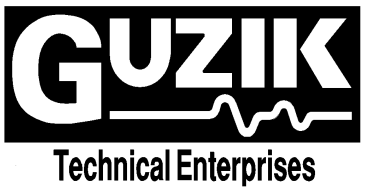

WITE32™

Release Notes
(web-site version)

Version 2.65

08/10/2001

Guzik Technical Enterprises

CHAPTER 1

INTRODUCTION

The 2.65 release incorporates the new features and bug fixes introduced after WITE32 2.64 release. (This document uses WITE32 2.64 release notes as a base line for comparison.).

CHAPTER 2

NEW FEATURES

2.1 Spectrum Analyzer 900

Starting from WITE32 ver.2.65, the new revision of Spectrum Analyzer is supported. This device is installed in the Analog box, and labeled as Spectrum Analyzer 900 (device Part Number 700232). The Spectrum Analyzer 900 consists of two boards: HF-1000 (P/N 313990), and IF-2550 (P/N 305740).

The main difference between Spectrum Analyzer 900 and previous models of spectrum analyzer is wider bandwidth from 0.5 to 900 MHz. The Table 1 below provides specifications for Spectrum Analyzer 900.

Specification Type	*Value*
Bandwidth	0.5 to 900 MHz
Accuracy	± 0.2 dB with 70 dB dynamic range
Selectivity (Switchable)	100 kHz at –3 dB; 500 kHz at –60 dB 140 kHz at –3 dB; 850 kHz at –60 dB
Video Bandwidth	100 kHz
Noise Floor Level	Better than –85 dB for frequencies 0.5 to 800 MHz Better than –80 dB for frequencies 800 to 900 MHz

