

F6TesT™ 2.20

Marketing Release Notice



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Introduction

F6TesT is a graphical and highly automated software application for protection testing that enables the control and operation of the F6000 Family of Power System Simulators. The instrument models supported are F6150, F6150A, and the F6300 external high-power current amplifier.

F6TesT version 2.20 software is a product of continuing development from Doble Engineering, as well as from valued input from our customers. F6TesT version 2.20 is a major upgrade of the previous version, 2.19, with a number of new features.

F6TesT includes the option to select English, Spanish, Portuguese, French, or Chinese language when logging in. You can also switch the language while inside the program.

F6TesT includes the following features:

Relay Characteristics:	<p>General and specific operating time characteristic equations for various overcurrent, voltage, and frequency, volts per hertz relays are predefined and can be simply selected by the user. The user can define additional characteristics.</p> <p>Where no suitable equation exists for defining the operating time characteristics of relays, the user can enter the overcurrent, voltage, and frequency, volts per hertz versus time characteristics in tabular format. Differential relay characteristics are also based on lookup tables.</p>
Tabular User Interface:	F6TesT uses a tabular interface extensively to display the values of test points and test results.
Graphical User Interface:	F6TesT uses graphical interface extensively to allow visualization of the characteristics, settings, test points, and test results. It allows the user to see how the test is progressing and immediately see the results visually.
Automatic Calculation of Expected Values:	Once the user has defined the functions and characteristics, the program automatically calculates the expected values and the minimum and maximum tolerance limits. Expected values may be time, voltage, current, frequency, impedance or angle.
Automatic Calculation of pre-fault and fault voltage and current magnitudes and phase angles in the impedance test modules	Between pre-fault and fault conditions all quantities can simultaneously change in magnitude and angle, providing dynamic test and a more realistic simulation of fault conditions. The transient dc decaying component can also be included in the simulation.

Spreadsheet Formulas:	Test modules support spreadsheet-like formulas in some cells to automatically calculate values from given settings.
Reports:	Test modules including the test parameter, test points, test results, and graphs may be previewed, printed and exported in RTF format.

F6Test performs testing through the following test modules:

- I-Char This times the operation of an overcurrent relay at a number of test points, evaluating (pass/fail) each test point based on the expected operating time. It is used for testing the characteristic points of the relay and for plotting the operating time.
- VF-Char This times the operation of undervoltage, overvoltage, underfrequency, overfrequency, and volts per hertz (over-excitation) relays at a number of test points, evaluating (pass/fail) each test point based on expected operate times defined by its characteristics. This also replaces V-Char and F-Char test modules on previous versions.
- Z-Time This test times the operation of an impedance relay for a number of test points and evaluates (pass/fail) each test point based on the expected operating time. It is used for testing the characteristic boundary points of all distance relay zones and for plotting the operating time of the relay for faults along a fixed angle.
- Z-Char This test is used for searching for and plotting the zone characteristics of an impedance relay. At a given test angle, a sequence of test points searches along a radius from the center of the RX plane. Testing uses either the *Constant Current* model or the *Constant Voltage* model to verify the steady state or static characteristics of the relay. To test the dynamic characteristics, the *Constant Source Z* model is used.
- ZMTA ZMTA, or Impedance Maximum Torque Angle, applies only to mho-type characteristics, and is a special form of the Z-Char test. The sequence of test values sweeps out circular arcs with their center at the RX diagram origin, rather searching along radial lines.
- Ramp Test uses linear stepped or pulsed ramp of source value to find operate point; e.g., relay pickup, relay drop off, synchronization, directional test, or voltage regulator test. Manual ramp test can also be performed.
- VpHzRamp A special ramp dedicated to testing Volts per Hertz relays by simultaneously ramping the amplitude and frequency of voltages.
- SSimul Simulates a sequence of states and faults, approximating real life events. It can be used with GPS time synchronization for end-to-end testing.
- DiffChar Searches and plots the characteristics of a current operated differential relay. It supports various relays with different bias equations and characteristics.

