

Customer UI Software Manual

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1. Overview

This document supports customers who use the “Customer UI for DVIA-T and DVIA-ULF,” which includes six-axis control.

2. Installation

A. Installation Requirements

Refer to the minimum installation specifications below:

- OS : Windows 7 SP1
- CPU : Intel Pentium 4(released in 2001) or higher, AMD Athlon 64(released in 2003)
- DISK : 2GB
- RAM : 2GB

B. Customer UI Software Download

Setup file for the Customer UI Software can be downloaded from the following link:

<https://www.daeilsys.com/support-ui-v2/>

Google Drive has detected issues with your download

This file is too large for Google to scan for viruses.

This file is executable and may harm your computer.

[SetupMonitorTU_Customer_mcr_V200.exe \(584M\)](#)

[Download anyway](#)

A Google account login is required to download; file is large, and there might be warning messages. Simply ignore the warnings and click Download.

C. Installation Steps

Follow the instructions in the figures below to install the software.”

 SetupMonitorTU_Customer_mcr_V200.exe

Figure 1: run the downloaded setup file.

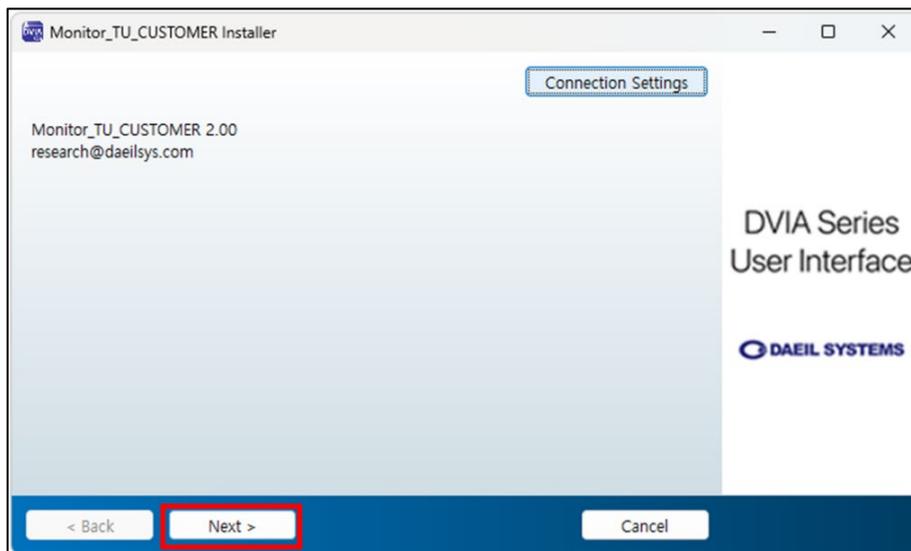


Figure 2: Press Next.

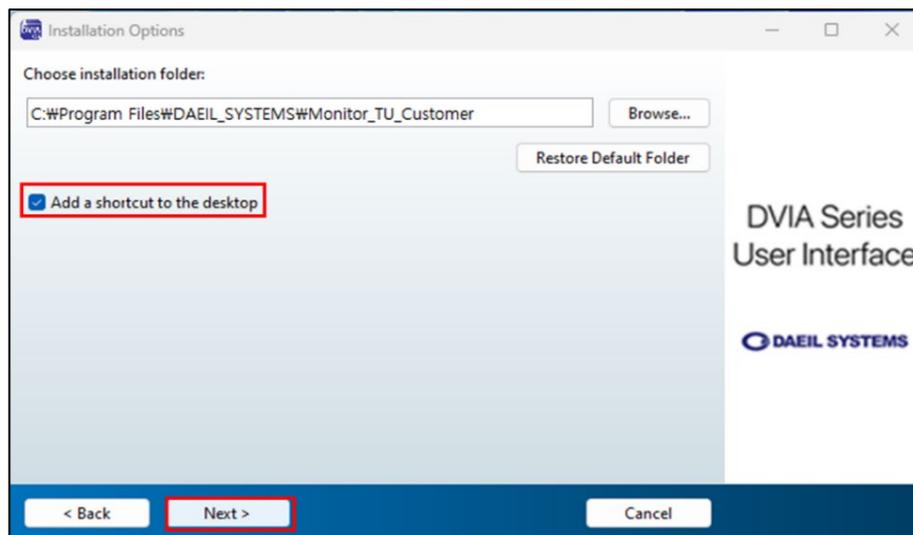


Figure 3: Choose a directory for the installation. Adding a shortcut to the desktop is recommended for convenience.

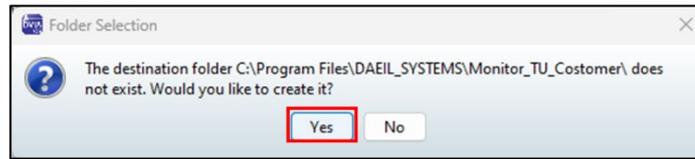


Figure 4: press **Yes** to proceed.

