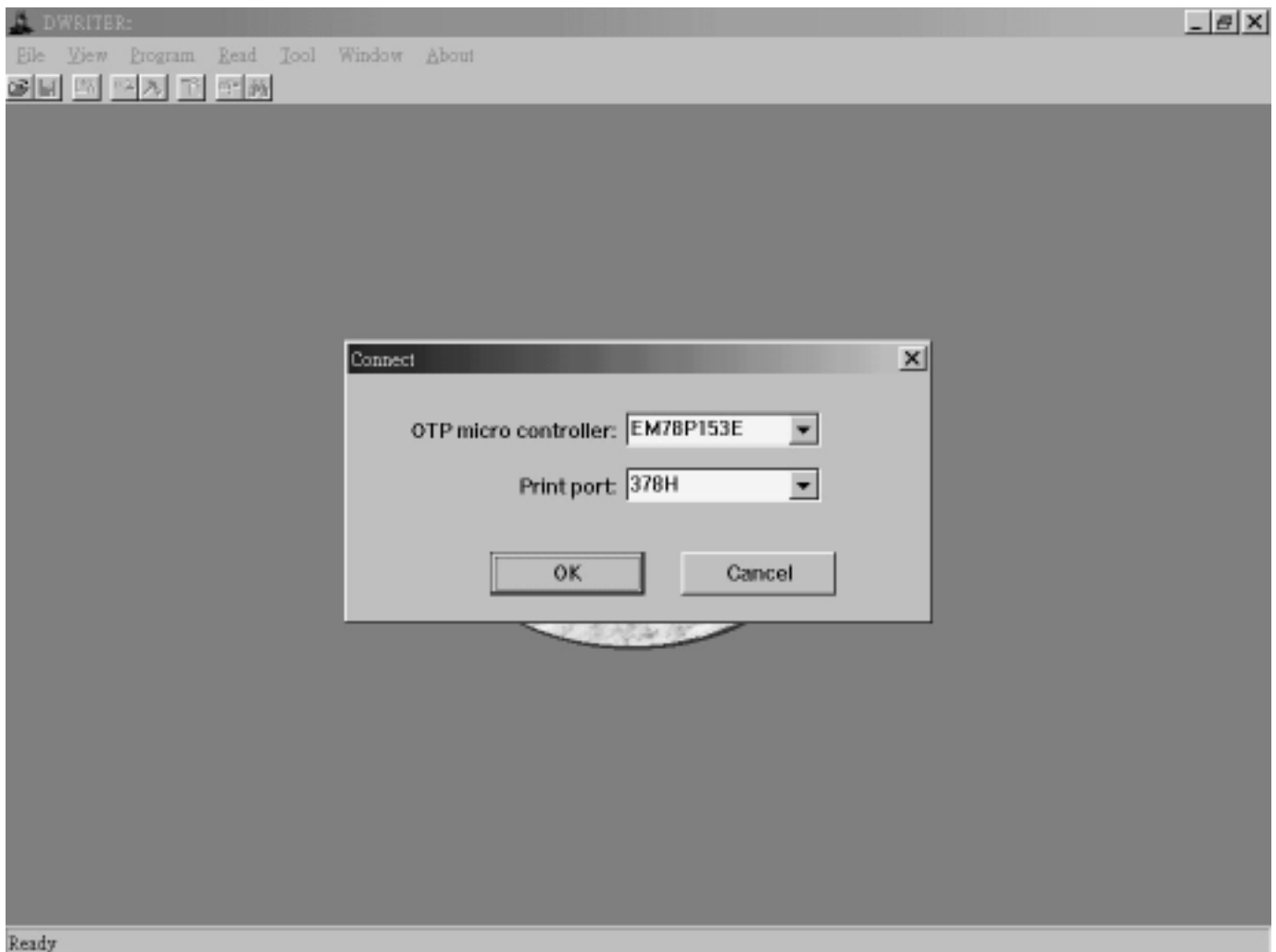

Fig 2: DWTR initialized

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Procedure 2: Open a CDS file

To choose [Open CDS file…] from [File] menu.

Step 1: Open file: The "Open" dialog box appears as being showed in Fig. 3. After selecting a file, then press [OK] button. The source file window appears as being shown in Fig. 4, and it consists of check sum, option, code option value and binary data.

Step 2: Set Option: The Option dialog depicted in Fig. 5 and Fig. 6(only IRC user's) appears. In accordance with the application environment, designers can mix up a suitable combination with the code option for the selected microcontroller. After selecting options, then press [Update] button.

Step 3: Load: To keep loading source to Buffer until loading completely or press the [OK] button depicted in Fig. 7, which is located on the up-left corner of the whole display. If the [OK] button is pressed during dumping, the power of the hardware must be turned off and turned on to resume the procedure of programming.
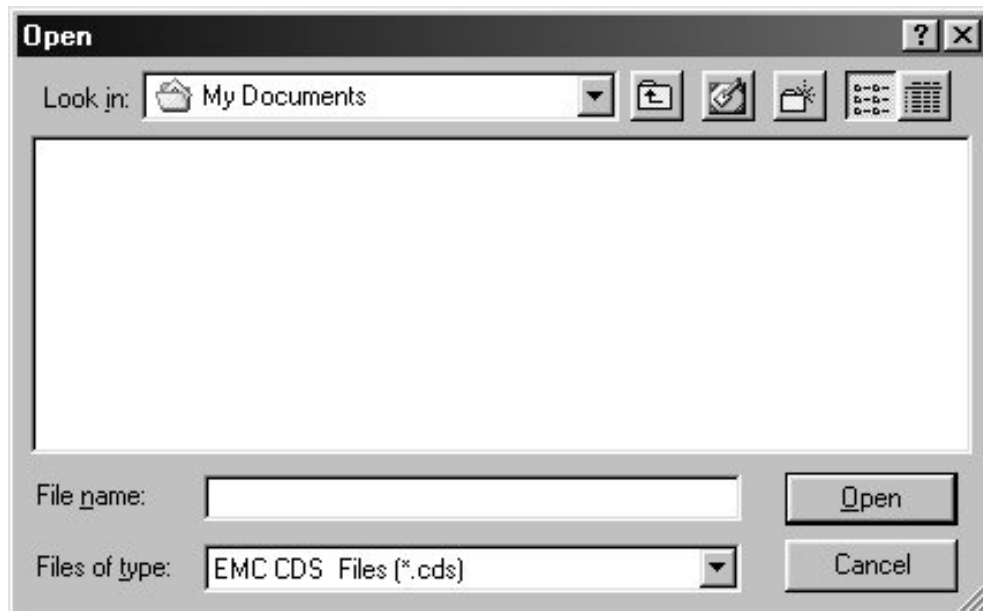