Directional	Varies polarizing and operating quantities and performs a binary search to find the relay directional characteristics – lead angle, lag angle and maximum torque angle.
WaveSim	Simulate transients like power swings, out-of-step conditions, and ground faults and plays them directly into the F6 test instruments.
Notebook	A two-section notepad for test instructions, comments, etc. Files can be attached for viewing with other software; e.g., pictures, MS Word or Adobe Acrobat documents containing schematics or manufacturer instructions.
Extern	Allows F6TesT to run an external program, such as a relay settings program or some scripts. Extern can pass data to and from external text files for use by the scripts or external programs.

What's new in F6TesT 2.20

- Relay level reports have been added. It includes an interface for easily selecting relays, test plans, and tests that are to be included in the report.
- Graphics setup. You can now set up and save several user-defined graphics preferences, such as a light or dark background, the color, width and type of various lines, etc.
- Oscillograph display has been added to enable one to view the waveform of test voltages and currents as well as the digital inputs and outputs. The oscillograph display can also be modified from the oscillograph setup menu.
- Relay Characteristics – Added Volts per Hertz function. You can now use more mathematical functions like LN, LOG, etc. Characteristics can now be edited with a password.
- Characteristic can now be selected from any manufacturer in overcurrent, voltage, frequency, volts per hertz, and differential functions. This also allows you to create or define common characteristics that can be used in defining functions for any relay manufacturer.
- VT and CT primary and secondary factors have been added at the relay level. This enables the user to enter the settings in primary values and perform the test in secondary values. The software performs the conversion internally.
- Overcurrent function – Added two more setting levels from three to five.
- Generic function – This new function provides two tables. The left-hand table can be used for defining relay settings. The right-hand table can be used to define additional variables for use in testing. These new variables support the spreadsheet-like formulas and use the setting variables from the other table. The variables from the generic function can be used in the Ramp, SSimul, and WaveSim test modules. Functions that are not supported in specialized functions can be defined using a generic function.
- VpHz (volts per hertz) function has been added. This allows modeling of V/Hz versus time characteristics to be modeled based on the relay settings.

- VF-Char test module has been added. This allows testing of the VpHz time characteristic function for multiple test points in a single test module by varying both voltage and frequency simultaneously. The previous V-Char and F-Char modules have been removed and previous test modules are converted to VF-Char, which allow only voltage to vary or only frequency to vary or vary both voltage amplitude and frequency simultaneously.
- Formulas are now supported in test modules. This feature is particularly very useful in SSimul, Ramp, and WaveSim test modules; it is also supported in other modules. Special pre-defined keywords that refer to settings can be used in the formulas, along with the user-defined variables in generic functions. This feature allows creating template relays and test plans. Creating similar new relays can use a copy of the template relay and test plan and simple change the settings; this setting changes automatically calculate the new test values.
- WaveSim is a new test module that creates transient waveforms and plays them into the F6000 test sets directly. It supports simulation of power swings or out-of-step conditions using a classical two machine model as well as user-defined points and rate-of-change of impedance (dz/dt) between these points. Transient ground fault simulation and testing is included in WaveSim test module.
- Import of differential characteristics in addition to overcurrent and impedance has been added. Import of XRIO files has been added.
- A Library of distance relay models from various manufacturers has been added. When creating a new impedance function, this allows you to select a relay model and enter the settings. The user interface uses variable names that closely mimic the actual relay setting names. A graph of the impedance characteristic model is also displayed and updates when the settings are changes.
- In the test modules, the table of test points can be maximized to the entire pc screen to view the entire table without the need to scroll vertically or horizontally. The graph can also be maximized to the entire pc screen to get a larger view.
- Addition of a third state (CB opening) and fourth state (Reset) in all test modules. This allows extension of the fault according to the breaker opening time after the relay trips, and also to reset the latched output contact of some relays.
- Control of digital outputs (conventional hard-wired and GSE signals) in all test modules for each of the states. This allows simulation of the circuit breaker status, reception of a transfer trip command, simulate a control switch, initiate the reset of relay outputs, etc.
- Test modules can now directly use digital inputs (LN1, LN2, ..., GN1,...) and outputs (LP1, LP2, ..., GP1, GP2, ...), using their generic names even when they are not assigned to the relay level user-defined signal names. The latter can still be used and is the preferred way of assigning digital input and output signals for use in testing.
- In all test modules, you can now choose to select to display test error calculations in percent or absolute values. Also, you can now choose to display or not display the test evaluation.
- In Ramp and SSimul test modules, changing the expected and tolerance values will recalculate the test error and evaluation. This enables you to correct any mistakes in the expected values while keeping the actual test results and not having to rerun the test.