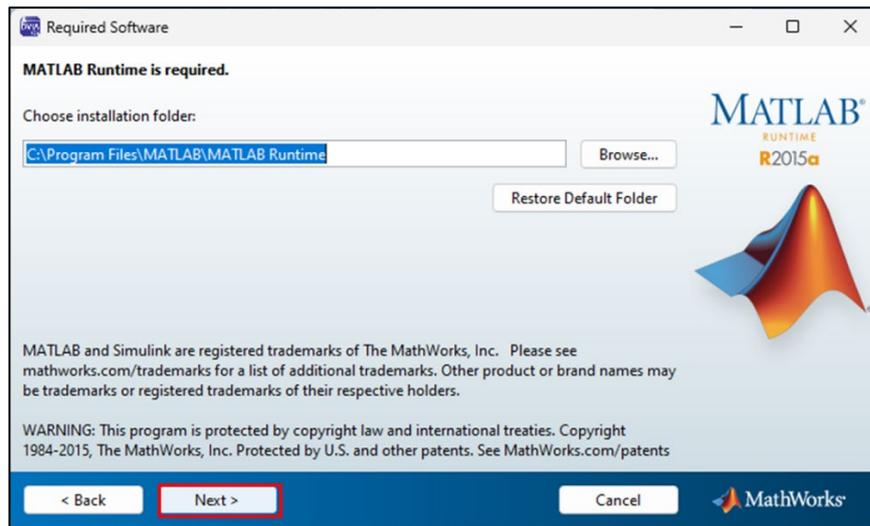


Figure 5: Select the folder where you want to install MATLAB R2015a Runtime (**Required**).

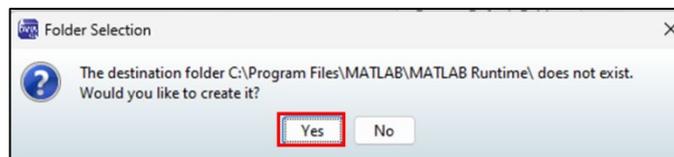


Figure 6: The folder selection pop up shows up if folder doesn't exist. Press **Yes** to create a folder.

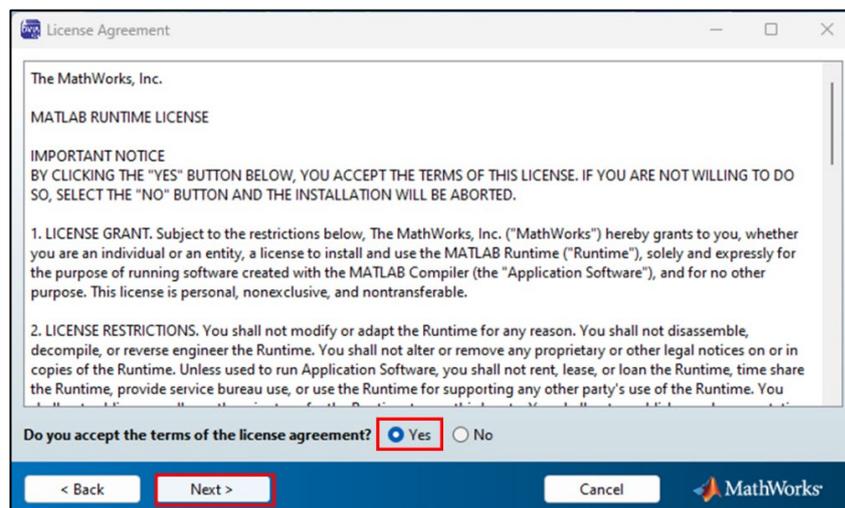


Figure 7: Check **Yes** to agree with the license agreement, then press **next** to continue.

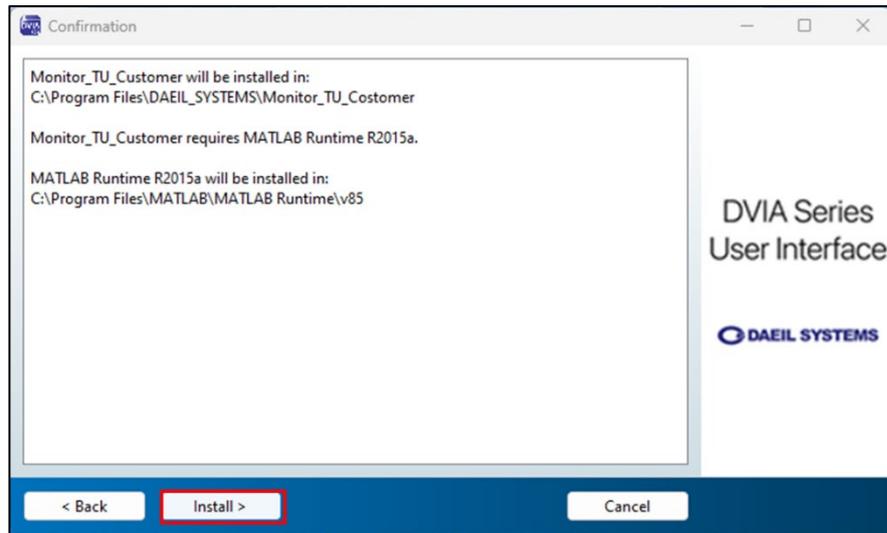


Figure 8: This is the final confirmation for the installation. If anything needs to be changed, press **Back** button

