

MIZ-21C SOFTWARE 1.0.6

Product Bulletin

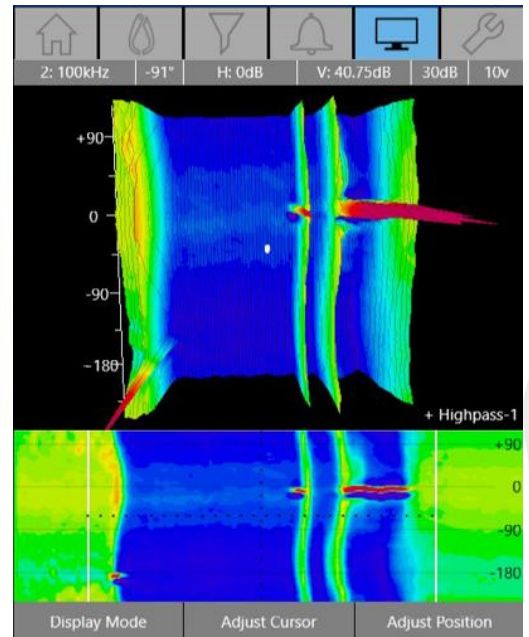
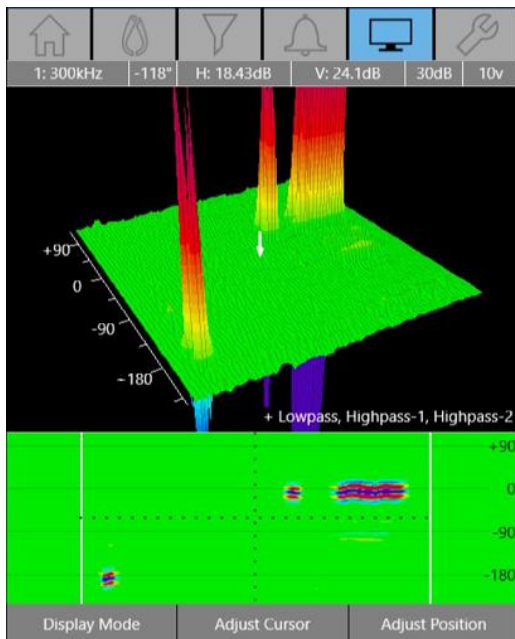


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March 15th, 2019

MIZ-21C Software 1.0.6 Product Bulletin

Zetec just released *MIZ-21C Software 1.0.6*. 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 1.0.6 is available in three versions:

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

Purpose of MIZ-21C Software 1.0.6

MIZ-21C Software 1.0.6 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 1.0.6 have no consequences on the sensitivity and the accuracy of the recorded data or results processed by the software.

Downloading and Installing MIZ-21C Software 1.0.6

To upgrade MIZ-21C software to the new 1.0.6 version:

1. Create the following folder structure on a USB drive: \MIZ-21C\Updates\
2. Copy the downloaded zip files (MIZ-21C.Application.1.0.6.32.zip and MIZ-21C.System.1.0.6.32.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.1.0.6.32.zip**
5. It will unzip and the MIZ-21C will shutdown (verify by noting that the fans are off)
6. Press the Power Button
7. The 'Gears' phase will begin and the MIZ-21C will shutdown (verify by noting that the fans are off)
8. Press the Power Button
9. Wait for a few minutes. One of 2 things will happen on restart:
 - A. The application will boot to the normal applications screen, **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 change the screen to the Version Manager

10. In the Version Manager press Uninstall (there should be a 'Uninstall succeeded' message)
11. Press Install, select from the list: **MIZ-21C.Application.1.0.6.32.zip** (install will take about 15 seconds, it should complete with the 'Install succeeded' message)
12. Press Open MIZ-21C (if the black Zetec logo persists for more than 2 minutes, then Press the Power Button)

New Features in MIZ-21C Software 1.0.6

The following are the new features in *MIZ-21C Software 1.0.6*:

Software Update Reliability

- This prevents the unit from having issues during a software update if the process is interrupted.
- Version Manager is a new program that helps to monitor the system and deal with potential problems during the software update process.
- Version Manager is installed as part of the MIZ-21C.System.* package.
- Version Manager can be accessed by going to **Tools > System Updates** and click **Update Software And Firmware**.
- The MIZ-21C software version is shown on the boot screen or can be found in **Tools > Status and Information**.