Fig.3: Open a CDS file

```
Source:D:\EMC_DOS\ICE152\TEST153E.CDS
Checksum of the file:  FBB8
RESET:Disable        WATCHDOG:Enable     CLOCK:4           OSC1:RC
OSC0:Inter_or_High   Protect:Disable     SUT1:1            SUT0:1
RC_OUT:P64           ID12:1              ID11:1            ID10:1
ID9:0                ID8:1               ID7:0             ID6:1
ID5:1                ID4:1               ID3:0             ID2:1
ID1:1                ID0:1               Code Option0:17E7         Code Option1:0003
Code Option2:1D77


0000:0000 1800 000E 18DF-0002 0080 000F 1808-0006 11EA 18FF 11EA-18E0 11EA 18FF 0050
0010:05D0 1410 18E1 11EA-18FF 0050 0590 1415-18E2 11EA 1800 0050-07D0 141C 18E3 11EA
0020:1800 0050 0790 1421-18E4 11EA 18FF 0050-01D0 0E83 1428 18E6-11EA 18FF 0050 0190
0030:0E83 142E 18E7 11EA-1800 0050 0550 0E83-1436 18E8 11EA 1800-0050 0510 0E83 143C
0040:18E9 11EA 0000 18C0-11EA 18FF 005F 1855-0050 0E10 081F 0C50-085F 0E90 089F 0CD0
0050:08DF 0F10 091F 0D50-095F 0F90 099F 0DD0-09DF 041F 11EA 18C1-11EA 18FF 005F 18AA
0060:0050 0C10 081F 0E50-085F 0C90 089F 0ED0-08DF 0D10 091F 0F50-095F 0D90 099F 0FD0
0070:09DF 041F 11EA 18C2-11EA 18FF 005F 18AA-0050 0C10 1587 147F-0C90 158B 1488 0C50
0080:1589 147C 0D10 158F-148E 0D90 1593 148B-0CD0 158D 1482 0DD0-1595 1491 0D50 1591
0090:1495 0A1F 11EA 18C3-11EA 18FF 005F 18AA-0050 0C10 1597 1495-0C90 159B 1498 0C50
```

Fig. 4: Source file

Fig. 5: Code option

10

Fig. 6: IRC Code option

Fig. 7: Stop executing

Procedure 3: Program

To choose [Write] from [Program] menu.
To keep writing the OTP device or press the [OK] button depicted in Fig. 7
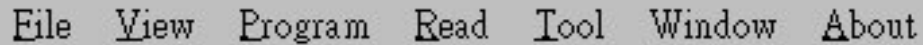
2. Introduction of environment
(1) Menu

| File | View | Program | Read | Tool | Window | About |

Fig. 8: Menu

a. File: File manager includes "Open CDS file", "Close file", "Save", "Save as CDS file", "Save as text file", "Save read as CDS file", "Save read as text file", "Recent files" and "Exit".

b. View: To view opened window, which consists of "Source"," Read " and "Output."

c. Program: Write function includes "Set option", "Load "," Write", "Auto", "Protect", and "Write continuously."

d. Read: Read consists of "Read OTP" and "Read Buffer".

e. Tool: Tool contains "Connect", "Blank check ", "Verify", "Compare", "Find code", "Reset" and "Font."

f. Window: Setting arrangement of windows. It includes "Title", "Cascade" and "Arrange."

h. About: To show about DWTR information.
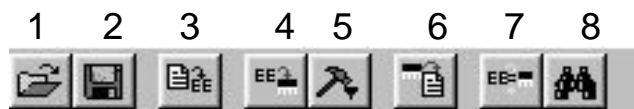
(2) Tool bar

Fig. 9: Tool bar

In Fig. 9, the icons from left to right in the tool bar are (1) Open a CDS file, (2) Save (3) Load, (4) Write, (5) Protect, (6) Read OTP, (7) Verify, and (8) find code.
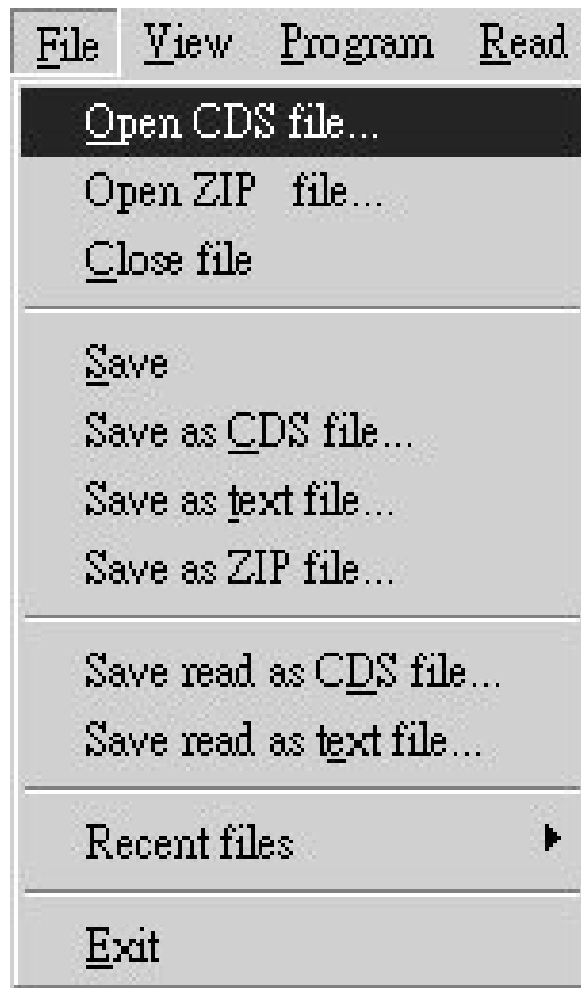
(3)   File menu

