VFDSoft User Manual

（English Version）

This software only supports VFD-B, VFD-F, VFD-M, VFD-S, VFD-E, VFD-L(0.25HP-2HP) and VFD-VE, its function to support other VFD models is under development

Table of contents

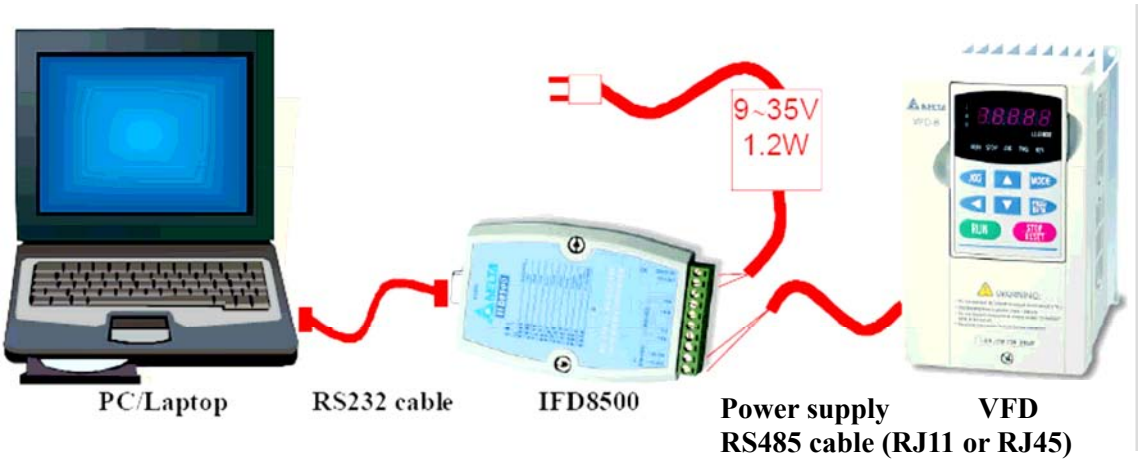
Chapter 1 General Introduction

1.1 Guide of installation

Before using this software for a VFD, please prepare well for the following equipments: a Delta's VFD, a converting interface for RS485/232/USB, an RS485 connecting cable (RJ11 or RJ45) and an RS232 or USB connecting cable.

1.2 Starting preparation

1.2.1 System configuration



1.2.2 Applicable VFD models

VFD-B, VFD-F, VFD-M, VFD-S, VFD-E, VFD-L (0.25HP-2HP) and VFD-VE

1.2.3 Other required equipments

Please use RJ11 connector for the models of VFD-B, VFD-F, VFD-M, VFD-S, VFD-L (0.25HP-2HP) and VFD-VE, and use RJ45 connector for the model of VFD-E.

RJ45	8←1 RJ45	1: reserved 2: reserved 3: GND 4: SG- 5: SG+ 6: reserved 7: reserved 8: reserved
RJ11	6←1 RJ11	1: reserved 2: GND 3: SG- 4: SG+ 5: reserved 6: reserved

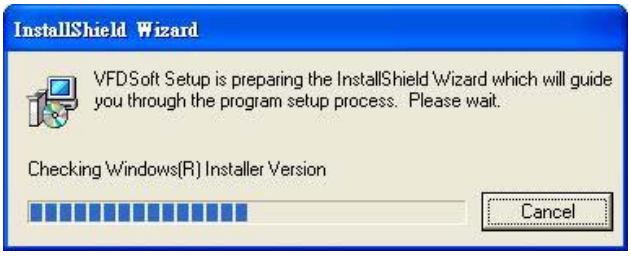
Or you can select to link a PC's USB through a communication converter which is generally used to link RS485 to USB.

1.2.4 Installation

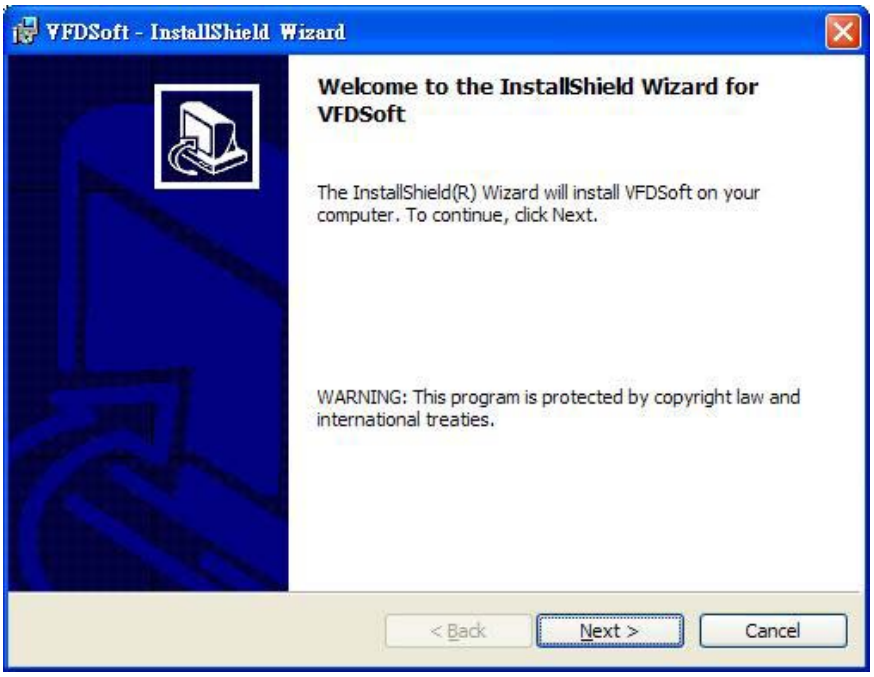
Step 1. Please download the installation file from web site: http://www.delta.com.tw/

Step 2. Please execute installation file 

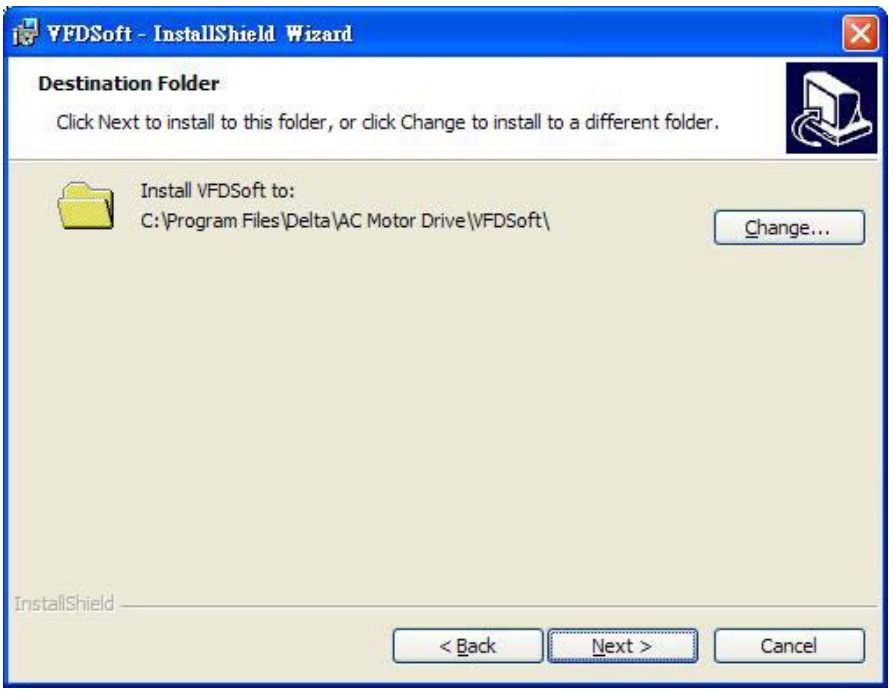
Step 3. Detecting system information



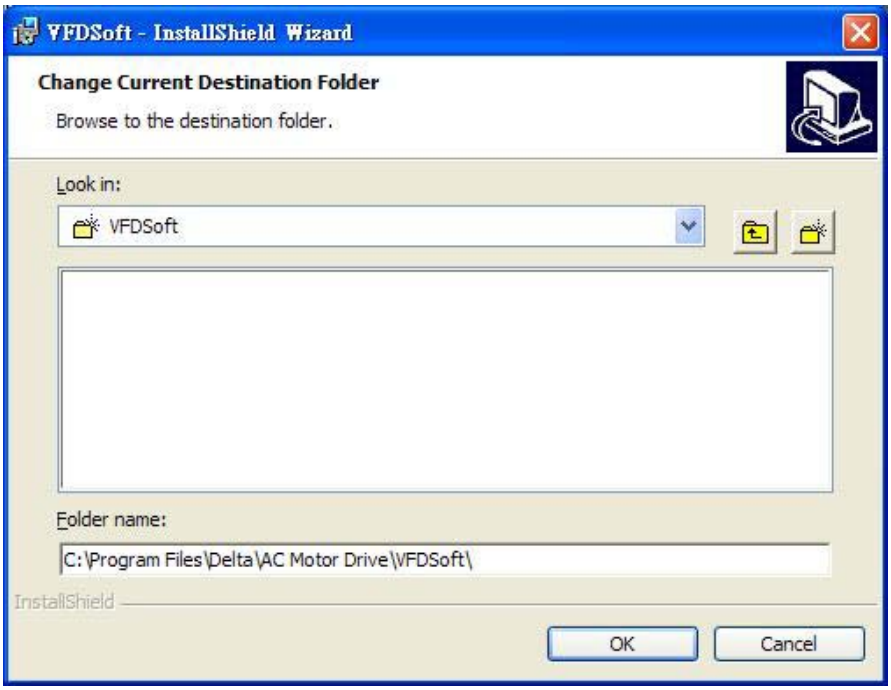
Step 4. This is a welcome dialogue box; please click Next > to continue this installing process



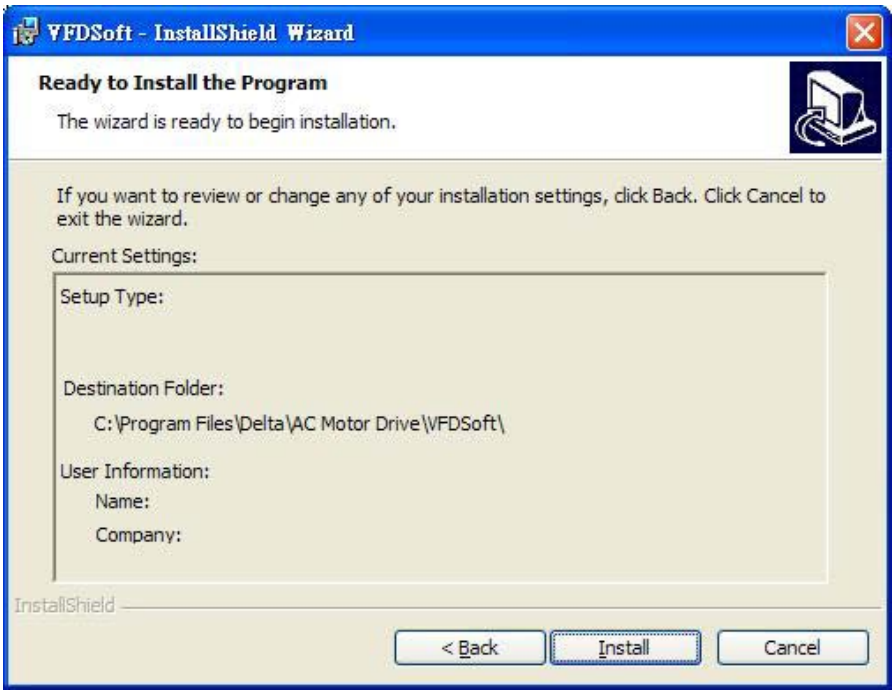
Step 5. If you wish to change the folder's installing destination, please click Change... and move to step 6; or receive default value then click Next > and jump to step 7.



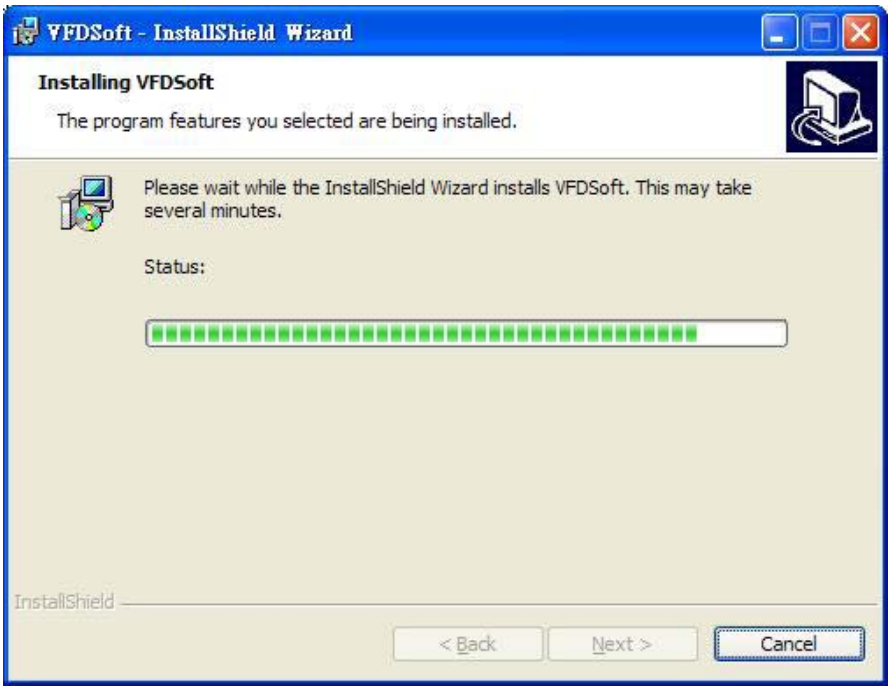
Step 6. Please select a destination folder according to your preference



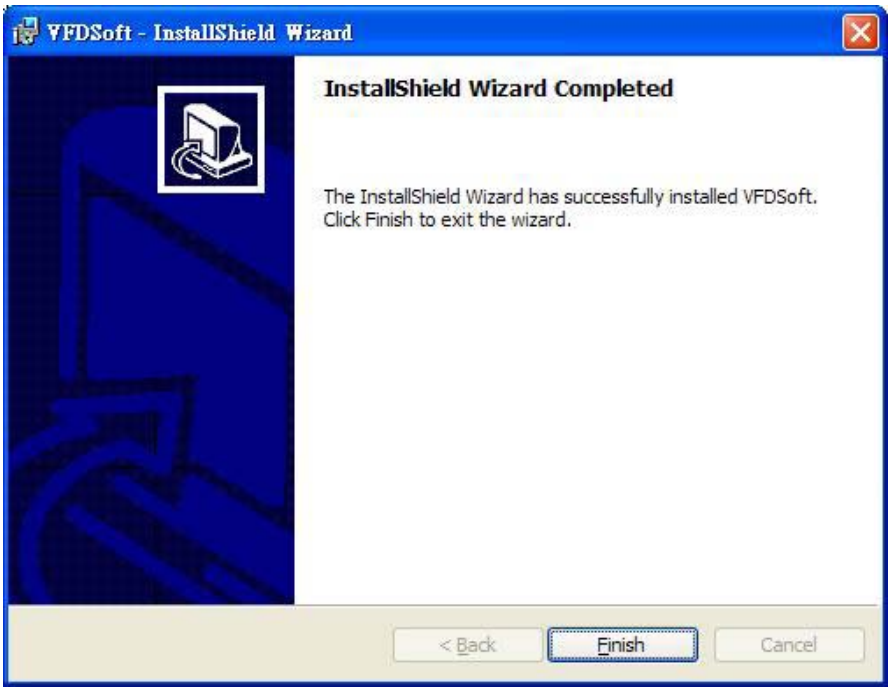
Step 7. Ready to install, please click Install to continue if all settings are OK