- The power system model (PSM) has been integrated into F6TesT and is accessible from the Tools menu. PSM exports SS1 files or can directly create SSimul tests without importing SS1 files, although PSM can still export SS1 files that can be imported by F6TesT to create SSimul tests..
- Added a user interface for selective copying, deleting, cutting, and pasting of multiple groups of locations, relays, and test plans within the same database.
- Added a user interface for copying locations and relays from separate template library databases and pasting into the currently open database.
- Added new fields at the relay level – asset code, firmware number and date change, test interval and next test due date. Asset code field for location has also been added.
- The length of the comments field of the test has been increased to 64 characters.
- Ramp test module has been improved as follows:
 - Added predefault state
 - Frequency ramp can now be selectable between stepped or smooth
 - Added manual ramp mode to allow the user to manually step the action quantity using the mouse.
 - Amplitude Action now supports decimal multiples of Action, e.g., A*0.5, A*1.5, etc.
 - For dual ramp a third row has been added in the measurements table to allow calculation of dropout/pickup ratio or the reverse.
- SSimul test module has been improved as follows:
 - A new keyword “INH” (inherits) can be used instead of entering a number to indicate that a parameter in the current state is the same as that of the preceding state.
 - Right-click options in the amplitude, phase angle, and frequency field enable faster entry of test values.
 - Use of Z-Time graphical user interface to insert or append a fault. This automatically calculates the predefault and fault voltage and current test values and adds them to the SSimul test.
 - Added more timers, up to 32.
 - Combined the digital outputs for conventional and GSE signal in a single window.
 - Symmetrical components have been added to the phasor diagram user interface.
- On the IEC61850 front, up to 96 GSE inputs and 96 GSE outputs are now supported. Separate tabs are now used to define GSE signals and conventional hard-wired signals.
- The date and time format has more options. You can also control the number of significant digits and the number of digits to the right of the decimal point in the Setup/test defaults menu.
- Maintenance Alarm. You can set the test interval for each relay and specify the number of months to set an reminder alarm before the next test is due. An overdue alarm also triggers when the relay has not been tested after the test due date expires.
- F6TesT can now be set up to enable or disable automatic logging of communications between the PC and the F6000 for diagnostic purposes.
- The transient mode duration is now user-adjustable, instead of the previously fixed value of 1.5s to allow a longer fault time interval for lower amplitude currents in the transient range.

- French language is now supported in F6TesT 2.20.
- Fixed some other issues and improved the overall stability of the program.

Previous Version Enhancements

F6TesT 2.19 –

Support for Windows VISTA operating system.

Fixed some issues including the following:

- Test points in Z-Char and Z-Time at 90 degrees and 270 degrees do longer appear as 89.9 degrees and 269.9 degrees in some cases.
- Points in the 4th quadrant for Z-Char using User-defined test lines are now properly created.
- When converting an old database the test default no longer goes back to 60Hz.
- Relay nominal frequency can be set to non-integer values to allow testing relays at off-nominal frequencies in all test modules.
- Fixed problems when importing some RIO files

F6TesT 2.18 –

F6TesT now supports the IEC 61850 GSE (generic substation events) messaging over a local area network. Both GOOSE (generic object-oriented substation events) and GSSE (generic substation status events, formerly called UCA2 GOOSE) types of messages are supported. Only CPU2 F6160 instruments with option F6860 support this feature and the latest firmware is required.

