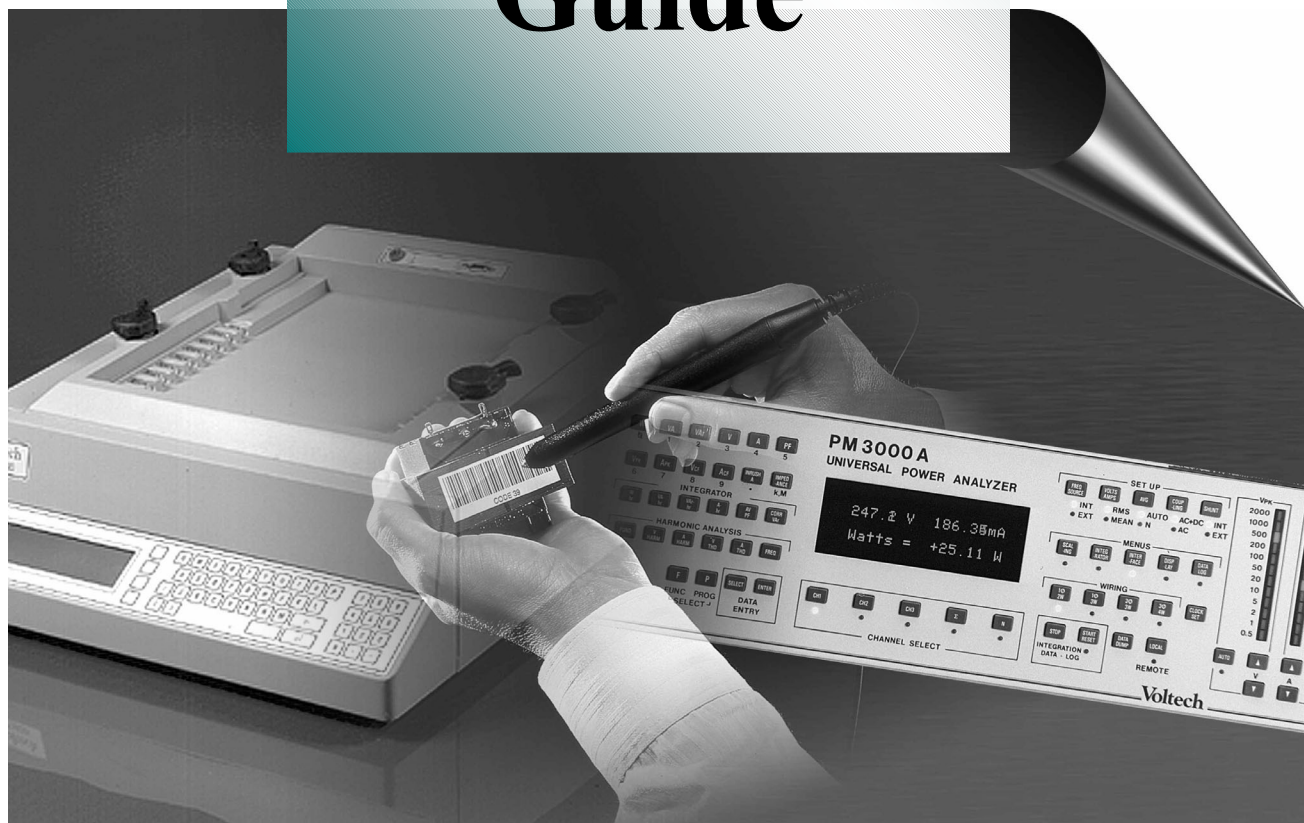


AT Series Testers

User Guide

Database Connectivity User Guide



1. Introduction:

The Voltech AT Server is a powerful Windows application that can display and record the measurements and results produced by the Voltech ATi and AT3600 transformer testers. This user guide describes just one of the ways in which the AT server application may be used to record test results storage in an existing database. Storing test results in an electronic database is a very powerful and versatile method of recording and analysing test data. Every test detail can be automatically recorded and may be analysed and presented in many different ways. For example, real time statistical process control (SPC) can be implemented to monitor electrical parameters such as resistance in order to identify trends or deviations caused, for example by a faulty wire tension device on a coil winding machine.



