



MESCO VIEW for Windows XP, Win7 and Win10

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User Manual

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- 3.0 Scanner Manual*

* Only by delivery of scanner SCAN-415T

CHAPTER 1

Introduction

1.1 Welcome

Congratulations for selecting the Mesco View for Windows. You have chosen a powerful, intuitive, rapid development environment for testing your components. With Mesco View for Windows, you can point-and-click your way to test your components by opening your test step, storing to data file, printing and viewing as excel file.

With the professional version, you can test your components with graphic, also store the graphic to data file, bitmap format, print the graphic and view as excel file.

MESCO-VIEW allows taking full advantage of your powerful hardware.

It is possible to set and execute all measuring functions of the Measuring Bridge, using the mouse switches and movements. The measuring results will be evaluated, to determine, whether they satisfy the redefined limits. Subsequently the results will be stored for the statistical evaluation. Up to 25 measuring steps can be incorporated in a test file.

Hotline for Questions/Problems

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1.2 Mesco View versions

The Mesco View for Windows is available for Wayne Kerr instruments 3260, 3265, 3255, 6430, 6440, 4300 and 6500, each providing a level of additional power over the last. You can choose the version that best suits your needs now, then upgrade to a more powerful version later, when your needs change. The available editions include:

- **Mesco View** is the Measure Component View for Wayne Kerr Instruments. Mesco View includes the features most testers need to produce high quality for testing their components. Mesco View provides the intuitive measurement features, by which you can add test steps, change test steps, delete test steps, store test steps to data file, open test steps, print test steps, normal and transformer measurement mode, and so on.
- **Mesco View Pro** is the Measure Component View professional for Wayne Kerr Bridge Instruments. Mesco View Pro adds even more powerful features, like the ability to show the test step with graphic (Frequency Graphic, Level Graphic and BIAS Graphic), major and minor results, normal and transformer measurement mode, store the graphic data to data file, print the graphic pictures, save the graphic to bitmap files.

The differences between the programs are the possible functions of the instruments.

The **Demo** Program is a full working program. The only difference is that it runs without connection to a Wayne Kerr Instrument. The results of the Wayne Kerr instruments are random numbers calculated by the limits input. With this program you can write/change test programs on other PCs, also evaluate the measuring results. **The program is fully network compatible.**

CHAPTER 2

Installation and System Requirement

2.1 Installing Mesco View

The instruments can be controlled by different interfaces. The following interfaces can be used: e.g. GPIB, respectively USB-GPIB from National Instruments (www.ni.com) or from Computer Boards (www.computerboards.com) or other interfaces for RS232, LAN and USB, provided the instrument has got this interface.

Starting the installation program

Launch the Mesco View Installation program-- **Setup.exe** --from your CD.

IMPORTANT! Be sure to reboot the computer (as prompted by the installation program) after installation and before using the product.

Installation directory

By default, Mesco View installs into the directory: \Program Files\MVxxxx

For MVxxxx there is MV3260, MVPro3260, MV6440 or MVPro6440 indicated, depending on your Installer type.

2.2 System Requirements

Hardware Required:

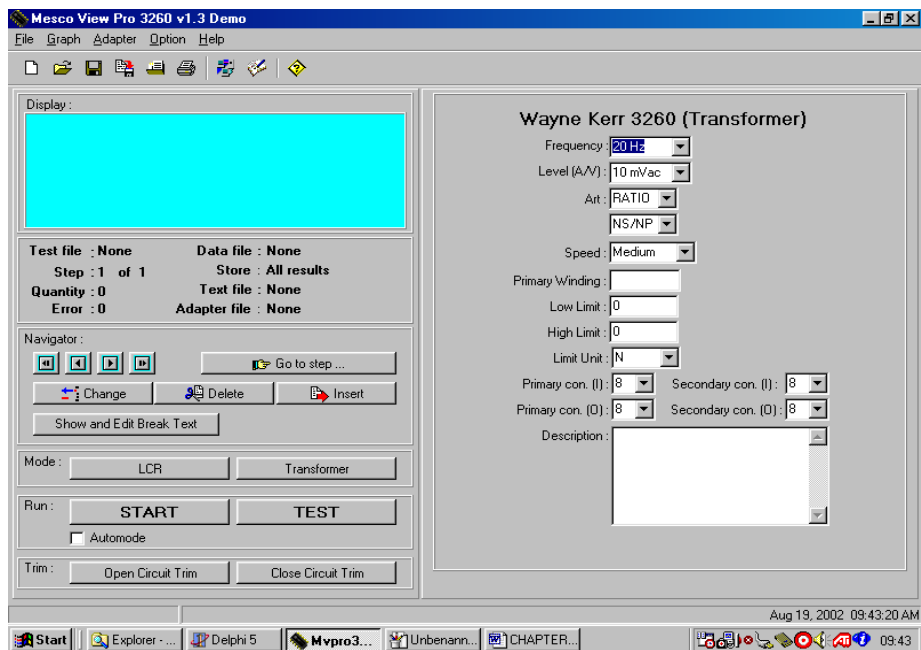
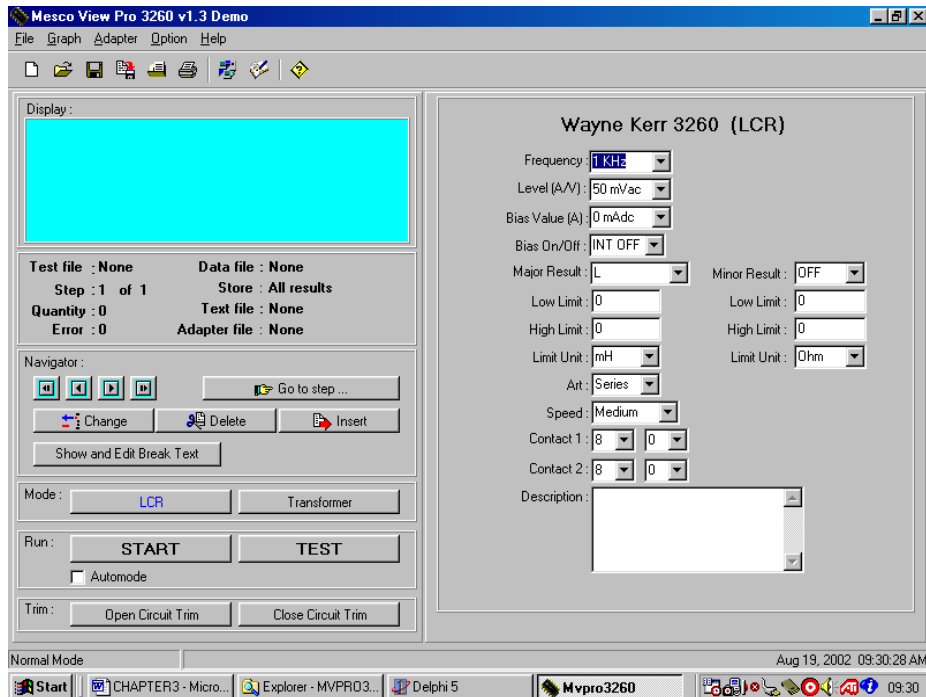
- Pentium processor or IBM-Compatible PCs
- RAM 16 MB or higher
- Monitor SVGA 14" or higher
- Hard disk with minimum space 500 MB
- Compatible Mouse
- Keyboard
- Wayne-Kerr Bridge
- Scanner (optional)
- GPIB card
- SentinelPro Key

Software Required:

- Windows 2000/XP/7
- Mesco View Program
- GPIB driver
- SentinelPro Key system driver
- Kithara driver

CHAPTER 3

Features



3.1 Menu File

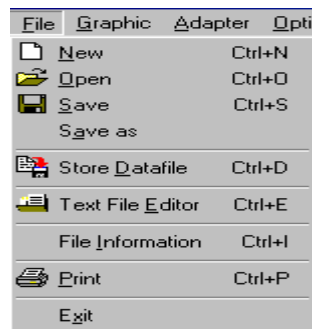


Figure 3.1 Menu File

Description: Used for managing Mesco View files.