Fig. 10: Submenu of file

a. Open CDS file(open a file with CDS format)
    Step 1: To select a file which extension file name is "cds". The open dialog box is as showing in Fig. 11.
    Step 2: If all items are correct, press the [OK] button.
    Step 3: The source file window shown as Fig. 12 consists of check sum, option, code option value and code data.
    Step 4: The set option dialog, depicted in Fig.5 and Fig.6, appears. In accordance with the application environment, designers can mix up a suitable combination with the code option for the selected microcontroller. After selecting options, then press [Update] button.
    Step 5: To keep loading source to buffer until loading completely or press the [OK] button depicted in Fig.7, which is located on the up-left corner of the whole display. If the [OK] button is pressed during dumping, the power of the hardware must be turned off and turned on to resume the procedure of programming.
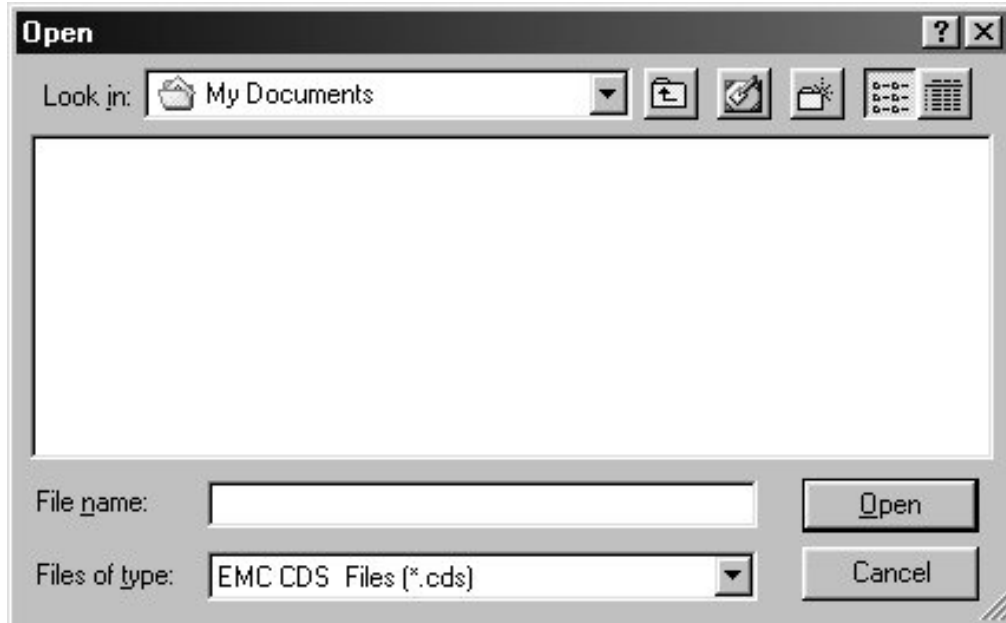
Fig. 11: Open a CDS file
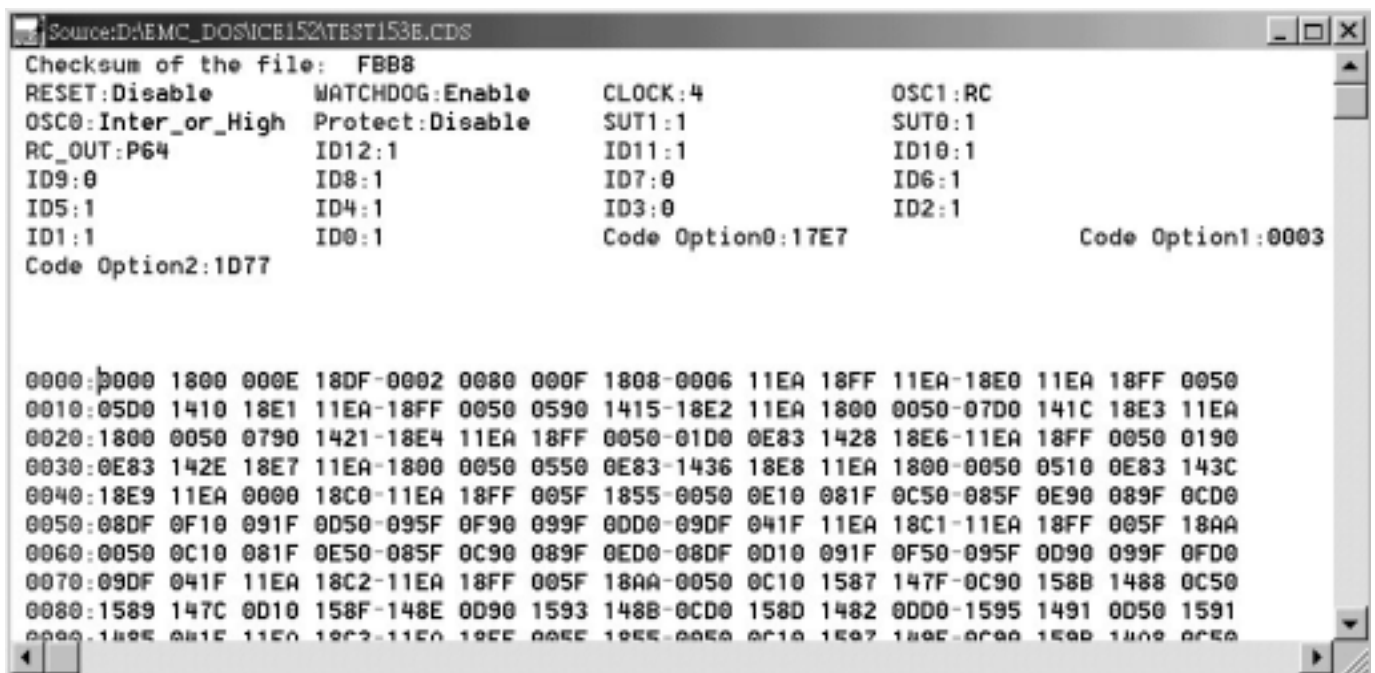
Fig. 12:Source window