2. Database Connectivity Implementation:

To implement the database connectivity feature, you will need the latest version of Server software, available at no charge from our web-site. The DB Connectivity function is available in this server free of charge for a period of 30 days. After this evaluation period a full licence key-code may be purchased from Voltech to maintain the function without loading further software. The AT Server can make connection to many types of databases including Microsoft Access, Oracle and SQL servers. You should have some familiarity with how databases work to gain most benefit from this feature of the AT Server software.

3. How To Make a Database Connection:

If a Microsoft Access database is being used, then copy the Voltech DB file into an appropriate directory then from the AT Server software 'Set-Up' menu, 'Results' to see the following dialogue box.

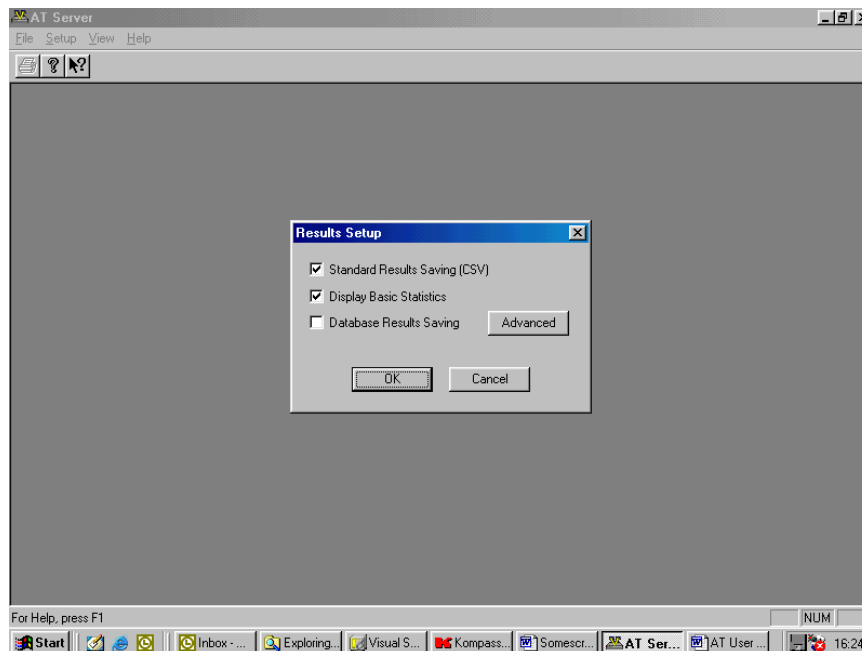
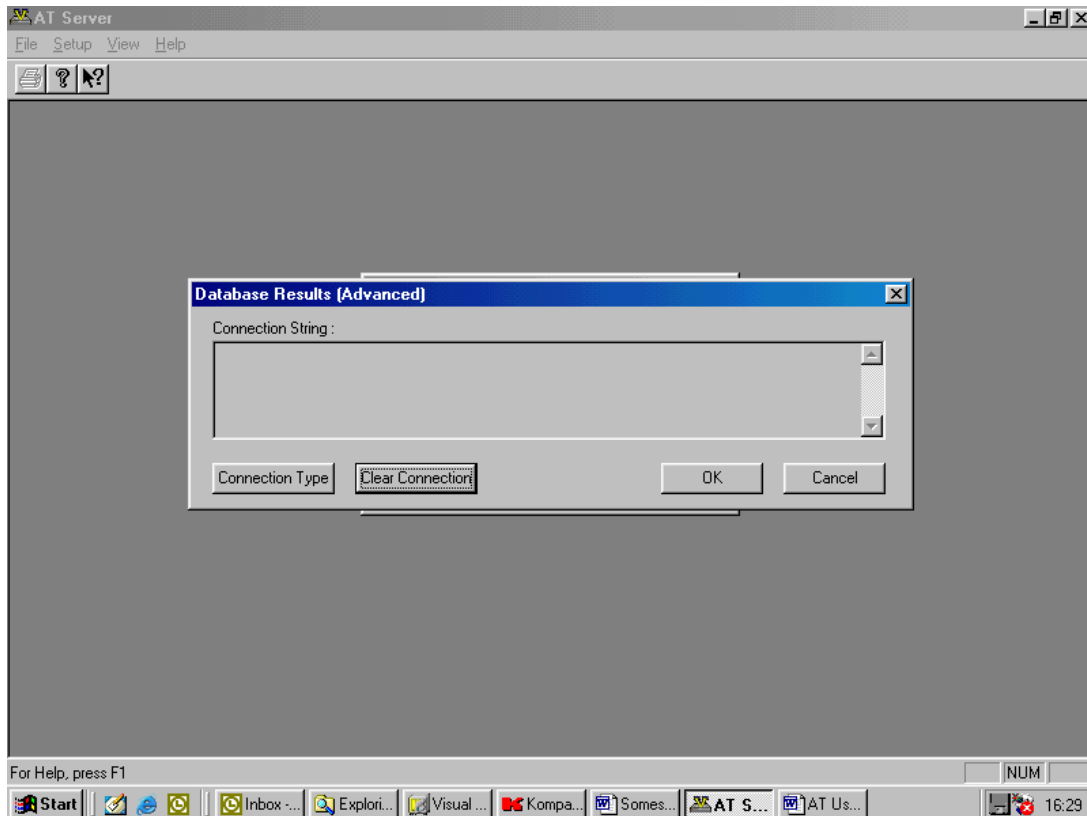