Step 8. Installing

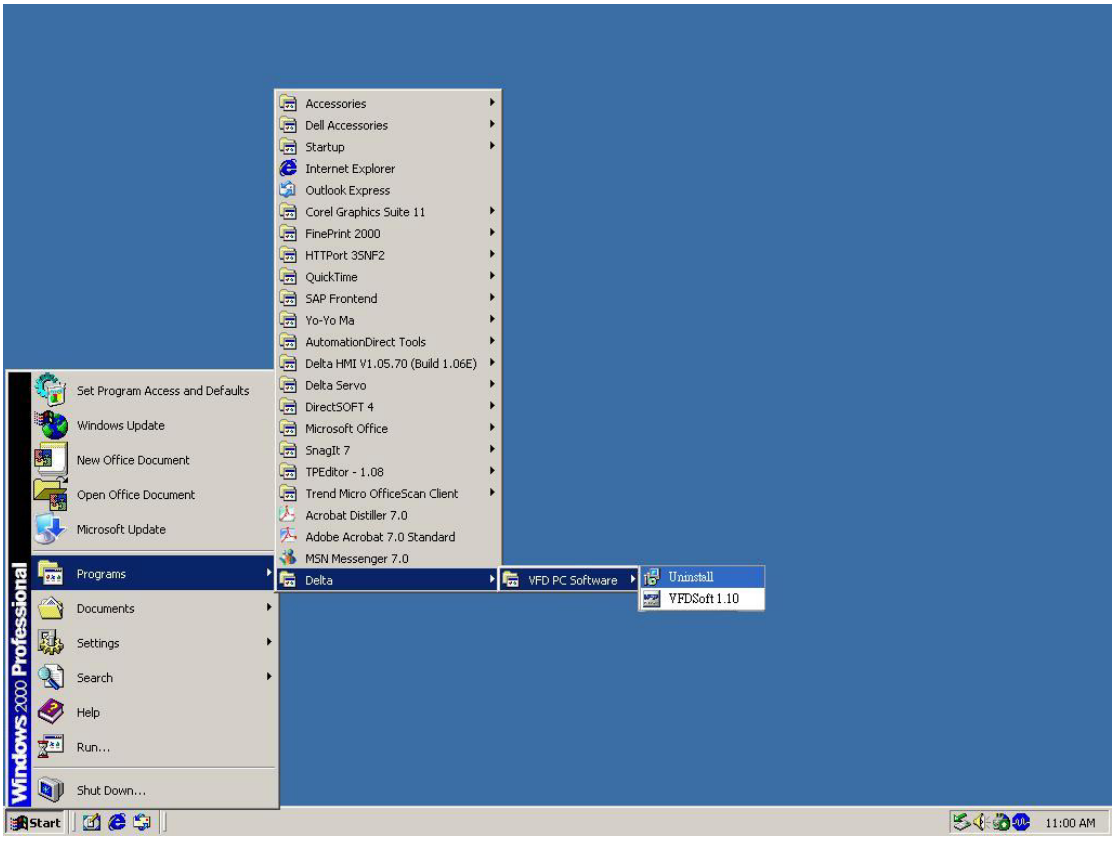


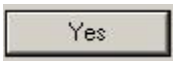
Step 9. Installing completed, please click Finish to end this program



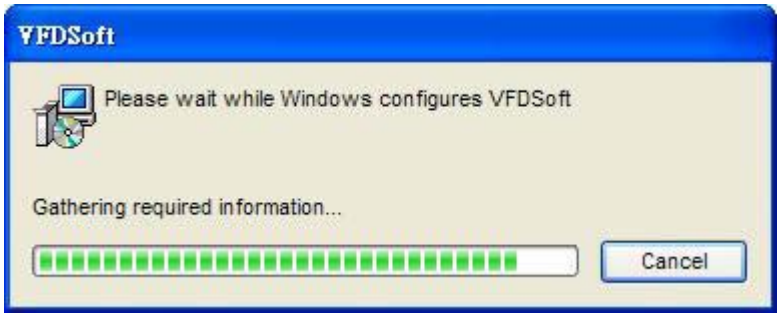
1.2.5 Uninstalling the software

1. Open executable file 



2. If you really wish to uninstall please click 

3. Uninstalling



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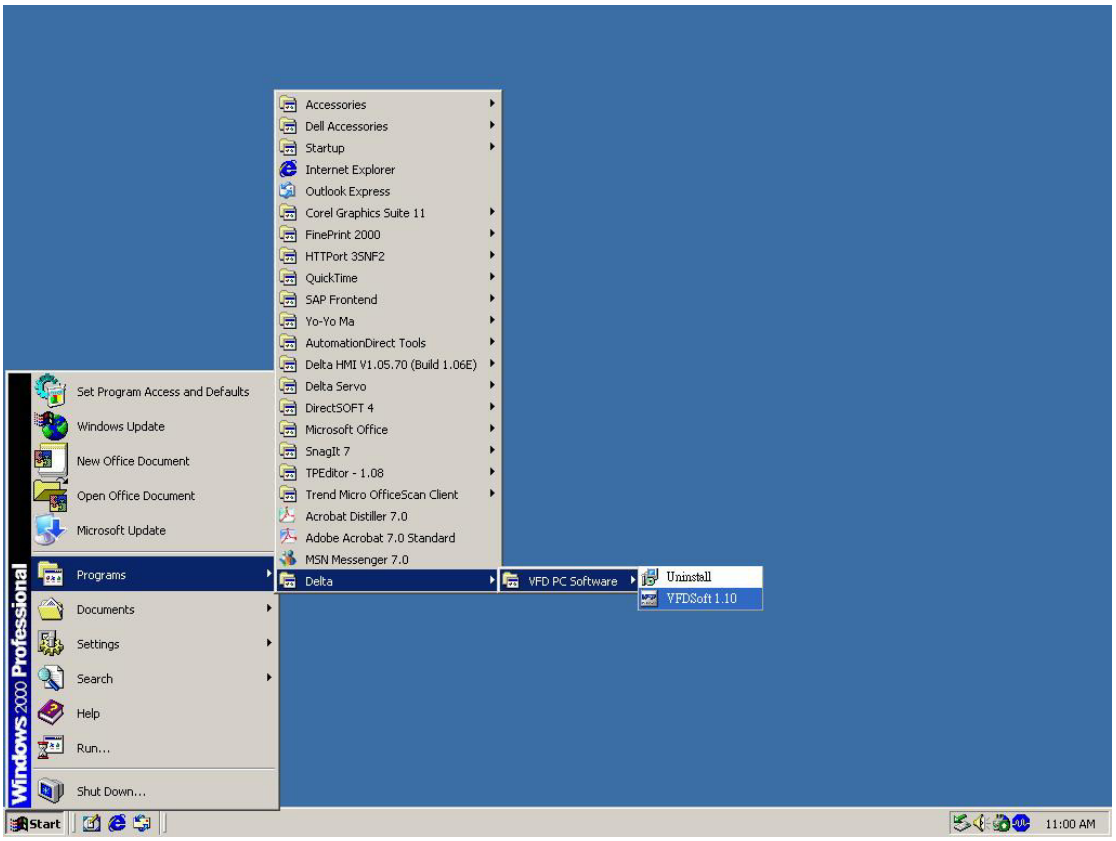
2.1 How to start VFDSoft

Please double click the executable file on desktop to start

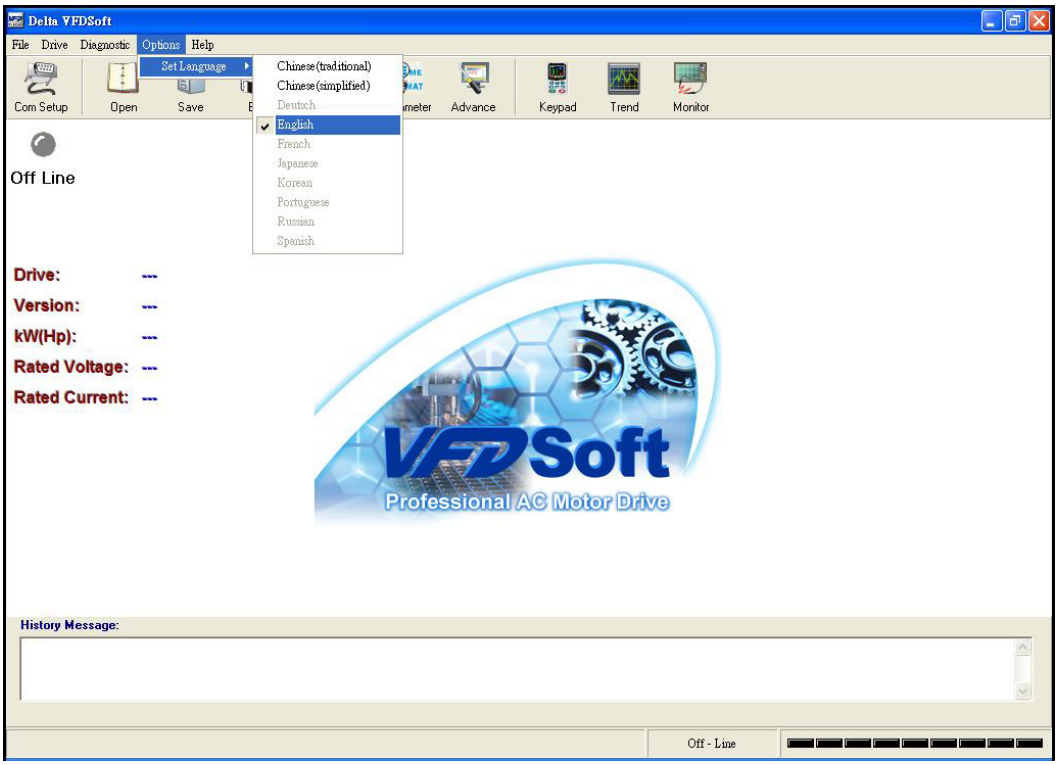
Or start from the lower left menu of the system



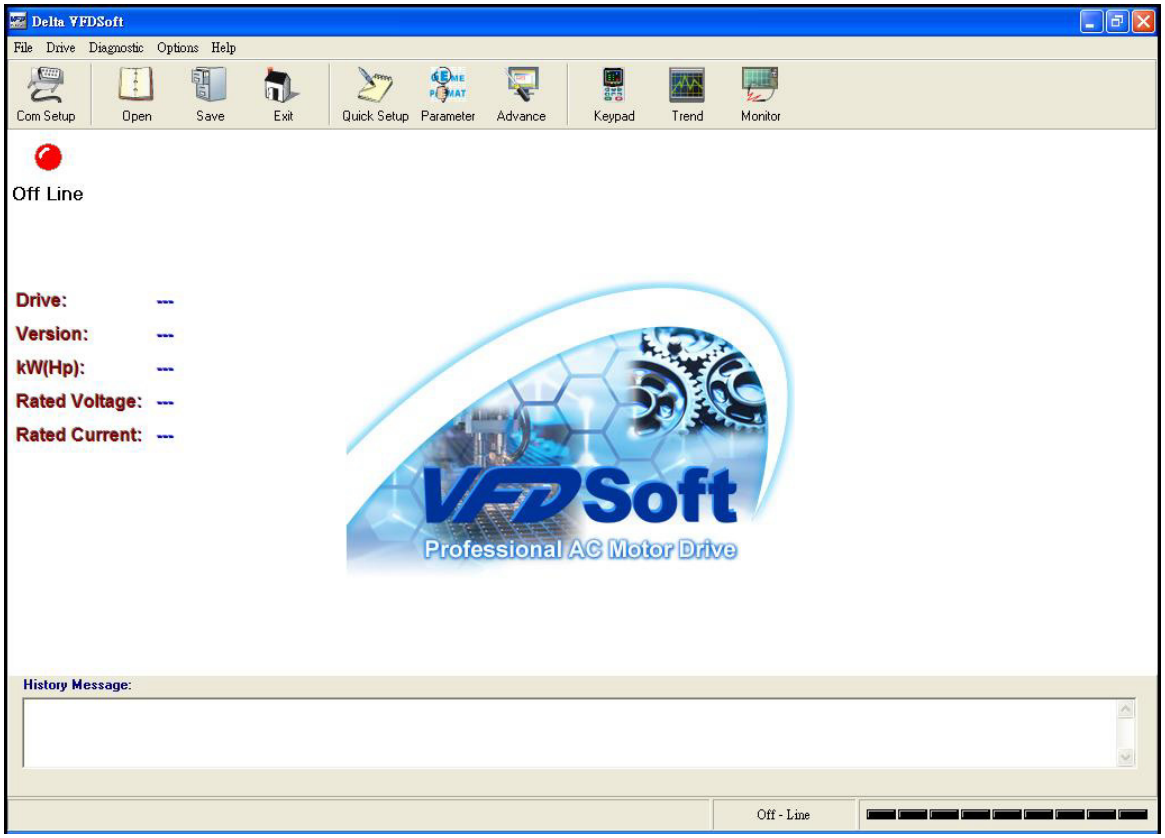
2.1.1 Opening the software

Entering the initialization file after clicking the executable file

2.1.2 You can select your preference language interface



2.2 Software functions summary



2.2.1 Functions table

File Drive Diagnostic Options Help

File: here you can save the operating environment

Drive: it can be used for communication settings, parameter controlling, quick setup and other advanced functions

Diagnostics: it has the functions of online keypad, trend records, instant monitoring, PID controlling and automatically measuring of motor's parameters

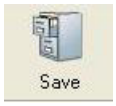
Options: multi-language settings

Help: it will help you to get information about software manual, VFD manual and software announcement

2.2.2 Tools introduction

: For PC to set VFD's communication connecting

: Open project file



: Save project file

: Exit this software

: Set some basic functions for VFD

: Can write in and read out VFD parameters

: Has advanced functions of communicating

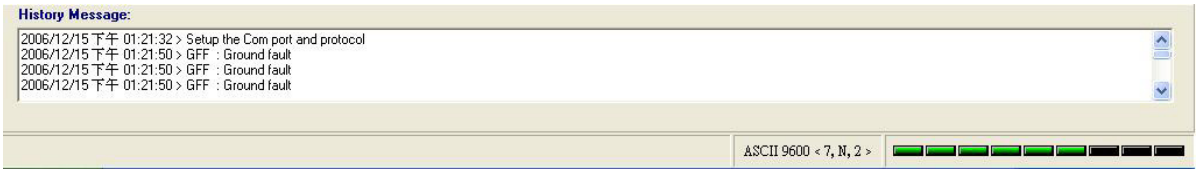
: Has the function of online digital operating

: Can monitor and record VFD's different working status

: To monitor VFD's working status in the form of meter

2.2.3 History message

To display history message of software and VFD's status

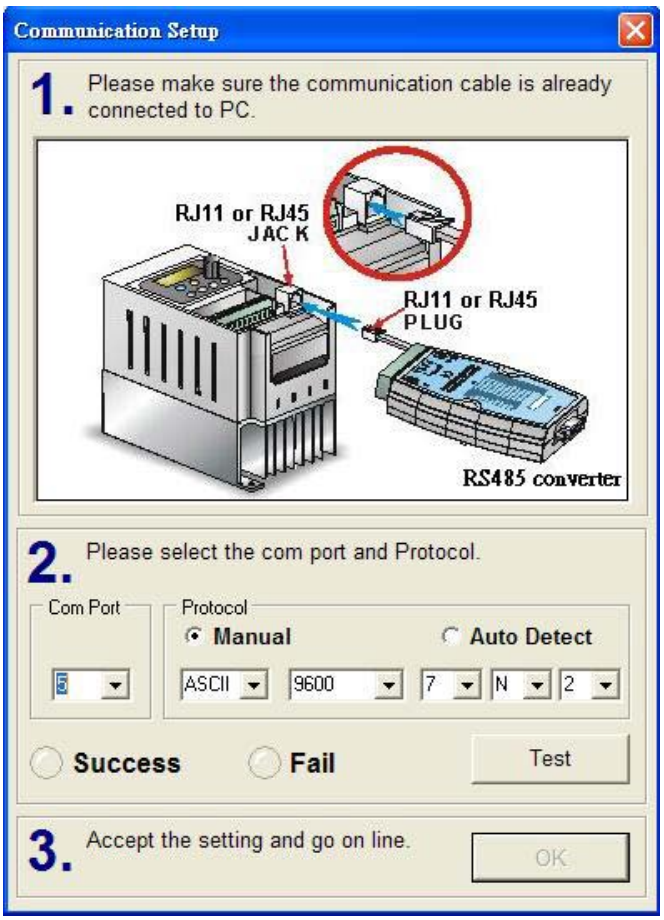


2.3 Connecting communication cable

Step 1, Double click the icon 

or 

to enter communication setup dialogue box

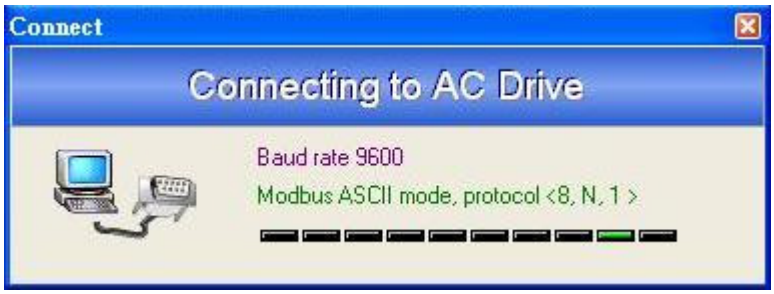


Step 2, To set according to the indication showed in the dialogue box

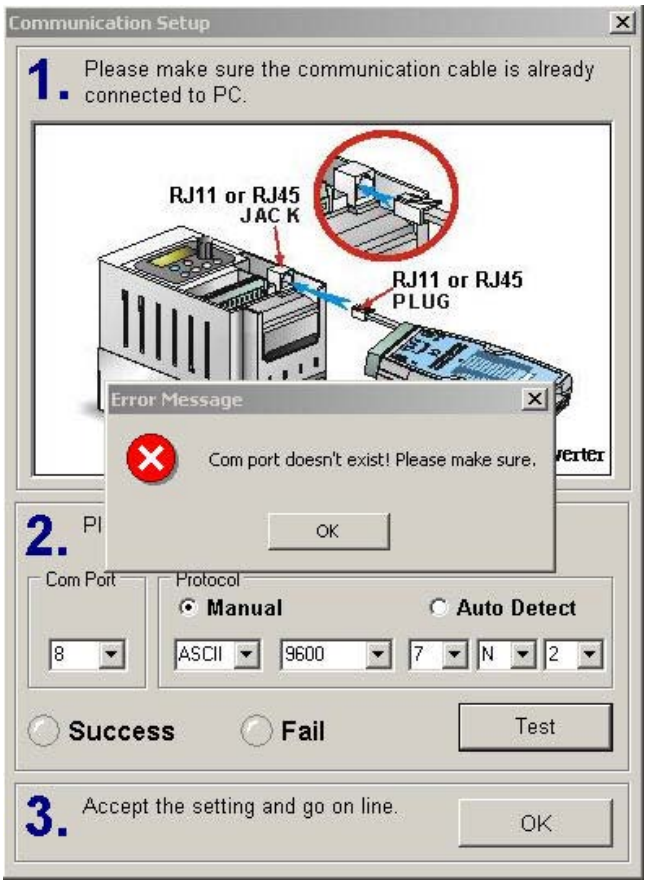
Step 3, You can select manual way or auto-detect way to set communication parameters, and then click 

a. If you select manual way it will do connecting cable test only on the indicated communication parameters