Sub Menu:

- New (Ctrl + N): to make new Apg file
- Open (Ctrl + O): to open or load an Apg file (*. Apg)
- Save (Ctrl + S): to save or store Apg file (*. Apg)
- Save as: to save or store as Apg file (*. Apg)
- Store data file (Ctrl + D): to store measuring results to data file (*.csv)
- Text file editor (Ctrl + S): to display text file editor
- File information (Ctrl + I): to give information about files that used
- Print (Ctrl + P): to print Apg file, and data file
- Exit: to exit from Mesco View program

3.2 Menu Graphic

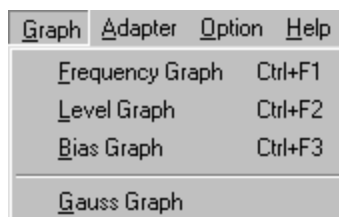


Figure 3.2 Menu graphic

Description: Used for displaying the Graphic View of measurement results of Frequency, Level and Bias. The graphic shows Series Inductance dependent on Frequency/Level/Bias. GAUS Graph of the results.

----- **More: Chapter 4**

3.3 Menu Adapter

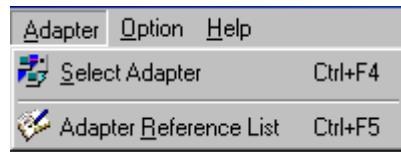


Figure 3.3 Menu Adapter

Description: Used for selecting adapter and adapter reference list

Sub Menu:

- Select adapter: select adapter file (*.ada)
- Adapter Reference List: display or select adapter that is used in Scanner

3.4 Menu Option

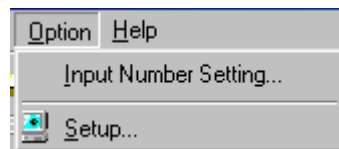


Figure 3.4 Menu Option

Description: Used for setting the program setup

Sub Menu:

- Input Number Setting: set number of measuring process
- Set Up: show set-up dialog box

Setup option

Used for setting-up system options

Data Store Tab:

- Data store options:
 - ✓ Store all results: Store all results with PASS result and FAIL result
 - ✓ Store only PASS results: Store only PASS result
 - ✓ Store PASS/FAIL results: Store PASS or FAIL results with confirmation dialogue box
- Autoopen datafile: Automatically opens datafile that refers to apg file
- Datastore input number: Automatically inserts the sequence number of measurement
- Decimal symbol: Decimal symbol for results by point or comma

Directory Tab

- Test and text file directory: Sets up the Test and Text file location
- Data file directory: Sets up the data file location
- Adapter file directory: Sets up the Adapter file location

System Tab

- WK GPIB Address: Sets up the GPIB address of Wayne Kerr bridge
- WK Instrument display: Sets up the instrument display of Wayne Kerr bridge
- ALC: Sets up the ALC on/off
- Show tooltips: Shows hint of each button
- Password protected: Sets up the password of set-up dialogue box
- Automode time: Sets up the automode time in milliseconds, seconds, and minutes

- PASS Beep: Long Beep time after PASS sign
- FAIL Beep: Long Beep time after FAIL sign

Graphic Tab

- Visible: to make the graphic with background colour or not
- Start Colour: to select first background colour of graphic display
- End Colour: to select end background colour of graphic display
- Direction: to select where basic colour will be used from

3.5 Menu Help

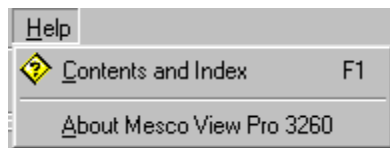


Figure 3.5 Menu Help

Description: Used for giving information about Mesco View

Sub Menu:

- Content and Index: shows Mesco view Help
- About Mesco View 3260: shows information about Mesco View

3.6 Display box

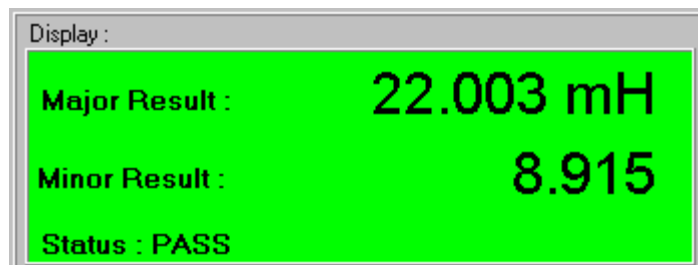


Figure 3.6 Display box

Description: Used for displaying status and measure data item value

Features:

- ◆ Major Result: displays major result of measurement
- ◆ Minor Result: displays minor result of measurement
- ◆ Status: displays status of measuring by PASS (Green background) or by FAIL (Red background)
- ◆ Status Fail: explains that measure data item does not match

3.7 Information Box

Test file : None	Data file : None
Step : 1 of 1	Store : PASS/FAIL results
Quantity : 0	Text file : None
Error : 0	Adapter file : None

Figure 3.7 Information box

Description: Used for giving information about test file

Features:

- ◆ Test File: Apg file name that will be measured
- ◆ Step: Amount of steps in Apg file
- ◆ Quantity: Counter of measuring processes
- ◆ Error: Counter of FAIL results
- ◆ Data File: displays name of data file, which will be used
- ◆ Store: storing data file
- ◆ Text File: displays name of text file (*.txt) that is used by Apg file
- ◆ Adapter File: displays name of Adapter file (*.ada) that is used by Apg file

3.8 Step Navigator

Navigator :









				 Go to step ...
 Change		 Delete		 Insert

Figure 3.8 Step Navigator

Description: Used for managing the test steps

Features:

- <<: goes to first step
- <: goes to previous step
- >: goes to next step
- >>: goes to last step
- Go to Step x: goes to step x
- Change Step: changes step specification
- Delete : removes current step
- Insert : adds new step

3.9 Mode

Mode :

LCR	Transformer
-----	-------------

Figure 3.9 Mode

Description: Used for selecting Wayne Kerr mode

Features:

- Normal: Selects Normal mode of Wayne Kerr
- Transformer: Selects Wayne Kerr Transformer mode for 3260 only

3.10 Run

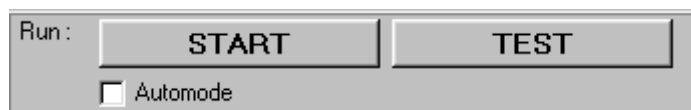


Figure 3.10 Run

Description: Used for running measurement

Features:

- Start: runs measurement with all steps
- Test: runs measurement with one step only
- Automode: starts measurement of all steps automatically, after time set in SETUP

3.11 Wayne Kerr Trim function

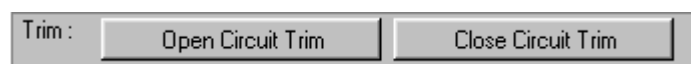


Figure 3.11 Trim

Description: Wayne Kerr all trim functions corresponding to the instrument used

Features:

