



Release Notes

WITE32

Version 3.01

2/11/2003

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CHAPTER 1

NEW FEATURES INTRODUCED IN WITE32

1.1 New Operations for Production Sequence

Two new operations *Heads Loading* and *Heads Unloading* are implemented in this release of WITE32 to provide possibility to load and unload heads during production sequence.

- The *Heads Loading* operation connects sliding amplifiers and loads heads.
- The *Heads Unloading* operation unloads heads and disconnects sliding amplifiers.

These operations can be used in a production sequence to change track with unloaded heads. To do this, insert the *Heads Unloading* operation at the end of the first zone/setup, and the *Heads Loading* operation at the beginning of the next zone/setup.

1.2 Head Amplifiers

The following head amplifiers are initially supported in WITE32 ver. 3.01:

- SR1774ACA
- TLS26A714PM
- TLS26A784
- 81G5112
- 81G5122

The following head stacks are initially supported in WITE32 ver. 3.01:

- SR1774 - INVADER1774
- WABASH - WABASH
- 81G5122 - MARVELL_5122
- VM5410A3 - ROMULUS_5410A3
- VM5410D4 - NEBULA2 (was accidentally excluded from release WITE 3.0)

1.3 PRML Chip Adapters

All custom chip adapter software for Wite3.0 and previous versions is not compatible with Wite3.01.

Please contact sales department to receive a new version of the software.

1.4 Pattern Designer Changes

1. New parameter **chip_am_bits**, which is a length of the PRML chip generated sync marker in bits, is added. You can add this value in a pattern control block to make a calculation of the beginning of the RWA Read Gate more accurate. Recompilation of the changed pattern file is required (please refer to *WITE32 Pattern User's Guide* for details about pattern compilation).

An example:

```
ctldef ctldig
  scheme = SSI4910D
  ltd_time = 6us
  enamdet_time = 10us
  am_length = 8
  chip_am_bits = 64
  .....
ctlend
```

2. The parameter **winsync_time**, which specifies the position of the WINSYNC time base signal, is not used anymore. The timing of the WINSYNC time base signal is calculated automatically to match the position of the address mark. This parameter can appear in the pattern definition but it is ignored.

1.5 Envelope Signal Tracking Option

The Signal Profile Tracking check box in the *Configure | Measurement Options* dialog box is now enabled even for systems without Guzik Digital Channel. This option is intended to be used for tracking the Envelope signal using Guzik Signal Display. The content of the envelope memory is downloaded each time the TAA measurement is performed. Then this data is shown on a Guzik Signal Display.

Note: This option significantly slows down all TAA measurements. Therefore the default state of this option is OFF, and this option is not saved between WITE32 sessions.

CHAPTER 2

FEATURES REMOVED FROM WITE32

1. Digital Popcorn measurement is no longer available. The option is removed from the Control | Digital Measurements dialog box.
2. The module *WSpinstd.exe* is removed from the WITE32 installation. The DLL version of this module *OxSpinstd.dll* should be used instead. If you install the WITE32 over existing installation, the WITE32 installer automatically updates WITE.INI file to reflect this module replacement.

CHAPTER 3

WITE32 MODIFICATION

3.1 Create Product Dialog Box

Automatic directory name creation is added to Create Product dialog box.

When you create a new product, WITE32 will display a dialog box asking for information about the new product:

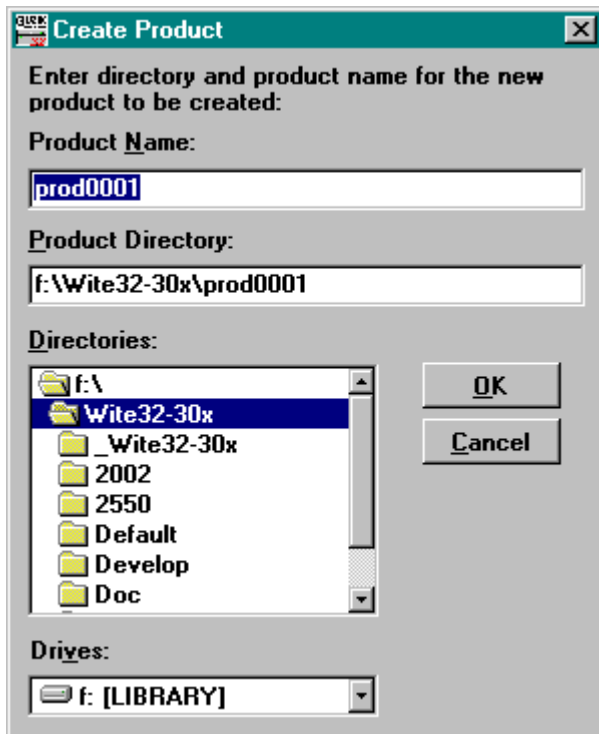


Figure 1: Create Product Dialog Box

If you start typing over the *Product Name* field, the same text will replace the default product directory (any illegal character for a directory name will be removed automatically):



Figure 2: Create Product Dialog Box: typing over the Product Name field replaces the Product Directory

The same behavior is implemented in the *Copy Product* dialog box, which is invoked when you press the *Copy* button on the *Product Configuration Menu* dialog box.

Additionally, when the *Copy Product* dialog box is just opened, the product directory name for the new product is set to the original product directory name with added postfix “0001”:

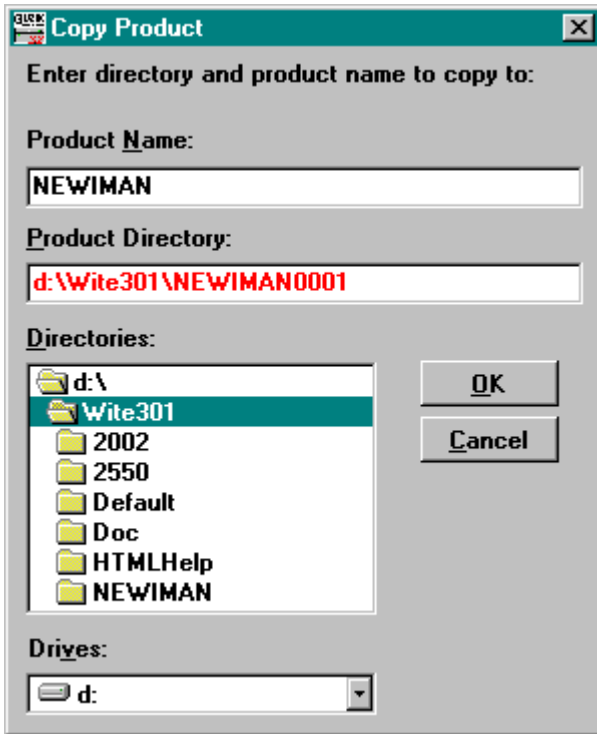


Figure 3: Copy Product Dialog Box

3.2 About WITE Environment Dialog Box

Additional information about WITE environment is added into WITE information dialog box (see Figure 4):

- WITE Root directory.
- Product directory.
- Full path and filenames for all modules.