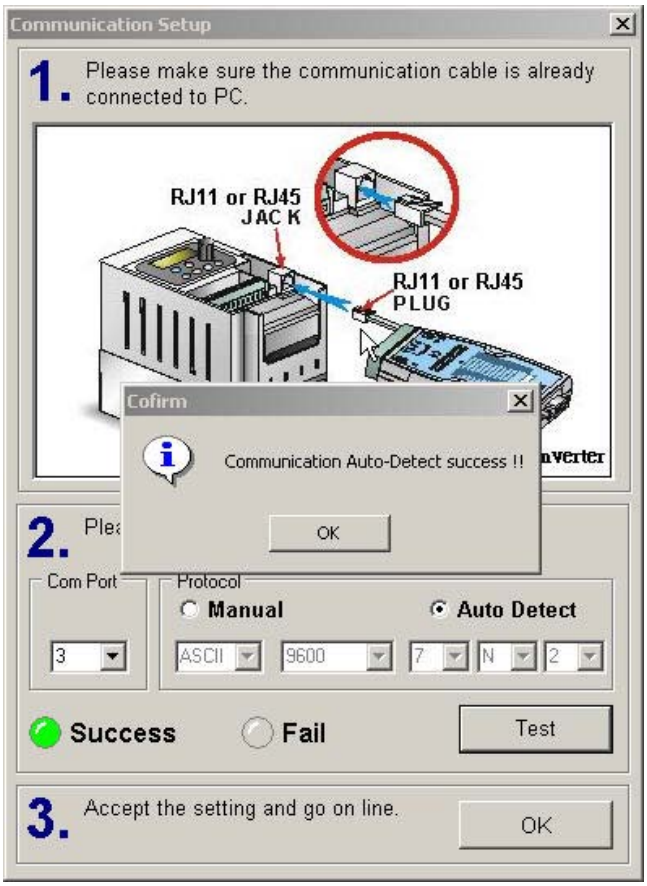
b. If you select auto-detect then it will do communication test as bellowing



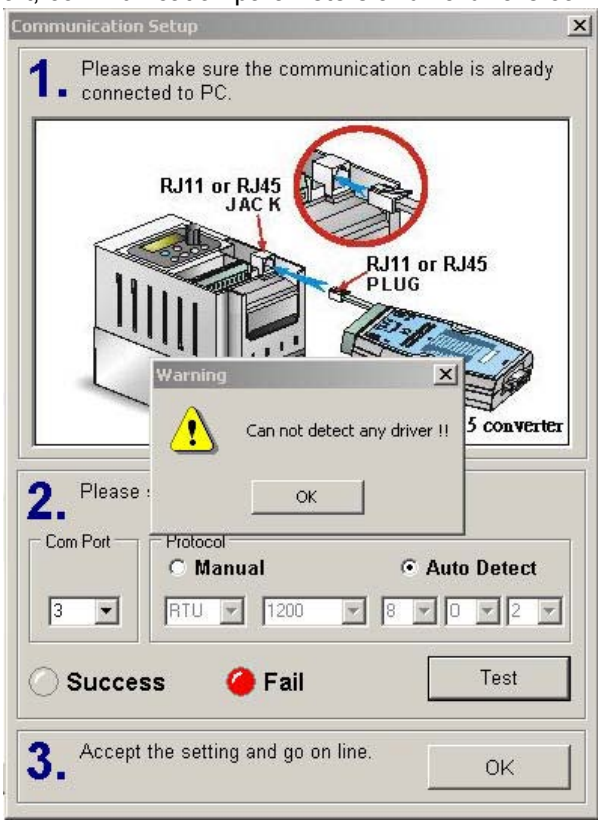
Step 4, Please select the right computer communication port. If your selection is wrong, it will appear the following false message



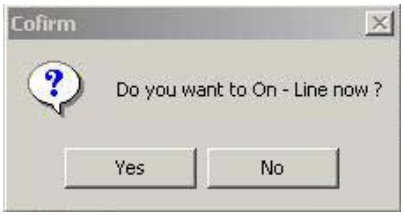
Step 5, If communication connecting succeeds, it will appear the following message



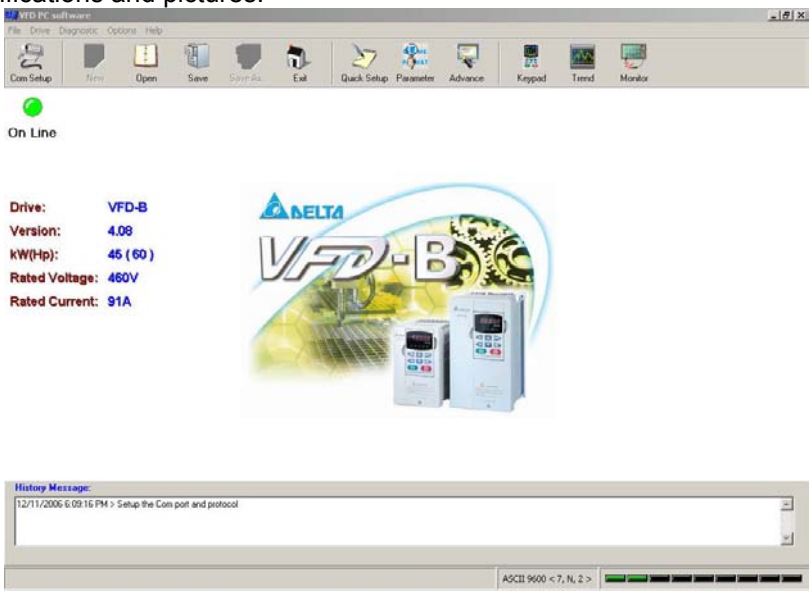
Step 6, If communication connecting fails, it will appear the following message. Then please check if the communication port, communication parameters and hardware connecting are all right.



Step 7, When connecting succeeds please move to step 3. Click OK it will appear a dialogue box like this



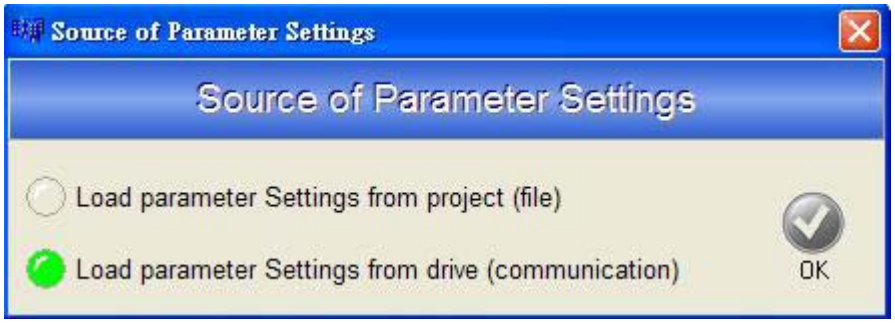
Step 8, Select Yes to enter the connecting window. Then you will see the upper left light On Line, VFD's basic specifications and pictures.



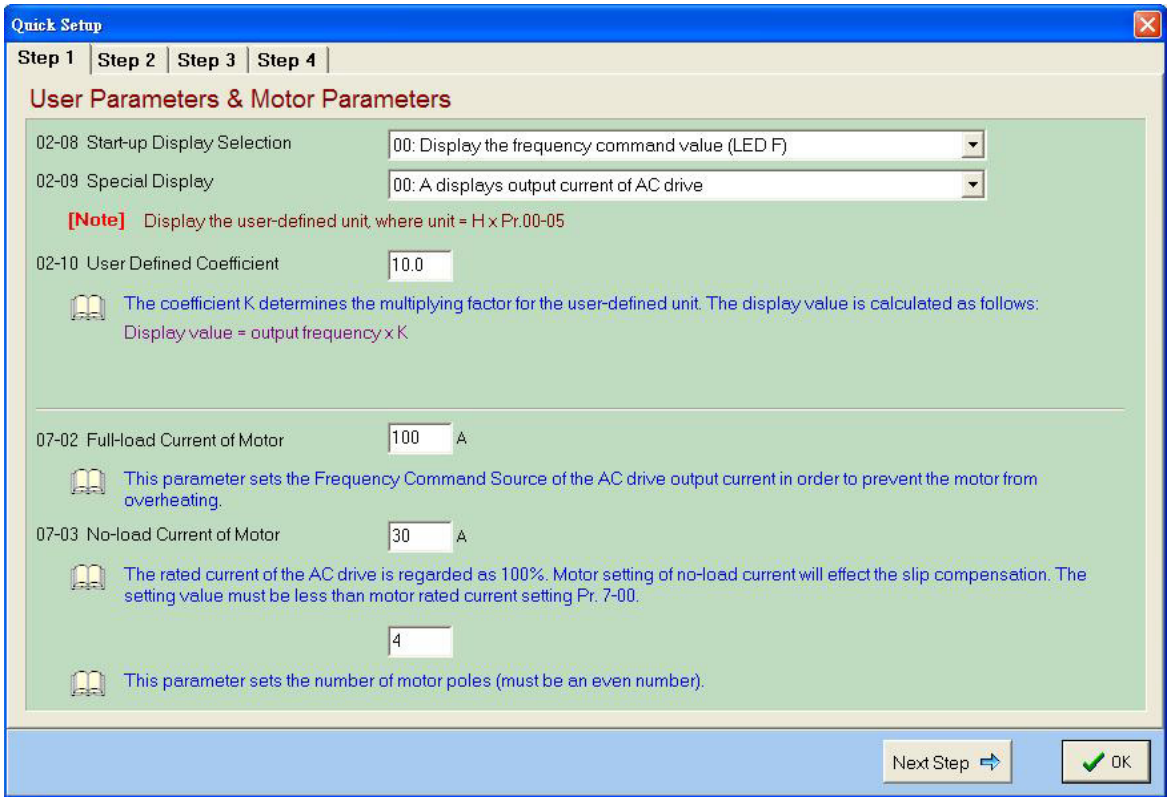
2.4 Quick setup

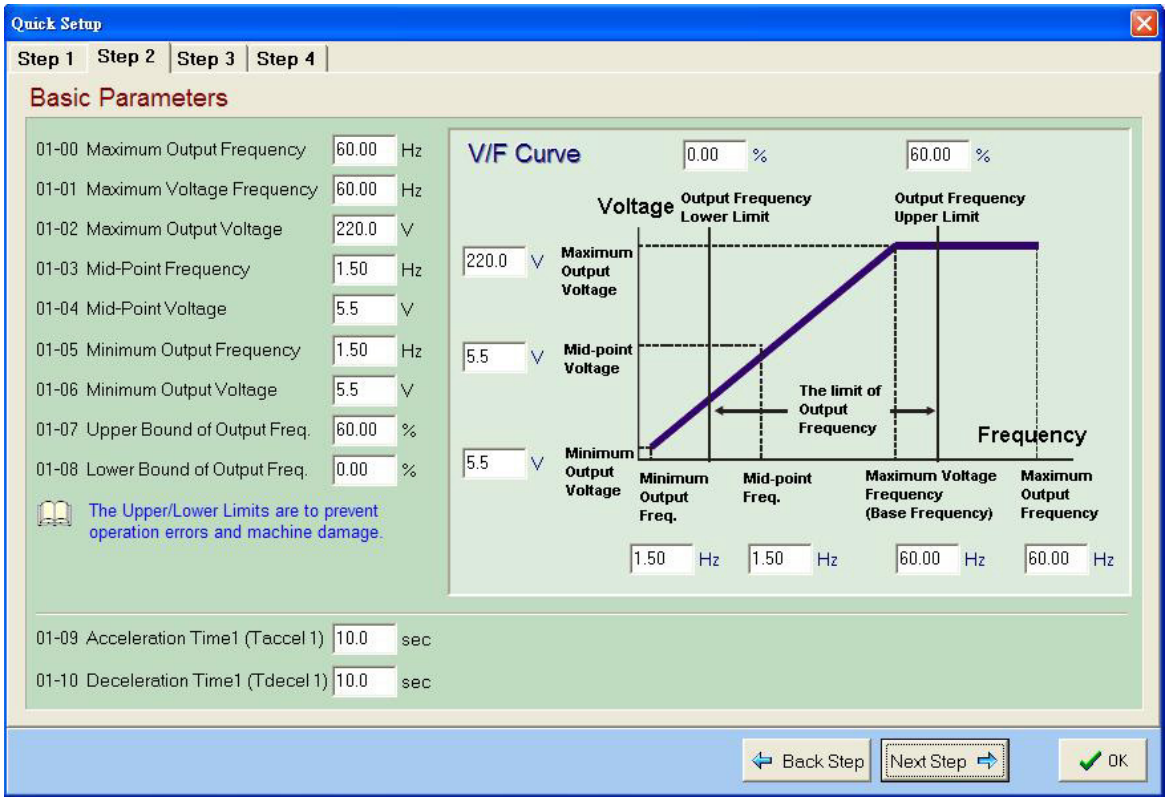
Please select Quick setup to set VFD's basic parameters

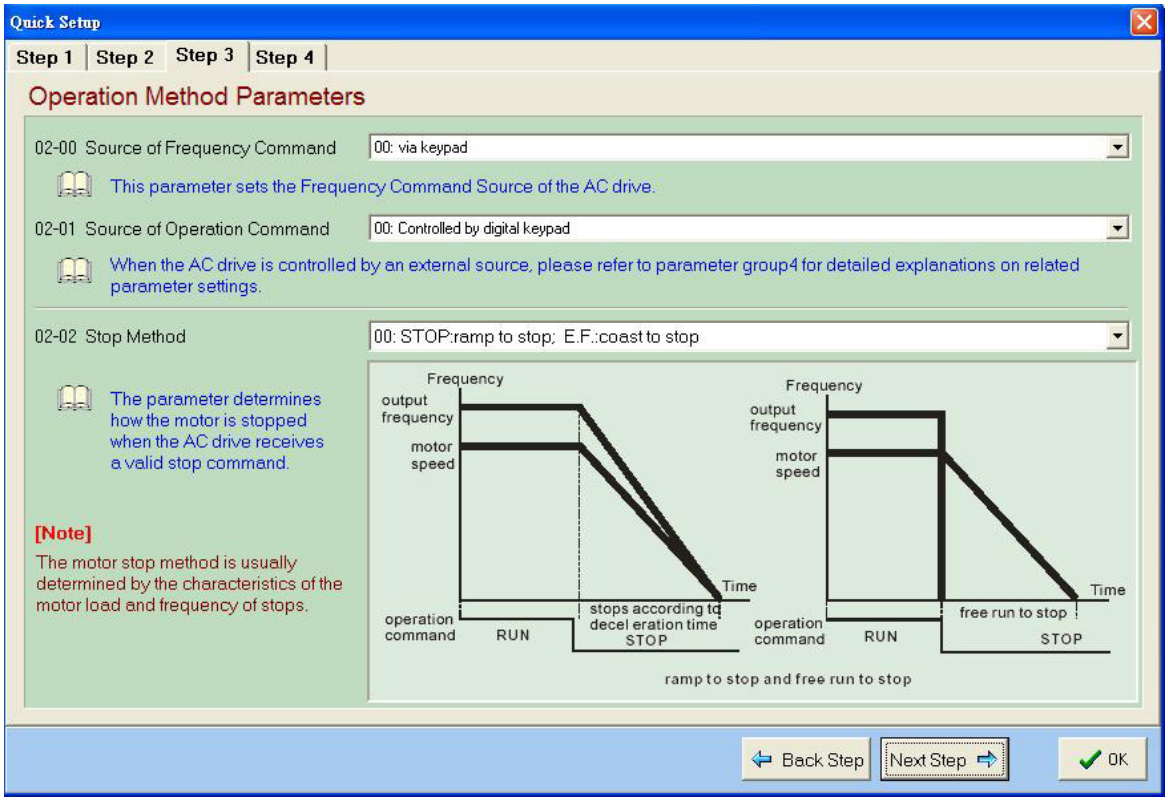
1. Please select the way of loading parameters either from file or from communication. We advise you first to select the latter.