- ◆ Open / TR: open circuit trim
- ◆ Close / TR: close circuit trim

3.12 Break between the test steps

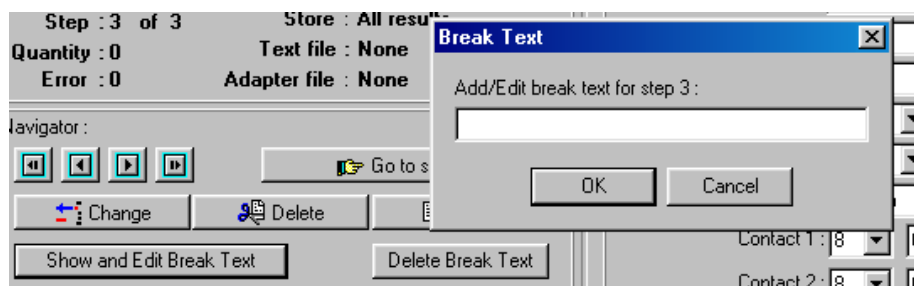


Figure 3.11 Break

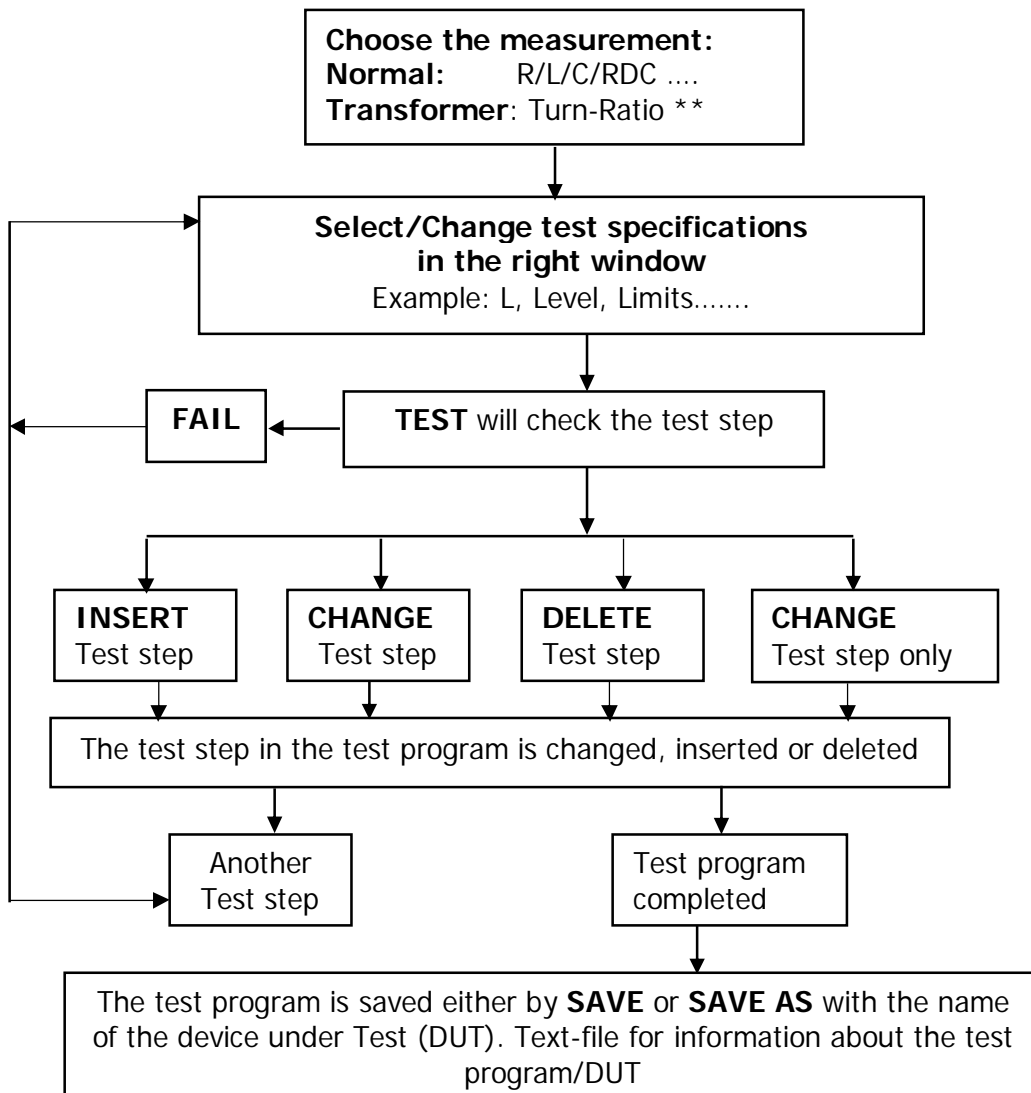
Description: A complete test has different test steps. If you want to change something between the test steps, then you can install a break between the test steps. The program goes to the step, shows a text, then changes something and continues. With this function you can test coils step by step (change pins manually)

Features:

- ◆ Show and Edit Break Test: Shows/Edits the break text, with CHANGE to the program
- ◆ Delete Break Text: Deletes the break test from the test step

MESCO-View for Windows Instruction

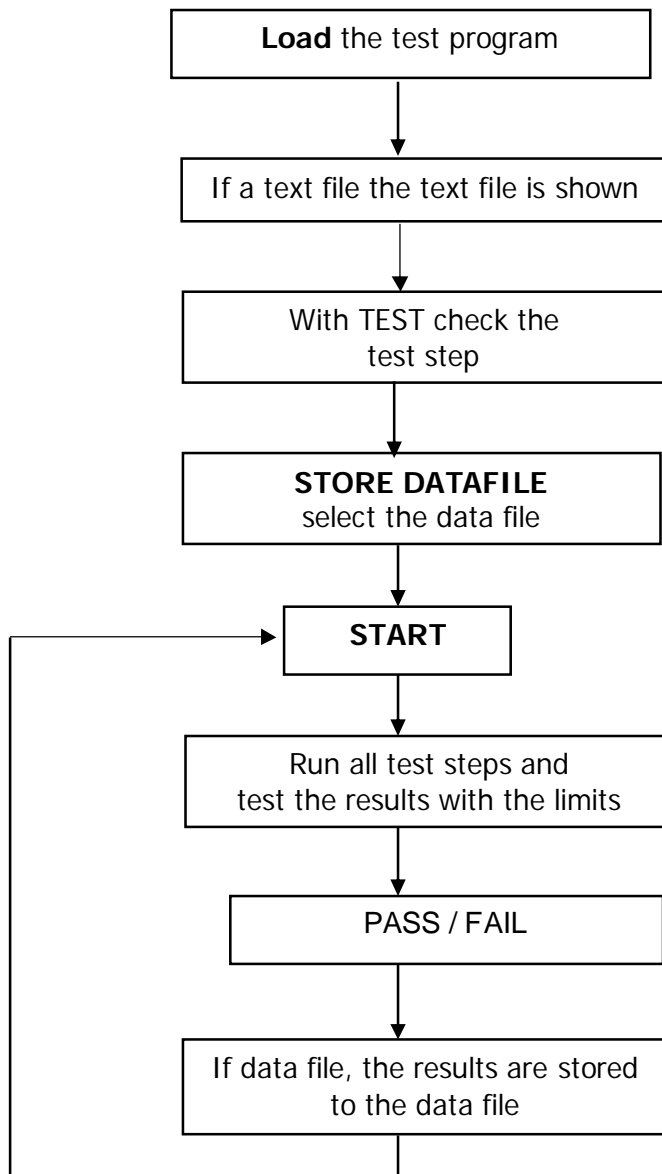
3.13 Develops a complete test program and stores it in a test file



** only for Wayne Kerr Model 3260

3.14 Load a complete test program and store the results

Please note : The datafile must be opened before the test is started!

