Release Notes

WITE32

Version 3.21

03/17/2005

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CHAPTER 1
INTRODUCTION

The release 3.21 of WITE32 incorporates the new features and the bug fixes introduced after the release 3.20. This document uses the release notes for the WITE32 version 3.20 as a base line for a comparison.

CHAPTER 2
NEW HARDWARE SUPPORTED IN WITE32

2.1 New Head Amplifiers

The following head amplifiers are initially supported in WITE32 version 3.21:

- MR5ML
- SR1651AAA
- SR1984

2.2 New Head Stacks

The following UP8 head stacks are initially supported in WITE32 version 3.21:

- PA7540BM (headstack driver for PA7540B with the Multiple Head Stack Board P/N 23-324790)
- SR1784M (headstack driver for SR1784 with the Multiple Head Stack Board P/N 23-324790)

2.3 New PRML Chip Adapters

Two new chip adapters are initially supported in WITE32 ver. 3.21 for Chip Adapter Interface 4000:

- S23-322870
- S23-325460

Please contact sales@guzik.com for more information.

2.4 New V2002 Toolings

Starting from WITE32 revision 3.21 the *Y-Screw Limit Adjustment* test for V2002 spinstand supports the new toolings listed in the Table 1:

Tooling Part Number	*Media Size (Inch)*
80-702775 / 702776	3.5
80-702844 / 702845	2.5
84-800537	2.5
84-800547	3.5

Table 1 Toolings Supported by Y-Limit Adjustment Test

CHAPTER 3
WITE32 MODIFICATIONS

3.1 Guzik V2002 Spinstand

3.1.1 V2002 Head Stack

1. WITE32 disables the V2002 *Head Stack* hardware *Comb* button, when the device is started or the head stack vacuum is turned off. This is done in order to prevent the physical damage of the head stack or the tooling in the case the vacuum is not supplied, or when the device is started.

2. The V2002 *Head Stack* tooling *Comb Ramp* retracts automatically when Head Stack Vacuum turns off.

3.1.2 Support of Comb Loader Toolings

There are two revisions of Comb Loader toolings. For the Comb Loader Revision 1 the crash protection diagnostic is done with the ring installed on the spindle, for the Comb Loader Revision 2 it is done with the comb mechanism. In the previous versions of WITE32 the HSA Combloader Interface Board P/N 324250 only supports a connection to the Comb Loader Revision 2. Starting from WITE32 version 3.21 the board supports both Revision 1 and Revision 2.

3.1.3 XY Alignment, Head Alignment, and Head Alignment Rev.2 Tests

The new *Filter* combo box is added to the *XY Alignment*, *Head Alignment*, and *Head Alignment Rev.2* test configuration dialog boxes. This control defines which filter will be used for track profile and PW50 measurements. This control is required for heads and media designed for perpendicular recording. For such products you must use a programmable differentiator for track profile and PW50 measurements, while the currently selected system filter may be a low pass filter.

3.1.4 Retry Option for Spinstand Reset Procedure

The possibility to repeat the V2002 Spinstand Reset during the WITE32 initialization procedure is supported starting from WITE32 revision 3.21. If the *Spinstand Reset* fails due to any error (such as insufficient air supply), WITE32 will show the error message with the description of the reset failure reason (see Figure 1 below). You should fix the problem and press the *Retry* button to repeat the reset procedure, or press the *Cancel* button to continue the WITE32 initialization without completed spinstand reset.