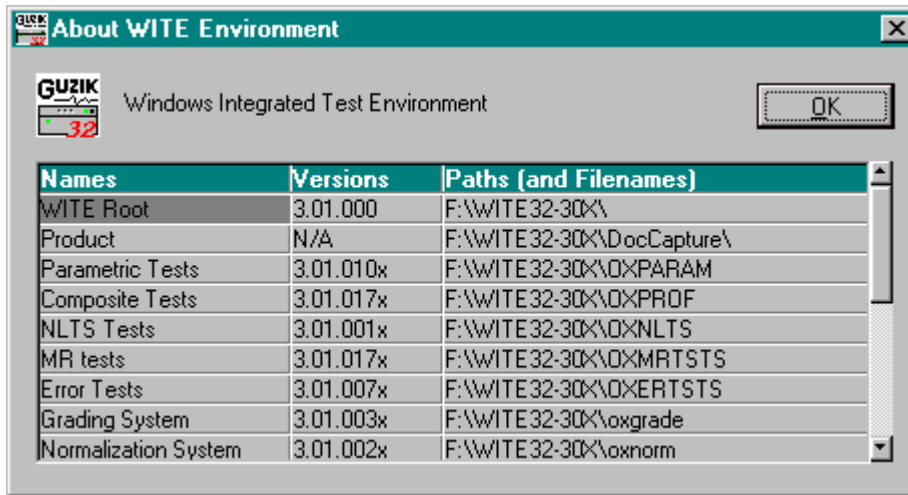


Figure 4: About WITE Environment Dialog Box

3.3 Exercise Menu Dialog Box

The *Exercise Menu* dialog box of the Spinstand Alignment Program (WDCP) is modified (to open the dialog box, select the *Configure | Device | Run Alignment Program* menu item, and then the *Test | Exercise...* menu item).

- The new *Slider boards* frame is added to the *Exercise Menu* dialog box. This frame includes four buttons: *Top In*, *Top Out*, *Bottom In*, *Bottom Out*.
 - Press the *Top In* button to connect a top amplifier board to the head.
 - Press the *Top Out* button to disconnect a top amplifier board from the head.
 - Press the *Bottom In* button to connect a bottom amplifier board to the head.
 - Press the *Bottom Out* button to disconnect a bottom amplifier board from the head.

Note: These buttons are enabled only for HLM-2F and HLM-3F head loaders.

- Stand Alone Test* is not supported for 312MP and 1701 models of spinstands. Starting from Wite32 ver. 3.01 the *Stand Alone Test* button in the *Exercise Menu* dialog box of the Spinstand Alignment Program (WDCP) is disabled for these models of spinstands (to open the Exercise menu, you select the *Configure | Device* menu item, press the *Run Alignment Program* button and then the *Test | Exercise* menu item).