b. Zip Function purpose: To storage the Latest version of Code Option Value

Step1: Open a CDS file, then press "Update" button to record the latest version Code Option, is shown Fig13.

Step2: To select main Menu [File]->[Save ZIP file…], then the software will product a new Zip file. The new Zip file is location in the project file path, if product success, is shown Fig14.

Key-point: You must to re-save project CDS file one again, keep the CDS file is latest version.

Stpe3: To select main Menu [File]->[Open Zip file…], then the software will loaded the latest version Code Option, is shown in Fig15.

Fig13. Code option of CDS file
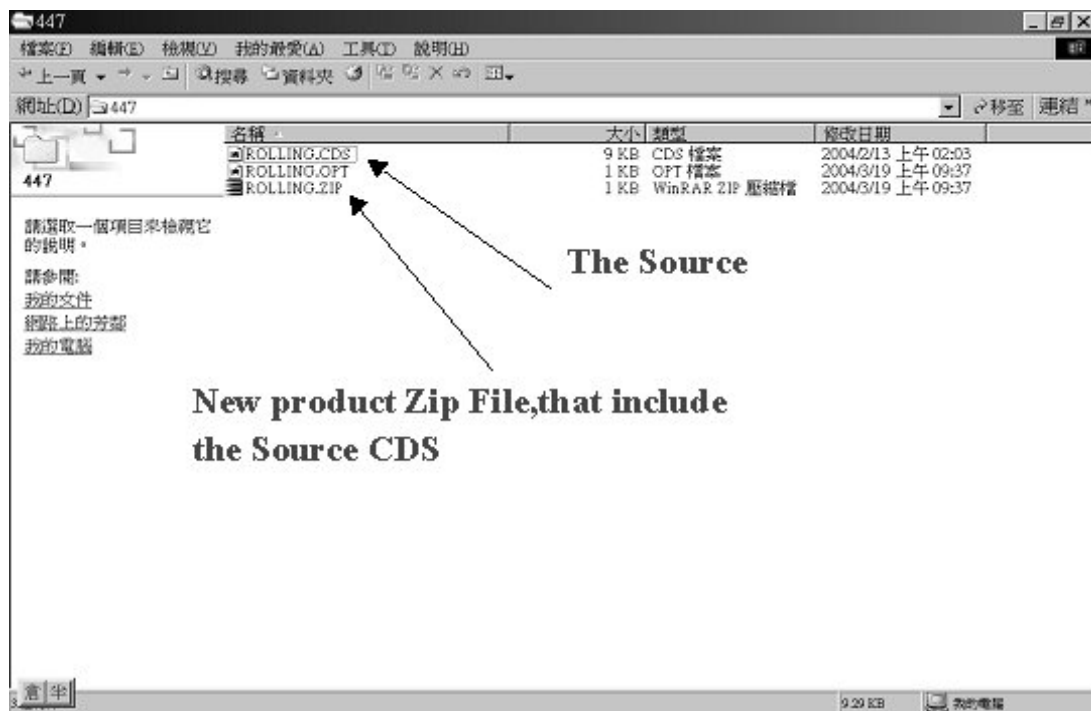
Fig14. Create the Zip file by DWriter Software

Fig15　Code Option is Open project.Zip

c. **Close file**: To close the active window.

d. **Save**: To save the contents of source window.

e. **Save as CDS file**: To save the contents of source window as an another CDS file.

f. **Save as text file**: To save the contents of source window as a text file.

g. **Save Read as CDS file**: To save the contents of read window as a CDS file.

h. **Save Read as text file**: To save the contents of read window as a text file.

i. **Recent files**: To record the recent closed files.

j. **Exit**.

(4)　View menu

Fig. 16: View menu

a. **Source**: To activate the opened source window, which consists of checksum, option, option value, program machine code.

b. **Read**: To activate the opened read window, which consists of checksum, option, option value, program machine code.

c. **Output**: To activate the opened output window. The messages in the output window
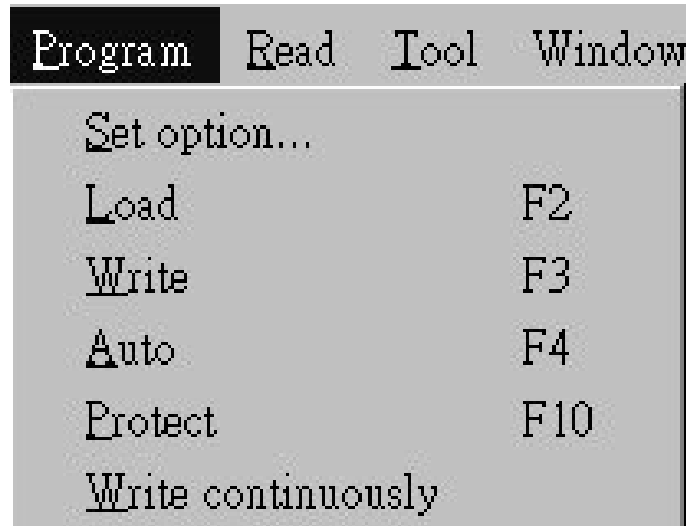
are created by any actions.