Table 1. Spectrum Analyzer Specifications

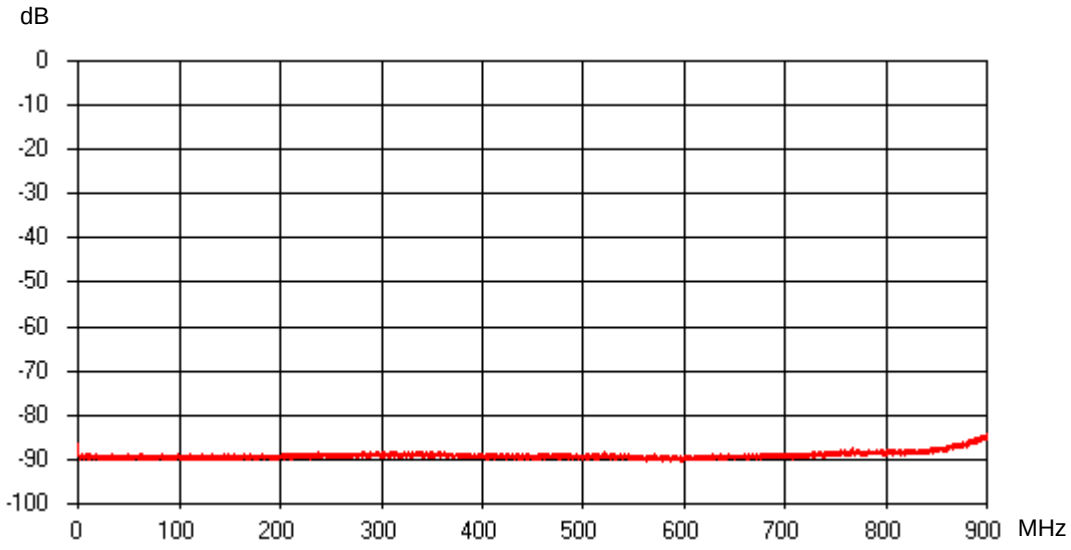

Figure 1. Noise Floor of Spectrum Analyzer 900

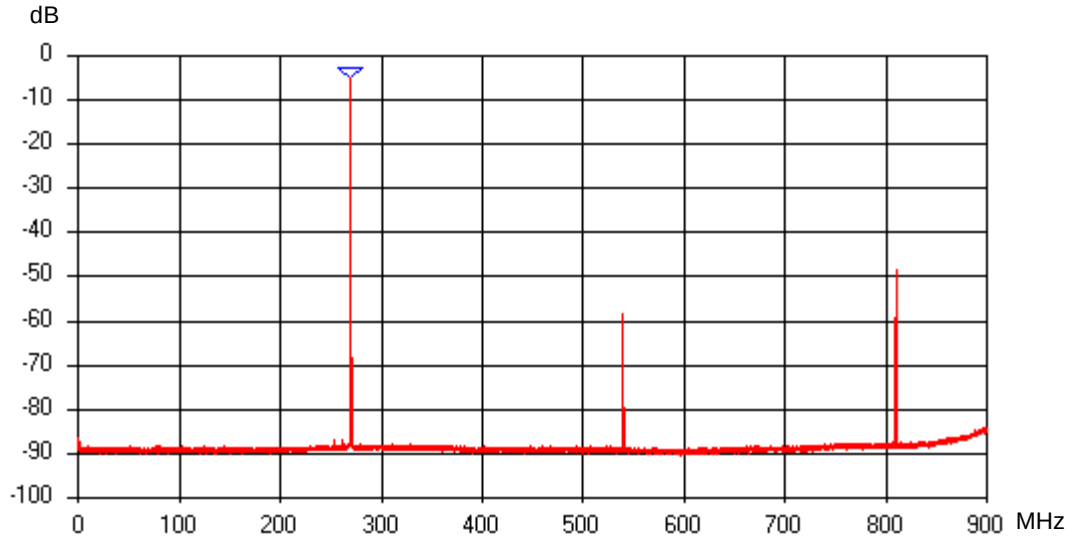

Figure 2. Spectrum of 270 MHz Signal

Note: If the Spectrum Analyzer 900 is installed in your tester, you must upgrade WITE32 to revision 2.65 or higher.

2.2 Head Amplifiers

1. The following head amplifiers are initially supported in WITE32 ver. 2.65:
    - MINIPUT
    - SR1759
2. The following head stacks are initially supported in WITE32 ver. 2.65:
    - MINIPUT
    - LILIPUT

2.3 Amplitude Stability Test

New result has been added to the *Amplitude Stability* test. It is called the *TAA Stability Range* (internal result ID is TstRsltTAAStbCOD). This result is calculated as

TstRsltTAAStbCOD = (Max{TAA(i), i=1…N} – Min{TAA(i), i=1…N}) / Average{TAA(i), i=1…N}

Where *TAA(i)* are the TAA values measured during the test, *N* is the number of iterations specified in the test setup.

2.4 Spinstand

1. If control box connected to S-1701B spinstand is replaced, or a spindle with different serial number is installed, the automatic procedure of spindle calibration is performed during the very first start of the spindle. It can take up to several seconds. WITE32 version 2.65 shows progress bar during this procedure.

2. The *Track Size, µInch* parameter in the *Product Parameters* dialogue box of the Spinstand Alignment Program can be a fractional number. In previous versions of WITE32 only integer *µInch* values could be assigned to this parameter.

2.5 Guzik Graph

1. Guzik Graph grids are now aligned with the ticks. If there are several vertical (or horizontal) axes, grids are aligned with the ticks on axis closest to the plot. Therefore changing the number of ticks changes the number of grids and vice versa.

2. The automatic adjustment of ticks and grids to decimal scale is improved. The new option *Adjust* in the *Axes* tab of the *Option* | *Preferences…* menu of Guzik Graph allows you to invoke new adjustment mode. This option is enabled by default.

   When the *Adjust* option is enabled, Guzik Graph may adjust the number of ticks and grids specified by user to make it round in decimal scale. For example, if for the fixed range 0 to 100 you set 3 ticks, Guzik Graph now sets ticks in position 25, 50, 75 to avoid values like 33.3333...66.6666… You will have four ticks instead of requested three. After you specified the number of ticks in the *Axes* tab of the *Option* | *Preferences…* menu, the number of ticks in the *Ticks* field doesn't change to adjusted value

immediately, i.e. it is not changed even if you click the *Apply* button and Guzik Graph sets adjusted number of ticks. It is made to prevent constant changing of the number of ticks when you click the *Apply* button several times. However, if you close the *Axes* tab or the *Option* dialogue box and re-open it, the adjusted number of ticks will be shown. The same is true for grids, i.e. for *Horizontal Lines* and *Vertical Lines* fields in the *General* tab of the *Option* dialog.

When the *Adjust* option is disabled, the ticks and grids are not adjusted, and you can specify any number you want.

3. To avoid the label overlapping, the labels of ticks nearest to the axes may not be shown if ticks are too close to the axes.

4. When logarithmic scale is selected for horizontal axis, the vertical grid is adjusted to every power of 10, and there are 8 intermediate lines between adjacent power of 10. For example, for the interval 10 to 100 there are lines at positions 10, 20, 30, 40, 50, 60, 70, 80, 90, 100; for interval 100 to 1000 there are lines at positions 100, 200, ... , 1000, etc.

2.6 Miscellaneous

1. The *Read Track* and *Rewrite Track* operations are added to the *Operation* menu of the RCE32 module.

2. To provide possibility to perform several iterations of the MR-Impedance measurement, the *Iteration* textbox was added to the *MR-Impedance* test configuration dialogue box. The default value for the *Iteration* setting is 1.

