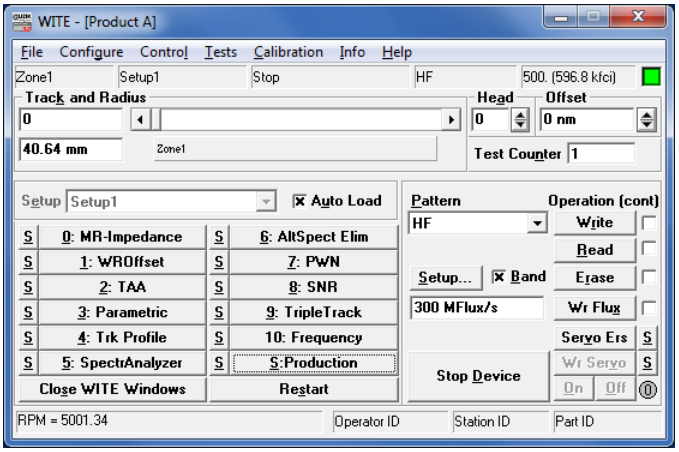
GUZIK PRODUCT BULLETIN

WITE32™

Windows Integrated Test Environment

Production and Engineering Mode
Digital Test Capability
Servo Support



WITE32 is the latest Guzik software package for Read/Write Analyzer (RWA) control. The open design architecture of the package provides flexibility and expendability to both user and designer. WITE32 is developed under Microsoft Windows 32-bit environment using Microsoft Visual Basic and Microsoft Visual C++. WITE32 has identical setups for engineering and production.

GUZIK
Technical Enterprises

Feature Support

WITE32 supports all features (such as analog and digital parametric tests, PRML channels, Guzik servo, Drive Servo etc.) for current Guzik RWA models and Guzik spinstands.

Open Software Architecture

WITE32 environment supports integration of user-defined external tests, called *external modules*. You can create external modules using Microsoft Visual Basic or Visual C++, using a simple interface protocol.

Results Output

WITE32 displays test results (including user defined tests) in a user-configurable spreadsheet style. You control the decimal point precision, fonts, width, and sequence of each displayed result. By enabling a history database (either locally or on a network) the results of all tests are stored in that database for manipulation (using Microsoft Access, or the data can be exported to any format that Microsoft Access supports, such as Lotus or Excel). The run-time results are kept in memory, which allows for faster execution of the tests.

Grading and Normalization

WITE32 production environment supports an unlimited number of grades, which are color-coded for easy reading. Simply drag the grade definition line higher or lower in the stack to perform grade prioritization. The grades are defined for individual heads and entire head stacks. When a grade fails, you can easily check the failed parameters. **WITE32** normalization system can be enabled to generate correction factors that correlate results to a set of goal measurement criteria. User defined tests are included in grading scheme.

WITE32™ Standard Tests

Parametric Tests

- TAA Test
- Overwrite Test
- Asymmetry Test
- Pulse Width Test
- Parametric Test
- Read-Only Parametric Test
- Signal-to-Noise Ratio Test
- Spectral Integral Signal-to-Noise Test
- Amplitude Stability Test
- Sector Amplitude Stability Test
- Resolution Delta Test
- Pulse Width Stability Test

Composite Tests

- Frequency Test
- Saturation Test
- Track Profile Test
- MR Saturation Test
- Pulse Profile Test
- Comparator Error Rate Test
- Off-Track Performance Test
- Set RPM Test
- Spectrum Analysis Test
- Triple Track Test

MR Tests

- TAA Asymmetry Test
- Pulse Width Asymmetry Test
- Pulse Stability Test
- Write/Read Offset Test
- MR-Impedance Test
- WR-Impedance Test
- Head Polarity Test

Error Tests

- Comparator Test
- Popcorn Test

Jitter Tests (with WDM5000/D5000)

- Jitter Explorer
- Media Noise Test

NLTS Tests

- Pseudo-Random Sequences
- Alternative Spectral Elimination Test
- Third Harmonic Ratio Test
- Alternate Overwrite Test
- NLTS vs. Write Current Test
- Signal/Noise Ratio Test

Digital Parametric Tests (with WDM5000/D5000)

- Digital Parametric Test
- Signal Profile Test

Optimization Tests

- System Optimization

WCALC – WITE Calculator

- WITE Calculator for Tests

Spinstand Tests

- Servo Position Error Signal Test (PES Test)
- Off-track Modulation Test
- Servo Status Test
- W/R Head Geometry Test

Servo Tests

- Off-track PES Analysis Test

Spinstand 2002 Tests

- Balancing (for V2002 spinstands)
- XY Alignment

V2002 Adjustment

- V2002 Main Piezo Scales Close Loop Adjustment
- V2002 Main Piezo Servo Loop Adjustment

Servo Control

- Servo Burst Profile Test
- Set Radius

WITE32™ Optional Purchase Tests

TFC Tests

New

- TFC Touchdown (AE, ECS, PES)
- TFC TAA Touchdown
- TFC Measurement

Sector Measurements

New

- Sector Sweep

Piezo Actuator Cartridge V2002

- Piezo Actuator Cartridge Stroke
- Piezo Actuator Cartridge Loop Setup
- Piezo Actuator Cartridge Mechanical Frequency Response
- PAC Frequency Response