(5)   Program menu

Fig. 17: Program menu

a. Set option: In accordance with the application environment, designers can mix up a suitable combination with the code option for the selected microcontroller. The detail code option is described in microcontroller specifications. An example of the EM78P153E code option is depicted in Fig. 5 and Fig.6.

b. Load: Two major tasks are performed. Firstly, to load an open source file to the buffer inside DWTR. Secondly, to read and compare the buffer against the file. The code dumping can be terminated by pressing the [OK] button depicted in Fig. 18, which is located on the up-left corner of the whole display. However, the power of the hardware must be turned off and turned on to resume the procedure of programming.
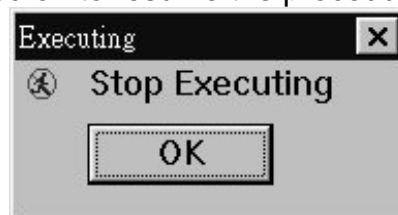

Fig. 18: Stop executing

c.   Write: Two major tasks are performed. Firstly, to program the OTP device on the socket. Secondly, to read and compare the OTP code against the file. The execution result is displayed on the output window. Moreover, internal frequency displayed on the LCM will just appear for about one second if using internal RC oscillator mode.

d.   Auto: Three major tasks are performed. Firstly, to check whether the OTP is blank or not. Secondly, to program the OTP device on the socket. Thirdly, to read and compare the OTP code against the file. The execution result is displayed on the output window. Moreover, internal frequency displayed on the LCM will just appear for about one

second if using internal RC oscillator mode.

e. **Protect**: Once the function of the protection is enabled, OTP memory will not be readable any more.

f. **Write continuously:** To program one after another. The function of each item depicted in Fig. 19 is described as follows:

"**Count**" indicates the number of devices programmed.

"**Blank check**" is to check whether the OTP device is blank or not.

"**Verify**" is to compare OTP code against source file.

"**Rolling code**" is to directly update the DWTR buffer with the sequence number. The range of sequence value is from 0 to 64K, and the program code which is updated must belong to "MOV A,K" or "RETL K". So the low byte of sequence number is put on the operand of "Lo address", and the high byte of sequence number is put on the operand of "Hi address" address.

"**Low Byte**" is address which the low byte of current value will replace the operand value in the program code of the address.

"**2'nd Byte**" is address which the second byte of current value will replace the operand value in the program code of the address.

"**3'rd Byte**" is address which the third byte of current value will replace the operand value in the program code of the address.

"**4'th Byte**" is address which the forth byte of current value will replace the operand value in the program code of the address.

"**Current**" is a current value of sequence number.

"**Step**" is a value, and the next current value is according to step value. The next current is equal to addition of current value and step value.

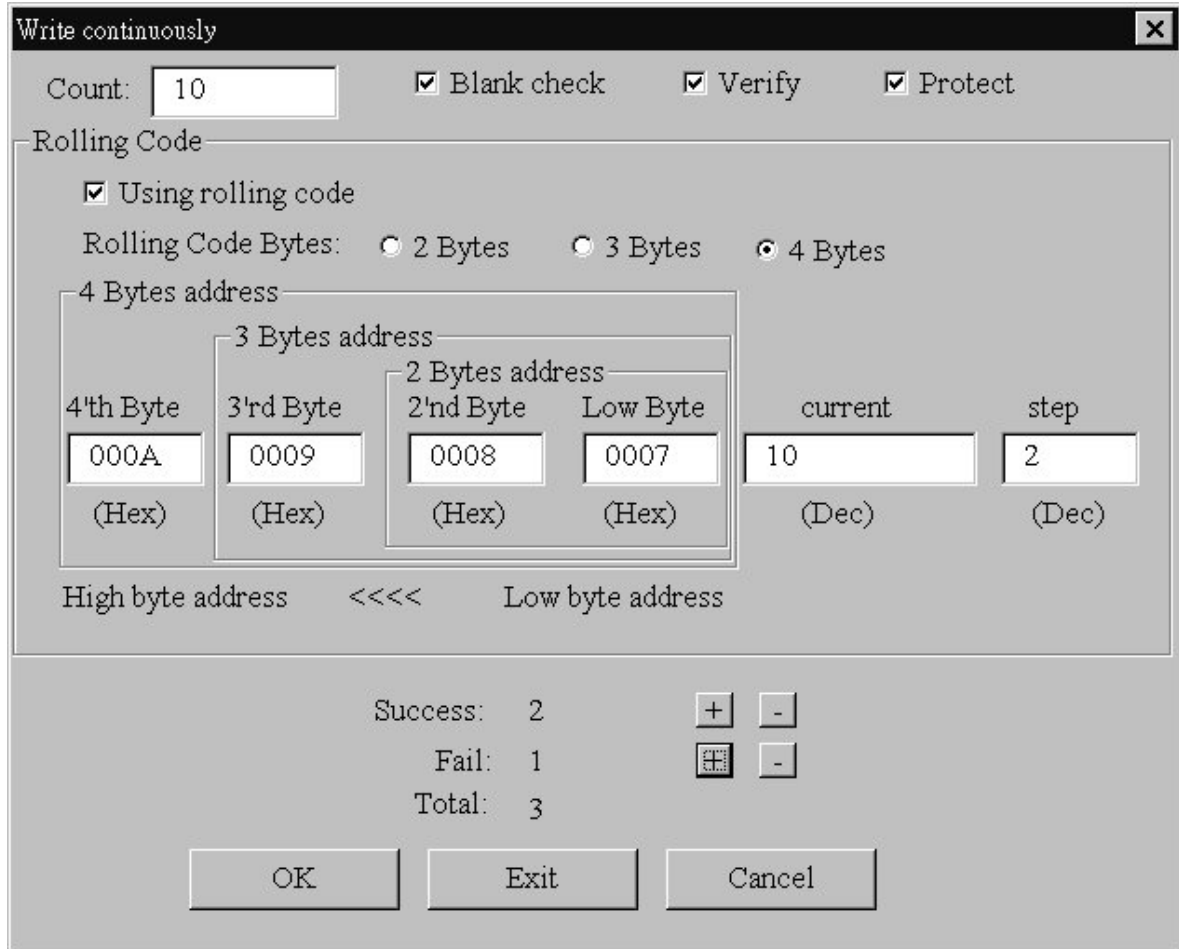"**Success**" is the number of devices programmed successfully.