3. Service Pack 1 for Windows 2000 is supported starting from WITE32 ver. 2.65. If you run previous versions of WITE32 with Service Pack 1 installed, the system will crash at boot time.

4. Modification in the *Production* test configuration dialogue box, *Head S/N* tab:

    - The *Output Results When Tests Failed* check box is renamed to *Output Results of Tests*. If this option is enabled, both failed and successful results are shown in the result output window.

    - The *MR Impedance Test* frame, *Head Selection Test* frame, and the *Output Results of Tests* check box are grouped in the *Pre-production Tests* frame. Pre-production tests are run in Production before the spinstand is started.

5. Modifications in the *MR Impedance* pre-production test configuration window (the *Head S/N* tab in the *Production* test configuration dialogue box):

    - The *Fault Level in Read Mode* control is removed and now defined by head amplifier driver.

    - The *Check Fault Conditions in Read Mode* check box is renamed to *Check Fault Conditions*. If this option is enabled, fault conditions for both read and write modes are checked.

CHAPTER 3

FIXED BUGS

The following bugs were discovered in WITE32 ver.2.64 or earlier, and fixed in WITE32 ver.2.65. The description below explains the bug behavior as it appeared in WITE32 ver.2.64.

3.1 Head Amplifiers

1. The following bugs were fixed in the head amplifier drivers:

   - TDA5362 – The head amplifier settings are reset to default on Device Start intermittently.
   - VM5410D3 – The head amplifier settings are reset to default on Device Start intermittently.
   - MERCURY – Missing value "*3=no low pass*" of the *Read Bandwidth* property.
   - MINIPUT – Wrong values of the *Gain* property are shown (125 instead of 100, and 190 instead of 150).

2. The following bugs were fixed in the head stack drivers:

   - MINIPUT – Wrong values of the *Gain* property are shown (125 instead of 100, and 190 instead of 150).

3. Results of the *MR-Impedance* pre-production test and the *Head Selection* pre-production test do not appear on the screen.

3.2 Miscellaneous

1. Intermittent glitches in the Error Rate measurements in case of RWA-2585B and RWA-2585S testers.
2. When Spinstand Alignment Program (WDCP) is starting in standalone mode and the product folder location is specified by *–PDIR* command line switch, the product parameters (DDT-file) are taken not from specified product folder location, but from the WITE32 installation folder.
3. The *Write Physical Register* operation in the RCE32 program does not work properly.
4. Writing the WITE32 log file BLACKBOX.TXT causes intermittent WITE32 crashes.
5. The incorrect error message *"Read unsafe for head N"* pops up while running the *Head selection* test in the *Production* test.

6. The *Set RPM* test does not allow setting RPM to more than 12000.

7. The *"Division by Zero"* error pops up during the *Triple Track* test execution, in case of K1, K2, and K3 coefficients in the *Triple Track* configuration dialogue box are set to zero. Starting from WITE32 ver.2.65, you will get an error message *"Three polynomial coefficients can not be equal to zero at the same time"* when you try to select all zeros for K1, K2, and K3 in the Triple Track configuration dialogue box. In case you are running previously created product, which has K1, K2, and K3 equal to zero, the K3 coefficient will be set to 1 to avoid division by zero.

8. If you set the *SNR level* setting to 1 or 0 in the *Triple Track* test setup, the "Subscript out of range" error message pops up while running the test.

CHAPTER 4

SPECTRAL INTEGRAL SIGNAL-TO-NOISE RATIO TEST

Spectral Integral Signal-to-Noise Ratio test (SpiSNR) was significantly redesigned in WITE32 ver.2.65.

Spectral Integral Signal-to-Noise Ratio test (SpiSNR) is an improved version of the Spectral Signal-to-Noise Ratio test. It has the following improvements over the standard Spectral SNR test.

- The test supports three different methods of estimating the power of signal.
- The RMS of noise (without DC-erase) has configurable signal rejection range.
- The signal and noise spectra can be plotted.
- The results of signal and noise power measurements are calibrated either to head input voltage or to preamplifier output voltage.
- The test can write a different frequency prior to measuring the power of noise.
- The test can measure Partial Noise, comprising selected components of the noise.
- The test outputs not only SNR but also the power estimations for both the signal and the noise.
- The test can make a sweep of SNR over a range of frequencies, in other words it can build a plot of SNR vs. written signal frequency.
- For RWA model 2585 or higher the test can work through the Digital Channel, significantly reducing execution time.

Note: Please order your copy of WITE32 ver.2.65 to get the detailed description of this test, provided in the complete version of the Release Notes.