The impedance test modules can now use the low-range current high-power convertible sources in for 3 voltages and 3 currents for testing 1A relays with high burden.

Impedance function can import `.rio` files that have different values of residual compensation for each zone instead of one common value for all zones.

Extern module is used to run external programs. The user can write and run scripts that change a relay setting, map a relay element to an output contact, and read relay operation and measurements such as fault location after a test.

F6TesT 2.17 –

Earlier Beta F6TesT releases (build 977 to build 1000) included support for IEC 61850 GSE (generic substation events) messaging but were not fully tested until the release of the firmware version 4.25.

Several issues were also fixed in these builds.

F6TesT 2.16 –

Added import of state simulation (SS1 and SS2) files (created by some short-circuit and relay coordination programs). This automatically creates one or more SSimul test modules, depending on the contents of the file. This is done by right clicking on a test plan name on the tree view or any free space on the list of tests and selecting “Import from SS files” from a pop-up menu.

Changing the selection of elements in Z-Char Test Elements tab no longer deletes the test lines but only the test points. The user simply clicks on the add test lines button and F6TesT recalculates the new test points based on the existing test lines.

Enhanced importing of user-created `rio` files. The user can specify, using the keyword `PREDEFCHAR`, any overcurrent characteristic that already exists in the database and F6TesT will automatically select it.

Added “CT direction” drop-down menu with selection of either “Towards Line” or “Towards Bus” for test modules I-Char, SSimul, and Z test modules. In Z-Char and Z-Time test modules, the checkbox “Impedance correction to 1A/In” is now saved to the database. These required changes to the database schema and older databases will need conversion to the new schema.

F6TesT 2.15 –

Digital input voltage sensing now has 15V threshold option in addition to 1.5V.

Added the checkbox option “Impedance correction 1A/In” in the Impedance test modules test configuration tab. Checking this option allows correct testing of some Siemens impedance characteristics that were imported from `rio` files, wherein the characteristic of a 5A relay is referred to 1A. You don’t have to manually modify the Z, R, and X values since the software will do it automatically before calculating the voltages and currents. Please note that state of this checkbox is not currently stored in the database. One has to make sure that it is checked before running the test.

The Communication Setup now lists only the available serial COM ports in the combo box to make it easier to look for COM ports in new laptops that use USB ports only.

Added the option “Retry NoOp points” to the Test Defaults miscellaneous tab. If the F6150 instrument has firmware versions before 2.21 (for CPU1) or 4.21 (for CPU2) checking this box prevents some testing failures. The checkbox should be unchecked if you have the latest firmware version.

F6TesT 2.14 –

Added support for controlling the F6300 high-current amplifier.

Improved automatic source configuration and automatic range selection to maximize the power output. Auto ranging of current sources now considers the effect of the dc transient in increasing the peak current in order to avoid waveform clipping.

Creating a new database can now use any valid F6TesT database as the template in addition to the Master database. This allows users to create their own company standard templates.

Included the Transwin application in the F6TesT installation. This program can be started from the Windows start menu Program Files → Doble → F6TesT → Transwin or launched within F6TesT from the Tools menu.

F6TesT 2.13 –

Added support for simplified Chinese for Windows 2000 and Windows XP. The software may possibly work on Windows 98, Windows Me or Windows NT4 but has not been tested.

F6TesT 2.12 –

Two flavors of F6TesT are included – one for Windows 98, Windows Me, and Windows NT 4.0 and the other for Windows 2000 and Windows XP. The first one uses Crystal Reports version 8.0 and the latter uses Crystal Reports version 10, which requires Windows 2000 SP3 or Windows XP.

During installation the setup program determines the operating system version and installs the proper version of F6TesT.

F6TesT 2.11 –

Notebook now saves the contents of the Originator and User boxes to the database instead of a subfolder in the F6TesT directory.

The following standalone programs are now included and installed together with F6TesT.

