



## Release Notes

# **WITE32**

**Version 4.03**

**12/19/2008**

# **CHAPTER 1 INTRODUCTION**

The release 4.03 of WITE32 incorporates new features and bug fixes introduced after the release version 4.02. This document uses the release notes for WITE32 version 4.02 as a baseline for comparison.

# CHAPTER 2

## NEW FEATURES INTRODUCED IN WITE32

### 2.1 New V2002 Tooling Types

The following cartridge and media sets for V2002 spinstand are supported for the first time in WITE32 version 4.03:

<i>Cartridge Part Number</i>	<i>Media Size</i>
80-704377/704440	2.5", 3.5"
80-704645/704646	2.5"
80-704680/704681	2.5"
80-704682/704683	3.5"
80-704738/704739	2.5"
80-703753/703754	3.5"

### 2.2 New Headstack

A new headstack HSA\_PA7840B3 is supported starting from WITE32 version 4.03.

### 2.3 WITE32 Modifications

1. The *Pitch* calculation in *Servo Calibration* is changed, and is now defined as one-third of the reader width, instead of one-third of the average of the writer and the reader widths. This is done to avoid amplitude distortion of servo bursts for the heads that have the writer much wider than the reader.
2. WITE32 implements new functionality for the DigitalWESA API provided in WDK32 version 4.03. The new interface allows external modules to acquire digitized read signal in the Write-Excited Sector Amplitude (WESA) measurements mode. Please refer to chapter 2 of the *WITE32 Write-Excited Sector Amplitude Test Descriptions Engineer's Reference*, PN 02-107336-01 for details. The write excitation will be applied in the write gate and digital acquisition in the read gate following the write gate will be performed using the high speed ADC of the D5000 signal analyzer (up to 10 Giga samples per second). The *DigitalWESA* functions work only for RWA2000 series with D5000 signal analyzer. Please refer to WDK32 ver.4.03 Release Notes for more details.
3. If V2002 spinstand is equipped with a *Protective* or an *Automated* shroud, WITE32 moves the shroud over the disk when exits. In WITE32 version 4.03 a warning message "*Is it safe to close spinstand shroud?*" is displayed when you close WITE32. Please make sure that nobody works with the spinstand before pressing OK.
4. The PRML chip write and read gates are made longer by three microseconds by moving the chip servo gate inside the RWA servo zone. This will allow more user data inside a sector, which can improve the *BER* test times for a large number of sectors.

# CHAPTER 3

## FIXED BUGS

The following bugs were discovered in WITE32 version 4.02 or earlier, and fixed in WITE32 version 4.03. The description of a bug explains the bug behavior as it appears in WITE32 version 4.02.

### 3.1 PRML Chip

1. Inaccurate PRML chip data rate calculations may lead to the poor BER measurements due to chip adapter write gate being overlapped with the sector pulse. As a result, write operation may be of incorrect length. The data may not be written on the track. It is more likely to happen at low data rates.
2. The “*Timebase Error Detected*” error message may pop up when measuring bit-error-rate (BER) through PRML chip after writing flux.
3. PRML chip sync mark window location does not take into account writer-to-reader time shift, causing the window to be misplaced relative to the written sync mark. The sync mark may not be detected.
4. PRML chip write and read gate lengths are not updated when changing the number of sectors.

### 3.2 TFC

1. For the PA2770 headamplifier, which supports three TFC Units, only one of them - the DAC Unit can be selected in the TFC tab in the *Control | Head Amp...* dialog box. You cannot select *V* (Voltage unit) or *mW* (Power unit.)
2. When you specify the *TFC DAC Unit* in the *Control | Headamp...* dialog box, the value is wrongly evaluated based on the *Heater Resistance* range in the *Configure | Preamp...* dialog box. For example, if the *Heater Resistance* limits checking is enabled and set to form 40 to 100, you cannot specify the *DAC* value less than 40 or larger than 100.
3. No TFC is applied to a head if a headamplifier does not support TFC *Voltage* mode, and the *Heater Resistance* range is enabled in the *Configure | Preamp...* dialog box.
4. If an out of range TFC *Read* or *Write* value in the *Control | Head Amp...* dialog box is set and saved before start device, the evaluation is performed when the device starts. If the evaluation fails, the minimum TFC value is applied to the TFC head, which is right, but the fields in the dialog box are not updated to reflect the value that is set to hardware, and show the old wrong value in black color.

### 3.3 Miscellaneous

1. The “*Serializer FIFO error detected: underflow -- PG produced corrupted output at previous write cycle*” error message pops up intermittently during the write operation.
2. WITE32 hangs at 40% start-up when using UP10 with some commercial headamplifiers.
3. The *Track Profile* test configured to *Use Fast Offset* makes one extra step over the *To* position.
4. *MSCAN D5000 ETA Scanner*: the media defect positions may be shown at the wrong position when the test uses a combination of long sectors and a high sampling rate, due to overflow of the

position counter. For such combination of settings, the *MSCAN* test now displays a warning message: "*Current analog filter cutoff frequency and sector length will cause overflow. Please either use more sectors or decrease analog filter cutoff frequency.*"

5. The *TAA* test does not report the modulation results for the following combination of the test and system settings:
  - *TAA* test: the *Overwrite* filter is selected and *Modulation* is enabled.
  - *Control | Spectrum Analysis Channel...* dialog box: *SA-960* is selected as the *Spectrum Analyzer Model*.
  - *Control | Digital Measurements: Digital Parametric* is enabled and the *Profile* method is selected in the *Digital Parametric* frame.

The *Digital Measurements* settings must not control the spectral measurements.

6. The *Spectral Integral SNR* test setup displays the "*Invalid property value*" error message if you select the *Analyzer* model in the following way:
  - Go to the *Measurement* tap.
  - Click small 's' to the left of the *Analyzer* model combo-box - *Zone Data Edit* dialog box opens up.
  - Select in the *Zone Data Edit* dialog box *Use System* as the *Analyzer* model and press *OK*.
7. The default *Explicit Signal Bandwidth* in the *Control | Digital Measurements* dialog box is equal to 0. The *Signal Bandwidth* is not validated properly when you change it using *Zone Data Edit* or switch to *Explicit* from the other *Signal Bandwidth* options. For the wrong *Signal Bandwidth*, less than 9 MHz, and the *Explicit* option selected, WITE32 displays a warning message "*Digital Spectrum Measurements warning: maximum requested spectrum frequency 8.3886 MHz exceeds currently selected signal bandwidth 0 MHz*" during the device start.