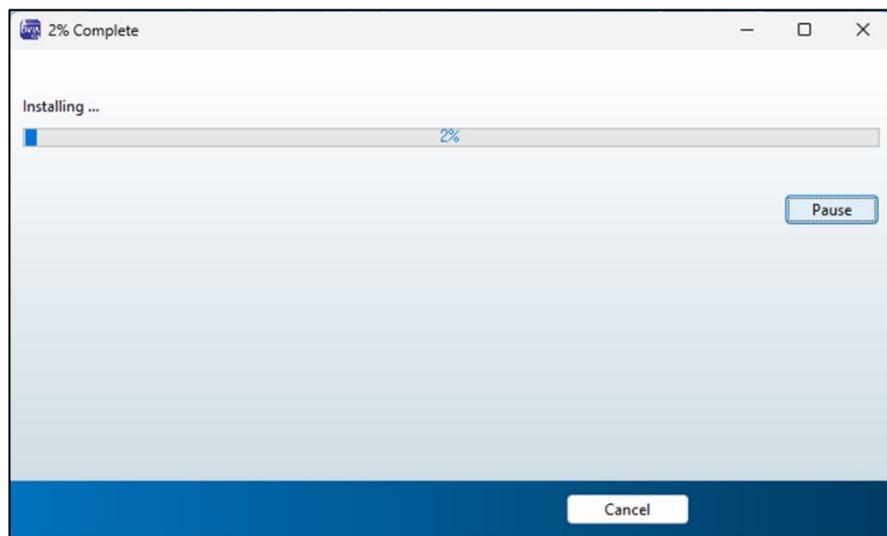


Figure 9: This screen shows the progress of the installation; it takes few minutes.

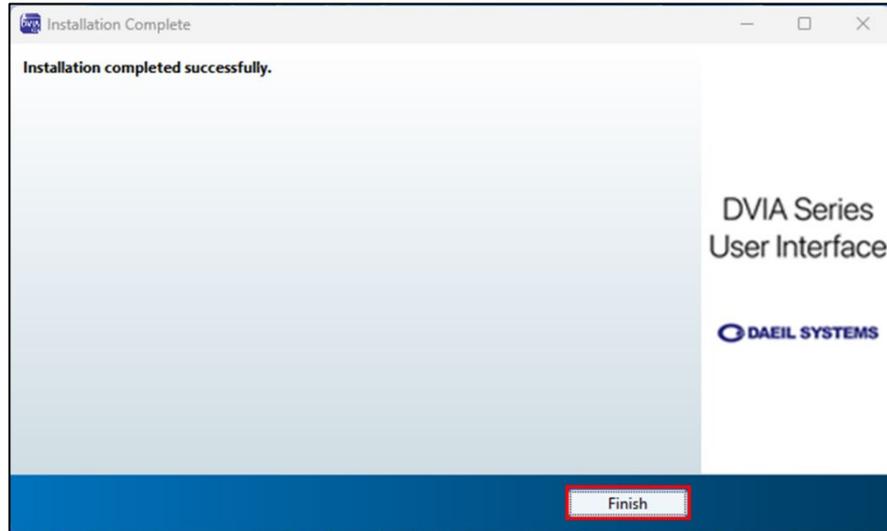


Figure 10: The Installation is finished. Press **Finish** to close the installation window.

