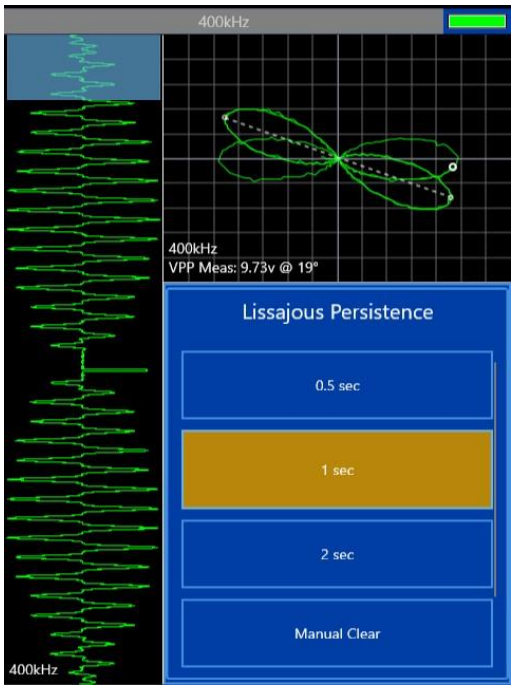
MIZ-21C SOFTWARE 1.0.8

Product Bulletin



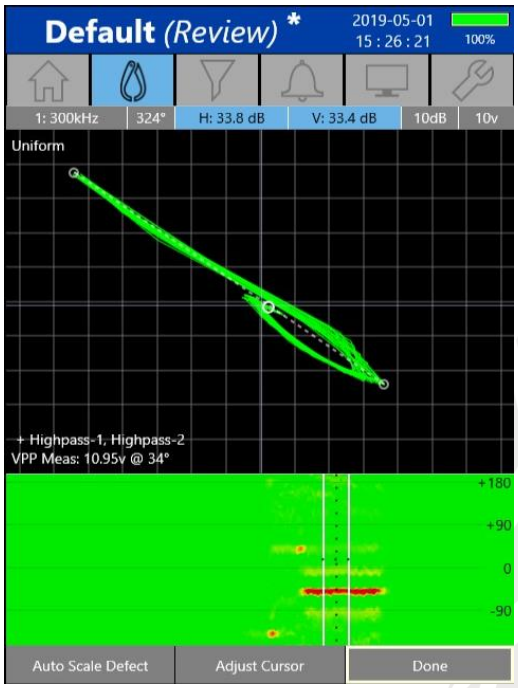


Table of Contents

Table of Contents 2

Purpose of MIZ-21C Software 1.0.8 3

New Features in MIZ-21C Software 1.0.8 4

Save Setups with Techniques 4

Configure Data Persistence 4

Screen Capture Updates 4

Real Time Measurements 5

Rotating Scanner RPM 5

10 x 10 Grids 6

Cursor Control Improvements 6

Probe Type Changes 6

Downloading and Installing MIZ-21C Software 1.0.8 7

April 30th, 2019

MIZ-21C Software 1.0.8 Product Bulletin

Zetec just released *MIZ-21C Software 1.0.8*. This software version can be used on any MIZ-21C instrument. This product bulletin presents an overview of the new features and changes in this software version.

For downloading this or other MIZ-21C Software versions, please visit www.zetec.com

MIZ-21C Software 1.0.8 has three application modes depending on the MIZ-21C model:

- **MIZ-21C-SF Models**: Conductivity and Coating Thickness, Sub-Surface, and Surface Cracks.
- **MIZ-21C Models**: Includes Bolt Holes.
- **MIZ-21C-ARRAY Models**: Includes Bolt Holes and Surface Array.

Purpose of MIZ-21C Software 1.0.8

MIZ-21C Software 1.0.8 is the standard upgrade for users of previous versions of MIZ-21C software. This software release includes several new features and improvements.