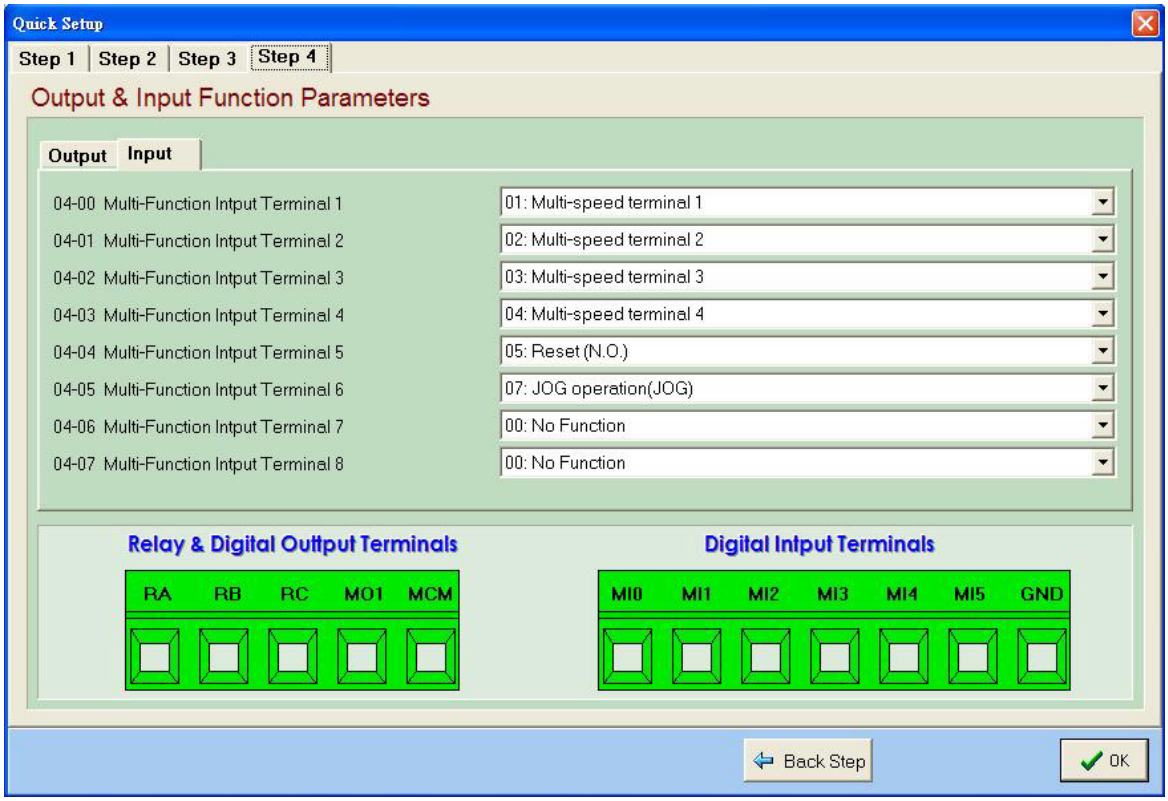


2. Please do basic settings according to Step 1, Step 2, Step 3 and Step 4

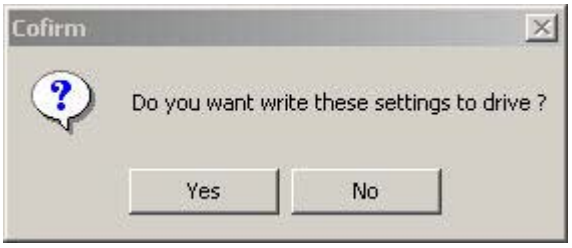



Quick Setup
Step 1
Step 2
Step 3
Step 4
Basic Parameters
01-00 Maximum Output Frequency 60.00 Hz
01-01 Maximum Voltage Frequency 60.00 Hz
01-02 Maximum Output Voltage 220.0 V
01-03 Mid-Point Frequency 1.50 Hz
01-04 Mid-Point Voltage 5.5 V
01-05 Minimum Output Frequency 1.50 Hz
01-06 Minimum Output Voltage 5.5 V
01-07 Upper Bound of Output Freq. 60.00 %
01-08 Lower Bound of Output Freq. 0.00 %
The Upper/Lower Limits are to prevent operation errors and machine damage.
V/F Curve
0.00 %
60.00 %
Voltage
Output Frequency Lower Limit
Output Frequency Upper Limit
220.0 V
Maximum Output Voltage
5.5 V
Mid-point Voltage
5.5 V
Minimum Output Voltage
The limit of Output Frequency
Frequency
Minimum Output Freq.
Mid-point Freq.
Maximum Voltage Frequency (Base Frequency)
Maximum Output Frequency
1.50 Hz
1.50 Hz
60.00 Hz
60.00 Hz
01-09 Acceleration Time1 (Taccel 1) 10.0 sec
01-10 Deceleration Time1 (Tdecel 1) 10.0 sec
Back Step
Next Step
OK


Quick Setup
Step 1
Step 2
Step 3
Step 4
Operation Method Parameters
02-00 Source of Frequency Command 00: via keypad
This parameter sets the Frequency Command Source of the AC drive.
02-01 Source of Operation Command 00: Controlled by digital keypad
When the AC drive is controlled by an external source, please refer to parameter group4 for detailed explanations on related parameter settings.
02-02 Stop Method 00: STOP:ramp to stop; E.F.:coast to stop
The parameter determines how the motor is stopped when the AC drive receives a valid stop command.
[Note]
The motor stop method is usually determined by the characteristics of the motor load and frequency of stops.
Frequency
output frequency
motor speed
Time
operation command
RUN
stops according to decel eration time
STOP
Frequency
output frequency
motor speed
Time
operation command
RUN
free run to stop
STOP
ramp to stop and free run to stop
Back Step
Next Step
OK

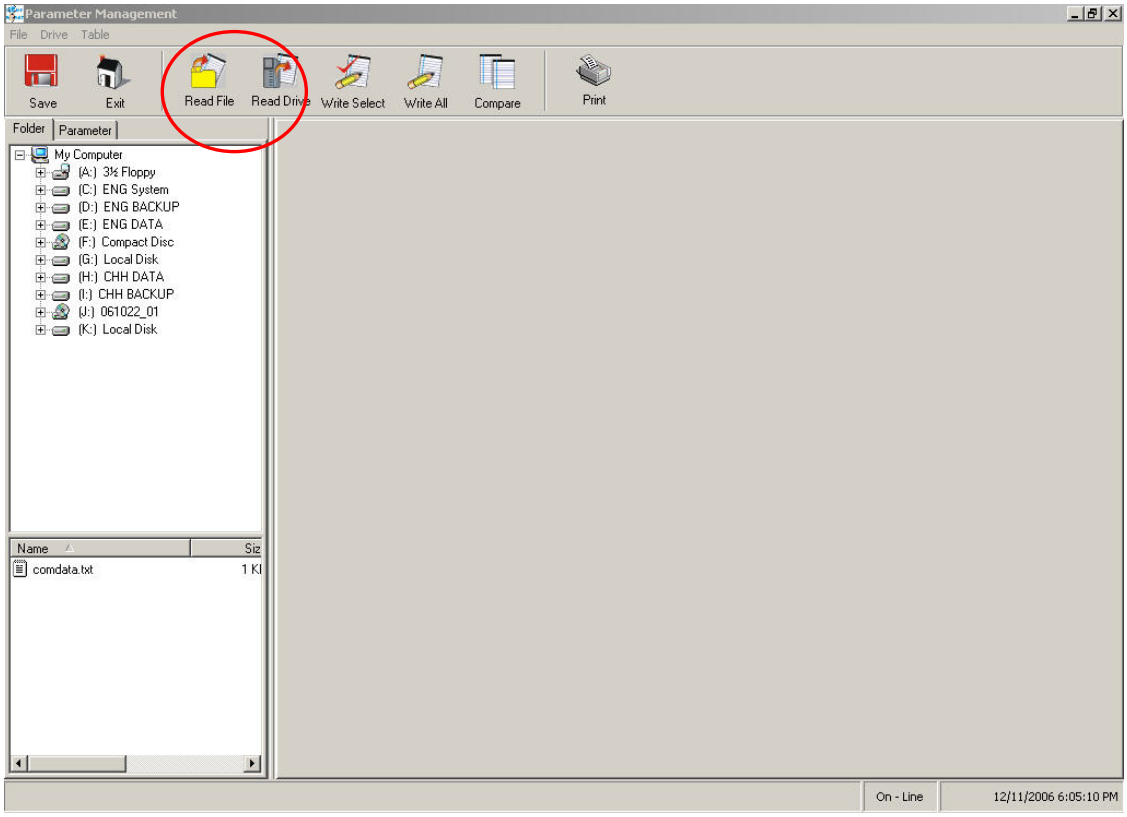


3. When all settings completed click  to write in parameters.

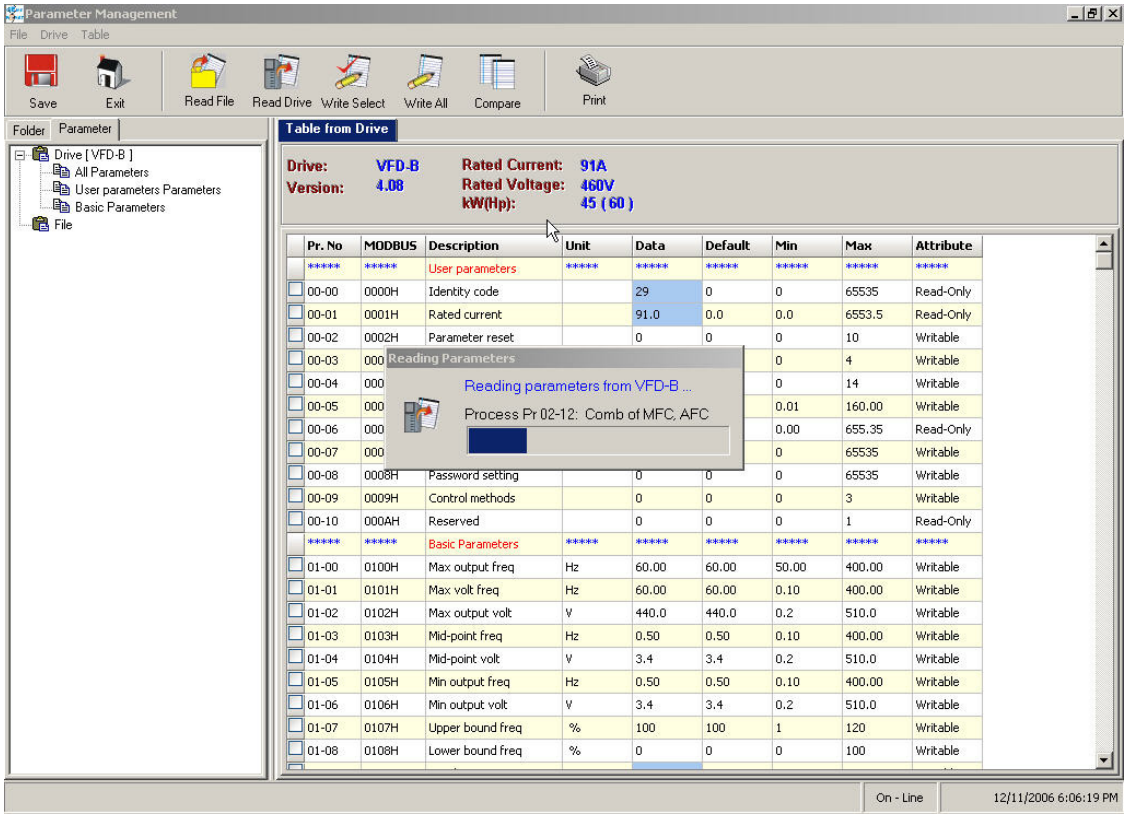


2.5 Parameters management

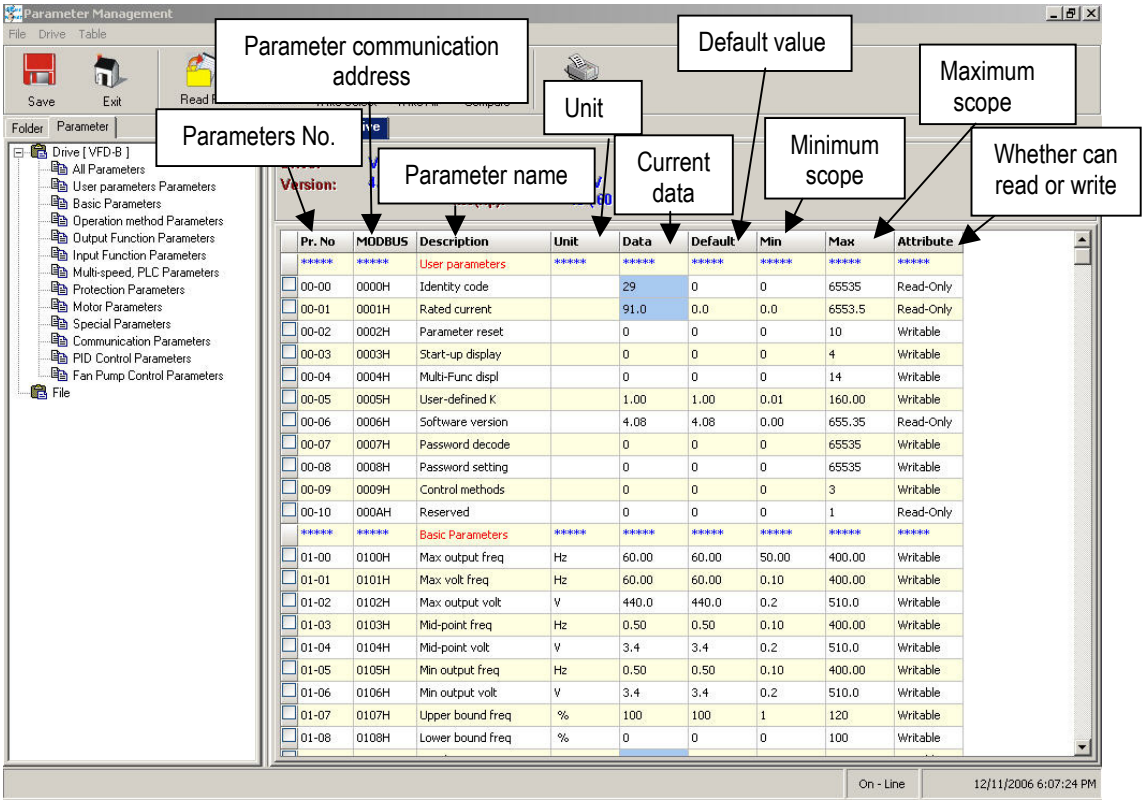
1. Please select the way of loading parameters for VFD either from file or from communication.