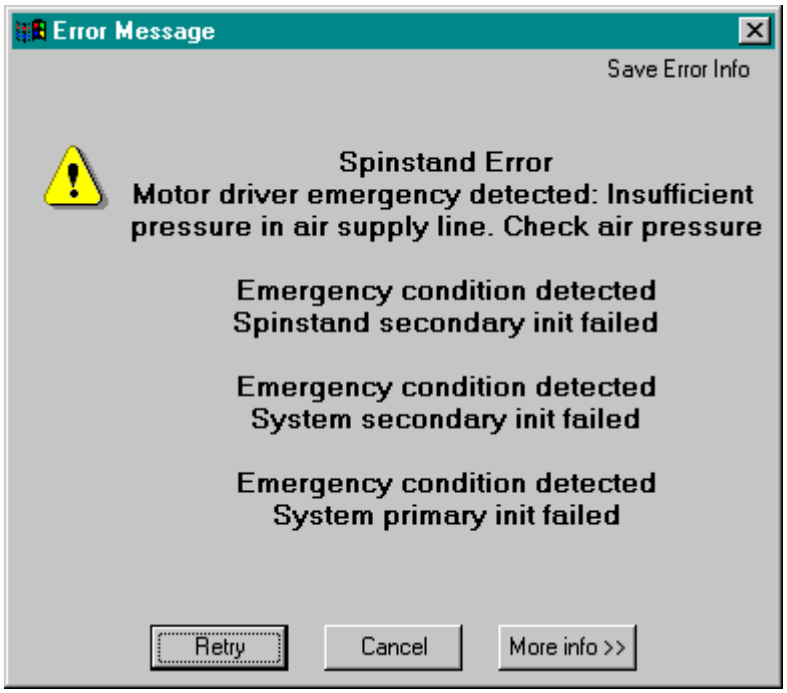

Figure 1 The Spinstand Reset Failure Message

In the case you pressed the Cancel button, you will get the warning message shown on the Figure 2 below.

Figure 2 Incomplete Reset Warning Message

WITE32 will start, however, you will not be able to start the device or perform any spinstand operations until you press the Red button on the spinstand front panel to repeat the *Reset* procedure.

3.1.5 Head Stack Support in Y-Limit Adjustment Test

The *Y-Screw Limit Adjustment* test for V2002 Head Stack tooling is modified starting from the WITE32 version 3.21. If the Head Stack touches the crash protection sensor during the *Y-Screw Limit Adjustment* test, or comb mechanism is retracted, the spinstand cannot perform a reset, and it cannot successfully finish the *Y-Screw Limit Adjustment* test. To prevent these conditions the additional instructions for the Head Stack tooling are added to Step 1 and 3 of *Y-Screw Limit Adjustment* test, see Figure 3 below.