Zetec's hardware and software development process is performed according to a quality system that is certified ISO 9001-2015. With this certified software development process, Zetec guarantees that changes between earlier MIZ-21C Software releases and MIZ-21C Software 1.0.8 have no consequences on the sensitivity and the accuracy of the recorded data or results processed by the software.

New Features in MIZ-21C Software 1.0.8

The following are the new features in *MIZ-21C Software 1.0.8*:

Save Setups with Techniques

- The ability to save and export setups along with the techniques has been added, which saves time in getting an inspection started. A previous setup can be used without having to enter it each time a new application is started. Further, setups can be shared between instruments and have a common setup for inspections in different locations or with different inspectors.
- This is for all setup parameters including gains, rotations, filters, etc. per technique.
- The setups can be recalled and copied to other MIZ-21C instruments.
- A default setup is attached to a technique. The act of saving/loading a setup is accessed via the "Reset Calibration" button from the Calibration tab. When no setups are saved for a given a technique, the default setup is automatically loaded.

Configure Data Persistence

- A more intuitive and easier way to configure data persistence is now available. Persistence is how long the data shows up on the display before being removed from the screen. This can also be called Autoclear.
- The impedance display (lissajous) buffer size setting in Tools has changed from % of buffer to a time or distance value, depending on if encoder sampling is active.

Screen Capture Updates

- A new approach to screen captures has been implemented that improves the work flow and makes inspections more efficient.
- Screen captures can now be renamed at the time when they are taken to customize the information to make it easy to find and use for reporting.
- The screen shot functionality has been changed from a press and hold of the Select button to a press and hold of the Play/Stop button.
- For a limited number of software releases the old press and hold Select button will pop up a message that directs to use the new press and hold Play/Stop button feature.

Real Time Measurements

- Measurement tools are critical to providing meaningful interpretation of inspection results using the MIZ-21C.
- The following real time measurements have been added: Vertical Max, Volts Peak to Peak, Vertical Max from Null, Volts Peak from Null, and Cursor Info.
- The measurements follow the rules set out in Tools for whether to be shown Always, only when in measurement mode (the measurement screen) or either on the measurement screen or when adjusting calibration.
- The cursor info gives volts magnitude, vertical, horizontal, and angle based of the current cursor data point relative to null.
- The reported values are based on a new setting in tools: Measurement Mode.
- Measurement mode can be either scaled voltage or raw voltage.
- Scaled voltage measures and reports the volts and angle based on how the data is portrayed on the screen, with one volt being one screen division. If there are different vertical and horizontal scales, the angle and voltages reported reflect what is on the screen.
- Raw voltage mode gives the raw volts based on 20 volts full instrument response. If there are different vertical and horizontal scales it does NOT affect the result of the angle or reported volts.
- The measurement types in the measurement tab have also been updated to include the newly added measurements.

Rotating Scanner RPM

- In real application, bolt hole inspections using a rotating scanner and rotary probe can have varied speed depending on several factors such as surface friction, probe type, and operator technique. A readout of the actual revolutions per minute (rpm) is a valuable tool to assist in optimizing bolt hole inspections.
- The current real-time rpm label has been added to the impedance display (lissajous) and c-scan.
- The rpm is only shown while acquiring data in the bolt hole application.

10 x 10 Grids

- A 10 x 10 grid in eddy current inspections is a common industry practice used to properly scale signals and determine acceptance thresholds.
- All displays involving an impedance display (lissajous) are refactored so that it's at least a 10 x 10 grid.
- In some cases, it stretches wider but not narrower than 10 grids. This includes refactoring the measurement screen, the dual impedance stripchart screen, the continuous impedance screen, the impedance/c-scan/waterfall screen, the dual waterfall dual impedance screen, the normal impedance stripchart screen, and the sweep screen.
- The exception to this 10 x 10 rule is for conductivity, which can be narrower than 10 grids.

