WITE32™

Release Notes
(web-site version)

Version 2.69

04/01/2002

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CHAPTER 1
INTRODUCTION

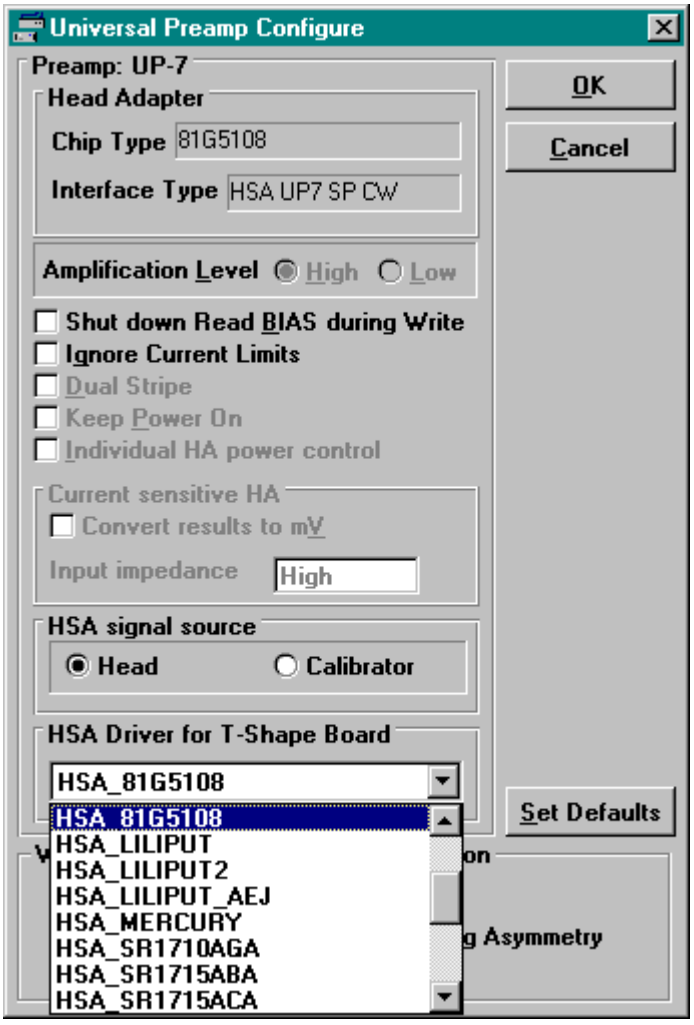
The 2.69 release incorporates new features and bug fixes introduced after WITE32 2.68 release. (This document uses WITE32 2.68 release notes as a base line for comparison.).

CHAPTER 2
NEW FEATURES

2.1 Support for T-Shape Board for Multiple Headstack ICs

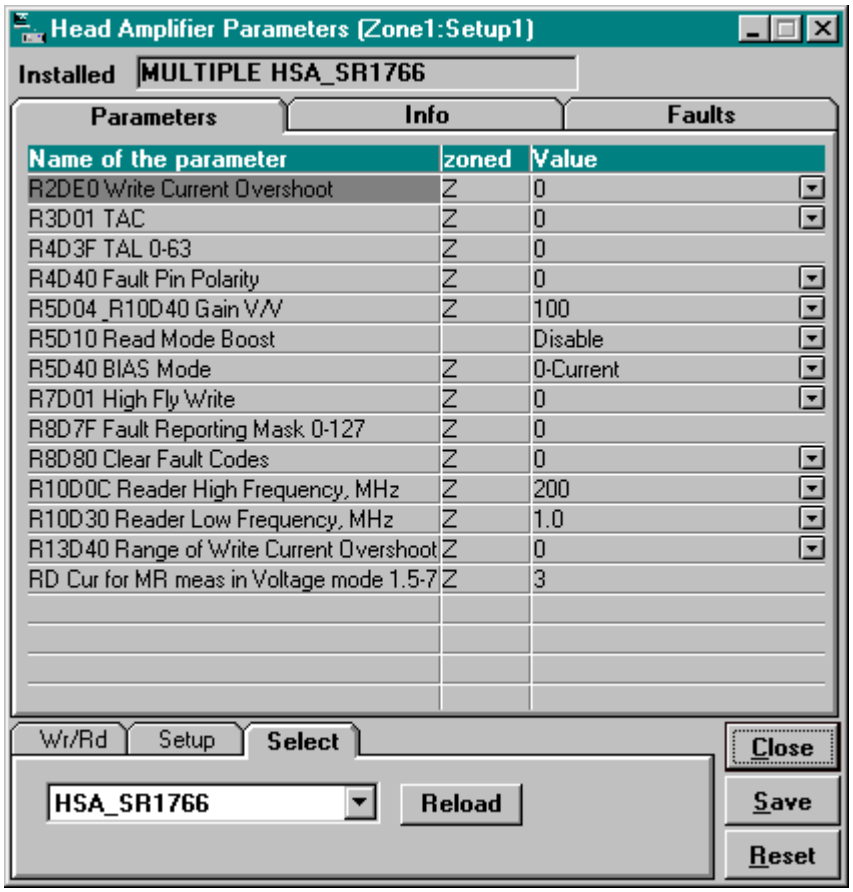
A T-shape board, P/N 23-308190-05, has been developed for working with multiple headstack ICs. The new revision of WITE32 supports this T-shape board.