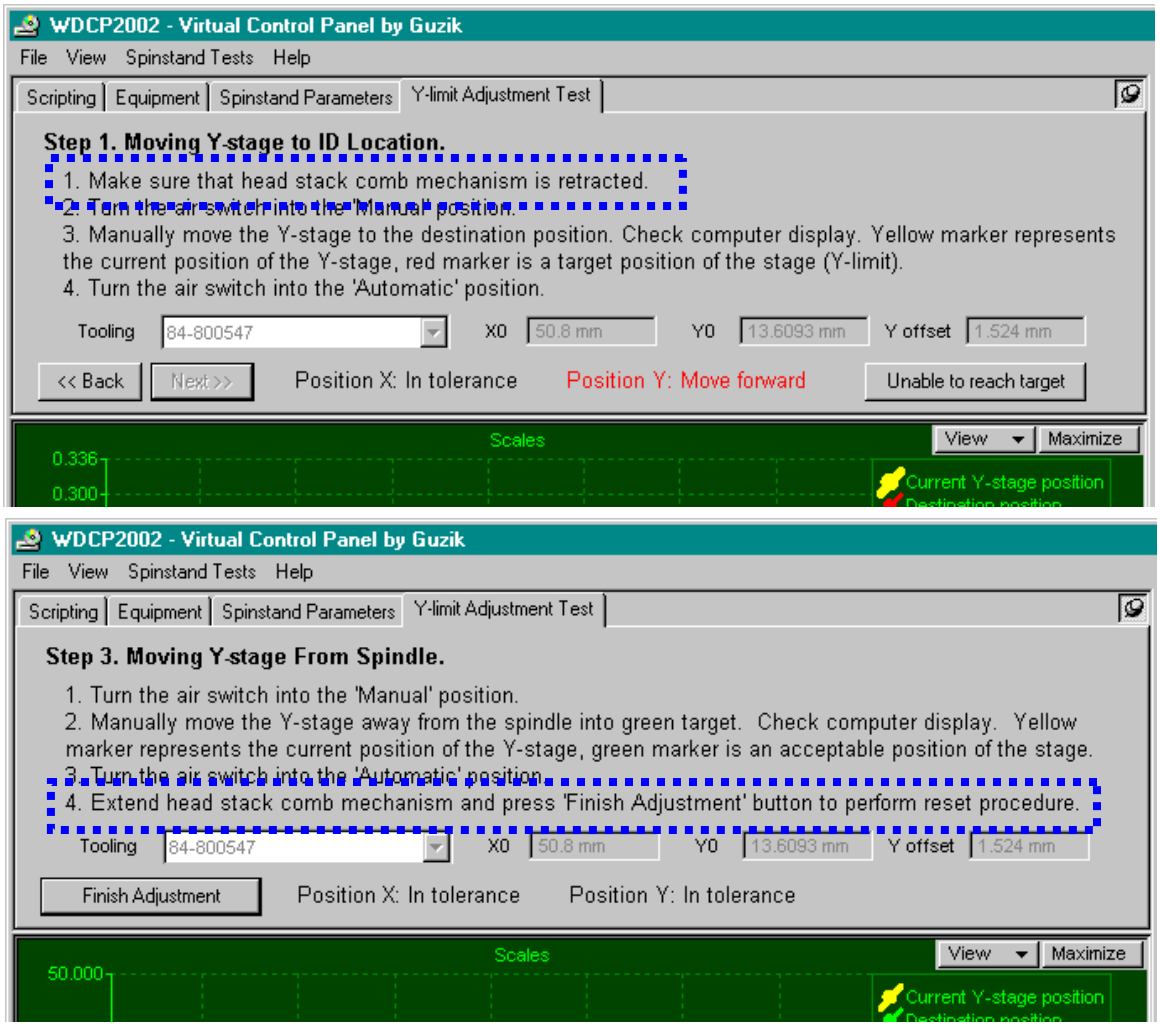

Figure 3 Additional Head Stack Y-Limit Adjustment Instructions

3.1.6 Miscellaneous V2002 Spinstand Modifications

1. *Sensors* test in WDCP2002: The *Clamp air pressure sensor* is renamed to *Disk Clamp sensor* to avoid ambiguity.

2. *PES Analysis Test*: The *AvgNRRO* column is added to the result grid of all graph windows of the *PES Analysis Test*. This column displays the Average Non-Repeatable Run-out value. Previously the *AvgNRRO* column appeared only on the *PES Analysis (Sector Statistics)* graph window.

3.2 Head Bandwidth Selection for RWA Models With Servo-2

In order to support low RPM products and low frequency heads (with data rates below 110 MFlux/s), the *Head Bandwidth* control was introduced in the *Control* | *Servo* dialog box of WITE32 in the previous 3.20 version of WITE32. This control was only available for RWA equipped with Servo Revision 3.

Starting from WITE32 version 3.21 the *Head Bandwidth* control is supported for Servo-2 and Servo-3 testers. Please refer to section 4.2.1 of WITE32 Release Notes version 3.20 for more details on the Head Bandwidth selection for servo.

3.3 M7500M Chip Adapter 4000 Optimization Procedure Improvement

PRML Chip optimization execution time depends on the number of sectors selected in the *Gate and Track Format* dialog box. For optimization, a PRML chip must receive a certain number of read gates for measurement of the metric function. The more sectors you have, the faster the optimization runs.

In WITE32 version 3.21 the optimization procedure for M7500M PRML chip on Chip Adapter 4000 is modified to run faster for the products with small number of sectors selected in the *Gate and Track Format* dialog box.

The Chip Adapter driver for M7500M Chip Adapter is modified to generate two or more read and write gates in every sector during the optimization process. WITE32 splits the data area of every sector into several smaller data areas. This makes the PRML Chip optimization to run faster.

3.4 Miscellaneous

If the grading configuration file (WGrade.cnf) is modified outside of WITE32, the file will be reloaded before the production test run.

CHAPTER 4
FIXED BUGS AND ISSUES

The following bugs were discovered in WITE32 version 3.20 or earlier, and fixed in WITE32 version 3.21. The description below explains the bug behavior as it appears in WITE32 version 3.20.