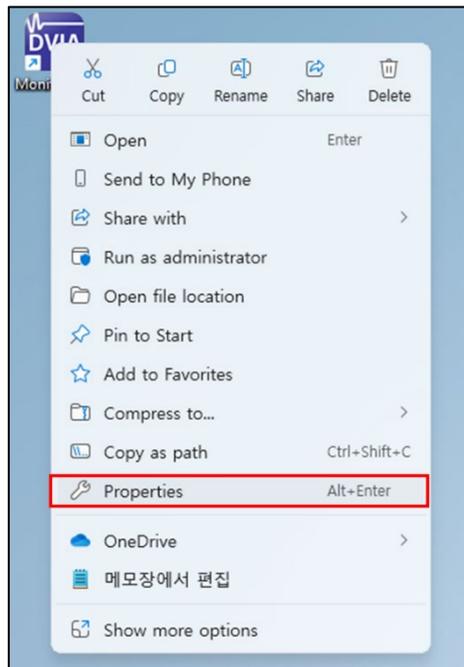


Figure 11: Right click on the shortcut and press **Properties**

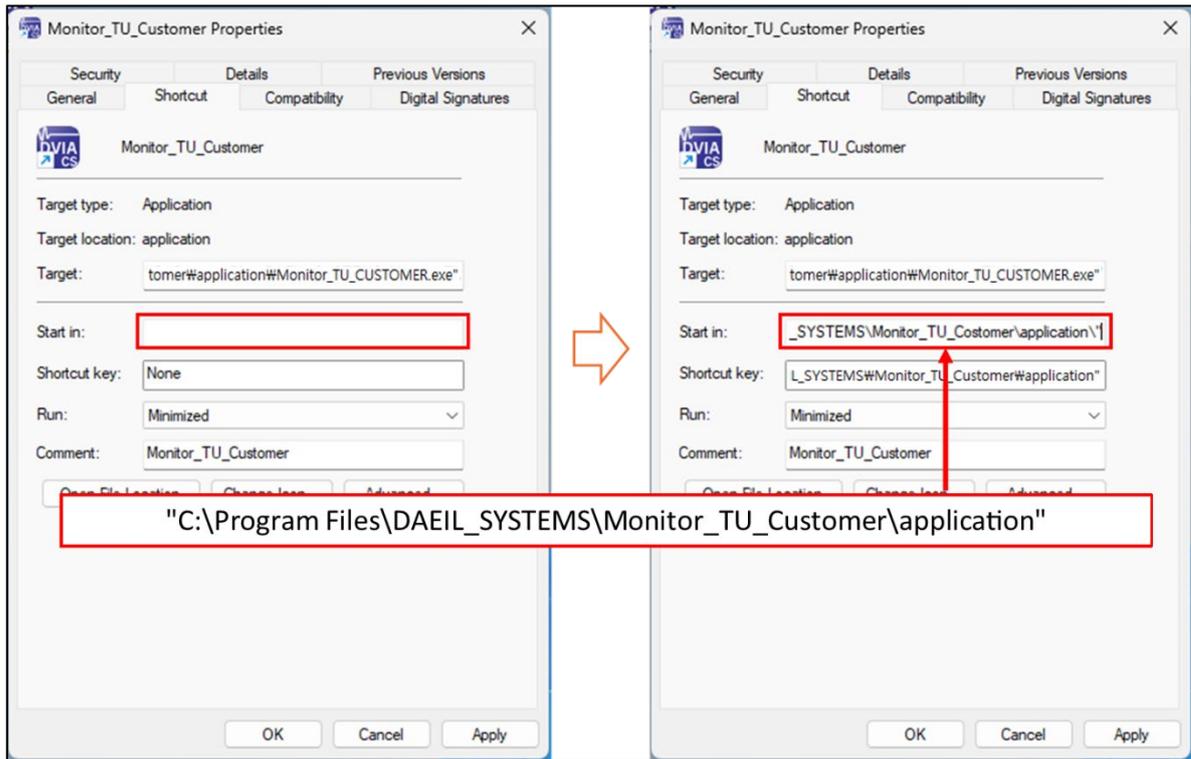


Figure 12: Copy the Target field and paste it in the Start in field without the program name (directory only).

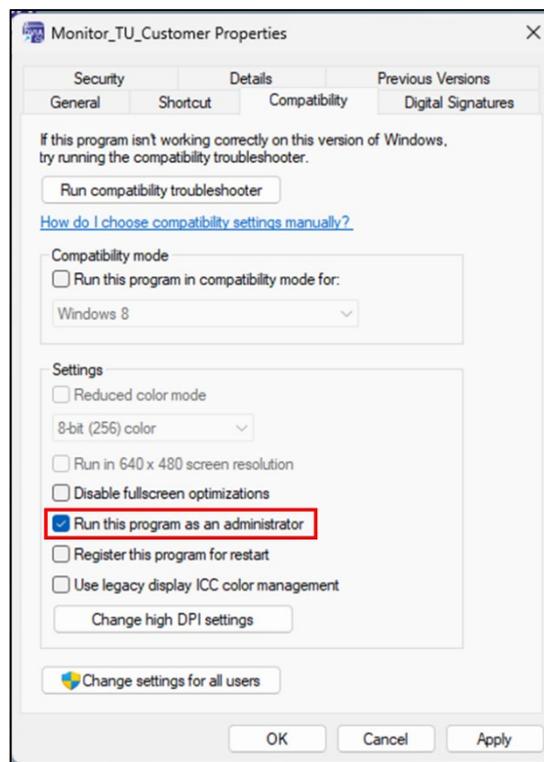
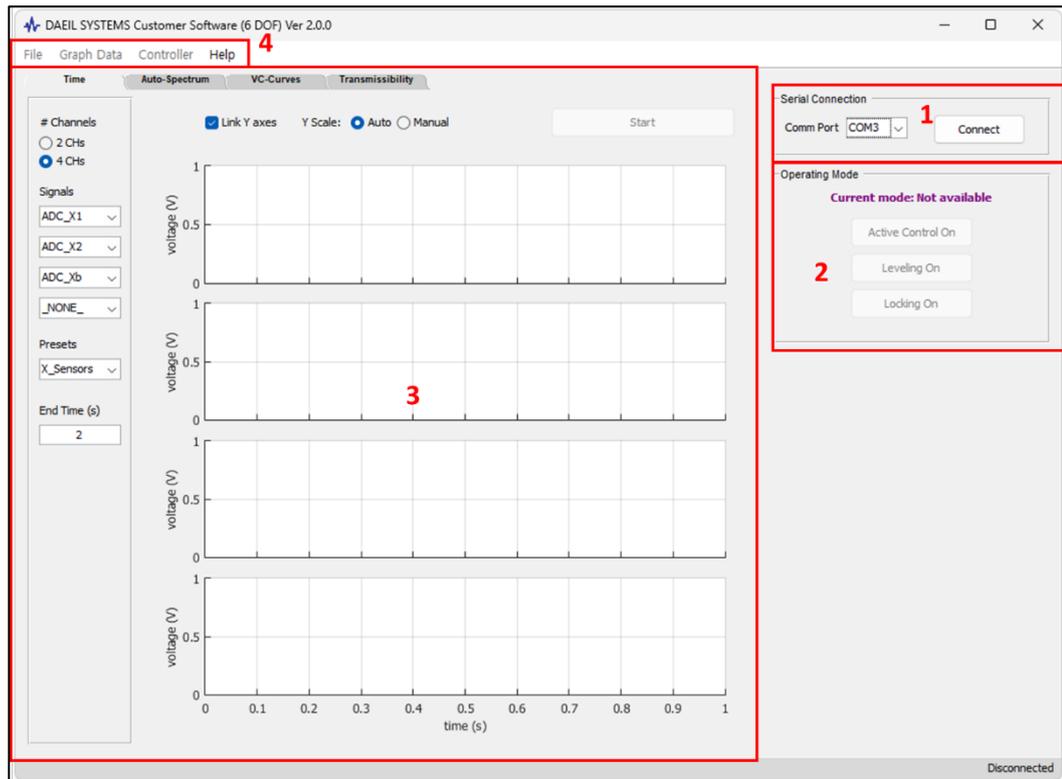