"**Error**" is the number of devices programmed fail.

"**Total**" is the total number of good devices and failed devices.

"**OK**" is to execute.

"**Exit**" is to initialize all items and close the dialog.

"**Cancel**" is to close the dialog.

Fig. 19: Write continuously

(6) Read menu

Fig. 20:Read menu

a. **Read OTP**: Read data from OTP. The read OTP window appears as being shown in Fig. 21. It consists of check sum, option, code option value and binary data, but OTP not in socket or Short jump not connected shown in Fig. 22. Moreover, there will be no frequency displayed on the LCM if using internal RC oscillator mode.
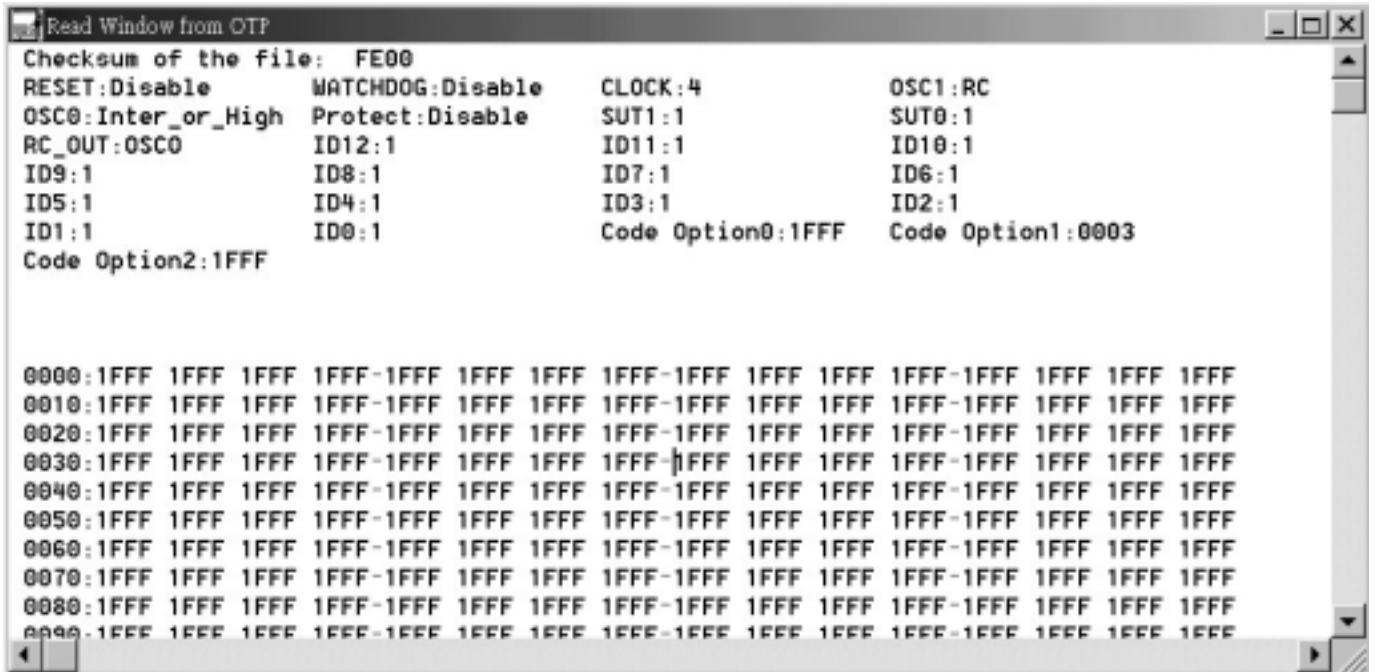
Fig. 21: Read OTP.

Fig.22. OTP not in socket or Short jump not connected

b. Read Buffer: Read data from buffer.

(7)   Tool menu
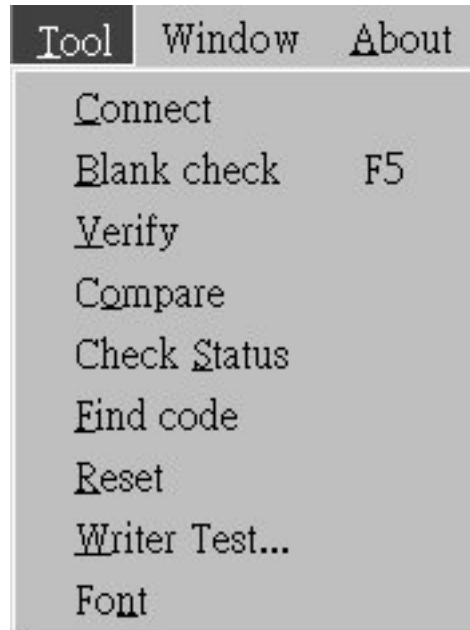
Fig. 23. tool menu

a. **Connect**: To connect with the hardware. The connect window is depicted in Fig. 24.
- **Microcontroller**: The device presented on the edit bar is one of the EM78PXXX series. Users can also select others by clicking the downward triangle icon on the right side of the edit bar.
- **Print port**: The system will search automatically the address of the print port, which is already connected with the hardware. After the connection is successful, DWTR will also diagnose the hardware right away.

b. **Blank check**: To check whether the OTP is blank or not.

c. **Verify**: To compare the contents of OTP memory against an open source file, and to display the result on the output window.

d.. **Compare**: To compare contents of the read window against the present source file, and to display the result on the output window.

e. **Check Status**: Read DWTR version, IC_ID (in EEPROM), OTP Read/Program solution, EEPROM Read/Loading solution ,Jump connection test,Socket connection test, Current detector and Voltage detector.

f. **Find code:** To find a certain code in the active source or read window. The dialog box is shown in Fig. 25.

g. **Reset:** Reset DWTR and Read status.

h. **Writer Test**: The dialog box is shown in Fig. 26.
To execute different combinations of the writer operations repeatedly.