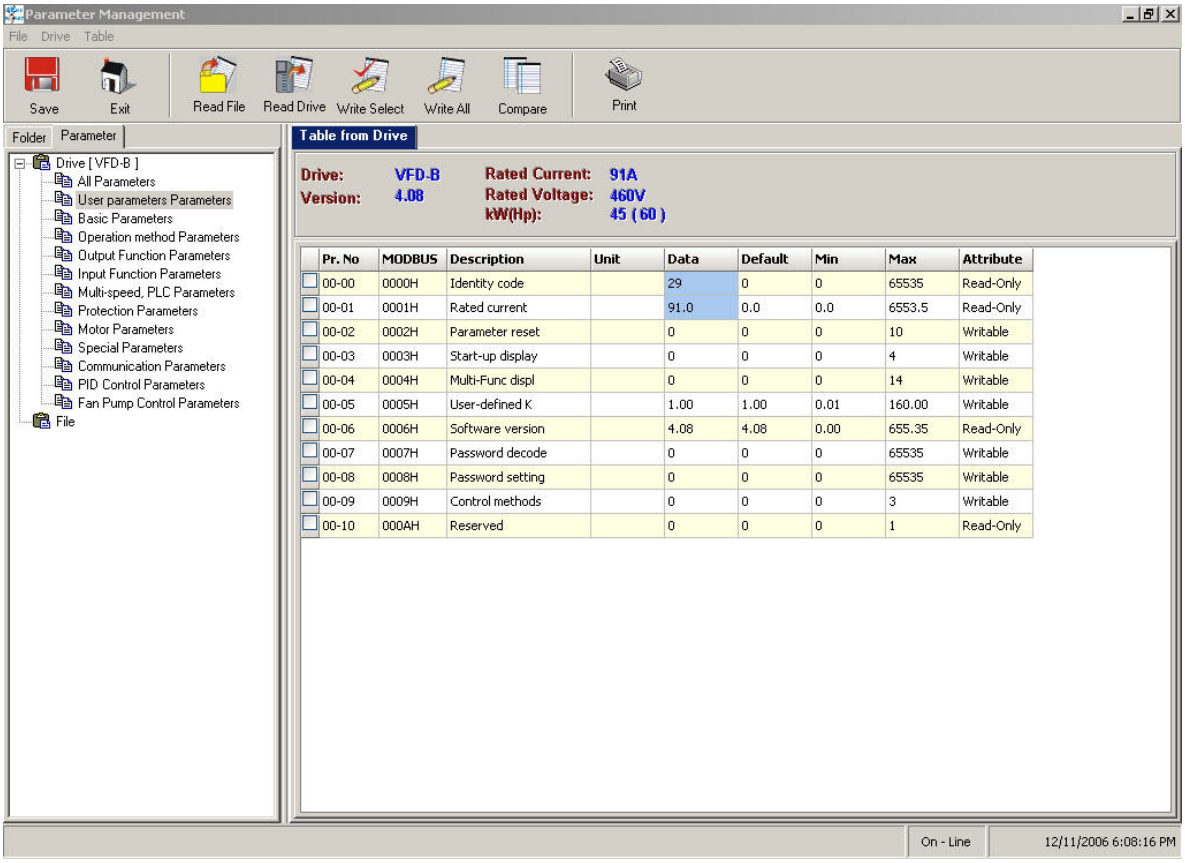
2. Following is the window of reading parameters when loading from communication.



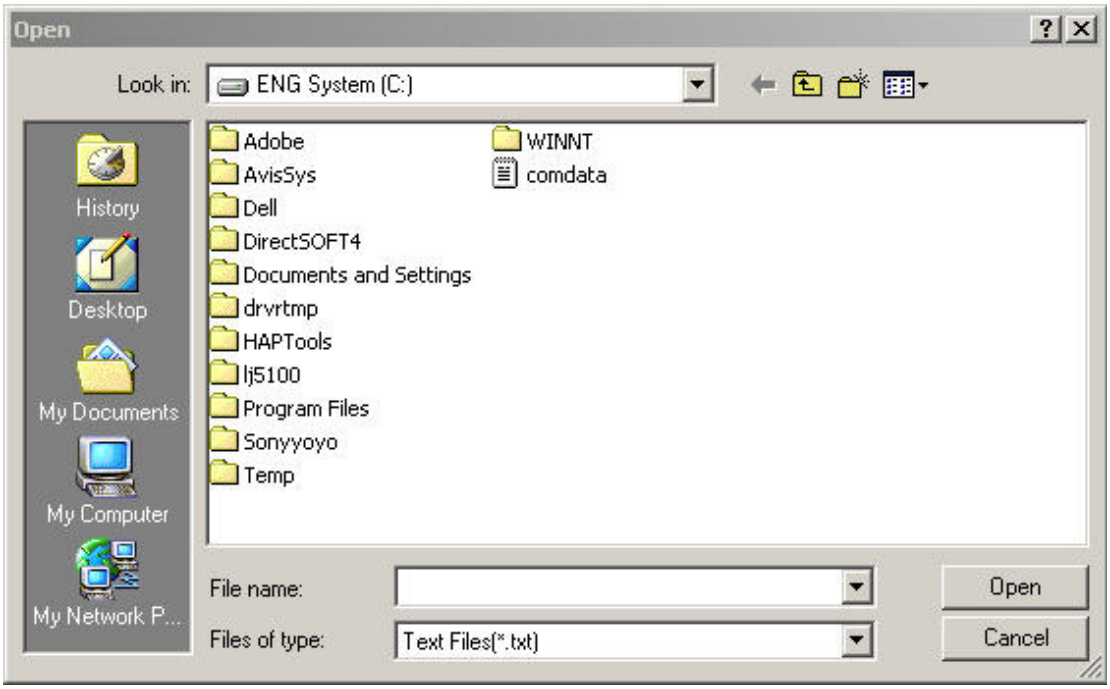
3. When reading completed it will appear the following window. Parameters are classified according to different parameter groups which displayed on the left of the window. Their details are displayed on right.
   Note: All VFD series have parameter group classification except VFD-M.



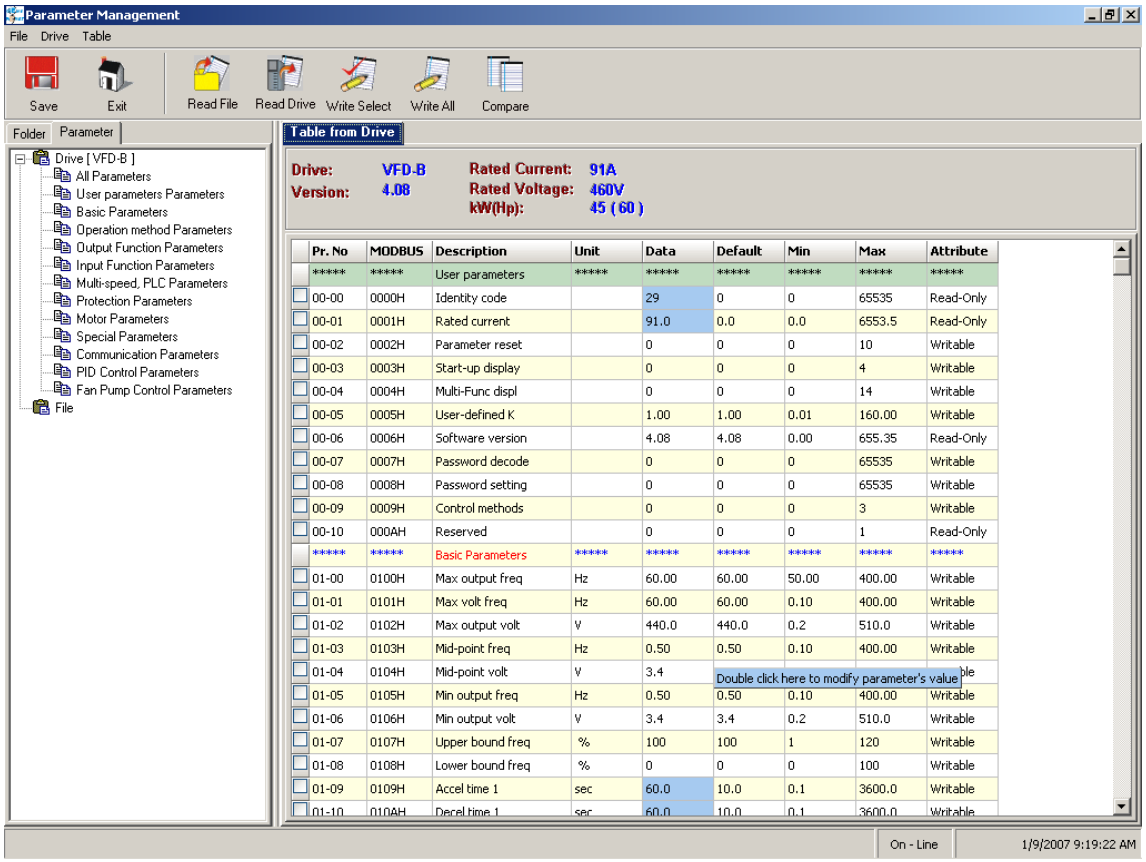
4. Select one group from the left then only appropriate parameters will be listed as following.



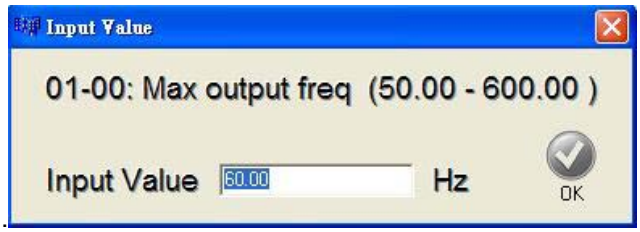
5. Please select .txt or.xls file if parameters loaded from files. We advise you to load them from communication if it is the first time to use no parameter file.



The following window shows that parameters are loaded form file. So its way of displaying is different with loaded from communication on the right part of the window.



6. If you want to modify parameters please double click the parameters that listed on the left of the diagram



When modifying finished, the left square frame will be ticked. Now parameters are not really written into VFD.

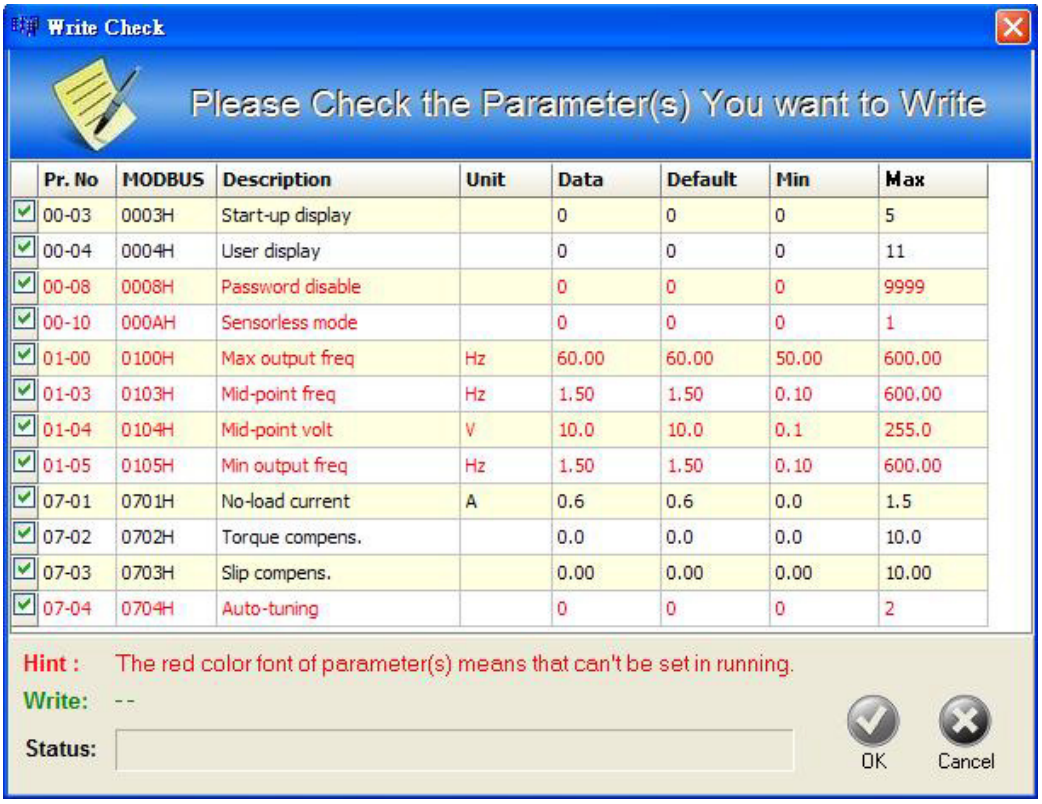
☑	01-00	0100H	Max output freq	Hz	60.00	60.00	50.00	400.00	Writable

If you wish to write the modified parameters into VFD please select the icon 

or 

.

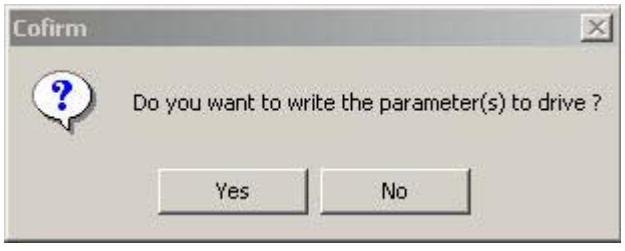
a. If you select *write select* it will only write in the modified parameters



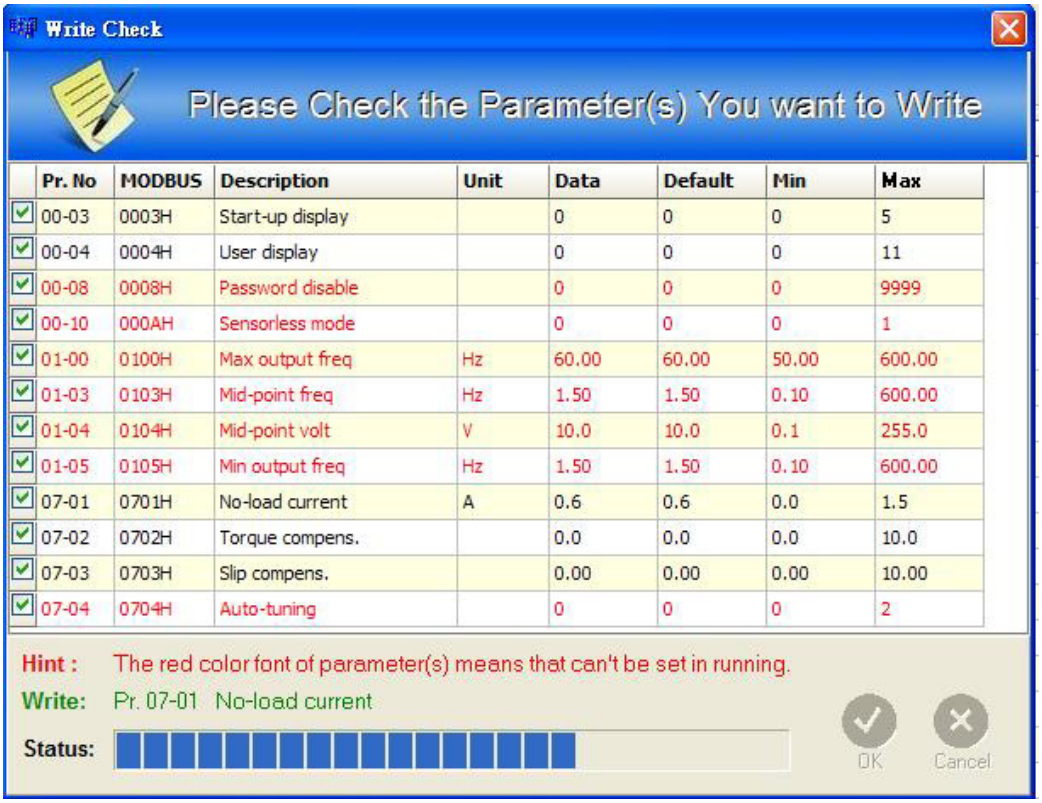
b. If you select *write all,* all parameters will be written into VFD, no matter whether they have any change or not.