F6 Control Panel –

It can be started within F6TesT from the Tools menu. Please refer to the F6000 User Guide on how to use the Control Panel.

Vector Calculator –

This utility performs complex vector calculations in either polar or rectangular form and displays the phasor diagram. The instructions on using the vector calculator can be found in the documentation folder in the CD.

F6TesT 2.10 - had the following new features added to version 2.00:

VpHzRAmp test module was added.

It tests the pickup or dropout of Volts per Hertz or overexcitation relays by simultaneously varying the amplitude and frequency of voltage signals.

Variable Battery Simulator support.

For F6150 instruments that have the new battery simulator module with a range of 6 V to 300 V in steps of 1 V.

SSimul includes new features:

- Triggered State transitions can now occur based on a selected logic input status change, without having to run the full state duration.
- Decaying dc transient current components at state transitions can now be simulated based on the user-specified L/R time constant and the current amplitudes and phase angles of the preceding and new states.
- Direct addressing of logic inputs (select from LN1 through LN8) for timing as well as for triggering state transition.

Z-Time and Z-Char

- Automatic and manual control of the fault inception angle
- Simulation of decaying dc transient with control of the time constant, L/R
- Separate arc resistance model for testing quadrilateral characteristic

Z-Char additional changes:

- Option to ignore the reference characteristics and during search to speed up testing for unknown characteristics.
- Allow user editing of test points in the Test tab

I-Char –

User-defined source configuration has been implemented to allow combining of current sources to allow higher VA output as well as higher current amplitudes.

DiffChar –

Added an option to ignore the reference characteristics during a search, which is useful to speed up the search when the exact characteristics are not known.

Relay Functions

- Impedance relay modeling:
 - Added protected line impedance.
 - Editing of zone names
 - Residual compensation can now be modeled using three modes: |kN| and Angle; ratios of RN/RPh and XN/XPh; and |Z0/Z1| and Angle.
 - Greatly improved ease in modeling complex characteristics by selecting predefined common shapes and entering settings.
- Addition of Move up and Move down buttons for rearranging the order of functions in the Functions table.
- Importing file in .rio format automatically creates the equivalent impedance and or overcurrent functions.
- Allow editing the settings of copied or existing relays and applying changes to affected tests.

Copying test plans to new relays.

Test plans from existing relays or a test plan library can be copied and pasted to a new relay. The setting of the new relay can be applied to the tests modules in the test plan to automatically display the reference characteristics and recalculate test points.

Package Description

The release package contains the following items:

- One CD-ROM containing F6TesT. See Package description below
- This Release Notice.
- F6TesT User's Guide

On the F6TesT 2.20 CD

F6TesT 2.20 Software

Firmware (.pkg file)

- The Firmware folder contains two subfolders CPU1 and CPU2 that contain the latest versions of the firmware "F6150.pkg" and "F6300.pkg". The file named "F6150.pkg" contains the firmware for both the F6150 and the F6150A Power System Simulators. The file named "F6300.pkg" contains the firmware for the F6300 Power System Simulator. Instruments shipped from Doble starting January 1, 2004 have the new CPU2 board and must use the firmware file found in CPU2 subfolder.

- F6TesT works best with the latest F6150 firmware version 2.23 or later for CPU1 and version 4.28 for CPU2. If the firmware version loaded in the F6150 is an earlier version, please load the firmware file “F6150.pkg” contained in the firmware folder. The loaded firmware version is displayed in the instrument when it is booted up.
- The new F6150 firmware can be flashloaded to the instrument by selecting Tools, F6000 Software Tools, and F6000 Flash Loader from the F6TesT menu and browsing to point to the firmware file to be installed.

For the latest firmware please check the [Doble website](#).

Transwin 3.1 Software

F6Control Panel 3.0 Software

Doble Databases

Three databases are installed in the F6TesT 2.20 directory. These databases are required in order for F6TesT to run.

- The **F6_master.mdb** database is required for the creation of a new empty database.
- The **F6Test_INTDB.mdb** database contains the language translations for the international version.
- The **Users.mdb** database contains user login information.