Cursor Control Improvements

- Cursor control in the MIZ-21C is an important interaction with the instrument used to quickly process inspection results and interpret data.
- Adjusting cursor position is now more manageable.
- The various cursor related controls such as moving cursor, moving measurement box, adjusting data window are all now more controllable. The cursor starts off slow and ramps up over time as the button is held down. The current behavior remains of going faster depending on how much data is zoomed in.
- An impedance display (lissajous) double tap moves the operating point so that the data is centered at cursor.
- The double tap zooming has been removed.

Probe Type Changes

- In certain MIZ-21C applications probe types are not necessary and can complicate the inspection setup. Probe types have been optimized for each application to make the setup more efficient.
- Probe types in subsurface and surface techniques have been removed.
- In the bolt hole application probe types are not available.
- Probe type is available in surface array to choose from the family of array probe types.
- In conductivity probe type is available since it can be configured to use a pencil probe or the Zetec conductivity probe.

Downloading and Installing MIZ-21C Software 1.0.8

To upgrade the MIZ-21C software from **1.0.5 or earlier** to the new 1.0.8 version:

1. On a USB drive create a folder "MIZ-21C" with subfolder "Updates": \MIZ-21C\Updates\
2. Copy the downloaded zip files (MIZ-21C.Application.1.0.8.15.zip and MIZ-21C.System.1.0.8.15.zip) into the "Updates" folder on the USB drive
3. Insert the USB drive into the MIZ-21C and go to **Tools > System Updates** and click **Update Software and Firmware**
4. Select from the list: **MIZ-21C.System.1.0.8.15.zip** and click **OK**, then wait for shutdown (verify by noting that the fans are off)
5. Press the Power Button to turn the instrument back on
6. The 'Gears' phase will begin, then wait for shutdown (verify by noting that the fans are off)
7. Press the Power Button to turn the instrument back on
8. Wait for a few minutes, then one of two things will happen on restart:
    A. The application will boot to the normal Applications menu, WAIT 5 seconds for the screen to change to the Version Manager
    B. OR during the boot cycle the user will have a 5 second window to select between 'Launch' or 'Manage Versions', click **Manage Versions** to go to the Version Manager
9. Select **'Uninstall'**, confirm by clicking **Uninstall**, it will complete with the 'Uninstall succeeded' message
10. Select '**Install'** and select from the list: **MIZ-21C.Application.1.0.8.15.zip**
11. Select **'Install'** and after 15 seconds it will complete with the 'Install succeeded' message
12. Select '**Open MIZ-21C'** and the Applications menu will open (**Note**: if the black Zetec logo persists for more than 2 minutes, then reboot the instrument)

To upgrade the MIZ-21C software from **1.0.6 or later** to the new 1.0.8 version:

1. On a USB drive create a folder "MIZ-21C" with subfolder "Updates": \MIZ-21C\Updates\
2. Copy the downloaded zip files (MIZ-21C.Application.1.0.8.15.zip and MIZ-21C.System.1.0.8.15.zip) into the "Updates" folder on the USB drive
3. Insert the USB drive into the MIZ-21C and go to **Tools > System Updates** and click **Update Software and Firmware**
4. Select '**Install'** and select from the list: **MIZ-21C.System.1.0.8.15.zip**
5. Select '**Install'** and it will unzip, then wait for shutdown (verify by noting that the fans are off)
6. Press the Power Button to turn the instrument back on
7. The 'Gears' phase will begin, then wait for shutdown (verify by noting that the fans are off)
8. Press the Power Button to turn the instrument back on
9. Wait for a few minutes, then it will go to the Version Manager
10. Select '**Install'** and select from the list: **MIZ-21C.Application.1.0.8.15.zip**
11. Select **'Install'** and after 15 seconds it will complete with the 'Install succeeded' message
12. Select '**Open MIZ-21C'** and the Applications menu will open (**Note**: if the black Zetec logo persists for more than 2 minutes, then reboot the instrument)