Click 

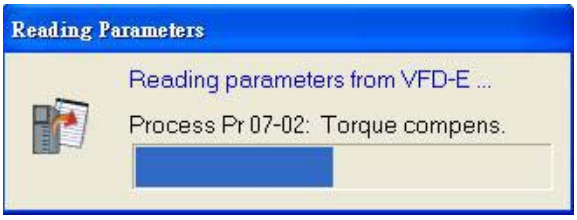
to confirm.



Writing status looks like this

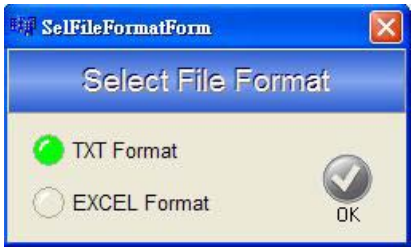


Reading parameters again so as to update the parameters content that showed in the window



7. Saving files

It can be saved as either Text format or Excel format



It needs a transferring progress as bellowing if it is to be saved as Excel format.

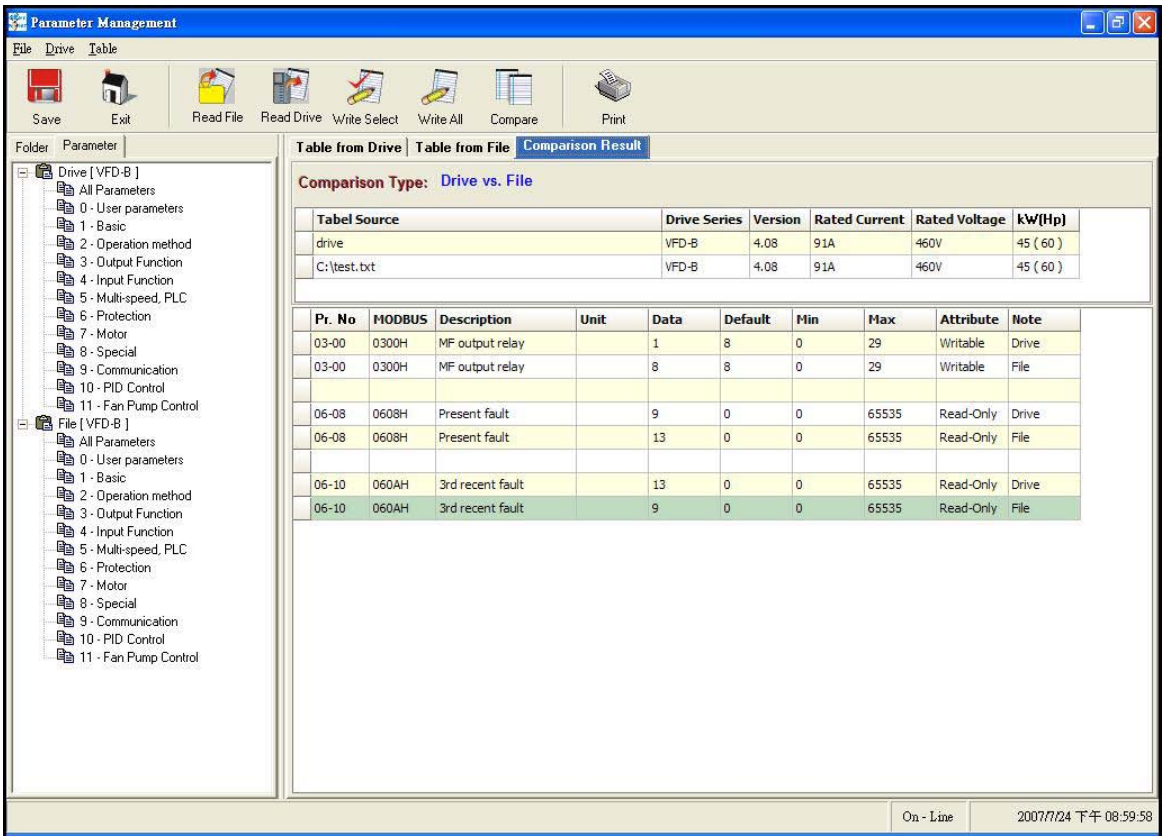
It can be rectified and edited directly after being saved, no matter in Text format or Excel format.

8. Function of parameter comparing

   No matter comparing a file to another one or comparing a drive to a file, it will finally list out the parameters that have different setting values.

   a. Select comparing kind

   b. Comparing result



9. Or you can also execute the functions from the above element drop down menu 

2.6 Online keypad

You can use online keypad to control the drive, adjust its speed, monitor its status and write in or read out parameters. If you wish to use online keypad to adjust drive's speed and to start or stop it, then please set the parameters of frequency command source and operating command source to be controlled by communication.

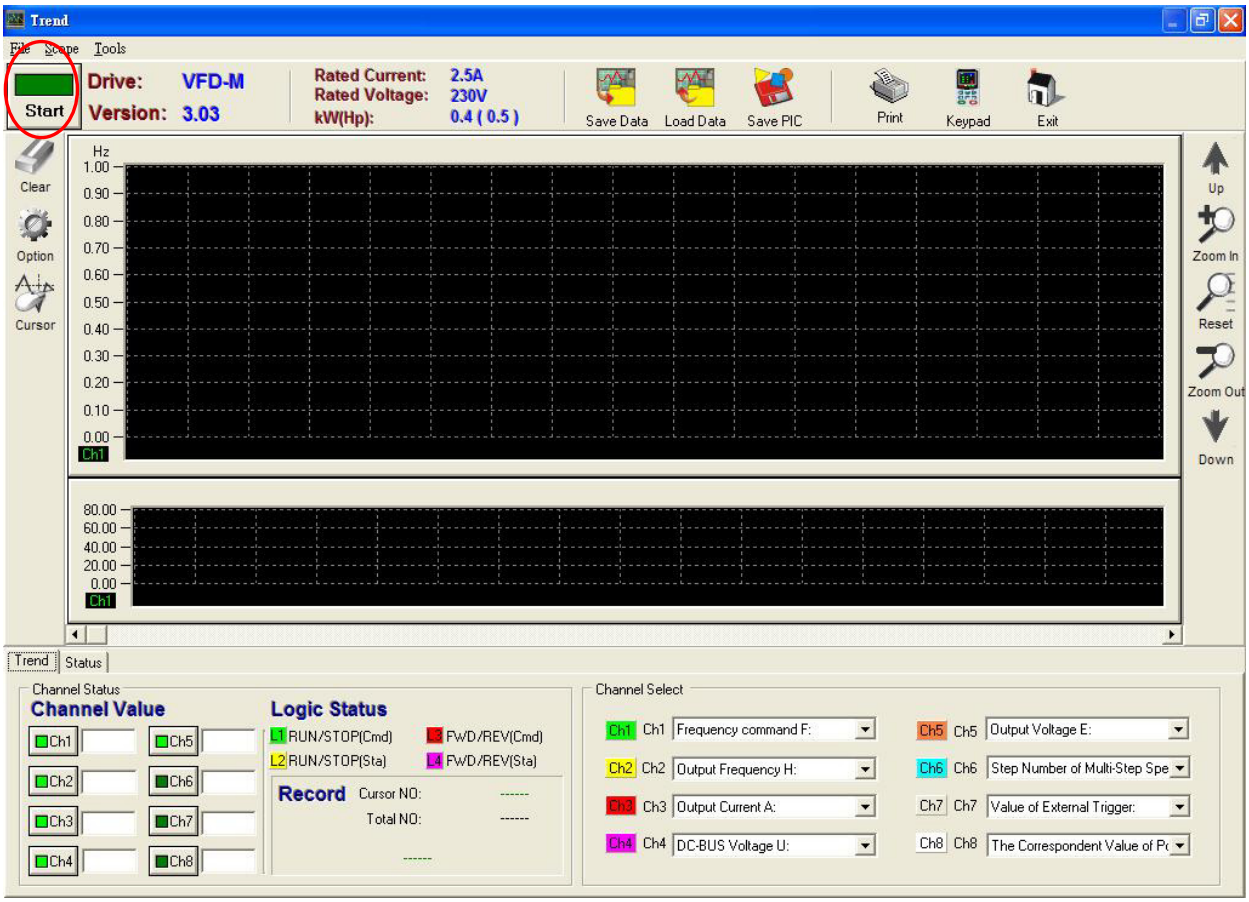
VFD series	Frequency Command Source	Operating Command Source
VFD-B	02-00=04 or 05	02-01=03 or 04
VFD-F	02-00=04	02-01=03 or 04
VFD-S	2-00=04 or 05	2-01=03 or 04
VFD-M	P00=03	P01=03 or 04
VFD-E	02.00=03	02.01=03 or 04
VFD-VE	00-20=1	00-21=2

Press PROG/DATA to set parameters

After the selection of a parameter double click its value, and then you can modify it.

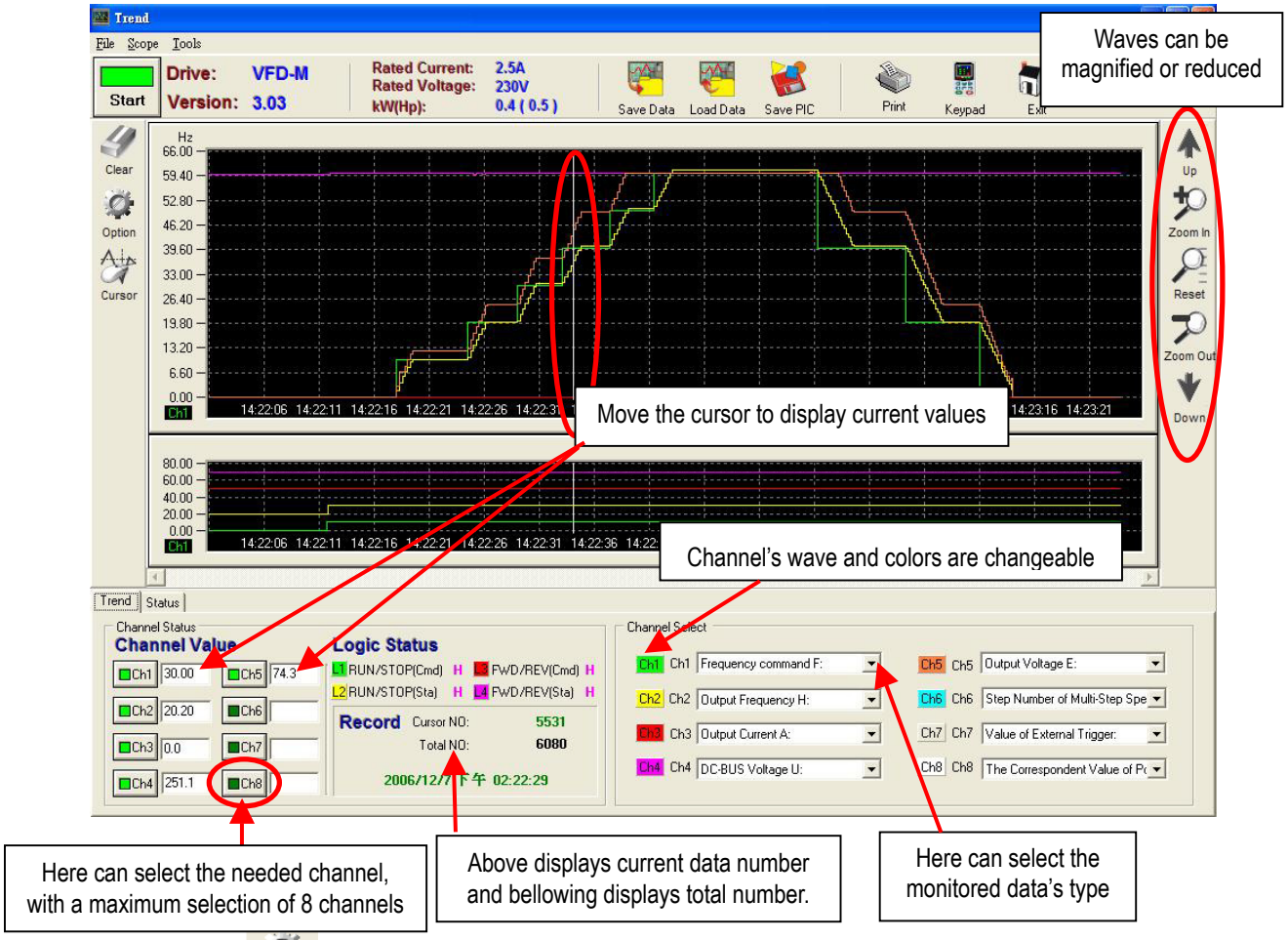
2.7 Trend record

2.7.1 Start trend record

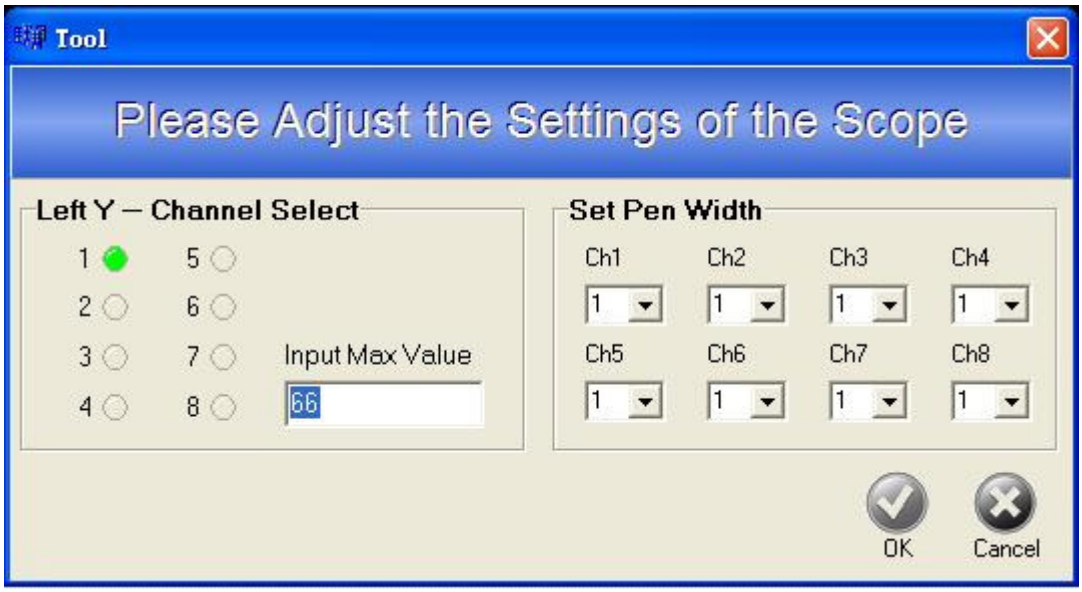


You need to click  so as to start data trend record.

Following displays actual recording status



1. Select Option on the left it will appear the following frame. Then you can change the wave's thickness degree and each channel's maximum value.