WESA – Write Excited Sectored Amplitude Tests

- Separate Amplitude Asymmetry Stability
- Triple Amplitude Asymmetry Stability
- Write Induced Instability
- Pole Erasure

WATI – Adjacent Track Interference Tests

- Adjacent Track Interference Test
- Adjacent Track Interference Multi-Track Test (WATI MT)

Micro-Actuator Tests

- Stroke Test
- Mechanical Frequency Response Test
- Micro-Actuator Loop Setup Test
- Micro-Actuator Loop Frequency Response Test
- Micro-Actuator Automatic Loop Adjustment

Perpendicular Parametric Tests

- Differentiator Optimization
- Roll-off
- Rise and Fall Time
- Saturation Asymmetry
- Amplitude Asymmetry

WOFFTRACK tests

- TTT SNR

DTR Tests (with DTR3000 tester)

- DTR Servo Erase
- Envelope Track Profile
- Head and Track Geometry
- Media Alignment
- Sector LGW (Land Groove Width)
- Sector Selection
- Servo Distortion
- Servo Linearity

3D Pulse Profile (with WDM5000/D5000)

- 3D Pulse Profile Test

Digital MSCAN – Media Scanning (with WDM5000/D5000)

- Missing Pulse Detection
- Super Pulse Detection
- Transition Shift Detection
- Thermal Asperity Detection (written signal)
- Thermal Asperity Detection (erased track)

MSCAN – Media PRML Scanning Tests

- Extra Pulse Detection
- Missing Pulse Detection
- Thermal Asperity Detection

Triple-Track Tests

- Triple-Track Signal-to-Noise Test (with 747 option)

747 Tests*

- 747 Comparator Error Test

Bit Error Rate (BER) Tests

- BER 747A Test
- BER Linear Density Test
- BER Error Distribution Test
- BER Performance Test

** Deprecated test module, using BER 747A Test is recommended*

WITE32™ Optional Purchase Features

Servo Improvement Package

- Format Media
- Servo Alignment
- Wide servo
- RRO Compensation

Media Centering with Guzik Servo New

- Allows for writing Guzik servo and data tracks on a blank disk, removing the disk, exposing it to extreme conditions, placing it back on the spinstand, and performing tests on the data tracks

Immediate Start Enhanced Performance Mode

- Increased UPH (typical test time improvement 20–30%)

Parametric TFC Control

- Adjusting value of the write-mode TFC power depending on write parameters

WITE32™ Additional Tools

- Signal Display
- Signal Analyzer
- Grading System
- Normalization System
- Result Processing System
- Graph Viewer
- WDCP2002 with Spinstand Diagnostic Tests

WITE32™ Supported Operating Systems

Operating System	WITE32 version 2.72	WITE32 version 3.40	WITE32 version 4.00 – 4.20	WITE32 version 4.30 beta	WITE32 version 4.40 beta
Windows 95	**YES**	NO	NO	NO	NO
Windows 98	**YES**	NO	NO	NO	NO
Windows 2000 Service Pack 4	NO	**YES**	**YES**	NO	NO
Windows XP Service Pack 3	NO	NO	**YES**	**YES**	**YES**
Windows Vista	NO	NO	NO	NO	NO
Windows 7 (32bit)	NO	NO	NO	**YES**	**YES**
Windows 7 (64bit)	NO	NO	NO	NO	**YES**

WITE32™ Extensions

WDK32 – WITE Developer's Kit

WDK32 is a software package that allows you to create external test modules for WITE32 using Microsoft Visual Basic or Visual C++. The compiled custom external module can be used in both Engineering and Production environment.

WDK32 supports the following programming environments:

- Microsoft Visual C++ version 10.0 (included in Visual Studio 2010)
- Microsoft Visual C++ version 8.0 (included in Visual Studio 2005)
- Microsoft Visual C++ version 6.0
- Microsoft Visual Basic version 6.0

WDK32 Script – A Script Version of WITE Developer's Kit

A script version of Guzik WITE32 Developer's Kit (WDK32) allows for interactive execution of all Guzik WDK32 functions including RWA and spinstand control functions, operations, and measurement functions. WDK Script, based on Microsoft Visual Basic for Applications (VBA) engine, is integrated into Microsoft Excel.

Using WDK Script you can execute any Guzik WDK32 function or subroutine interactively either from the VBA environment or directly from an Excel worksheet. You can write your own scripts, using all the functionality of Guzik WDK32 but without the complication associated with the WDK32 WITE external module interfaces, licensing, and the necessity to have Microsoft Visual Basic installed.

WDDR32 – WITE Device Driver Template

WDDR32 is a software package for developing device drivers for the third party spinstands and connecting them to Guzik RWA and WITE32.

DDK – PRML Chip Driver Developer's Kit

DDK is a software package that allows for developing software drivers for PRML chip channels integrated into Guzik Read-Write Analyzers. The PRML chip drivers are developed using Microsoft Visual C++ programming language.

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