FIGURE 1

Next tick the boxes 'Standard Results Saving (CSV)' to save test results to a spreadsheet compatible file, tick select 'Display Basic Statistics', to provide statistical information to the server display only or select 'Database Results Saving' to save test results to a database. For the DB results to operate correctly a connection must be set-up first click the button Marked 'Advanced' to view the following dialogue box. Next Click the button marked 'Connection Type' this will allow us to build a connection string.

FIGURE 2



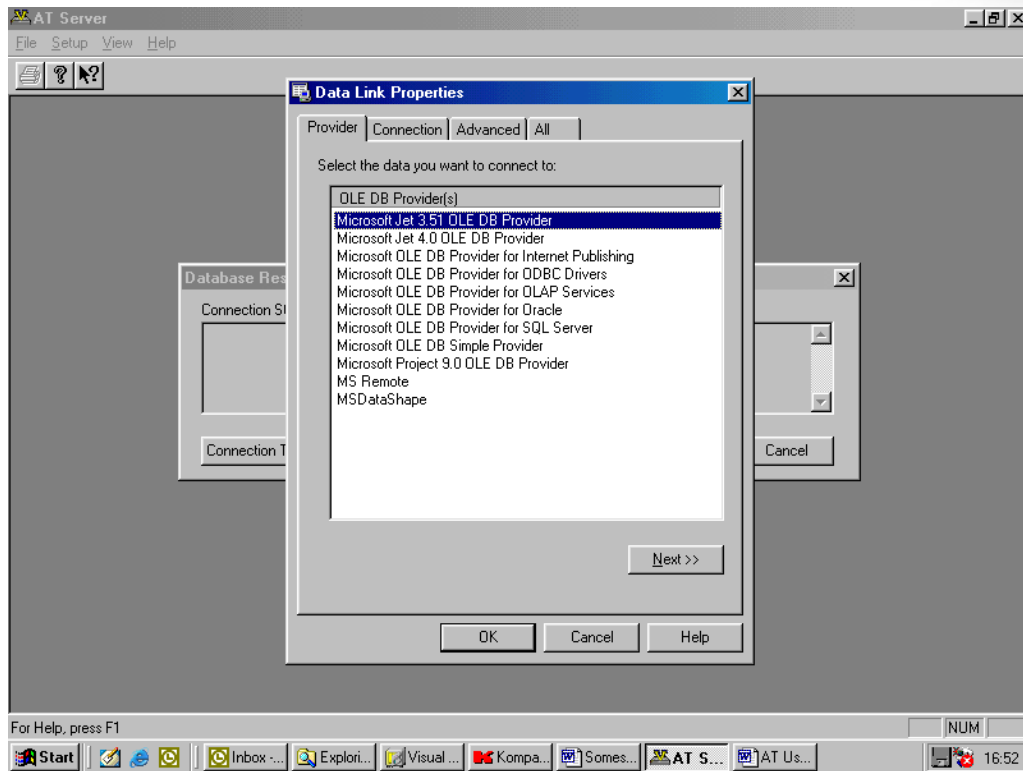
To connect to your database, the server software uses a connection string that contains, amongst other things, the name of a provider, the name and location of the database and a valid user name and password, if required. You may need to consult your database administrator to obtain this information.