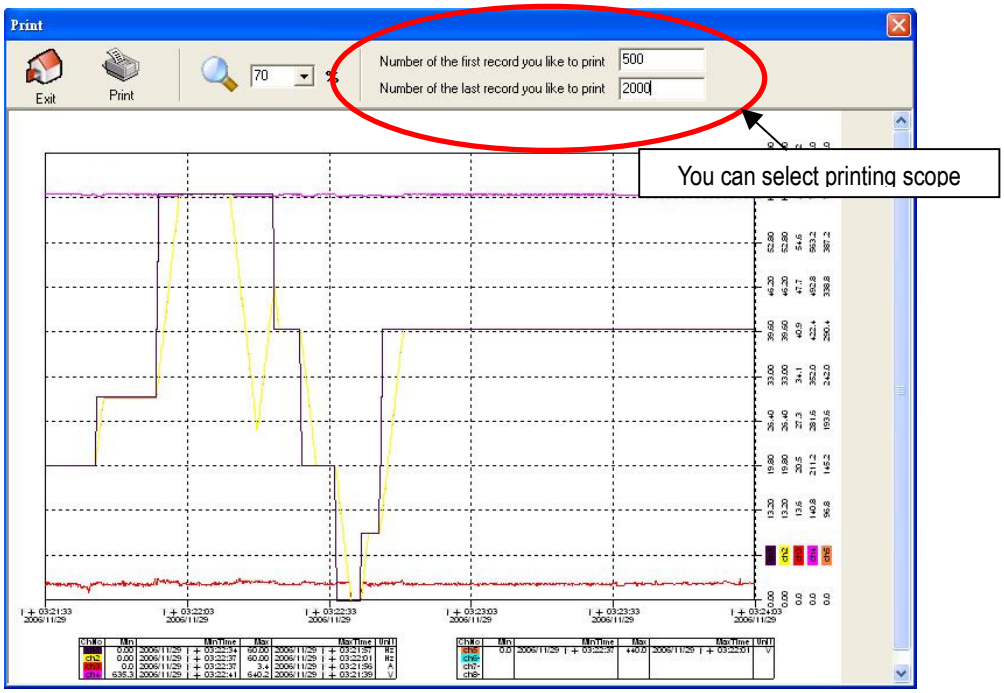


2. You can select Save Data Load Data from top of the upper window to save or load trend record wave (*.trd)

3. You can select Save PIC from top of upper window to save current page as picture format (*.bmpor*.jpg)

4. You can select 

from top of the upper window to print out waves as bellowing



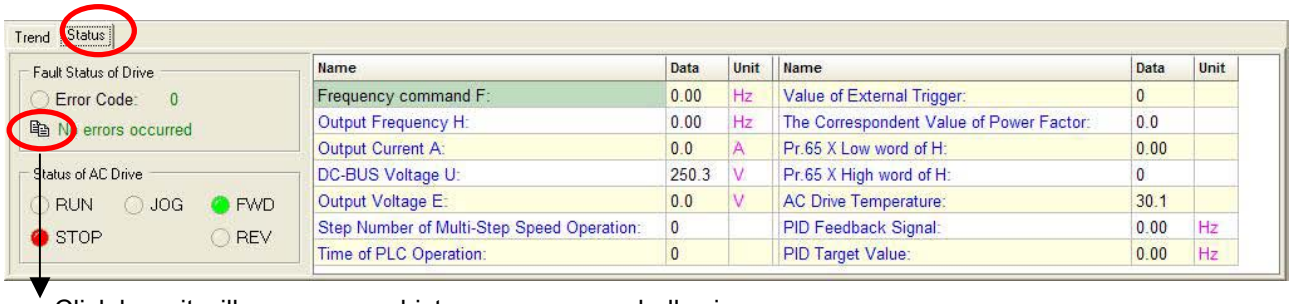
5. You can select 

from top of upper window to use online operating tool (Please refer to3-3)

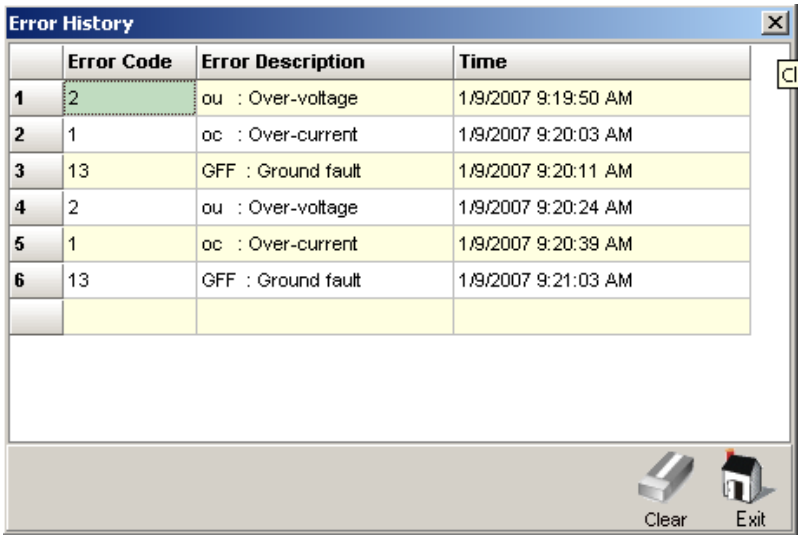
6. You also can select to execute these functions by menu items File Scope Tools on upper left

2.7.2 Page of data status

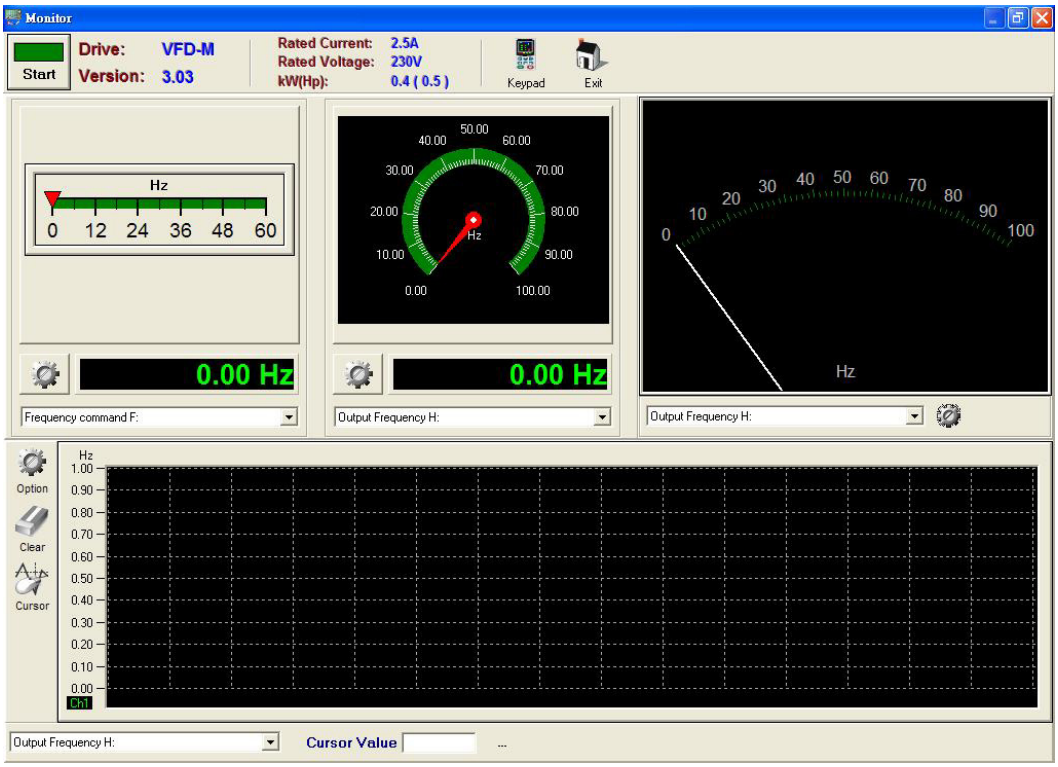
It can display the information of each data's current value, VFD status and error code



Click here it will appear error history message as bellowing:

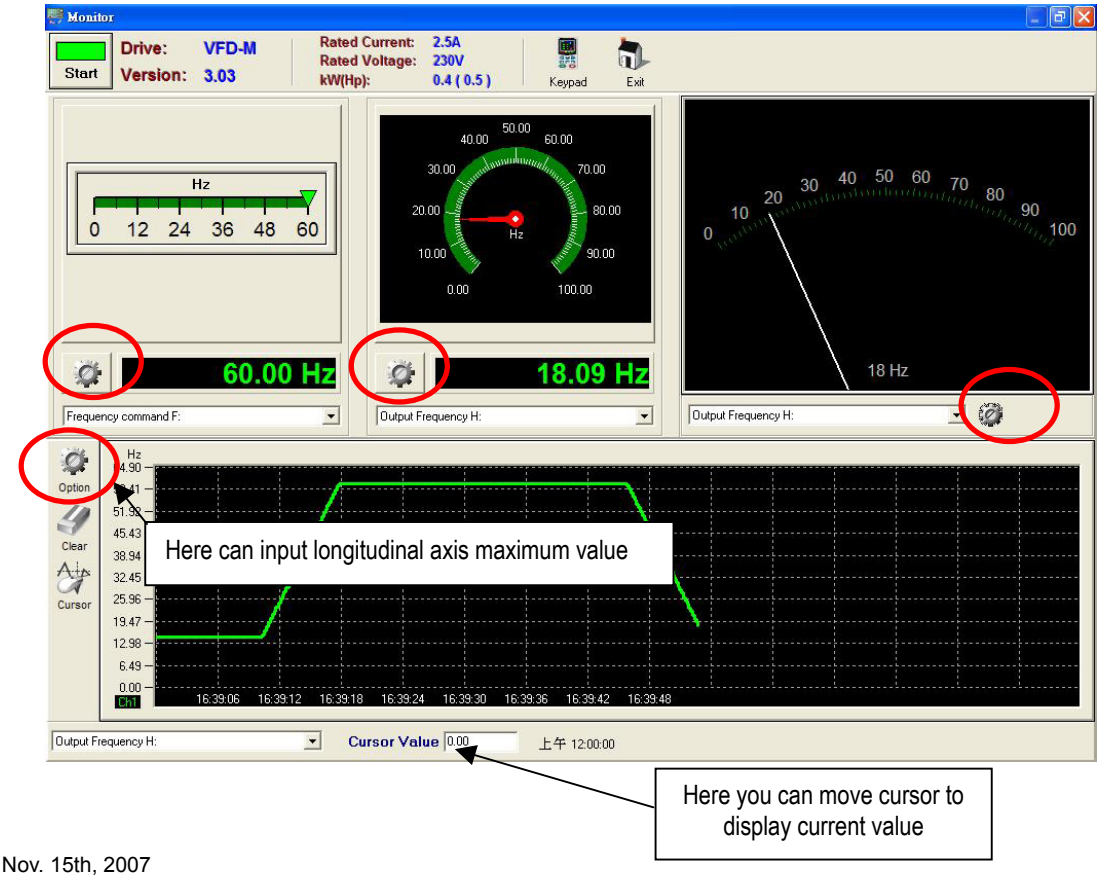


2.8 Instant monitoring

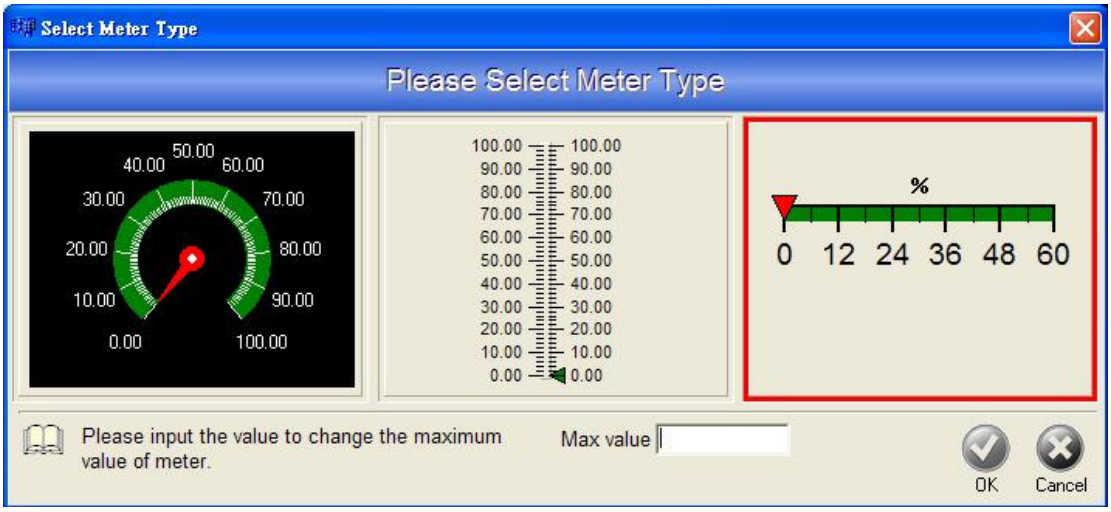


1. Click 

to start instant monitoring



2. Click  to select meter type



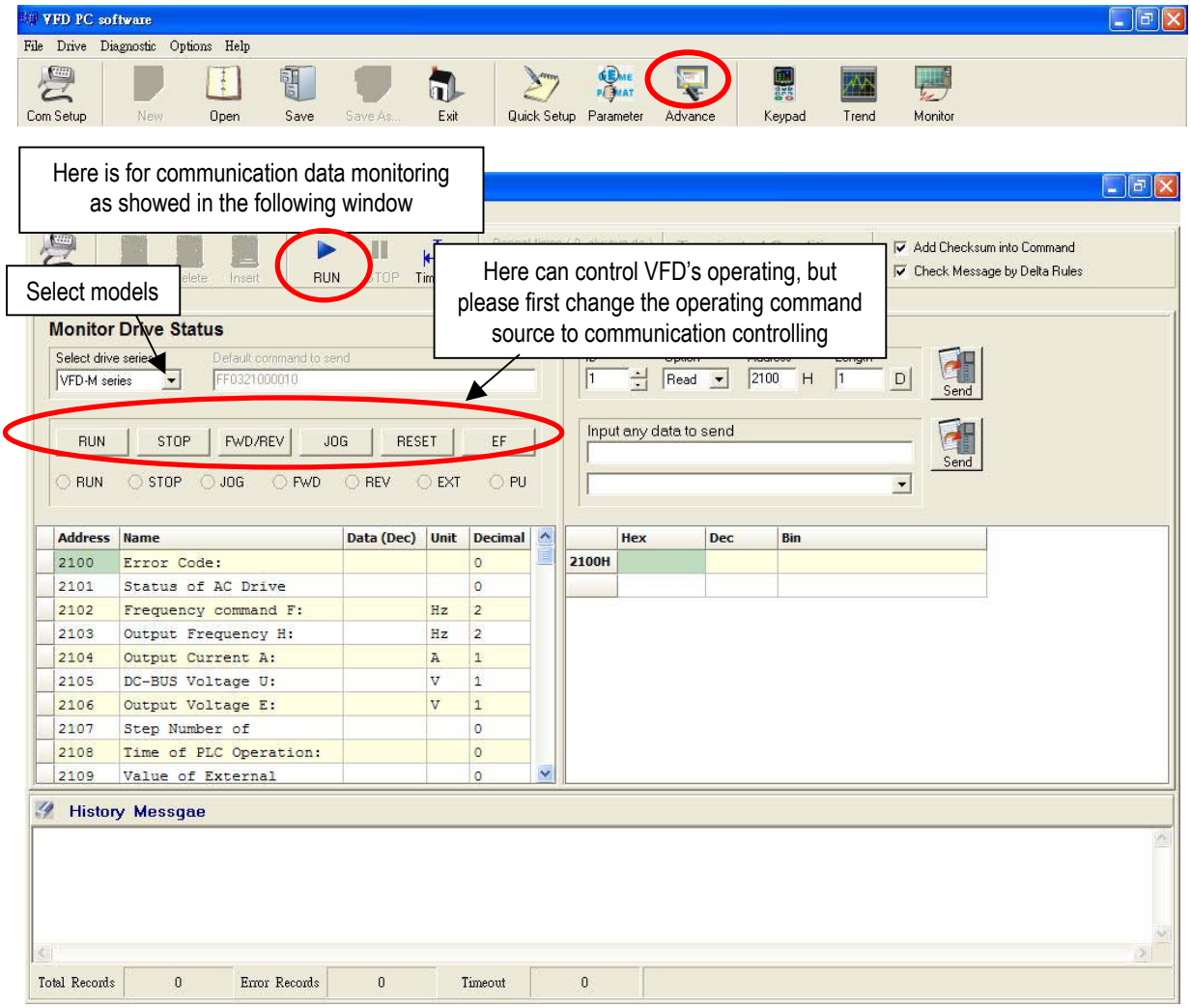
3. The bellowing oscillograph has the same function with trend record, but it has only one channel