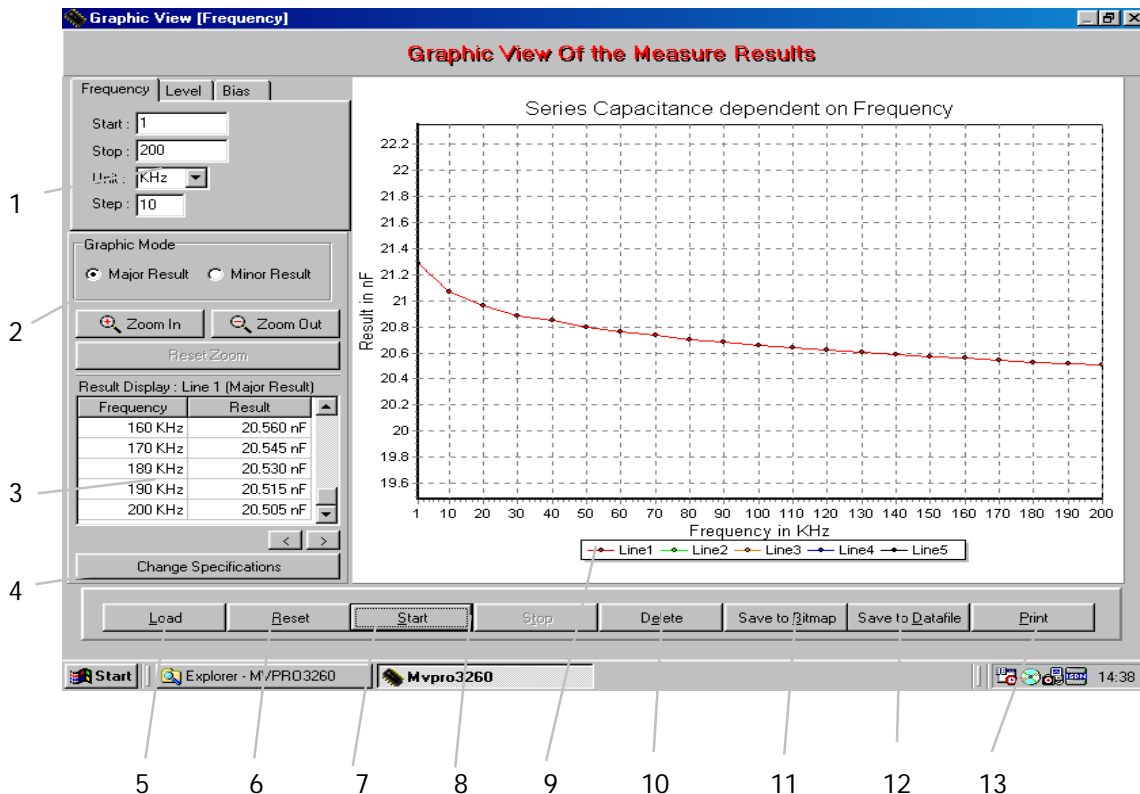


CHAPTER 4

Option Graphic

4.1 Line Graph (not with standard version)

Graphic representation of measuring results depending on Frequency, Level and Bias **.



Description

- [1] The input of range for the graphic. Example starts frequency, stops frequency, unit of frequency and the frequency steps.
- [2] Shows the graphic of the major results and minor results with zoom function.
- [3] Showbox of results.
- [4] Change specification, choose and change the graphic specifications. Between the 5 graphic lines it is possible to change the specifications (Ex. For the Frequency graphic, the first line has got a 10mV level and the second a 100mV level). The Unit determines the unit of the store results. The graphic data file can be destroyed, when the unit is changed between the graphic lines.
- [5] Loads a graphic data file with the results and the specifications.
- [6] Resets the complete graphic.

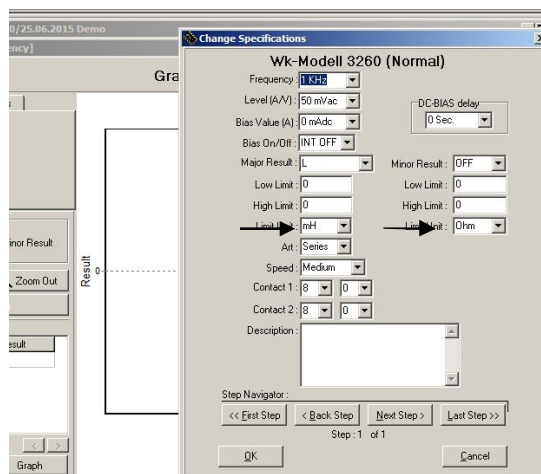
- [7] Starts the graphic with START value and adds the STEP values until Stop value. Five graphic lines are possible.
- [8] Stops the run of the graphic immediately. If the results are not acceptable then the graphic is stopped and you must not wait till the end. Then the last graphic line is deleted and the measurement is started again.
- [9] Every time the graphic is started, the program asks for a description of the graphic line.
- [10] Deletes the last graphic line.
- [11] Saves the graphic screen into a BITMAP file. Easy to be inserted in every document file.
- [12] Saves the graphic results and the specifications to a graphic data file. Readable from EXCEL and LOAD the graphic data file.
- [13] Prints the graphic screen.

Update 2015

In the setup, the graphics bitmaps files areas and the graphics data area can be set. Both major and minor results are saved.

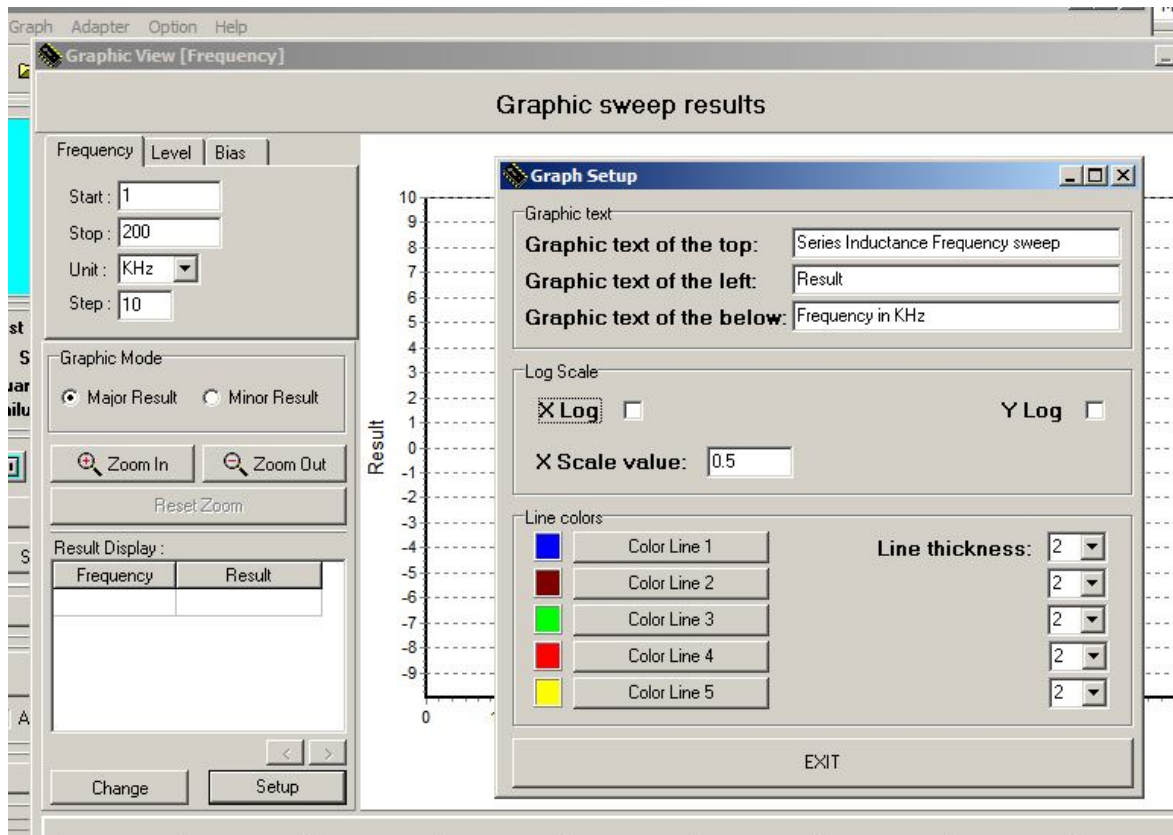
The limit units determine the storage of the data.