If a T-shape board, P/N 23-308190-05, is installed, the *HSA Driver for T-Shape Board* list box in the *Configure* | *Preamp* menu becomes enabled.



You have to manually select the driver for the currently installed headstack. The selected headstack driver becomes active **after restarting WITE32**. To restart WITE32 you can use the *Restart* button on the *Engineering Dashboard*. You can select different HSA drivers for different WITE32 products and save your settings.

The selected headstack driver is marked as "MULTIPLE" in the *Head Amplifier Parameters* dialog box (*Control* | *Head Amp…* menu).



The available HSA drivers for the T-shape board are listed below:

- HSA_32R1615DR
- HSA_81G5002
- HSA_81G5004
- HSA_81G5102
- HSA_81G5108
- HSA_LILIPUT
- HSA_LILIPUT2

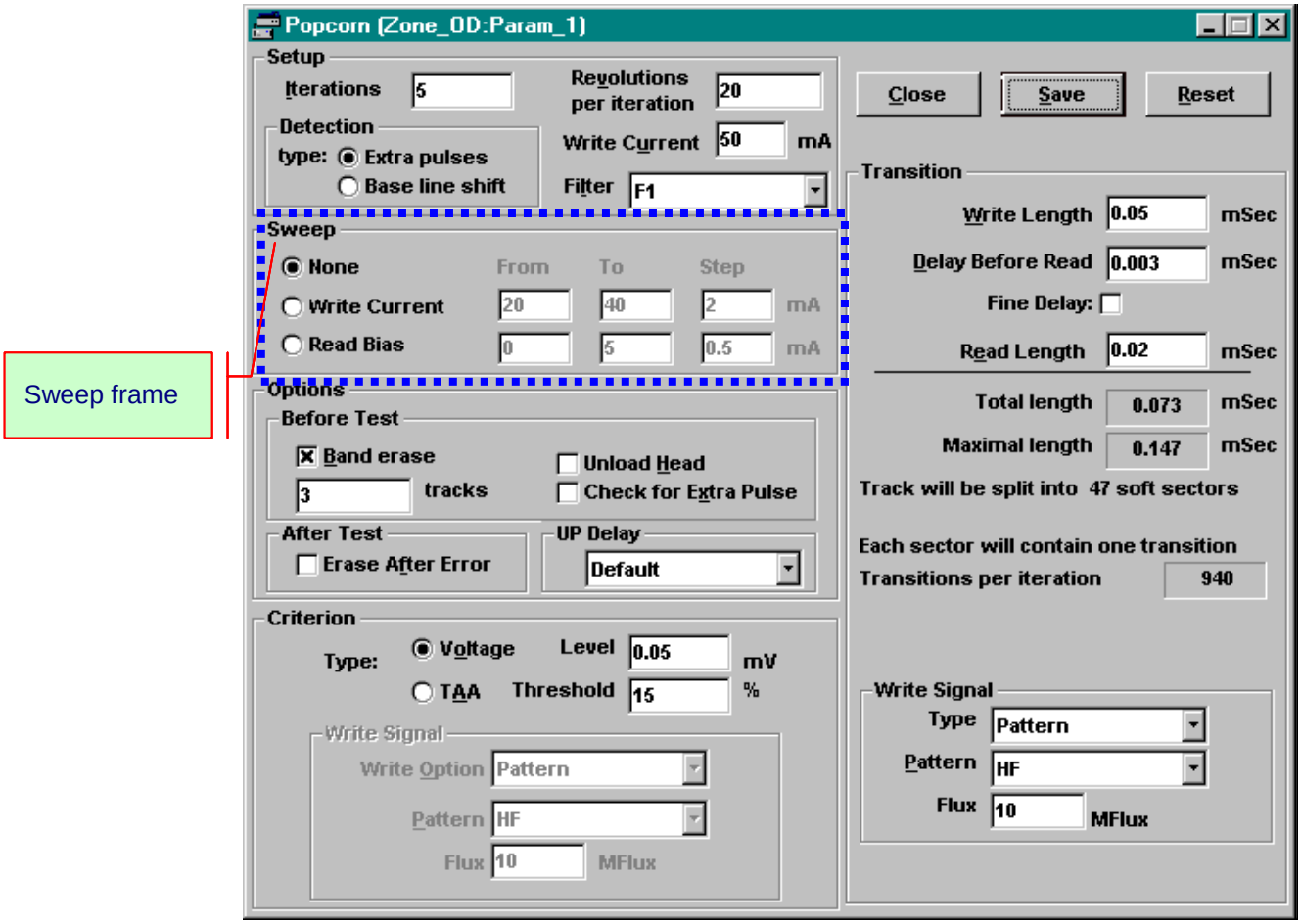
- HSA_LILIPUT_AEJ
- HSA_MERCURY
- HSA_SR1710AGA
- HSA_SR1715ABA
- HSA_SR1715ACA
- HSA_SR1766
- HSA_SR1767
- HSA_SR1767AC
- HSA_SR1776AAA
- HSA_VM5410A3
- HSA_VM5410D6
- HSA_VM541708
- HSA_VM5910