Two sample databases are installed in the directory ...\\F6TesT\\Databases

- The **F6TesTSampleDB.mdb** database has samples of relay characteristics for current, voltage and frequency relays already pre-defined. It also includes sample relays with specific functions, settings and distance relay characteristics and sample test plans.
- A **BlankDBwithCharacteristics.mdb** database contains a larger library of the many common time characteristics. It has no existing locations, relays, or test plans. This database can be used as the template when creating a new database by selecting it from:

C:\\Program Files\\Doble\\F6TesT2.20\\Databases\\BlankDBwithCharacteristics.mdb

All databases can also be found and copied from the Databases folder on the CD in case they have been deleted or modified.

Doble Documentation

- F6TesT 2.20 User’s Guide
- F6TesT Description
- F6FW 4.28.2 Marketing Release Notice
- F6Control Panel 3.0 User Guide
- F6Control Panel 3.0 Marketing Release Notice
- F6Test Visual Relay Testing Software 09-05 (brochure)
- Transwin 3.1 Marketing Release Notice
- This release notice

System Hardware and Software Requirements

F6TesT requires, as a minimum, the following hardware and software:

- A personal computer with a P3 or P4 processor (1.5 GHz or higher is recommended)
- Microsoft Windows 2000 or Windows XP or Windows Vista. Testing for Windows 7 is ongoing.
- An 800 by 600 VGA, 256 color is the minimum recommended.
- A pointing device such as a mouse compatible with Windows.
- At least 250 MB of free disk space for the program and to store test plans and results.
- At least 128MB of RAM for Windows 2000, and 256MB for Windows XP. More RAM is recommended, especially when other programs are also running.
- CD-ROM Drive
- The PC should have a USB port and an Ethernet port. For communicating with the F6000 unit(s) please refer to the F6000 User Guide for details This can be found in the utilities CD that came with the instrument or downloaded from the [Doble website](#). Older CPU1 units used serial RS232 port and a BNC Ethernet port. CPU2 units shipped in 2004 used RJ45 Ethernet port. CPU2 units shipped in 2008 replaced the communication card with a serial USB port and an Ethernet switch with three RJ45 ports.

Installation

Windows Component Installations

Windows 2000

Service pack 3 or later is required before installing F6TesT 2.20.

Windows VISTA

Windows Vista User Account Control (UAC) issue. The user installing F6TesT2.20 must be a member of the Administrators group in order to install the software.

F6TesT 2.20 Installation Instructions

Installation from CD-ROM

First Time Software Installation. If installing the software for the first time on a computer, follow these steps:

1. While running Windows, close all other applications and insert the Doble F6TesT 2.20 installation CD into the CD-ROM drive.
2. From the Windows task bar, select **Start → Run** and enter the CD drive and path name (for example, D:\Disk1\Setup.exe) or use the **Browse** button to locate the **setup.exe** file. Press **ENTER** or click **OK** to launch the F6TesT Installation Wizard.

3. Follow the dialog instructions. The default installation path is C:\Program Files\Doble\F6TesT2.20\. Note that the installation path can be changed if desired. During installation, the install program offers to create an F6TesT 2.20 shortcut on the Windows desktop. The desktop icon makes it easy to start the F6TesT program.
4. Click **Finish** when the installation is complete.

Upgrading From a Previous Version. If an earlier version of F6TesT exists on the computer, the earlier version need not be removed. If you want to remove it, however, select the **Remove** option after step 2 above and follow instructions to remove the existing version. Then follow steps 1 through 4 above to install the new version. F6TesT 2.20 cannot coexist with earlier versions of the software.

Refreshing the Existing Version. If the software stops working for some reason, try to reinstall the existing program in order to refresh the program files by following steps 1 and 2 above and then selecting the “**Refresh**” option. Then follow the online instructions. If refreshing the existing version does not solve the problem, uninstall the software and install it again.