Example: mH, the results are converted to mH.

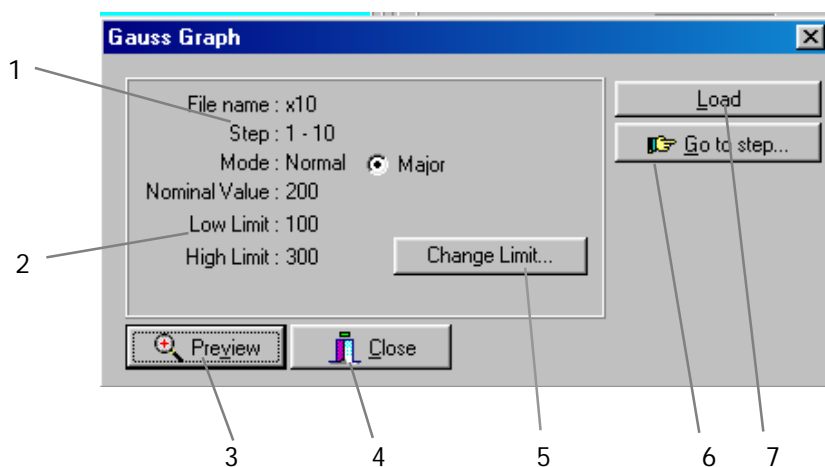


Additional graphical settings

Select setup:

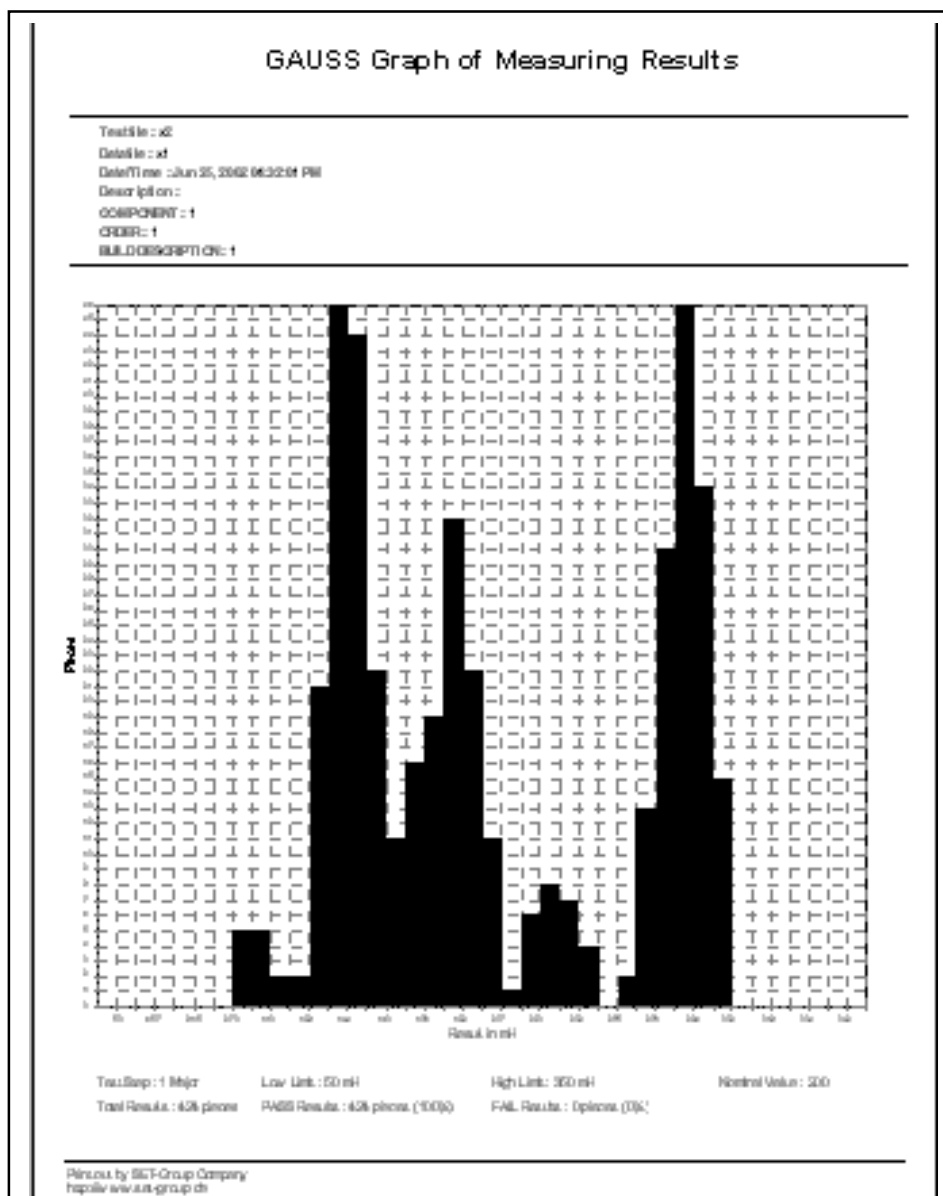


4.2 GAUSS Graph



- [1] Shows the Filename, the test step (1-10 = Step 1 from 10) and if it is a Major or Minor result

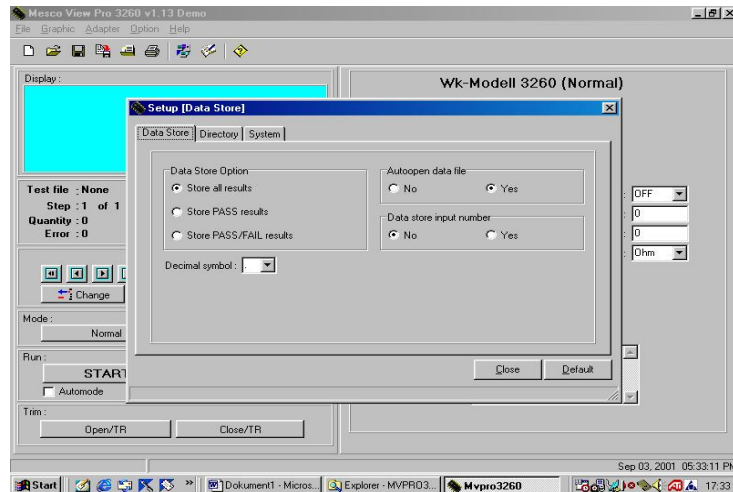
- [2] Limits of test step with nominal value
- [3] Previews the GAUSS graph before printing
- [4] Closes the function
- [5] The low and high limits are the left and right border of the GAUSS graph. With Change Limits change the right and left border. Adjustment of the GAUSS Graph.
- [6] The test program has different test steps. This function selects the test steps for the GAUSS Graph
- [7] Loads the Datafile of the measuring results.



