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AT Series Firmware/Software Release Notes

As part of our policy of continuous product development, Voltech provides new firmware for the AT Series testers from time to time. As well as providing new and enhanced features, the firmware is being continually optimised to preserve the speed and life of the AT testers. We therefore strongly recommend that the latest available firmware is always installed. This firmware is available from our website free of charge and is also automatically installed during any service process at Voltech.

IMPORTANT: Always install the latest available PC Editor and Server **before** installing or using new AT firmware. (See www.voltech.com support section for detailed instructions).

This document highlights important new features or changes that have been made to firmware and/or PC software.

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1. Tests for checking insulation failure during Hi-Pot ramp-up. ACRT & DCRT

Editor 3.25, Server 3.23, AT3600 3.06, ATi 3.06

These tests are specifically designed to test for insulation failure during the ramp up of an AC (ACRT) or DC (DCRT) Hi-Pot test. Should a breakdown occur during ramp-up, the AT3600 will report the voltage at which the trip occurred.

2. Tests for the DC1000 25A DC Bias Supply

Editor 3.24, Server 3.22, AT3600 3.03, ATi 3.03

Release of tests LSBX, LPBX and ZBX on the AT3600 and ATi for use with the DC1000. These allow testing of series inductance, parallel inductance and impedance with up to 250A dc bias current present.

Fixes bugs that occur when opening programs that contain LLO, WATT or VOC tests written in earlier Editor versions.

See also the important note below.

3. Reliability Upgrade

Editor 3.22, AT3600 2.98, ATi 2.97, Server 3.20. May 2005.

Amongst other feature and reliability upgrades, Firmware 2.97 improves the shut down sequence of the AT3600 if the ac line power is accidentally removed, such as during a power drop-out.

IMPORTANT: This upgrade is NOT compatible with all versions of hardware, and may cause damage if incorrectly installed.

When any Voltech product is serviced at a Voltech service centre we automatically, and without extra charge, upgrade both the firmware and hardware. If your AT3600 or ATi has not been serviced at a Voltech service centre since December 2003 you may require a hardware upgrade to make your AT3600 compatible.

Please contact either your local supplier or Voltech directly using the form on the next page to see if your AT requires hardware upgrade.

Although upgrades are usually free of charge when any other service item (e.g calibration) is carried out, Voltech reserves the right to charge for them if the condition or age of the AT require extra work.

AT3600 and ATi Hardware Status Check

Please check the status of the AT3600 and ATi transformer testers listed below to see if they are compatible with the latest firmware.

Product and Serial Number(s). E.g. AT3600 TC21 / 1234	
Name:	
Company:	
Address 1:	
Address 2:	
City:	
Zip or Postal Code:	
Country:	
Phone:	
Fax:	
Email:	

Please return to your Voltech supplier, or by Fax to Voltech at:
Canada, USA, Mexico and South America: 239 437 3841
Asia-Pacific, Europe, Middle East and Africa: +44 1235 861174

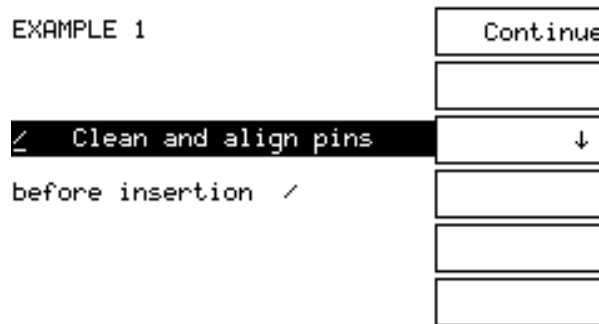
4. User Text Display on the Front Panel

AT Editor 3.22, AT3600 and ATi Firmware 2.97, Server 3.20. March 2005.

In the Editor, you may now enter up to 7 lines of text. This text may then be displayed on an AT when a program is first loaded from the front panel. For details see the Editor help system by selecting 'Program' the 'Options' and pressing F1.

There is no change to the operation of the AT if this option is disabled (which it is by default) or if the program is loaded remotely by the Editor or Server.

When enabled, you will see the text on the front panel of the AT whenever a new program is loaded by selecting it from a list, typing the program name or entering the name as a barcode. Up and down soft-keys may be used to scroll through the lines. You must press the 'CONTINUE' soft key to continue to the next screen, which is 'Fit the Fixture...'.
The Fixture...'



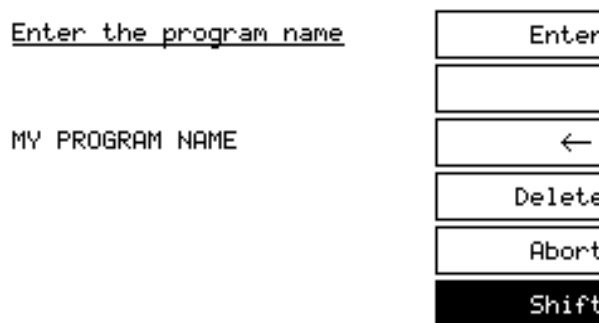
Example user text displayed on an ATi

5. Typing the Program Name on an ATi

AT Editor 3.22, AT3600 and ATi Firmware 2.97, Server 3.20. March 2005.