Note: Software cannot determine the actually installed headstack IC. Therefore, be sure that you select the proper driver for the physically installed headstack from the list.

Note: The list of "MULTIPLE" headstacks is stored in the **HDA.INI** file in WITE32 product directories and in the WITE32 Default directory. If you use an old WITE32 product with the WITE32 revision 2.69 or later, you must manually copy the HDA.ini file from the WITE32 Default directory to your product directory, otherwise the HSA driver list will be empty (only one item, *NONE*, Is shown in gray). When you create a new product, the HDA.ini file is copied from the Default directory to the new product directory automatically.

2.2 Sweep Option in the Popcorn Test

A new option, *Sweep*, has been added to the *Popcorn* test setup in WITE32 v.2.68, but the description of this modification was not included in the corresponding Release Notes. The updated *Popcorn* test setup form is shown below:



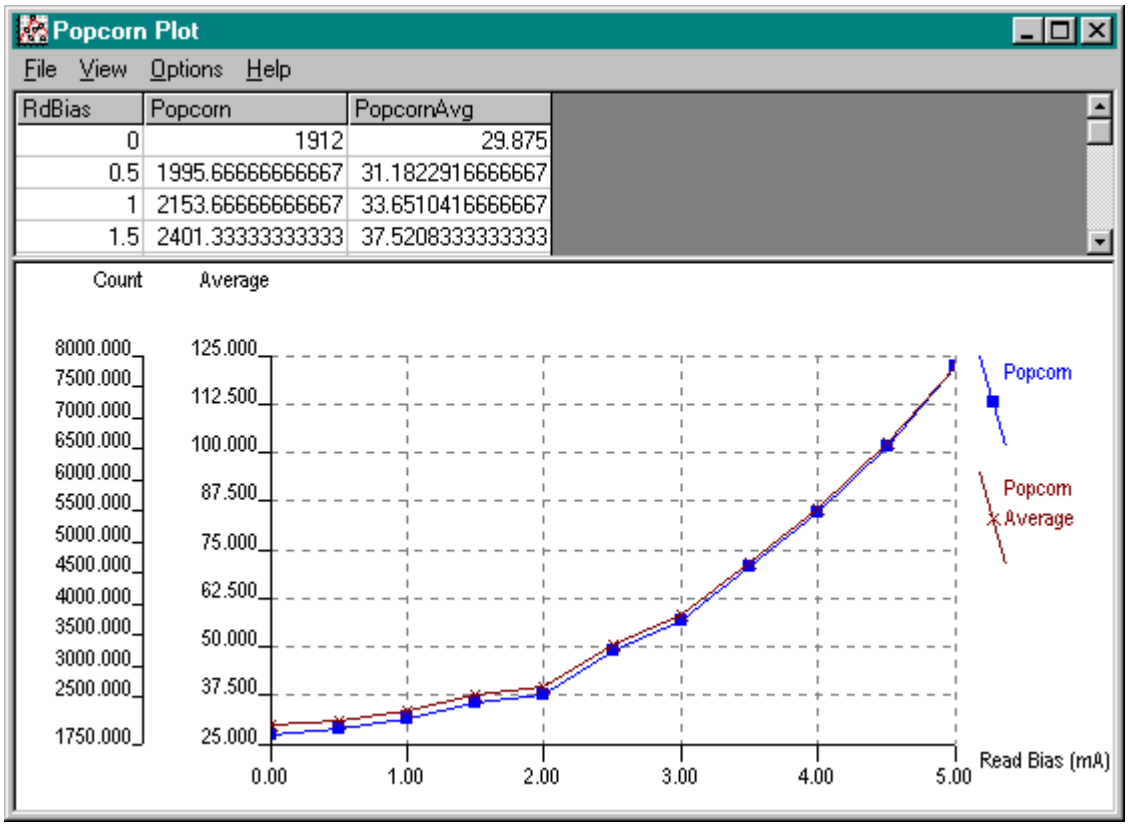
The *Sweep* option allows measuring the Popcorn noise with different values of *Write Current* or *Read Bias.*