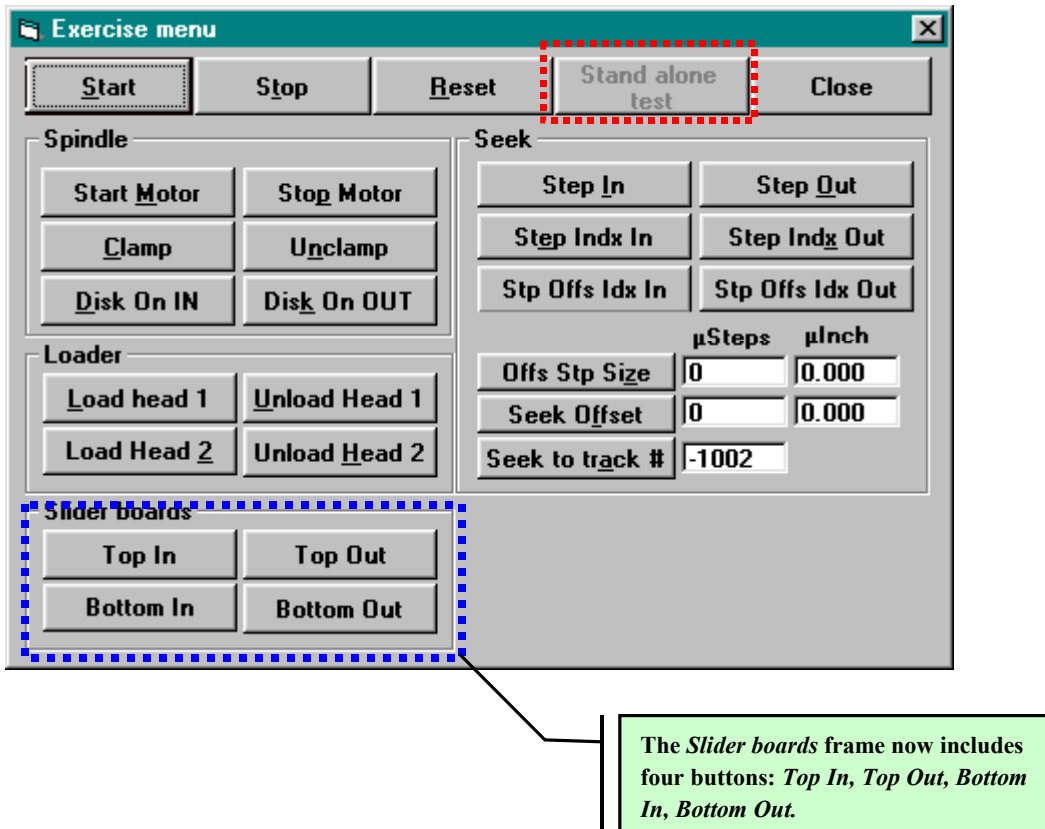


Figure 5: 1701 Exercise Menu Dialog Box

3.4 Jog Menu Dialog Box

The *Jog Menu* dialog box of the Spinstand Alignment Program (WDCP) is modified (the *Configure | Device | Run Alignment Program* menu item, the *Test | Jog...* menu item).

The new read-only *Skew angle* field is added to the *Jog Menu* dialog box. This field shows the current value of skew angle, and is updated when you press the *JogCCW*, *StepCCW*, *StepCW*, and *JogCW* buttons.

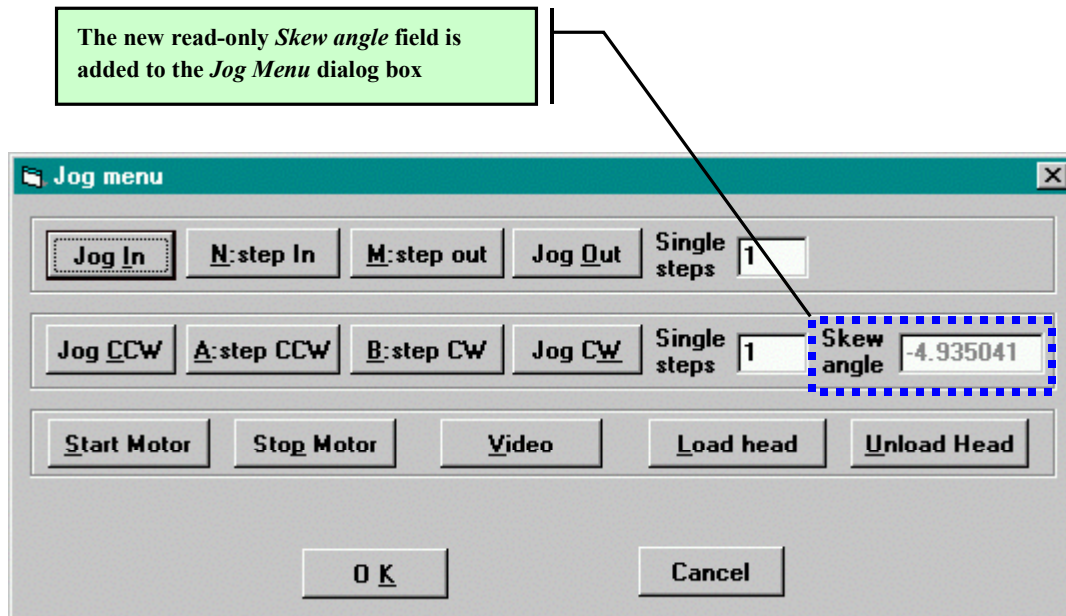


Figure 6: Jog Menu Dialog Box.

3.5 Filter Option in the Write/Read Offset and Position Error Signal Tests

The *Filter* combo box is added to the Write/Read Offset Test and PES Test configuration forms. In PES Test it is available for acquisition from data source only. In previous revisions of WITE these tests were performed through the system filter.