Figure 13: Switch to the Compatibility tab and check “Run this program as an administrator.” This prevents saving graph data in root directory. Click **OK**. The installation is now complete and ready to run.

3. Four main sections of Customer UI



The Customer UI has four main sections: 1. **Serial Connection**, 2. **Operating Mode**, 3. **Graph**, and 4. **Menu**.

A. Serial Connection



In **Serial Connection section**, you can select either RS-232 or USB Comm Port. You can simply connect and disconnect by clicking the button on the right.

i. Comm Port

Pressing the Connect button disables the dropdown list. The dropdown is only available when the system is disconnected from the PC.

ii. Connect

If the button displays “Connect”, clicking it initiates communication with the system. When the connection is successful, the button label changes to “Disconnect” and all monitoring controls are enabled.

B. Operating Mode (Shipped before September 1, 2025)

In Operating Mode, three buttons let you turn the system's Active, Auto-Leveling, and Locking functions on or off.

1. Active Control



Figure 14: Simply press the Active Control On button to turn on the active mode; turning off can be done by pressing the Active Control Off button.

- **Active Control On:**
 - Activates the vibration control function.
 - Other Operating Mode buttons disables.
 - The button label changes to **“Active Control Off”**, and *Current Mode* changes to **“Active Control”**.

- **Active Control Off:**
 - Deactivates the vibration control function.
 - Other Operating Mode buttons are re-enabled.
 - The button text changes back to **“Active Control On”**, and *Current Mode* returns to **“Idle”**.