In previous versions of the ATi Firmware, it was not possible to enter a program name from the front panel. For compatibility with the AT3600 and the optional user text this function is now available.

This functionality also overcomes problems encountered when trying to select from a list of over 600 AT Server programs.



Typing the program name on an ATi

For details of the following changes, see the latest copy of the relevant (AT3600 or ATi) user manual which is also available free of charge from our website.

6. German and Italian Language

AT Editor 3.20, AT3600 and ATi Firmware 2.93, Server 3.18. December 2004.

The Editor and Server menu systems can now be shown in German and Italian. Selection is made from the 'Setup' menu of the software.

7. Offset

AT Editor 3.20, AT3600 and ATi Firmware 2.93, Server 3.18. December 2004.

Under most circumstances, performing compensation before a measurement will compensate all measurements for the effects of stray parallel and series impedances, providing accurate measurements upon the part under test.

If compensation cannot be performed conveniently or an offset is required in the measurement is required for other reasons, then you may now enable and enter a 'User Offset' value into any test dialog of the PC Editor.

The value entered will be added to the measured result. Enter a negative value to subtract from the measured result.

The adjusted result (including any offset) is the result that will be used to provide PASS / FAIL judgments, and is the result that will be printed and / or stored by the server.

IMPORTANT NOTE: The Existing LLO Test.

Now that all tests have an offset function, the LLO (leakage inductance with user offset) test is obsolete. The Editor will open existing LLO tests as an LL test with the offset appropriately enabled. You can then run LL tests in place of LLO.

If any of your testers do not have LL fitted, please contact your supplier and we will send you, without charge, firmware that will install the LL test.

8. Constant Current Drive for Open-Circuit Voltage (VOC) and Wattage (WATT)

AT Editor 3.20, AT3600 and ATi Firmware 2.93, Server 3.18. December 2004.

Usually, open-circuit voltage (VOC) and wattage (WATT) tests are carried out with the primary energized by a constant voltage (e.g. 120V, 65Hz) from the AT3600.

For testing current transformers and making measurements on core materials it is now possible to select a constant ac current of up to 2 amps as the energizing source in the Editor dialogue for these tests.

When constant current ac drive is selected, a nominal voltage is also required. This is used by the AT3600 as an initial target voltage for its internal high power generator. An approximate value is usually sufficient since it will then be automatically trimmed by the AT3600 during the test so that the target energising current flows. If the approximate voltage across the part is unknown then the front panel Measure mode may be used during programming to determine this value by manually adjusting the voltage of a Magnetizing Current (MAGI) test until the desired current is obtained.

9. Compatibility Between Different Levels of Firmware

AT Firmware 2.89, August 2003.

There is normally no need to change any of the procedures required to operate the testers when firmware or software is upgraded. Sometimes, however, operating methods are changed in response to user requests and when there will be a benefit to all users.

We recognize that changes to the way in which the testers work can involve re-training of operators and adjustments to working procedures and, although we recommend that you use the default settings described here, it is possible to keep working in the previous way by setting the following options to OFF.

To change the compatibility options, enter the 'set-up' menu on the front panel of the tester. (Consult the user manual if you are unsure about how to do this.) Using the soft-keys, scroll down to 'Compatibility Options' and select 'CHANGE'.

Auto IR Limit

Auto IR Limit OFF:

When the resistance value is very high (GOhms) and/or the test voltage is low, the test current flowing through the part will be extremely small and subject to interference and noise. The result returned by the tester will be very high but subject to variation because of the noise current.

Auto IR Limit ON: (Default)

The maximum IR result is limited to the test voltage/50nA. This provides a consistent open-circuit reading (20GOhm at 1000V for example) without sacrificing accuracy at typical test levels of <1GOhm.

Retest on Continue

This compatibility option concerns the action of the 'CONTINUE' soft key when a program with 'stop on fail' enabled fails a test. See also the 'stop on fail' and 'trim' sections of the user manual.

Retest on Continue OFF:

When the CONTINUE soft key is pressed, the tester records a fail. The tester sequences through the rest of the tests in the program but results may be invalid or inaccurate since a fail has already been recorded.

Retest on Continue ON: (Default)

When the CONTINUE soft key is pressed, the tester records a fail. The test sequence is re-started from the beginning, though the results of previous tests that failed are ignored for the purposes of 'stop on fail'. This choice ensures that parts that have been trimmed during a trim test are always fully tested in the trimmed state. Tests carried out after the failed test are also now valid and accurate in this mode and may be used for selection or grading of parts.

VOC Source Compensation

Applies to VOC, VOCX and LVOC tests.

VOC Source Compensation OFF:

The tester applies the programmed voltage and measures and reports the voltage across the designated secondary. Small errors in the programmed voltage (typically <0.5%) will generate a similar error in the VOC measurement.

VOC Source Compensation ON: (Default)

The tester automatically makes a measurement of the applied test signal and compensates the secondary measurement for the small error in the applied voltage. This method will give a very precise VOC measurement, especially if four-terminal Kelvin connections have been made to the test part.