Available filter choices:

- Parametric
- F1
- F2
- F3
- Overwrite
- Use System

The default setting for the filter is *Use System* for Write/Read offset test, and *Overwrite* for the PES Test

In the case of the *Overwrite* filter, the test will automatically recognize the frequency of the written pattern and program the Spectrum Analyzer frequency accordingly. The frequency of the written signal can be identified if the parametric (not PRML) quasi-regular (see description below) pattern or flux was written on a disk. If the frequency cannot be estimated, one of these error messages will be shown:

- “Frequency of selected pattern can not be identified. Change pattern or switch from Overwrite filter to any other filter type.”

- “Frequency of written pattern can not be identified. Rewrite track or switch from Overwrite filter to any other filter type.”
- “*Frequency of written pattern can not be identified. Change pattern in System dialog box or switch from Overwrite filter to any other filter type.*”

A quasi-regular pattern is the one with constant distances from each even-numbered transition to the next (odd-numbered) transition and constant distances from each odd-numbered transition to the next (even-numbered) transition. For instance, pattern “1001000010010000...” is quasi-regular.

3.6 WROffset Test

1. The algorithm of the WROffset test is modified: the test leaves the head in the position of the reader after performing the WROffset measurement.
2. The WROffset test reports to the Result Processor test the test configuration as well. The test configuration is shown in the Configuration Area of invoked Result Processor window.

3.7 Sector Amplitude Stability Test

The set of results of the Sector Amplitude Stability test is modified, when the test is performed using spectrum analyzer. Specifically, all asymmetry results as well as positive and negative results are removed, because they are meaningless for spectrum analyzer measurements.

The following results have been replaced or deleted:

<i>Name of Field</i>	<i>Comments</i>
SAAAsymAvg	Removed
SAAAsymRange	Removed
SAAsymStdDev	Removed
SAARangeNeg	Removed
SAARangePos	Replaced with SAARange
SAAStbPos	Replaced with SAAStb
SAAStbNeg	Removed
SAA_TAAANegAvg	Removed

3.8 Marvell 5500 Pattern File

The pattern file names for the Marvell 5500 chip adapter have been changed from *marvell.** to *marvell5500.**. New products created with WITE32 ver. 3.01 will include *marvell5500.ep2*, while old products still have *marvell.ep2* file included, until you copy the new files manually from the *Default* directory.

3.9 Guzik Graph Control Modifications

The new property *Comment* is added to the Guzik Graph control. This property allows you to specify any text comment, which appears next to the graph caption in parentheses, when you print the graph on a printer. The comment does not appear on a screen. The comment is not saved between WITE32 sessions.

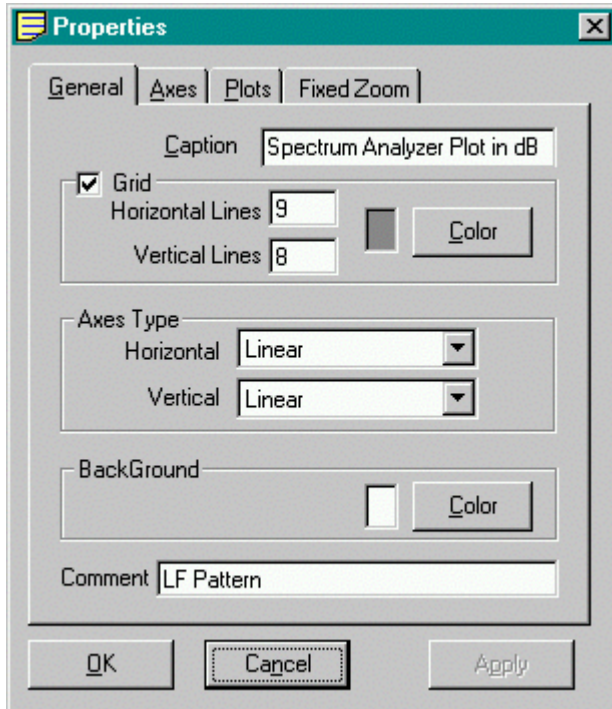


Figure 7: Guzik Graph Properties Dialog

3.10 Write and Read Gate Generation for Head Stacks

For the head stack configurations the following signals are neither used, nor supplied on a scope point #3:

- Read Gate Head 0
- Read Gate Head 1
- Write Gate Head 1

The *Write Gate Head 0* and *Read Gate* are supplied to all heads of the head stack instead.

3.11 Read-Only Parametric Test Modification

The new parameter *Read Threshold* is added to the setup form of the Read-Only Parametric test:

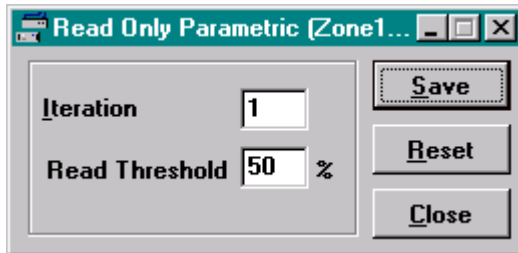


Figure 8: Read-Only Parametric Test Setup Form

This parameter is used as a threshold for pulse width measurement.

Note: This modification was introduced in WITE32 rev. 3.00 but was not included in WITE 3.00 release notes.

CHAPTER 4

FIXED BUGS

The following bugs were discovered in WITE32 Version 3.00 or earlier, and fixed in WITE32 Version 3.01. The description below explains the bug behavior as it appears in WITE32 Version 3.00.

4.1 Test Modules and Tests

1. In the Sector Amplitude Stability Test, both positive and negative TAA measured values are twice bigger than the actual TAA value.
2. In the Sector Amplitude Stability Test, when the current filter is “Overwrite”, the TAA negative value is displayed, despite the fact, that the negative TAA value is meaningless for the spectrum analyzer measurement.
3. TAA reported by the Track Profile Test performed through the Overwrite filter is twice lower than TAA reported by the TAA test performed through the same filter.
4. The Frequency test does not report the configuration parameters.
5. The Saturation test performs the SNR measurement on different patterns depending on whether the PW measurement is enabled. Instead, the High Frequency pattern from the Saturation test setup must be used for SNR measurements.
6. The choice between linear and $\sin(x)/x$ curve fitting in the Pulse Profile test setup is redundant and is not used by the test algorithm. The option is now removed from the configuration form.
7. The initial value of the Read Current in the Guzik Channel Optimization test may be selected outside the specified Read Current range.
8. Zone editing of the “Measure by” radio button group in the NLTS vs. Write Current test configuration form is not available if Digital Channel is not present in the system.
9. Some radio buttons in the NLTS vs. Write Current and Alt. Spectral Elimination test become colored as “changed from the database” after zone editing.
10. The TTTSNR test fails on the RWA2550++.
11. The TTTSNR test fails on the RWA-2000 Series when Overwrite filter is selected.
12. Positioning Error Signal (PES) test with acquisition from Data fails in the case of PRML chip pattern selected as a system pattern on RWA-2000 Series.
13. In the Sector Amplitude Stability test for RWA-2000 Series the results from the Positive Peak Detector channel are reported, even though the Overwrite filter is selected in the test setup.
14. In the Positioning Error Signal (PES) test for RWA-2000 Series the results from the Positive Peak Detector channel are reported, even though the Overwrite filter is selected in the test setup.
15. After changing the RPM in device menu or by RPM test, PWN test generates wrong results.
16. Comparator error test fails after servo calibration or servo writing with 128 hard sectors.