CHAPTER 5

SETUP

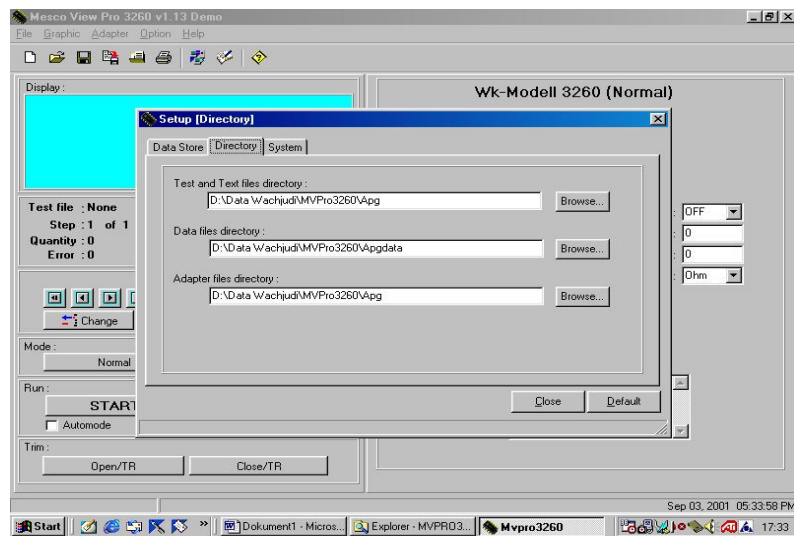
5.1 Set-up Data Store



Data Store Tab:

- Data store setups:
 - ✓ Store all results: Stores all PASS and FAIL results
 - ✓ Store only PASS results: Stores PASS results only
 - ✓ Store PASS/FAIL: Stores all PASS and FAIL results with confirmation dialogue box
- Auto-open data-file: Automatically opens a data file when loading a test program.
The name of the data file is date + apgfilename.dat.
If data file exists, the results will be appended.
- Datastore input number: input of a number (S/N number).
- Decimal symbol: Decimal symbol for the results, either point or comma.

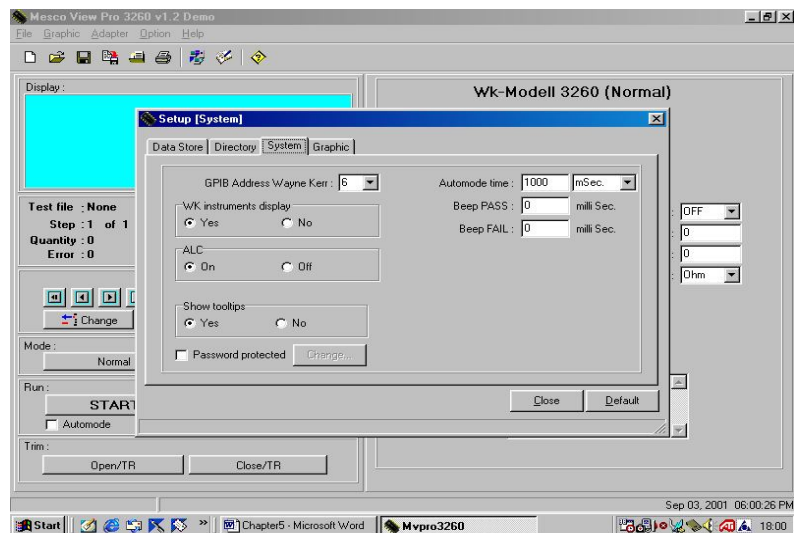
5.2 Set-up Directories



Directories Tab

- Test and text file directory: Sets up the Test and Text file location
- Data file directory: Sets up the data file location
- Adapter file directory: Sets up the Adapter file location with default the program will find the folders automatically

5.3 System setup

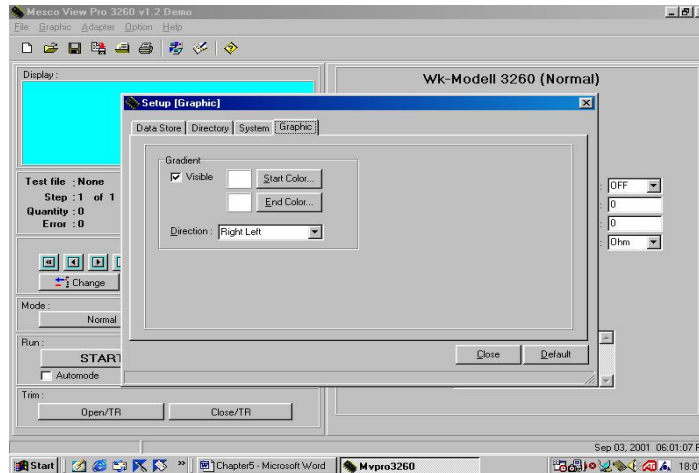


System Tabs

- WK GPIB Address: Sets up the GPIB address of Wayne Kerr bridge
- WK Instrument display: displays the Wayne Kerr bridge switch on and off
- ALC: Setup the ALC on and off
- Show tooltips: Shows hint of each button.
- Password protected: Setup the password of setup dialogue box

- Automode time: Sets up the automode time in milliseconds, seconds and minutes of the waiting time between the end of test and the start of test.
- PASS Beep: Computer beeps time after PASS sign.
- FAIL Beep: Computer beeps time after FAIL sign.

5.4 Setup graphic



Graphic Tab

- Visible: gives the graphic a background colour or not
- Start Colour: selects first background colour of graphic display
- End Colour: selects end background colour of graphic display

Direction: selects where basic colour will come from

CHAPTER 6

MESCO-VIEW for Windows Files

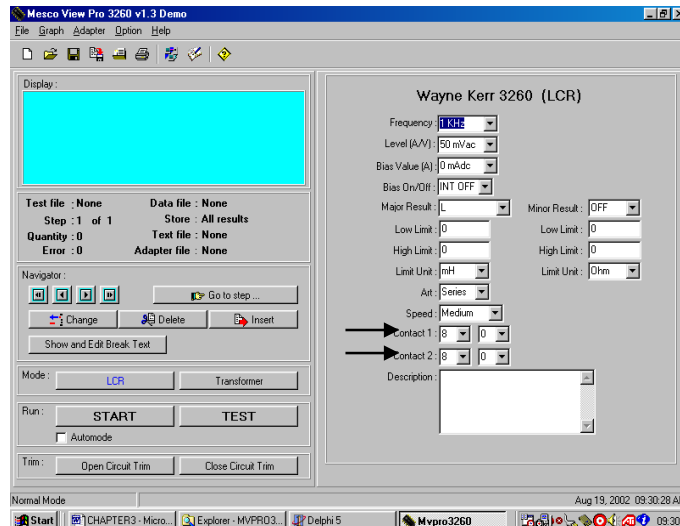
File Names/Folders	Description
MVProxxxx.exe	Mesco View Professional program file
MVxxxx.exe	Mesco View program file
MVProxxxxs.exe	Simulation program
MVxxxxs.exe	Simulation program
MESCO.DEF	Setup file
GRAPHIC.DEF	Graphic setup file
INFO.TXT	Info file
WKxxxxa.TAB	Convert Table DOS apg file to WINDOWS apg file
APG	Folder for the apg files
APGDATA	Folder for the data files
IMAGES	Folder for image files
HELP	Folder for help files
GRAPHIC\BITMAPS	Folder for bitmap files
GRAPHIC\DATAFILES	Folder for graphic data file
DATABASE	Folder for databases
APGDOS	Folder for DOS apg file
FDxxxx	Folder for specification files
OTHER	Folder for driver, GPIB drivers etc.
*.apg	Test files
*.csv	Excel Datafile
*.txt	Info files
*.mdb	Microsoft Access database files
MVHelp.hlp	Help file
*.Bmp	Bitmap files
Comctl32.dll	Delphi Application extension file for button pictures
Input.dll	I/O Control DLL