Next Click the button marked 'Connection Type' shown in figure 2 above which will allow you to build a connection string.

If a connection string has already been established, you will see the connection string in the centre dialogue box. If not it will be empty as shown in figure 2.

Figure 3 shows the next screen to establish a connection string and location of the actual database being used.

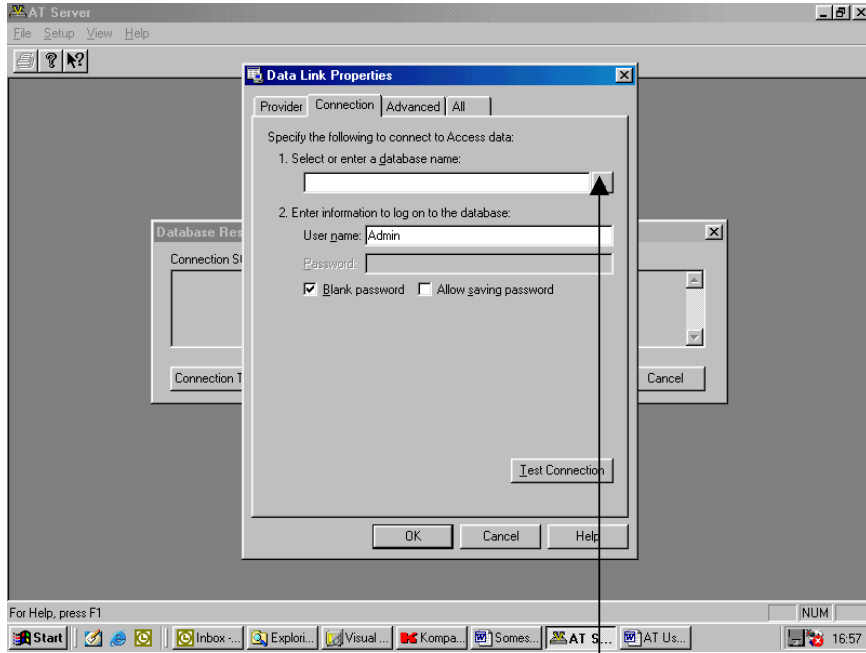
FIGURE 3



If you are using the provided Microsoft Access database (Voltech DB file) and you are using Microsoft Access 97 you will require the Jet 3.51 engine as highlighted in figure 3 or if you are using Microsoft Access 2000 you will require the Jet 4.0 engine. If you are using another type of database and do not know the SQL server to use you may need to contact your database administrator or database provider for the correct connection type.

Once the driver has been selected click onto 'Connection' in the tab menu at the top of the dialogue box. This will give you the dialogue box as shown in figure 4.

FIGURE 4



Click onto the selection button in order to enter the name and location of your database. Enter the location and click the button marked 'Test Connection', which should return a window saying 'Connection Succeeded'. Click OK and OK then OK until a blank screen is reached. In order to establish the results window in the Server click 'Set-Up' then 'Communications'. Select the required comm port and exit. The Server software is now ready to receive results into the embedded results window as well as the database.

4. Database Tables:

The AT Server software automatically creates the following tables in the selected database and stores data in the tables using the structure defined here.

Table: *tblVoltechATUnitID*

Field	Format	Notes
ATUnitID	Text (25)	Unit ID number
UnitType	Text (10)	AT3600, ATi or AT1600
UnitID	Text (10)	Units Serial Number
FirmwareID	Text (10)	Units Firmware Version



Table: *tb/VoltechResults*

Field	Format	Notes
ResultID	Text (25)	Result ID number
RunID	Text (25)	Run ID Number
TestID	Text (25)	Test ID Number
TestNo	Number Long	Test Number
OC_Comp	Text (5)	Yes, No, N/A Open Circuit Compensation
SC_Comp	Text (5)	Yes, No, N/A Short Circuit Compensation
Load_Comp	Text (5)	Yes, No, N/A Load Compensation (Future Development)
Result	Number Single	Actual Test Result
TestStatus	Text (5)	DSP Status for Test
PassFail	Pass/Fail	Test Pass or Fail