The *Sweep* frame gives you three choices: *None*, *Write Current*, and *Read Bias.*

- *None* (default), when selected, disables sweeping.
- *Write Current*, when selected, enables write current sweeping from the current specified in the field *From* to the current specified in the field *To* with the increment specified in the field *Step*.

- *Read Bias*, when selected, enables read bias sweeping from the current specified in the field *From* to the current specified in the field *To* with the increment specified in the field *Step*..

If *Write Current* or *Read Bias* sweeping is enabled, the results of the *Popcorn* test are represented as a graphic plot. The picture below shows an example of a graphical representation of the test output.



2.3 Head Amplifiers

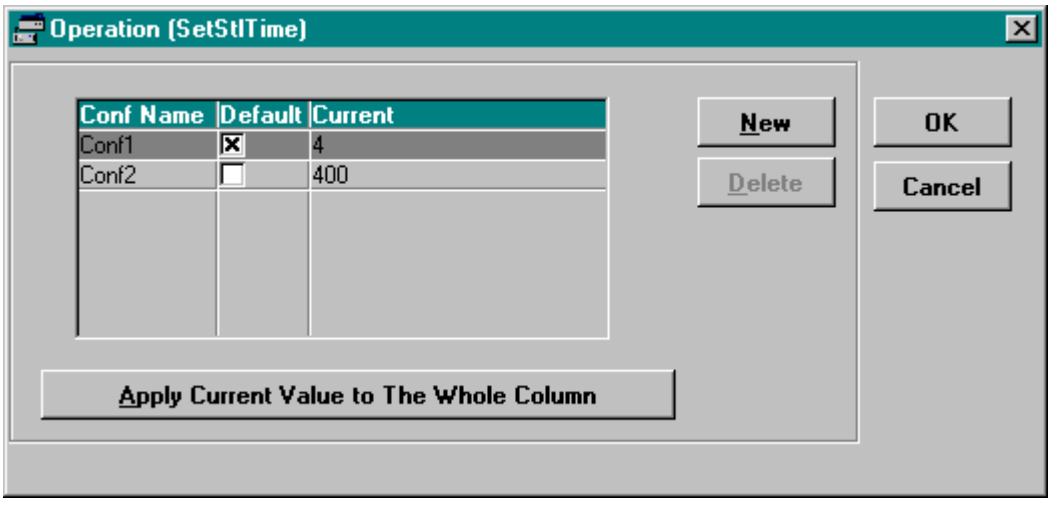
1. The following head amplifiers are initially supported in WITE32 v. 2.69:
   - SR1715
   - 81G5108
   - 81G5114
2. The following head stacks are initially supported in WITE32 v. 2.69:
   - VM5910 - AGERE_5910 (multiple)
   - VM5417 - AGERE_541708 (multiple)
   - VM5410A3 - ROMULUS_5410A3 (multiple)
   - SR1776AAA - SR1776AAA (multiple)
   - LILIPUT_AEJ - ARES_LILIPUT_AEJ (multiple)
   - 81G5114 - MARVELL_5114

2.4 Set Settling Time Operation

A new operation, *Set Settling Time*, is added for using in a production sequence.

The *Set Settling Time* operation changes the amount of time a spinstand waits after a head reaches the destination position before measurements are allowed. The *Settling Time* value is specified in mSec and should be in the range from 1 to 1000. The default value of the *Settling Time* is 4 mSec.

The configuration table for the *Set Settling Time* operation is shown below.