17. In the Pulse Profile test, test results for both polarities are always generated even though only one polarity is selected.
18. When a head fails the head polarity test, wrong head number is reported.
19. A deselected module reappears on the selected list after deleting another module. The following sequence of actions leads to the wrong behavior:
 - Deselect Module1 and Module2 from selected list.
 - Delete Module2 by clicking Delete button.
 - Now, Module1 reappears on the selected list.
20. If Module1 and Module2 are deleted from “Available List” on Select Module menu and are installed back immediately, WITE will display an error message saying no response from Module2 during installation.
21. The following tests generate errors while executed with RWA-2002/2003/2004 model, because the RWA-2000 series hardware does not support these measurements:
 - Extra Pulse
 - Missing Pulse
 - Undershoot

These tests are disabled for the RWA-2002/2003/2004.
22. “Subscript out of bound” error message pops up when WProf.exe (composite test module) is installed into WITE. The OxProf.dll (DLL version of composite test module) does not have this problem.
23. If the configuration form of any test from “MR Tests” module is left open while user adds/removes an external module, WITE32 will display an error “WMRTTests module disconnected”.
24. The error message “Timeout on receiving data” pops up when running the Scale Correction test when execution on tracks close to ID radius.

4.2 Spinstand

1. If Servo Write is configured to cover wide range with small step (for example, 200 μ In range, 0.3 μ In step), the spinstand gives a timeout. Timeout was increased from 20 sec to 60 sec.
2. The “*Turn Spinstand in IPL mode (turn power off/on)*” message pops up intermittently, when you press the *Yes* button after the software prompts you to replace spinstand internal program.

Note: This fix does not affect situation when older revision of the spinstand internal program is running inside the Spinstand and you perform upgrade with the spinstand internal program from WITE32 3.01. In this situation error still occurs. This error will not occur when you upgrade program from WITE32 ver. 3.01 to WITE32 ver. 3.02 or the later version.

3. *Track Size* value changes intermittently during test execution on 1701, 1701A, 1701CF, 312, 312MPCF spinstands.

4.3 Miscellaneous

1. When Write Flux operation writes a very low flux frequency (e.g. 1 MFlux/s) with a PRML chip pattern as the current pattern, “control program too complex” error message pops up.
2. When Normalization Limit menu displays limits in percent format, the following problems appear:
 - “Type mismatch” error pops up when you change the focus from any non-zero value limit.
 - “Max” header is still displayed on top even though that column is not used.

- Clicking on any empty column makes the whole table to be refreshed.
3. The *Abort* button does not stop the Band Erase operation started from WITE dashboard.
 4. When WITE switches to a zone with the precompensation enabled, “No Index” error message pops up.
 5. Dashboard is frozen after internal TAA calibration. This problem appears only if WControl.exe (RWA control module) is used. The OxCtrl.dll (DLL version) does not have this problem.
 6. The internal TAA calibration option on calibration menu is disabled if overwrite filter is the current filter.
 7. When *Servo Erase* operation is executed from dashboard, WITE displays “Write” rather than “Erase” on dashboard status bar.
 8. Wrong product files are used if two versions of WITE are installed into the same system. The following is the sequence to reproduce this problem:
 1. Install a WITE version to *c:\wite32*
 2. Rename the WITE root directory to *c:\wite32old*
 3. Install another WITE version to *c:\wite32*
 4. Run WITE from *c:\wite32old*
 5. WITE uses all files and products from the current *c:\wite32* directory rather than from *c:\wite32old* directory.
 9. If WITE product, created for one RWA model (say RWA-2585) is later executed with another RWA model (say RWA-2002), the opening of the scope point selection dialog box (*Control | Scope Points*) produces error messages. The error messages are changed to warnings with more detailed description of the source of the problem. You have to select the proper sources for the new RWA model, as the scope point sources are different for RWA 25xx and RWA 2002 series of testers.
 10. "*R/W offset*" captions are replaced to "*W/R offset*" captions in the following configuration forms:
 - Control | Gate and Track Format
 - Calibration | Servo Calibration
 - Configure | Measurement OptionsThe meaning of the control values is not changed.