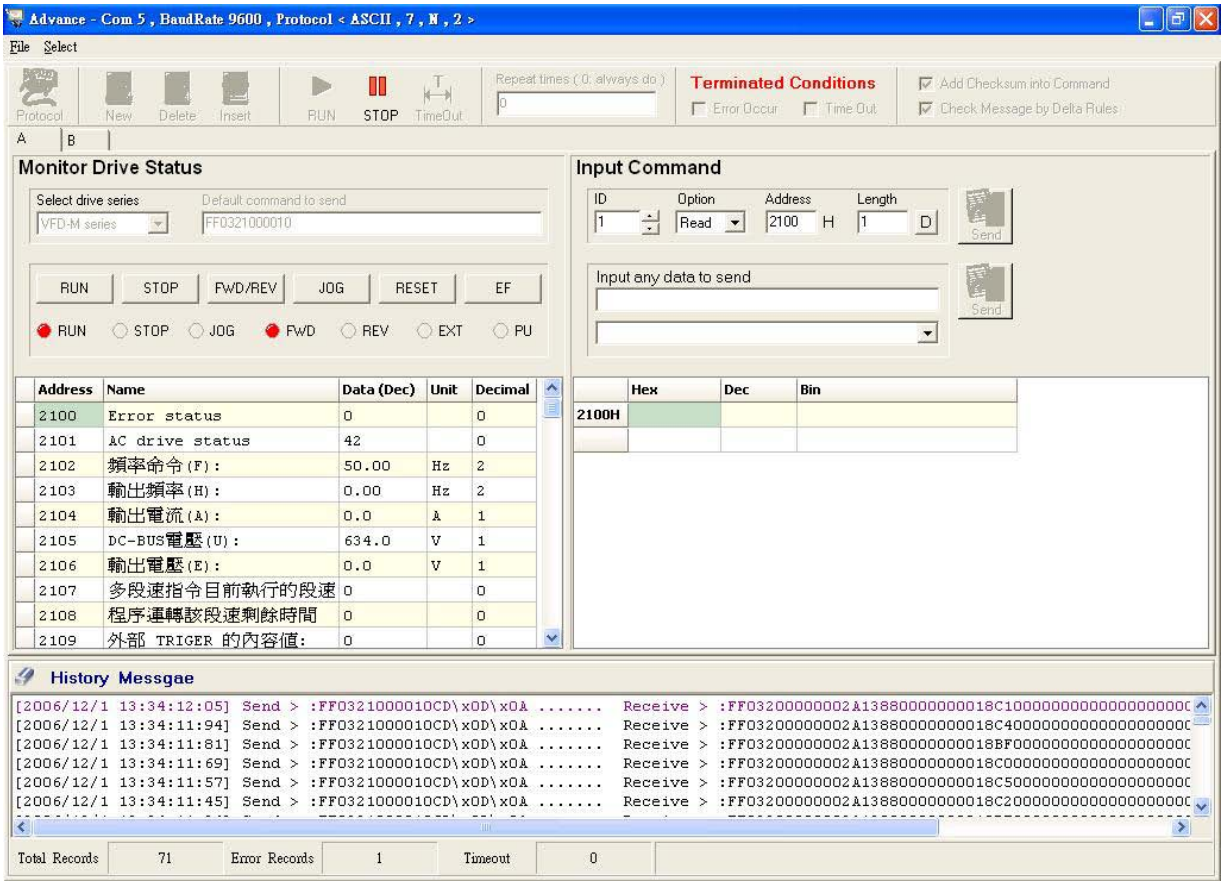
4. You can select 

to use online operating tool (Please refer to3-3)

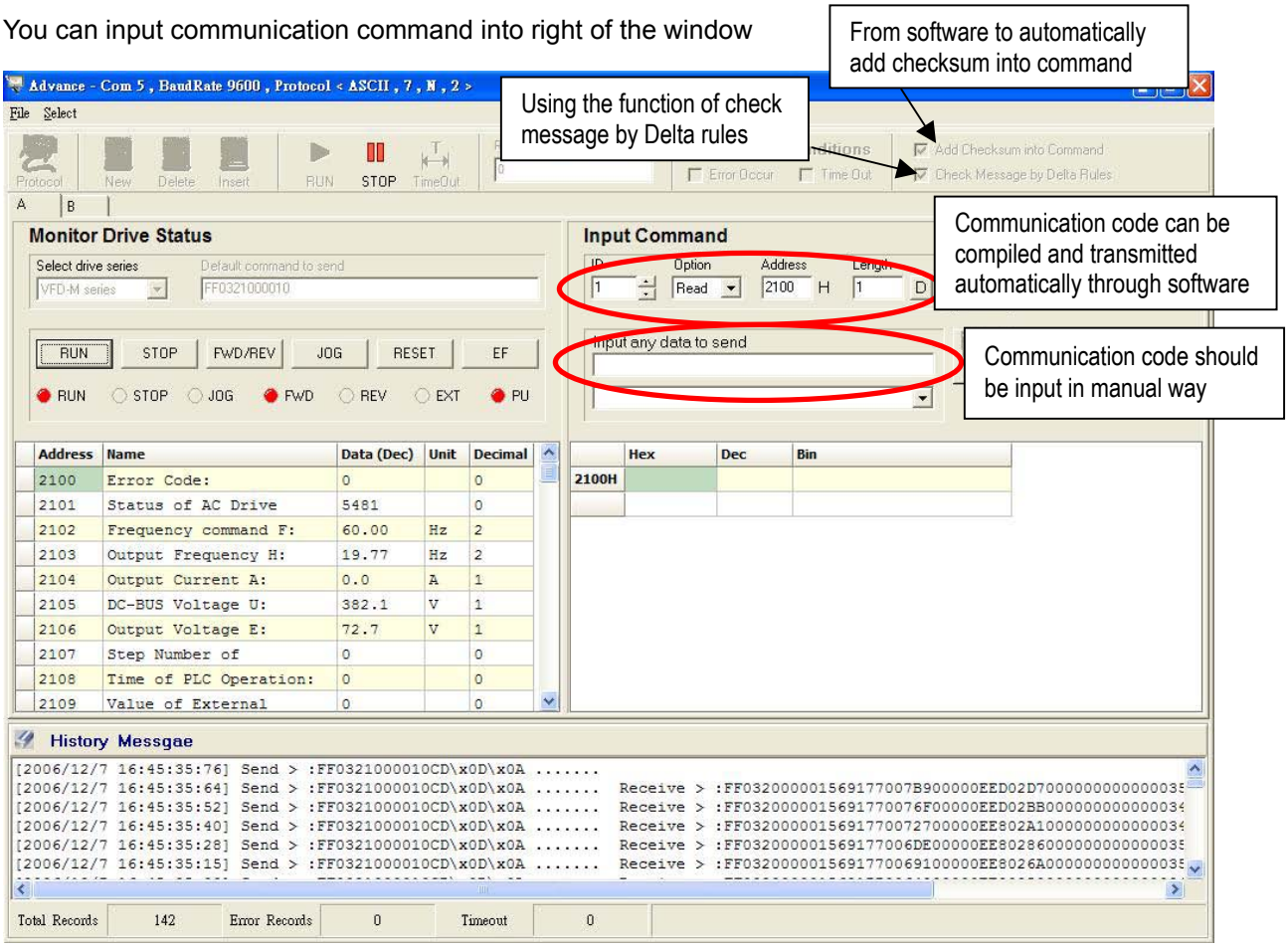
2.9 Advanced functions

2.9.1 Page A



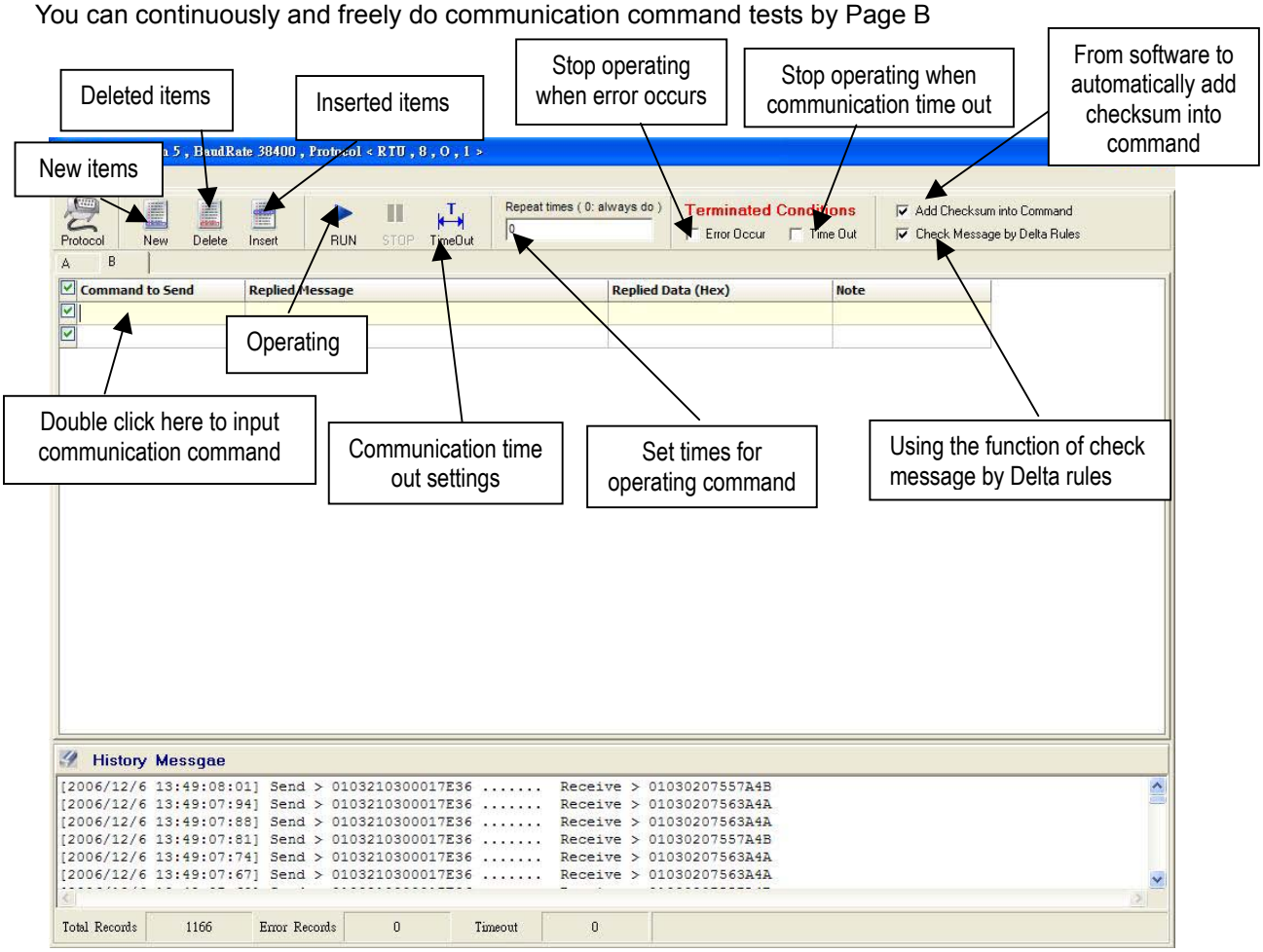


You can input communication command into right of the window

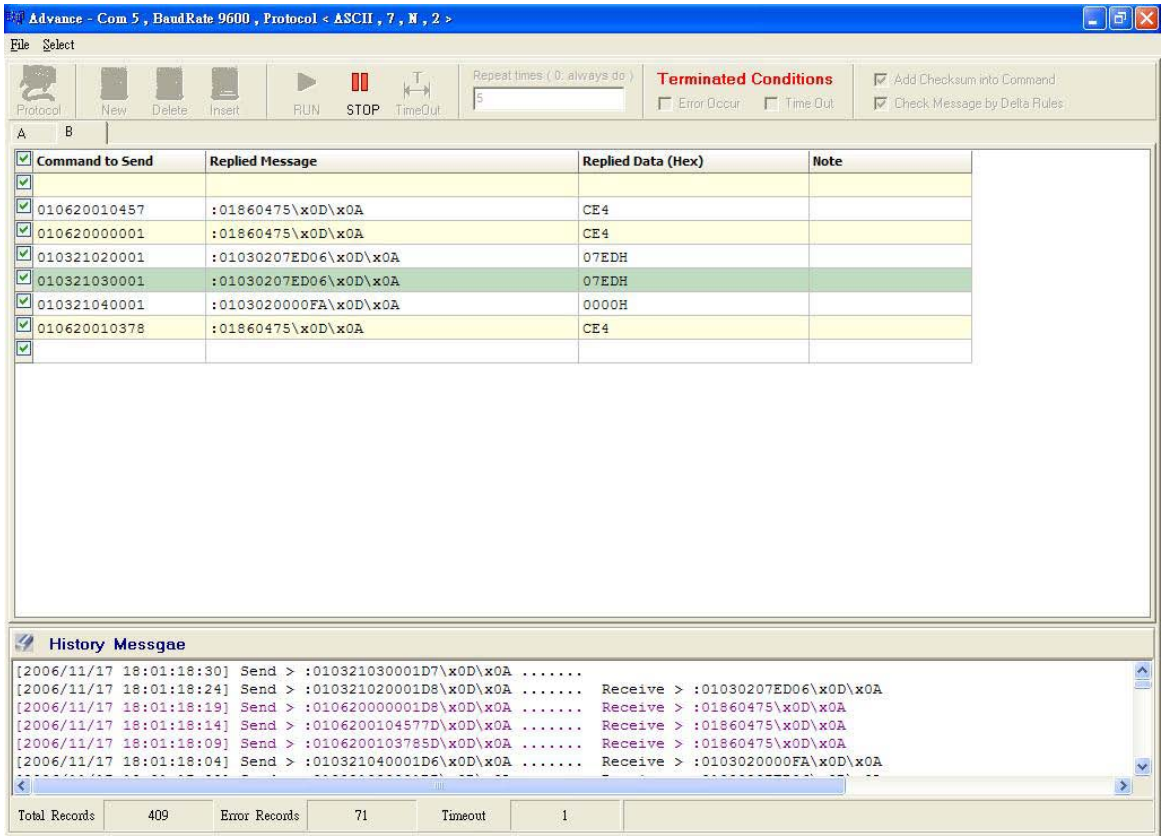


2.9.2 Page B

You can continuously and freely do communication command tests by Page B

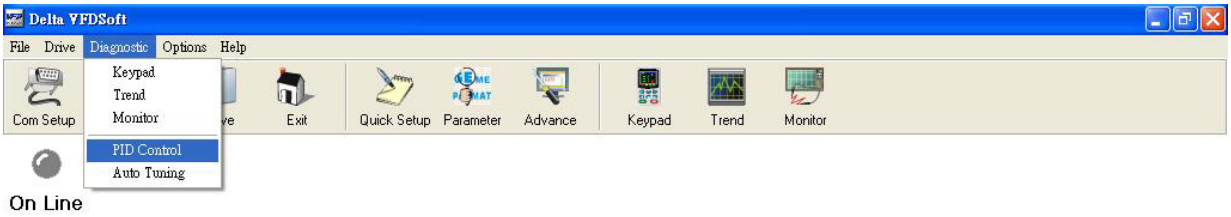


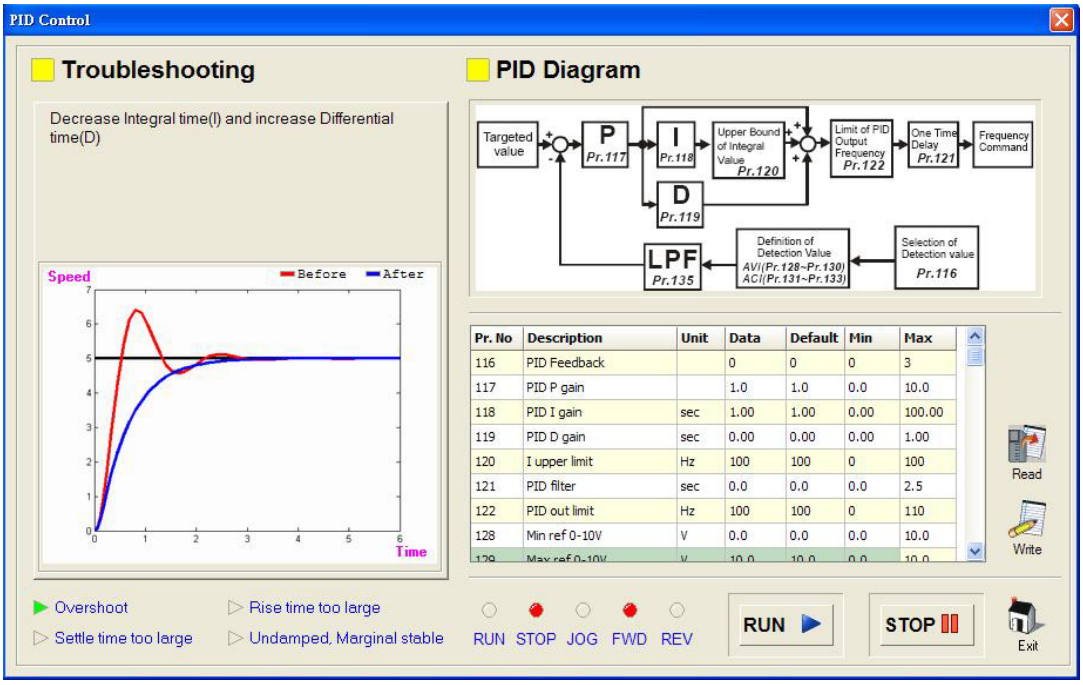
Operating status looks like this



2.10 Other functions

2.10.1 PID controlling





2.10.2 Automatically measuring of motor parameters