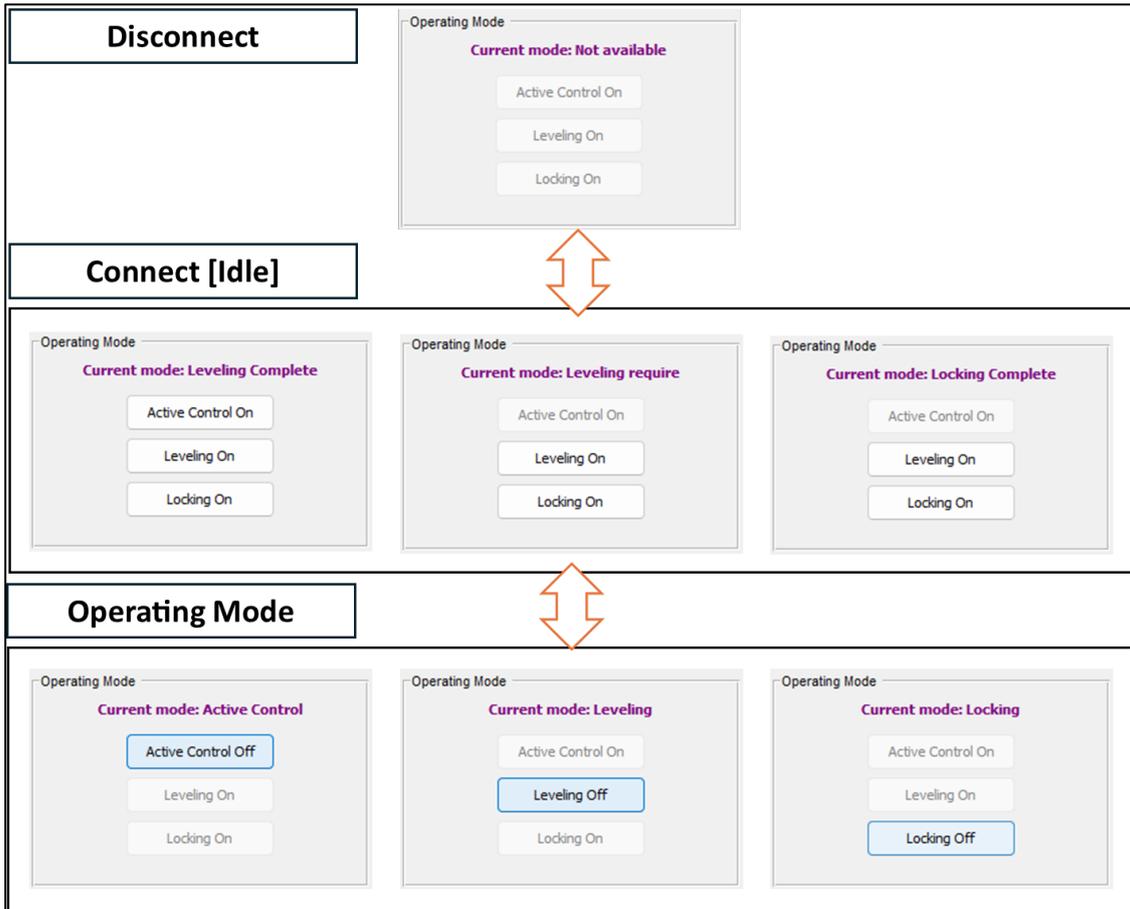
2. Leveling (Only for DVIA-T Series)

- **Leveling On:**
 - When the Leveling On button is pressed, the system automatically levels to the position set by the engineer.
 - During leveling, the Active and Locking buttons are disabled.
 - The button label changes to “Leveling Off,” and the Current Mode is updated to “Leveling.”
- **Leveling Off:**
 - When the button is pressed, it stops leveling.
 - The button’s text changes back to “Leveling On”, and Current Mode returns to Idle.
 - When Auto-Leveling finishes normally, it behaves the same as clicking Leveling Off.

3. Locking (Only for DVIA-T Series)

- **Locking On**
 - Executes the Locking function.
 - The top plate rises to the designated position and locks.
 - Other buttons are disabled.
 - The button’s text changes to “Locking Off”, and Current Mode changes to “Locking”.
- **Locking Off**
 - Unlocks the system.
 - Other buttons are enabled.
 - The button’s text changes back to “**Locking On**”, and *Current Mode* changes to **Leveling required**.

4. DVIA-T (Shipped After September 1, 2025)



Starting with firmware released on **September 1, 2025**, the system now stores the data whether Leveling or Locking has been executed, and the single *Idle* state has been subdivided into three states:

- **Leveling complete:** Auto-Leveling completed successfully.
- **Leveling required:** Auto-Leveling incomplete or interrupted.
- **Locking complete:** Locking completed.

The **Active Control** button is only enabled in **Leveling complete** state.

The table below shows how UI acts in different modes.

Status	Current Mode	Buttons Activated
No Serial Connection	Not Available	None
IDLE	IDLE	All (Active On, Leveling On, Locking On)
Active On	Active Control	Active Off
Leveling On	Leveling	Leveling Off
Locking On	Locking	Locking Off

iii. Active Control

- **Active Control On:**
 - Activates the vibration control function.
 - Other Operating Mode buttons are disabled.
 - The button's text changes to "**Active Control Off**", and Current Mode changes to "**Active Control**".
- ※ Only available when the system is in **Leveling complete** state.

- **Active Control Off:**
 - Deactivates the vibration control function.
 - Other Operating Mode buttons are re-enabled.
 - The button's text changes back to "**Active Control On**", and Current Mode returns to "**Leveling complete**".