Table: *tb/VoltechRunID*

Field	Format	Notes
RunID	Text (25)	Run ID Number
Date	Date/Time (Short)	Date of Test Run
Time	Date/Time (Long)	Time of Test Run
ATUnitID	Text (25)	AT Unit ID
PartID	Text (25)	Part Name
FixtureID	Text (25)	Fixture Name
OperatorID	Text (25)	Operator Name
BatchID	Text (25)	Batch Name
TransformerSerialNo	Text (25)	Transformer Serial No.
OverallResult	Text (10)	Pass/Fail/Re-Run/Abort

Table: *tb/VoltechTestID*

Field	Format	Notes
TestID	Text (25)	Test ID Number
TestMnemonic	Text (10)	Individual mnemonic
TestUnits	Text (10)	Individual Test Unit
CheckType	Text (5)	None/Min/Max/Diff/Pol
MinLimit	Number (Single)	Minimum Test Limit
MaxLimit	Number (Single)	Maximum Test Limit

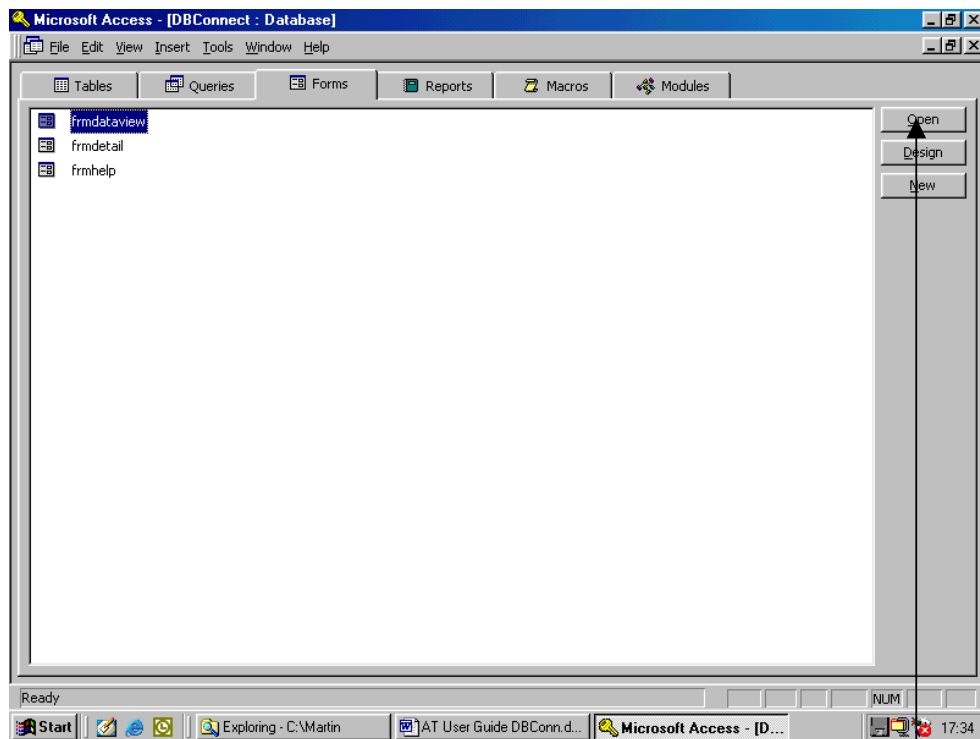
5. DBConnect.mdb Database Operation.

Voltech's database file for use with Access 97 or Access 2000 is called DBConnect.mdb and would be the name used in figure 4.0 above when creating the connection string.

The DBConnect database has two distinct functions, one is to view and Graph archive data and the other is to view and graph real time data on an individual test basis.

In order to view and graph data, open DBConnect.mdb by doubling clicking on the application, upon opening the application the screen shot below will be seen (figure 5).