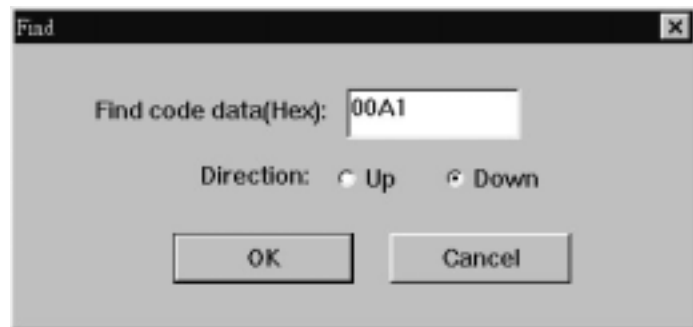i. **Font**: Font setting. To set the font of source, read and output windows.
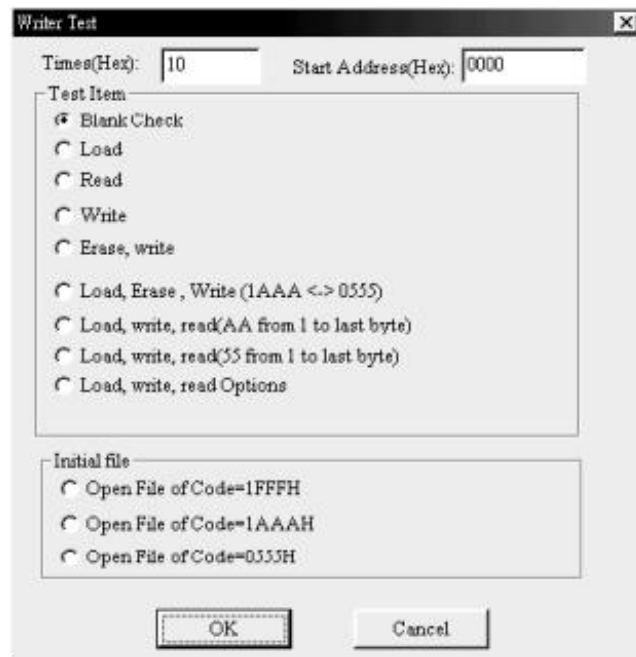
Fig. 24: connect

Fig. 25:Find code.

Fig. 26 WRITER TEST

(8) Window

To arrange windows by users' preference.

(9) About

To show about the version of DWTR software and other information.

3. IRC Frequency Calibration

All the four main frequencies (4MHz, 8MHz, 1MHz and 455KHz) can be calibrated through programming of the OPTION bits (CAL0, CAL1, CAL2).

When using DWTR in burning the EM78P153S under IRC mode, the DWTR will calibrate automatically. For example, if user chooses 4MHz base-frequency in IRC mode, the DWTR will automatically calibrate the IRC frequency to 4MHz through the OPTION bits (CAL0, CAL1, CAL2).

Take note that adjusting the OPTION bits will cause the internal RC frequency to drift. So, this OPTION bits are not provided in the DWTR software after Version 4.3.

 (1) DWTR Setting

When using DWTR in burning EM78P153S, the drift rate of ± 5% is guaranteed under IRC 4M Hz, and the drift rate of ± 10% is guaranteed under IRC 1M, 8M, 455K Hz. Assuming that user chooses 4MHz in IRC mode, DWTR guarantees that the IRC frequency range is from 3.8MHz to 4.2MHz. If the IRC frequency drift rate exceeds the ± 5% guaranteed frequency (after burning in IRC mode with DWTR), DWTR will sound an alarm (a beep signal) to alert user.

Remark: Drift rate of ± 5% is guaranteed under all the four main frequencies for DWTR4K.

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4. Error message

(1) " Error W001: PC can not connect with writer."
Reason: DWTR software can not detect the writer.
Solution:
1. To check the power of the writer.
2. To check the printer cable between DWTR and PC.
3. To check if the status of print port is normal in PC BIOS.
4. To turn off and turn on the writer power.
5. To check again with another PC, if the problem still exists.
6. To call ELAN.

(2) " Error W002: The file [file name] can not be opened!!"
Reason: The file can not be found.
Solution: To check whether the file exists or not.

(3) " Error W003: The file [file name] can not be created."
Reason: The file can not be created.
Solution: To check whether the disk is full or not and whether the system is affected by virus or not.

(4) " Error W004: The source window is found."
Reason: A source window already exists.
Solution: To close the present source window.

(5) " Error W005: The configure file is error."
Reason: The contents of the initial file are not correct.
Solution: Please install DWTR window software again.

(6) " Error W006:The file [file name] must be in CDS format."
Reason: The format of file must follow the rules of CDS file.
Solution: Please recompile the source file.

(7) " Warning W007: The ROM size %XH is not same as CDS code size %XH."
Reason: The size of a selected microcontroller dose not fit with that of a present CDS file.
Solution: Please check the selected microcontroller again.

(8) " Warning W008:The CDS code size %XH is over the ROM size %XH."
Reason: The size of a selected CDS file is larger than that of the present microcontroller.
Solution: Please check the selected microcontroller again.