"xxxx" stands for the chosen instrument

CHAPTER 7

Scanner Calibration

7.1 Short and Open Circuit Trim

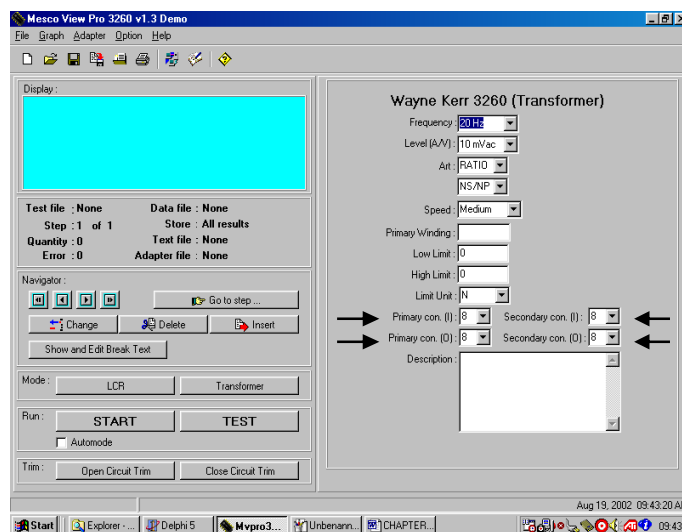


The Calibration with the Scanner 415T or 430T has got a special procedure. First decide which terminals are to be calibrated.

Example: A coil with 3 turns, the lowest result is 12.76 μH on terminal 5 and 6. Then select 5 and 6 and press the TEST button. Now the measuring ways are switched on to pin 5 and 6.

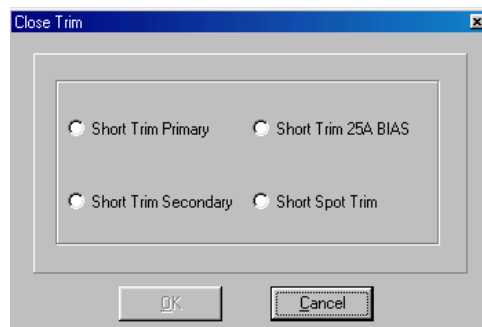
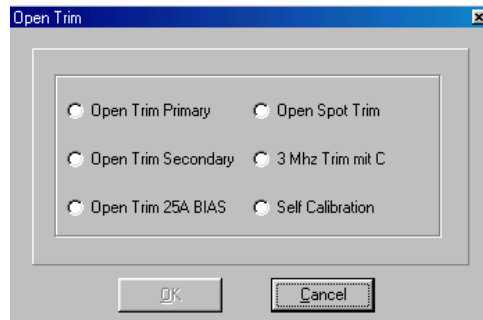
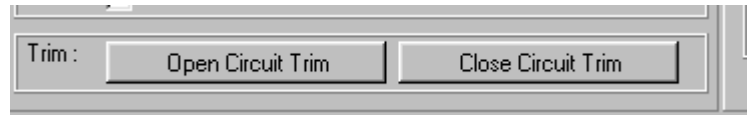
Do Short circuit and Open circuit calibration.

7.2 Short and Open Trim on primary and secondary (Wayne Kerr Model 3260+3265)



For Primary and Secondary Calibration select the terminals under Transformer Mode. Choose the terminals for calibration, select the terminals and press the TEST button.

Now the measuring ways are open. Do Open circuit and Short circuit trims.

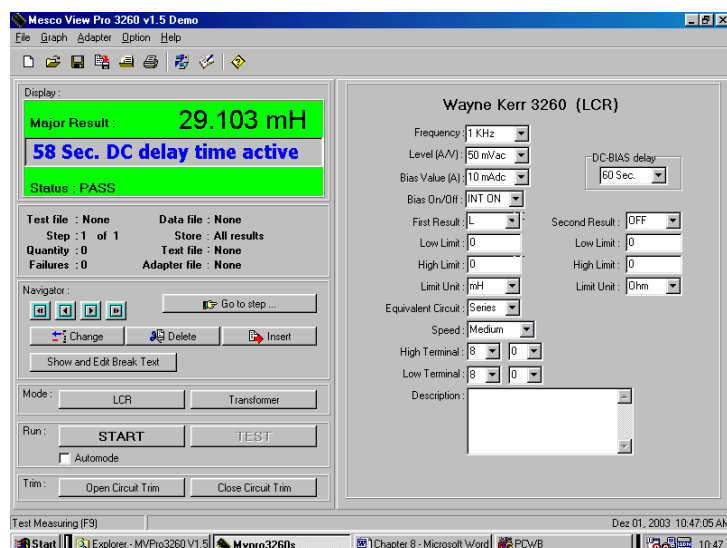


Note: If the open trim fails, repeat the **Self Calibration**

Chapter 8

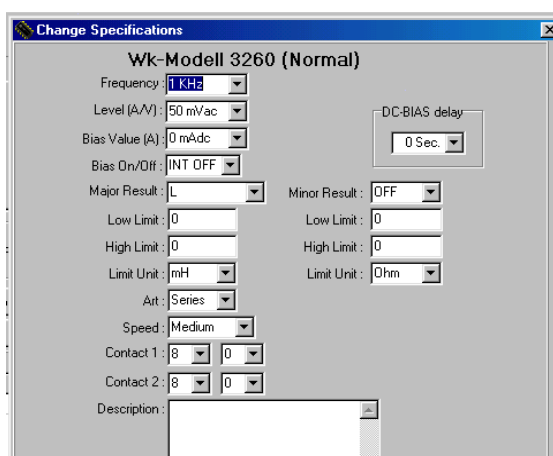
Special Functions

8.0 DC-BIAS delay time by step by step test

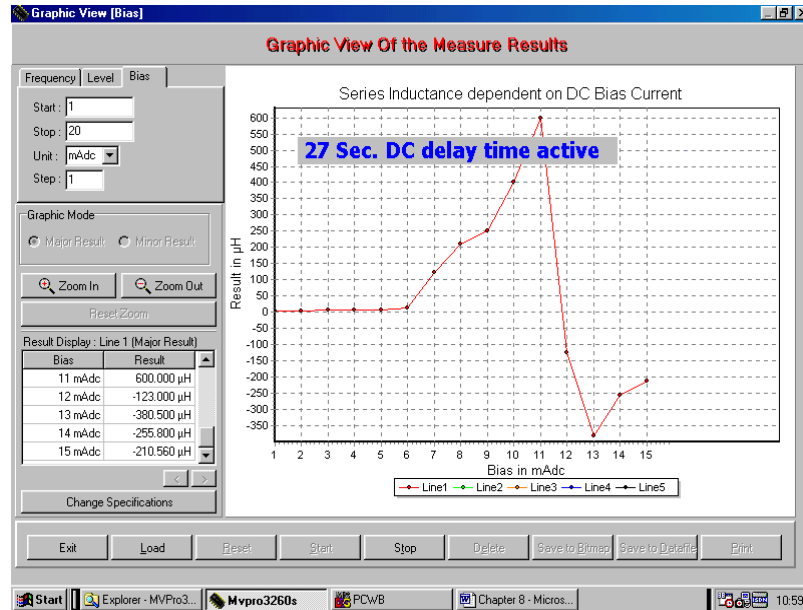


When the DC-Bias is not **0 mADC**, then it is possible to select a delay time. Without **INT ON** or **EXT ON** these functions do not work. When the test program runs and executes these steps, the DC-bias is turned on for the selected time. After delay the program gets the results and continues the test program. Stop the delay time with ESCAPE.