FIGURE 5

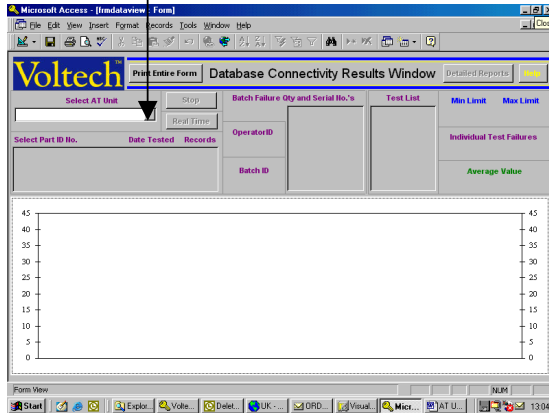


The correct form "frmdataview" will be highlighted as shown above, click 'Open' to begin viewing and graphing data and the following screen shot shown in figure 6 will be seen.

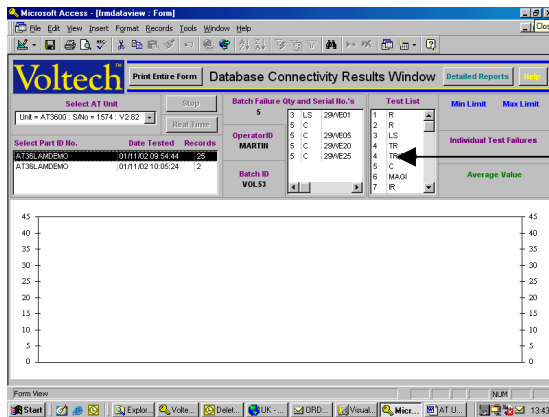
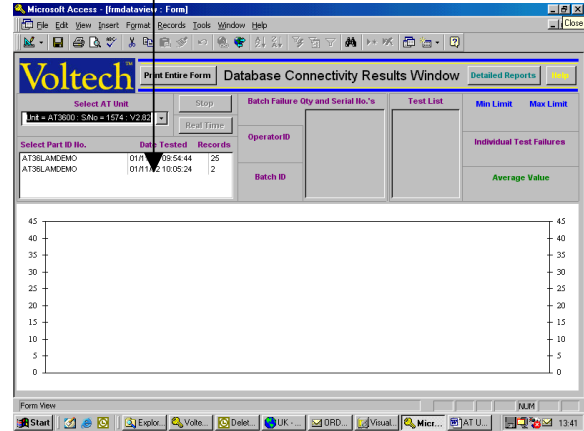
7. Viewing Stored Data Results:

The route through the various combo and list boxes is straight-forward and each element will be highlighted in white when selection is required.

First selection is the unit used.

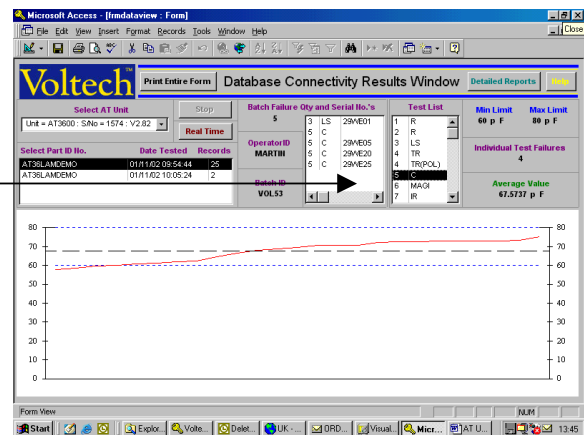


The next selection is to select the part number required for data viewing.

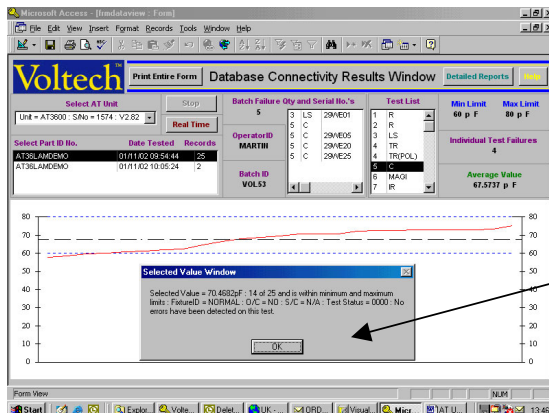


The next screen shot show a list of associated test used for the selected part number. Upon selecting an individual test further information and the graph of the results will be plotted.

The final screen-shot shows in this case the C test graphed, associated information for this test and a list of failures should any have failed.