Network Installation

It is possible to copy the contents of the distribution media onto a network file server, so that users who log onto the network can install from the network copy.

Uninstalling F6TesT

To uninstall the software, please use the Windows Control Panel Add/Remove Programs or run setup.exe from the F6TesT CD and select Remove.

Known Issues and Limitations

- When importing differential `rio` and `xrio` files the characteristic is ok but the compensation may not be the proper one for use in F6TesT since F6TesT uses the internal compensation that the relay uses while the imported file contains mostly the information about the protected object such as the vector group and voltage levels.
- If you have installed other F6 software, please note that F6TesT, F6 Control Panel, and Transwin applications cannot simultaneously control the F6000 instruments, although they may be open at the same time. One needs to close communication connection to the instrument before another program can control it. Closing the connection is accomplished by stopping the test and turning off the battery. The programs do not need to be closed.
- The template library copy and paste does not work in some cases.
- The F6TesT user’s manual in Chinese is not available.
- In some computers, due to some combination of operating systems and other programs, a system file may not be registered by Windows causing F6TesT not to start. You can try to manually register the file indicated in the message using the windows Start→ Run command. In the dialog enter `regsvr32 “FileToBeRegistered”`. You may need to first search for the file and its location and substitute it into `FileToBeRegistered`. For example if the message tells you

that it cannot find *spr32x60.ocx* you would enter *regsvr32 "C:\WINDOWS\system32\spr32x60.ocx"*.

- When using “Inherent operating time”, the calculated values in the test points table are correct, but the reference graph does not consider it; the discrepancy appears for the portion of the reference graph where the operating time is very short, such as the instantaneous elements. To avoid this, it would be better to include the additional time in the instantaneous time delay and set the inherent operating time to zero.
- Copying a test plan or test from one relay to another relay does not update the calculations unless the settings are changed after the paste.

Additional Information

- Windows 98 and Windows NT operating systems are no longer supported in F6TesT version 2.20 and later.
- The new F6TesT version 2.20 uses a new database schema to accommodate the new features of the application. In order to use previous databases you will need to convert them to the new schema. When you open an older database the program will ask you to convert it to the new schema. Enter a new name and click on the “Proceed” button. After conversion, F6TesT 2.20 will open the converted database. The previous database will not be deleted but the words “old version” will be appended to the name.

You can also convert the database by using the F6TesT 2.20 menu: Tools → Convert Database. Select the database to be converted, enter a new name, and click **Proceed**.

- F6TesT 2.20 can still be used with older versions of the firmware but with decreased functionality. To ensure support for all the new F6TesT functionality, firmware version 4.28.2 should be used for CPU2 and version 2.23 for CPU1 instruments.
- Control Panel has been removed from the F6TesT setup package. It is recommended to install separately the standalone Control Panel version 3.0 or you may still install the older Control Panel 2.08 from the Doble website.
- Transwin 2 has been removed as part of F6TesT setup package. It is recommended to install the newer Transwin 3 separately.
- Future versions of F6TesT may include newer versions of Transwin 3.x and Control Panel version 3.x, which support other languages.

Enabling Support for Chinese Language for non-Chinese Windows operating systems

Windows XP

1. Open the Regional and Language Options in the Control Panel.
2. Select the Language tab. Check “Install files for East Asian Languages” if it is not checked. (You may need the Windows XP CD to install East Asian Languages if it is not available in your hard disk).
3. Select the Advanced tab.
4. Select **Chinese (RPC)** from the drop-down menu. Click **OK**.

Windows 2000

1. Open the Regional and Language Options in the Control Panel.
2. In the General tab, click the button Set Default, and then select Chinese (RPC) in the drop-down menu. Click OK. Insert Windows 2000 CD.
3. After your computer is rebooted, open Regional and Language Options in the Control Panel.
4. In the Language settings for the system of the General tab, if Simplified Chinese is not set to Default, set it to the default.

Contact Us

Should you have any questions regarding F6TesT or any other Doble Engineering Company “F” series equipment please contact us at.

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