The *Settling Time* is an internal spinstand parameter, which is normally stored in the spinstand EEPROM. If you change the *Settling Time* from WITE32, this setting will remain active until you power down and power up the spinstand control box. The power up operation will restore the default *Settling Time* value from the EEPROM.

Note: Restarting WITE32 does not restore the default *Settling Time* value. We strongly recommend you to restore the default *Settling Time* of 4 mSec at the end of the production sequence, in which you have changed the *Settling Time.*

CHAPTER 3
FIXED BUGS

The following bugs were discovered in WITE32 2.68 or earlier, and fixed in WITE32 2.69. The description below explains the bug behavior as it appeared in WITE32 2.68.

3.1 Head Amplifiers

3.1.1 Fixed bugs in the head amplifier drivers

- VM5410D3 family – The "Analog Box DSP Buffer Overflow " error message pops up intermittently.
- 81g5014 – two issues:
  - If only a bottom head amplifier is installed, high write current values are not set correctly.
  - A readback from registers returns wrong values.
- COBRA3 –a property *R2D40 Boosts LFC (Tad4on)* is not set correctly for a bottom head amplifier.

3.1.2 Fixed bugs in the head stack drivers

- SR1767(6) – There is no MR Impedance measurement if a read bias is less then 1mA.

3.1.3 Headstack EEPROM reading bug

Headstack EEPROMs are not read correctly on fast computers.

3.2 Measurements through Spectrum Analyzer

If the system Spectrum Analyzer frequency is a harmonic of the HF signal (FOverwrite = k*FSystem / 4, k is whole, FSystem is the system frequency), TAA calibration might produce a wrong coefficient for the Overwrite filter. It happens only when TAA calibration is performed on a signal from a head. In this case the results of TAA and noise measurements through the Overwrite filter are wrong. This bug does not affect the results of the Overwrite and Spectral SNR measurements.

3.3 NLTS Tests

1. The *Alternative Overwrite* test reports incorrect results if the *Enable Trimming* option is selected.

2. The *Alternative Overwrite* test reports a meaningless result when the *Subtract noise* option is selected and the measured noise exceeds the signal. The bug is fixed in the following way: if the noise exceeds the signal the test skips the result, and shows a warning message “Noise exceeded signal for some samples”.

3. The following test names are changed in the setup form captions and in the plot captions:

    - "Alternate Overwrite" is changed to "Alternative Overwrite"

    - "Alternate Spectral Elimination" is changed to "Alternative Spectral Elimination".

3.4 Miscellaneous

1. The *WROffset* test reports a wrong track width if the *Adjust Gain at Each Offset* option is unchecked.

2. You can reload a head amplifier driver *(Control* | *Head Amp…* menu) when a device is not stopped and get the head amplifier driver not properly initialized.

3. If you rename a setup in the current zone (*Configure* | *Zone…* menu) such that the setup list is resorted, the *Rename* and *Delete* buttons on the *Setup* frame may become enabled for the current setup. Renaming or deleting the current setup crashes WITE32.

4. The track number in the WScan tests cannot exceed 32767. The “Overflow” message pops up if you set a larger track number.

5. In the Saturation test the write current value is not set properly during the overwrite measurements. The overwrite measurements are performed for the system write current.

6. The *Pulse Width* test displays the “Latch result in SDP board timeout” error message intermittently if the soft sector mode and the enhanced performance mode are used.

7. The *Read Clock* signal is provided to the RWA Scope Point 2 output, when the Scope Point 2 is disabled. This happens in one of the following cases:

    - Every time you restart WITE32.

    - When you open the *Control* | *Scope Point* dialog box and uncheck the *Enable* checkbox to disable all RWA scope points.

    - When you open the *Control* | *Scope Point* dialog box and select source *NONE* for the *Scope Point 2*.

The high frequency Read Clock signal provided to the BNC connector might cause interference with the measured signal.

CHAPTER 4
TRIPLE TRACK SNR TEST

4.1 Test Overview

The new Triple Track SNR Test is introduced in WITE32 2.69. The test is located in module "WOffTrk Tests". To install this module, please go to the *File* | *Select Modules…*dialog box and install WOffTrk.exe or OxWOffTrk.dll. An additional license is required to work with this module.

The Triple Track SNR Test measures the off track reading capability characteristics of a head. It reports the following results:

- Write width
- Read width
- Squash
- Squeeze
- Erase band
- OTRC

Note: Note: Please order your copy of WITE32 ver. 2.69 to get the detailed description of this test, provided in the complete version of the Release Notes.