Long Boot Up Mitigation

- When the MIZ-21C has an issue communicating to the FPGA, the following message is displayed: "Sorry, something went wrong. Please cycle the power button and try it again."
- Reset the power and the MIZ-21C boots up properly.

Filters for Pencil Probes

- Sub-Surface and Surface Cracks applications have the standard set of filters applied to all probe types which includes Median, Spike, Bandpass, Lowpass, Highpass-1, and Highpass-2 filters.
- Filters can be configured in the technique.

Improved I/O

- An Alarm Output pin is on both the 18-pin and 26-pin connectors to provide an "open drain" output pulled up to 3.3V with a 10k resistor.
- This provides several options for interfacing with a downstream device.
- Contact Zetec for more details and cable options.

ZM-5 Rotating Scanner Support

- The Zetec High Speed Rotating Scanner, ZM-5, was added to the Bolt Hole application.
- ZM-5 is now an option in the scanner list.
- The software selected rotational speed ranges from 600 rpm to 3000 rpm.
- The frequency range is 50 kHz to 6 MHz.
- An internal YT trigger output allows synchronized YT display of flaw responses.
- Using c-scans and two channels allows to easily see layers and flaws in multi-layer bolt hole inspections.

Conductivity Stabilization

- Stabilized conductivity measurements when moving or resting the conductivity probe.
- An indication is given when the value of a new point is determined.

Live Parameters

- During acquisition access is given to adjust common parameters: gain, frequency, phase, filters, X & Y gain, and alarms.
- An indication is given when the live calibration mode changes. There is a visible display of the current scale mode (independent vs symmetric) and a select button to toggle modes.
- Phase relative to null is shown when in adjust rotation mode, and voltage relative to null when in volts adjust mode.
- Added the option for Horizontal and Vertical Scale to be in dB units. This is set as the default.
- Note that the technique gain is a completely independent variable and has no bearing on the displayed H/V dB scale.

Bolt Hole Clocking

- For bolt hole, there are clocking lines or marks in the waterfall, c-scan, and sweep displays corresponding to labeled 90° increments. Minor marks are at 45° and are unlabeled.
- The user can set a trigger offset value, which is available only when a sweep display is being shown, and a second function of the 'adjust position' button is available either during live mode calibration or on the display tab. To control once activated, then use the 'Adjust Zero' second function to either touch the sweep display and move the data left or right or use the arrow buttons.
- A review sweep display has been added and is accessible by toggling through the display modes on bolt hole data.

Display Improvements

- The vertical grid is limited to 10 high in all displays.
- Bolt Hole can display sweep, impedance, and waterfall at the same time.
- If a large zoom or translation puts the c-scan off screen it was hard get back to normal. Now when the user changes the c-scan the view will reset to the center of the display.

1:1 Ratio Lock and Top View

- A top down view mode has been added that has no angled perspective.
- When in top down view mode, looking at array data, and encoder sampling is turned on, the c-scan display is scaled 1:1 with no distortion. This makes objects on the screen have the same shape as the real part.
- In the c-scan display menu remove the 'show scanlines' selection and instead provide a 'view mode' option, which contains the following items: Normal, Top Down Mode, and Hide Scan Lines.

Measurement Control Improvements

- In the measurements area the cursor is now given priority over the measurement box.
- If the cursor was inside the measurement box it could only be moved by moving the measurement box out of the way first. Now the cursor can be moved around the measurement box with issue.

Distance Markers on C-Scan and Waterfall

- Display distance markers are now on the c-scan and waterfall display in both the axial and transverse directions.
- An arrow has been added that shows the axial side to distinguish from the transverse.
- Note the axial markers are only be displayed when using an encoder, or if doing measurements.

Calibration Updates

- A warning has been added when selecting Reset to Default setup function to avoid inadvertent reset of setups.
- During live calibrating a scale has been added in the units defined from the Tools menu.

File Saving Changes

- In the conductivity section, a screenshot can now be taken which exports a jpg of the digital conductivity numerical display by pressing and holding the select button.
- The “-” character has been added as a keyboard option for use in file names and other typing.
- When the keyboard is shifted the “-” key becomes a “+” key.