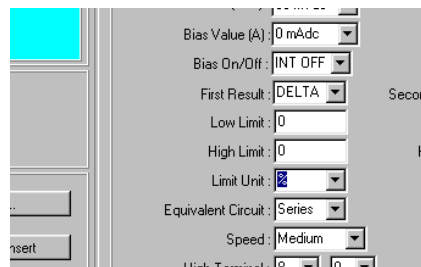
8.1 DC-Bias graph with delay periods



The period delay time will be selected under the menu **CHANGE SPECIFICATIONS** in the graph mode. When **STARTing** a graph, the BIAS will be turned to the delay time. At the end of the delay time the program gets the result and shows it on the graph. Then the instrument switches to the next DC value, turns on the delay time, gets the result and so on. Each DC value is shown with delay time and the complete graph. Between the lines it is possible to change the delay time. **INT ON** or **EXT ON** must be selected. STOP with **ESCAPE**



8.2 Proportional Deviation of results (Delta)



The DELTA Function calculates the deviation between two results. For the calculation we need two values. The first value is the measurement before the DELTA function and the second value is the measurement with the DELTA function.

Example: Test step 3 with L, 100kHz, 50mV and the result is 1.56 mH
 Test step 4 with DELTA, 200kHz, 50mV and the result is -2.5%

DELTA doesn't change the L measurement.

The result of the test step 4 is 1.521 mH and the calculation is:

$$(100/1.56 \text{ mH} * 1.521 \text{ mH}) - 100 = -2,5\%$$

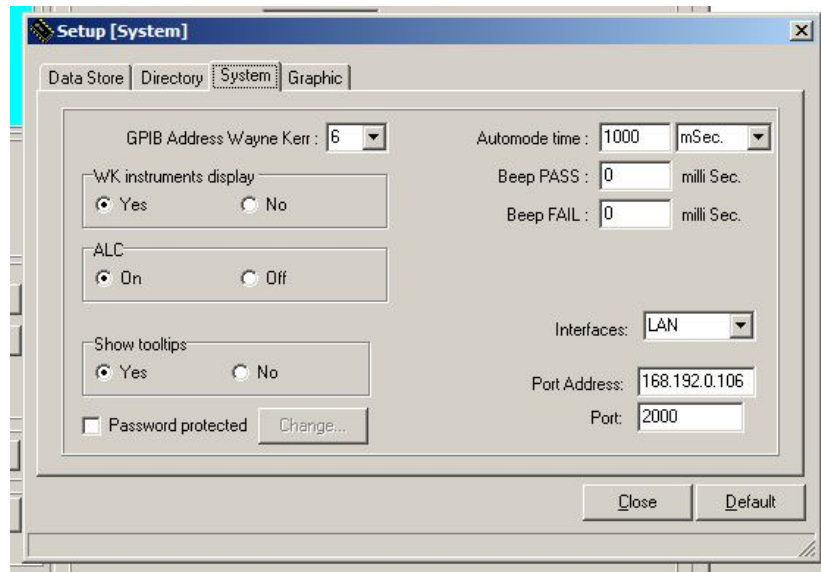
Chapter 9

Advanced Programme for Model 6500

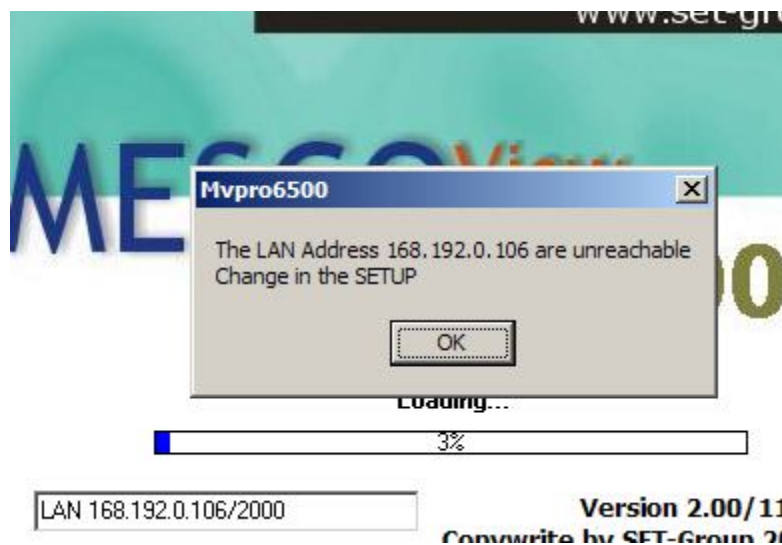
9.1 Interface selection

The model can be controlled by GPIB and LAN

To select the different interfaces click SETUP/SYSTEM

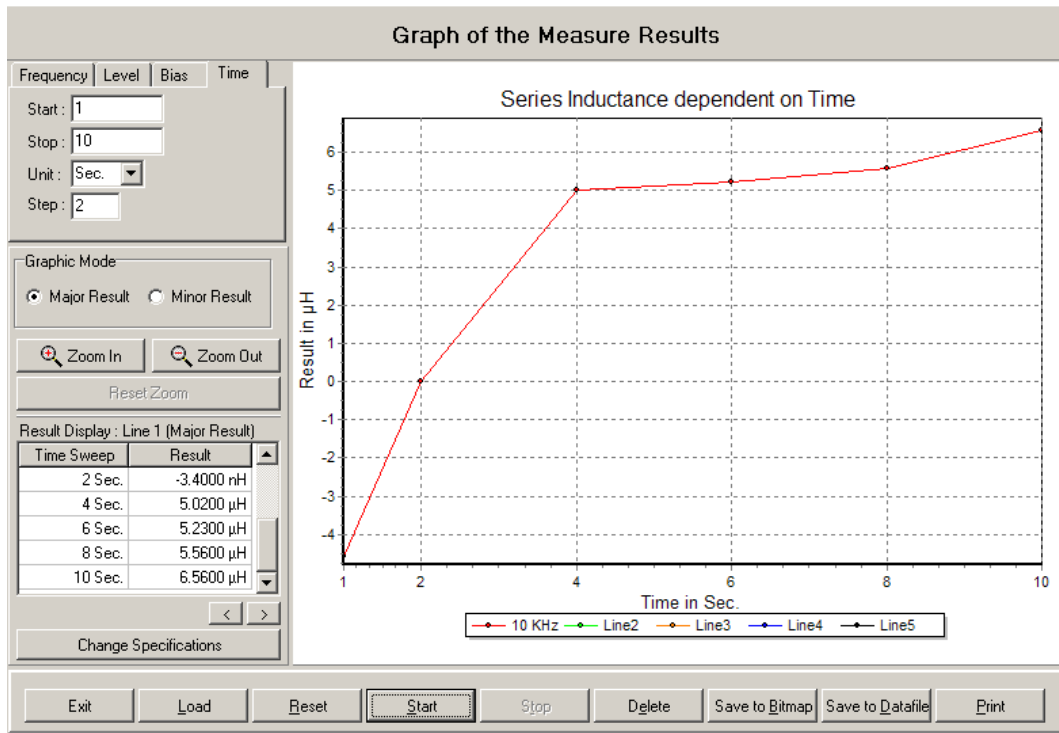


If the connection does not work the following error message will appear:



9.2 Sweep Time graph

Sweep without changes of the specification. The example starts from 1 second to 10 seconds and every 2 seconds the software starts a measurement.



APPENDIX

1.0 Datafile description

Results

step1;step2;step3;step4....

2.0 Graphic data file description

Results of line 5