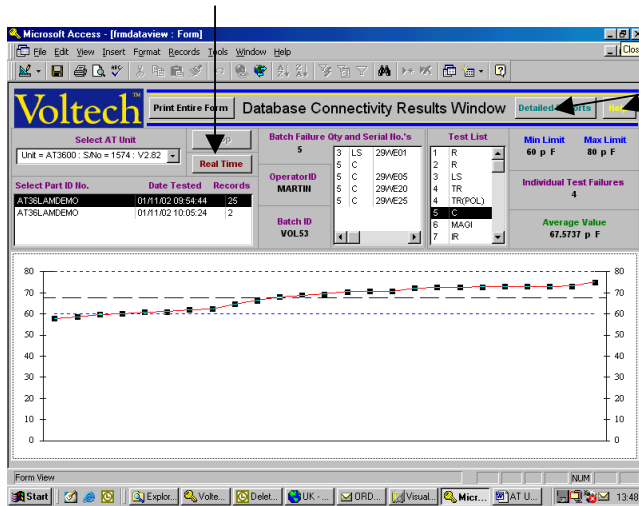
The plot points can be accessed to show additional information associated with the individual test.



8. Viewing Results (Real Time):

The DBConnect.mdb also contains a real time feature, which Allows the user to watch in real time the graph updating as the Test is run.

In order to accomplish this when a new program is downloaded into The AT. The user must first run one test to allow this set of results to exist in the database. Run through the above sequence and select the individual test required. The record count will only be one and no graph will be viewed yet. Press the “Real Time” button as shown below to begin real time measurements.

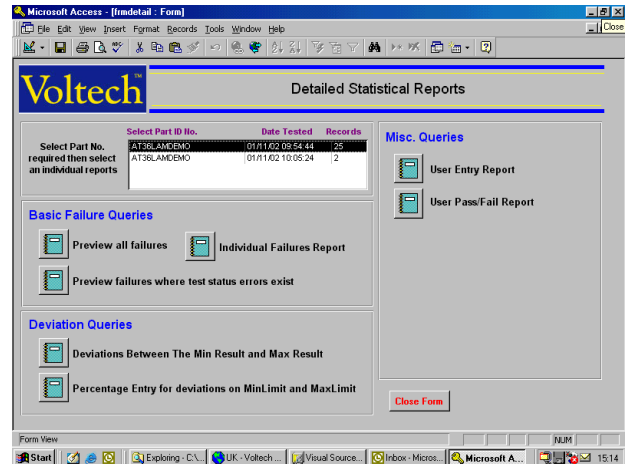
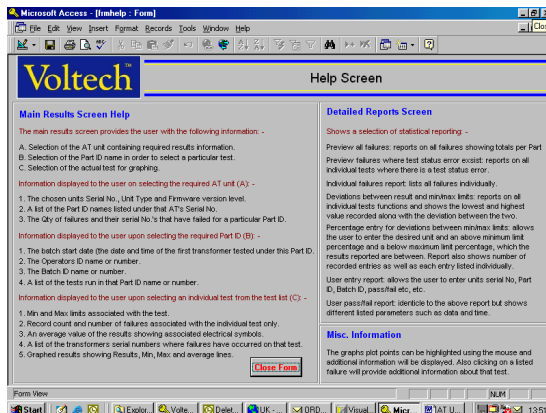


Detailed Reports and Help buttons

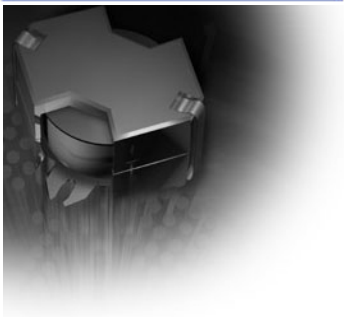
Once the “Real Time” has been pressed the test run can continue and as updates occur so the record count and graph will increase. The “Stop” button can be pressed at any time to select a different test for viewing and the “Real Time” button re-pressed and the test cycle resumed.

9. Additional Features:

Another additional feature is a form dedicated to statistical reporting through set queries. A help screen is also available that explains what each report query reports on.



The detailed statistical reports shown above provides the user with a part ID selection followed by a choice of reports covering failures, deviations etc.



AT Series Testers

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