(9) " Warning W009: The CDS code was created by [micro controller name], it is not the same as [micro controller name]."
Reason: The current selected microcontroller is not the same as the microcontroller which produces the CDS file.
Solution: To check a selected microcontroller again.

(10) " Error W010: The source file is not opened."

Reason: The source file is not opened.
Solution: To open the source file.

(11) " Error W011: To load the buffer failed."
Reason: The source code can not be downloaded to the buffer.
Solution: To turn off and turn on (reset) the power of the writer.

(12) " Error W012: To read the contents of the buffer failed."
Reason: The data in the buffer can not be read correctly.
Solution: To turn off and turn on (reset) the power of the writer.

(13) " Error W013: The value of address %04X in the buffer is not the same as that in the present source file."
Reason: The program code of the address is not the same as the source code.
Solution: To load the source code to the buffer again.

(14) " Error W014: To program the OTP device failed."
Reason: The code from the OTP device is not the same as the source code during verification.
Solution:
  1. To make sure the device placed properly on the socked.
  2. To execute "Write" command again.

(15) " Error W015: To read the contents of the OTP device failed."
Reason: Data in the buffer can not be read correctly.
Solution:
  1. To check if the protection bit is enabled.
  2. To make sure the device placed properly on the socked.

(16) " Warning W016: The number of error messages is over %d."
Reason: The number of error messages is over limit.
Solution: To correct the errors in accordance with the error messages.

(17) " Error W017: Could not allocate enough memory."
Reason: System has not enough memory to allocate.
Solution: To close unexecuted application program in system.

(18) " Error W018: Could not find the program code."
Reason: The program code is not found.
Solution: To update the search pattern and search again.

(19) " Error W019: The read window is not opened."
Reason: The read window is not found.
Solution: To execute the "Read OTP" or "Read buffer" command.

(20) " Error W020: The file name is empty."
Reason: The file name is empty.

Solution: To edit a new file name.

(21) ” Error W021: The active window must be source or read window.”
Reason: The active window is not source or read window.
Solution: To activate the source or read window.

(22) ” Error W022: The expression of hexadecimal number is invalid.”
Reason: The digits of number must be '0' to ''9' or 'A' to 'F'.
Solution: To enter new digits/a new expression.

(23) ” Error W023: The address %04X is over the ROM size %04X.”
Reason: The address is over the size of the present microcontroller.
Solution: To enter a new address.

(24) ” Error W024: The code %04X of address %04X can not belong to MOV A, K or RETL k instruction.”
Reason: The code of the address can not belong to "MOV A, K" or "RETL K" instruction.
Solution: To update the address.

(25) ” Error W025: The current value %d is over 0xFFFF.”
Reason: The range is from 0 to 0xFFFF.
Solution: To enter a new value.

(26) ” Error W026: The number must be greater than 0.”
Reason: The range is from 0 to 0xFFFF.
Solution: To enter a new value.

(27) ” Error W027: Please take off and on the power connector.”
Reason: The writer is not stable.
Solution: Please reset the hardware by taking off and on the power DWRITER connector.

(28) ”Error W028: The micro controller name is not the same as last time. “
Reason: The EEPROM ID is not the same as micro controller ID.
Solution: Please open CDS file to load to EEPROM.

(29) ”Error W029:The file %s must be in HEX format.”
Reason: The file %s must be in HEX format.
Solution: The file format must be in HEX format.

(30) ”Error W030:The Hex format error!! Please check the Hex file.”
Reason: The file is not HEX format.
Solution: Please check the HEX file format to load to buffer.

(31) ”Warning W031:The EEPROM ID is not the same as micro controller ID.”
Reason: The EEPROM ID is not the same as micro controller ID.
Solution: Please open CDS file to load to EEPROM.

(32) ”Warning W032: The EEPROM checksum is failure.”

Reason: The buffer checksum is failure.
Solution: Please to load a file to buffer. To reload a CDS file.

(33) "Warning W033: Jumper is not located on correct position."
Reason: Jumper is not located on correct position.
Solution: Please check Jump connection.

(34) "Warning W034: The socket is failure."
Reason: The writer is not ready.
Solution: Please check Jump connection and Socket connection.

(35) "Error W035: The DWRITER does not support the OTP %s."
Reason: The DWRITER does not support the OTP %s.
Solution: Please update the DWRITER hardware and software.

(36) "Error W036:The DWRITER is not READY!!!"
Reason: The writer is not ready.
Solution: Please check Jump connection and Socket connection.

(37) "Error W037:Please close SOURCE or READ window."
Reason: After connect other "OTP micro controller" must close SOURCE and READ windows .
Solution: Please close SOURCE or READ window .

Chapter 4   Q & A

1. How to check a failed buffer?

There are two ways to know the buffer is failed:

(1) The fail message is displayed on the output window whenever the "load" command is executed.

(2) The LED on the top of the hardware keeps blinking fast (5 times per second) all the time no matter users put power-on, or just push the red button.

2. What is "Frequency Mode"?

If the application system is below 200 kHz, the low frequency must be selected. Otherwise, the high frequency is selected.

3. What is "Code Protected"?

Once the protection function is enabled, the contents of the OTP ROM would not be read any more. The values displayed on the screen do not mean anything

4. What is status of LED?

(1) On under programming. Wait for LED turns off.

(2) Off: programming OK.

(3) Slow blinking (1.5 cycles per second): programming failed.

(4) Quick blinking (5 times per second): buffer reading failed

5. How to update your DWTR window software?

It is required to update the new function, when the new EM78P series are released. The software and the firmware should be updated for a new version. The following describes how to replace the old version with new one:

To update the software by catching the new software from the ELAN web. The IP address is http://www.emc.com.tw, and to find the DWTR window version software of free software in the "Customer" . Users also can ask their agents or ELAN to update with the new version.