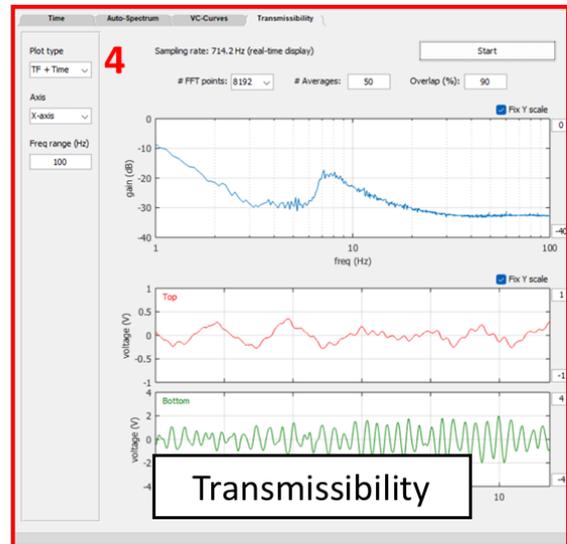
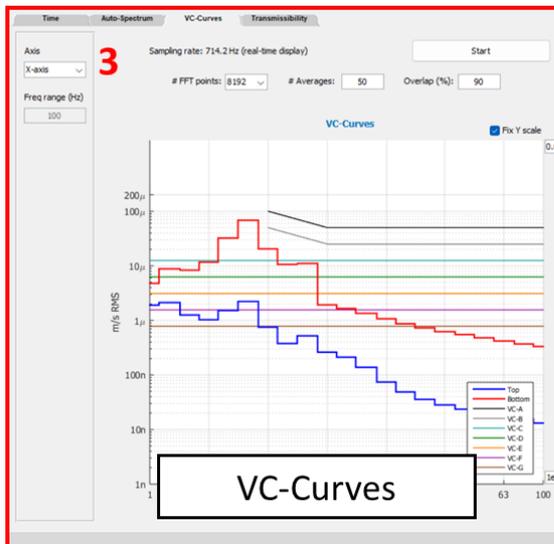
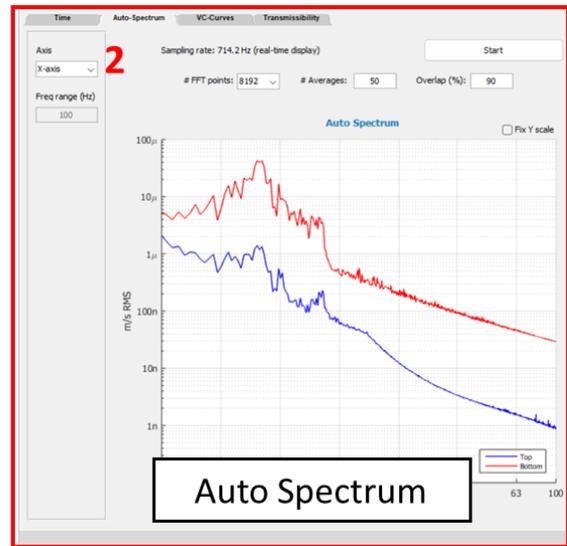
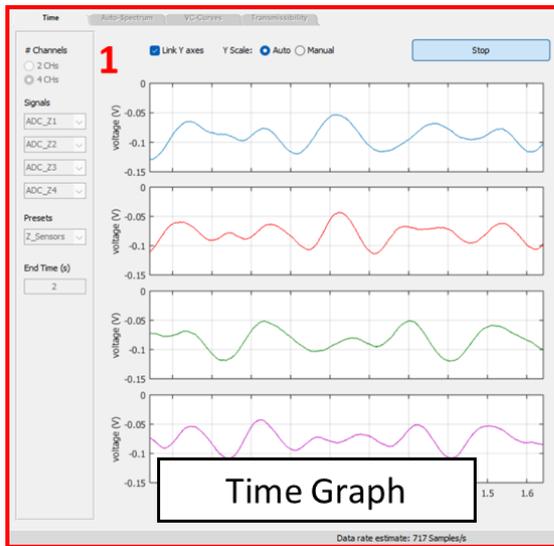
iv. Leveling

- **Leveling On:**
 - Executes the Auto-Leveling function.
 - The top plate lowers, then finely adjusts to the correct floating position.
 - Other buttons are disabled.
 - The button text changes to "**Leveling Off**", and Current Mode changes to "**Leveling**".
- **Leveling Off:**
 - Stops Leveling.
 - Other buttons are activated.
 - The button's text changes back to "**Leveling On**", and *Current Mode* changes to **Leveling required**
- **Automatic Completion:**
 - When Auto-Leveling finishes normally:
 - The button text resets to "**Leveling On**".
 - *Current Mode* changes to **Leveling complete**.
 - The **Active Control** button becomes enabled.

v. Locking

- **Locking On**
 - Executes the Locking function.
 - The top plate rises to the designated position and locks.
 - Other buttons are disabled.
 - The button text changes to “**Locking Off**”, and *Current Mode* changes to **Locking**.
- **Locking Off**
 - Stops the Locking function.
 - Other buttons are re-enabled.
 - The button text changes back to “**Locking On**”, and *Current Mode* changes to **Leveling required**.
- **Automatic Completion**
 - When the top plate reaches the designated position:
 - The button text resets to “**Locking On**”.
 - *Current Mode* changes to **Locking complete**.
 - In this state, the **Active Control** button remains disabled.