4.1 Compatibility with McAfee VirusScan Version 8.0

The previous versions of WITE32 are not compatible with McAfee VirusScan software version 8.0. This issue was resolved in WITE32 version 3.21.

4.2 Guzik V2002 Spinstand

1. The *Spinstand Product Parameters* dialog box displays the Micro Actuator parameters *Displacement Range* and *Tolerance* incorrectly. If you press the *OK* button to close the dialog box the wrong values of these parameters replace the correct ones in the Micro Actuator configuration file.

2. The *Edit Product Parameters* button may become disabled when the spinstand reset procedure fails due to the wrong Micro Actuator configuration parameters.

3. The *Disk Chuck Type* combo box in the *Spinstand Parameters* dialog box contains the unsupported item *Vacuum Clamping.* This item has been removed.

4.3 Tests and Measurements

1. The *Popcorn* test writes a pattern instead of flux when the *Flux Type* is selected in the *Write Signal* frame.

2. *Sector Amplitude Stability* test does not restore the before-test state of the enabled sector table. When the test is finished, all sectors are *enabled*.

4.4 Miscellaneous

1. WITE32 does not measure MR-Impedance to use TAA conversion from µA to mV for current sensing head amplifiers after the head is changed. This can lead to improper TAA result for the new head.

2. When WITE32 ver. 3.20 is started with newly created product and the Multiple Head Stack Board is installed, the error message "*HDL: The old revision of Head Amplifier driver is detected. Please contact a Customer Support department of your Head Amplifier manufacturer to get the newer revision of"* is displayed. WITE32 does not allow selecting the proper head stack driver in the *Configure* | *Preamp* dialog box.

3. If there is no record in the RWARSLT.MDB table, an error message *"Object variable or block variable not set"* may pop up on the database updating. It is safe to press the *Ignore* button.

4. In some Windows 2000 systems, no pattern files are displayed in the *Configure* | *System* dialog box.

5. WITE32 version 3.20 has a bug in the Spectrum Analyzer frequency equalization response that may lead to small variations in spectral measurements at high frequencies.

CHAPTER 5
KNOWN ISSUES

5.1 Guzik V2002 Spinstand is not Compatible with Windows XP Service Pack 2

If Windows XP is upgraded to Service Pack 2, V2002 spinstand operation might be performed slower than without Service Pack 2. We strongly recommend not installing Service Pack 2 if working with V2002 spinstand. We will fix this issue in the future releases of WITE32.

5.2 Maximum Number of Sectors in Partial Revolution Mode is Limited to 255

If you select the *Partial Revolution Mode* option in the *Enhanced Performance Mode* frame of the *Configure/Measurement Option* dialog box, you can only specify up to 255 sectors in the *Gate and Track Format* dialog box. If you select 256 or more sectors, not all sectors will be enabled for writing and reading. There is no such limitation in the full revolution mode (when you select the *None* option in the *Enhanced Performance Mode* frame of the *Configure/Measurement Option* dialog box).

5.3 Executable External WITE32 Modules (*.EXE) Limitation

For testers with ANA-2000A (equipped with the Chip Adapter Interface 4000 board), tests run longer if the external test module is selected as an executable. We recommend selecting test modules compiled as DLL.

5.4 Wrong Sequence of V2002 Comb Loader Operation

The V2002 Comb Loader tooling does not perform head loading in the correct sequence for the following tests and operations:

- Spectral Integral SNR test (when noise measurement with unloaded head is selected)
- Head Loading operation assigned to WITE32 Dashboard buttons or inserted in the Production sequence
- Head Loading operation invoked from the Exercise test of WDCP2002
- Calls to WDK32 function HeadLoad() from custom modules

When loading the heads, the comb is retracted first, and then the head loader platform loads the head. This can cause damage to the head and media. The regular Start Device and Stop Device operations control the comb loader tooling properly. Guzik identified the problem, and we have an updated V2002 spinstand driver for WITE32 version 3.21 available. Please contact support@guzik.com to obtain the updated driver. We will fix the issue in the next revision of WITE32.