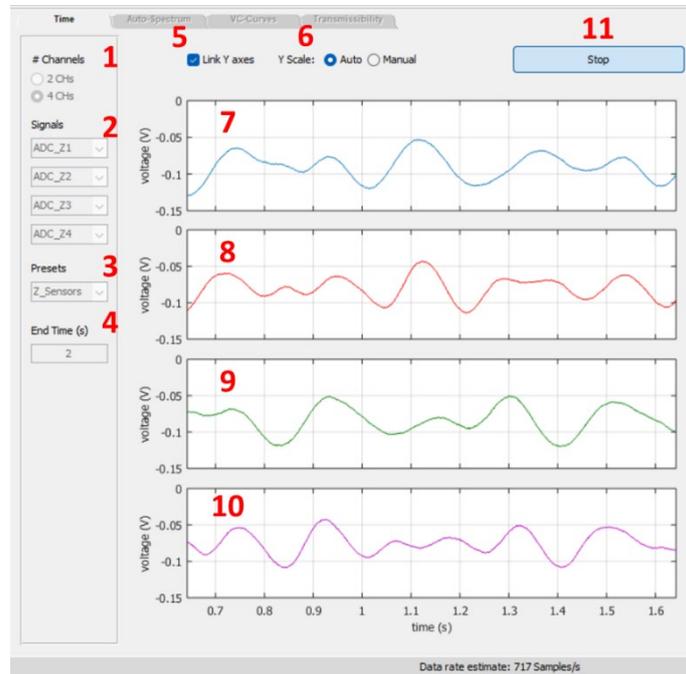
C. Graph Tab



In the Customer UI software, the top tabs let you choose what data to view:

- **Time Graph Tab** (real-time sensor values)
- **Auto-Spectrum Tab** (narrow-band auto-spectrum)
- **VC-Curves Tab** (1/3-octave-band VC-curves)
- **Transmissibility Tab** (transmissibility and sensor data)

i. Time Graph Tab



On the **Time Graph Tab**, you can monitor up to four sensors in real time:

1. Channels

Choose how many graphs to display:

- 2 Chs → shows two graphs
- 4 Chs → shows four graphs

2. Signals

Select which sensor to display in each graph via the combo box.

3. Presets

Quickly load a predefined set of “Signals” by selecting a preset from this combo box.

4. End Time

Sets the time window (in seconds) shown on the X-axis. If you enter 2, the graph will display data from 2 seconds ago up to now.

5. Link Y Axis

Synchronizes the Y-axis scales across all graphs when checked.

Checked → all graphs share the same Y-scale; you enter Y scales mode (see 6).

Unchecked → each graph may have its own Y-scale; you enter Fix Y scale mode (see 6).

6. Y scales / Fix Y scale

Changes function depending on Link Y Axis:



Y scales mode (when axes are linked)

- Auto → automatically adjusts the common Y-scale so that every sensor's data fits.



- Manual → opens Y Max/Y Min fields below End Time; graphs use the values you enter.



Fix Y scale mode (when axes are not linked)

Each graph has its own Fix Y scale checkbox.

- Checked → that graph's Y-scale is frozen at the current range.

- Unchecked → that graph's Y-scale auto-updates.

Note: Y Max/Y Min fields are not available in this mode.

7. Graph (1)

Displays the sensor selected in the first Signals combo box.

8. Graph (2)

Displays the sensor selected in the second Signals combo box.

9. Graph (3)

Displays the sensor selected in the third Signals combo box.

10. Graph (4)

Displays the sensor selected in the fourth Signals combo box.

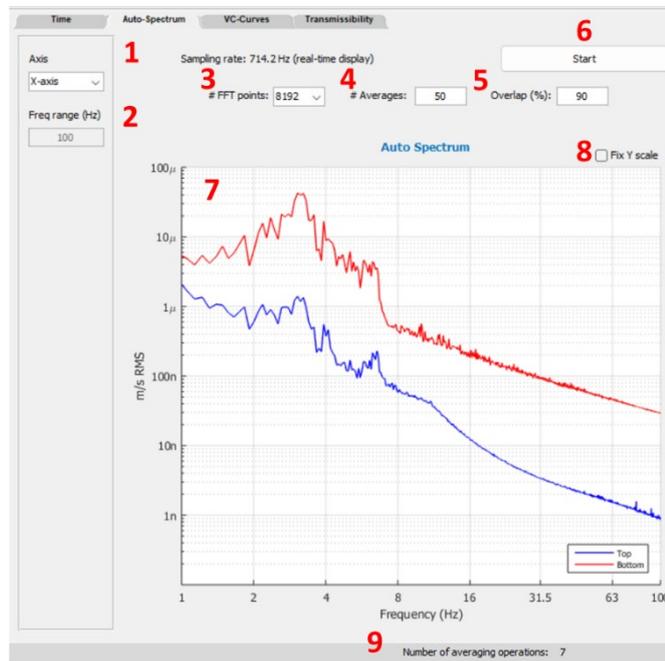
11. Start/Stop

Begins or ends real-time monitoring:

Button reads “Start” → click to start. It then changes to “Stop,” monitoring begins, and all UI controls except the Y-scale and Operating Mode buttons become disabled.

Button reads “Stop” → click to stop. It then reverts to “Start,” monitoring halts, and all controls re-enable.

ii. Auto-Spectrum Tab



Plots the narrow-band auto-spectrum for both sensors:

- Bottom sensor: red solid line
- Top sensor: blue solid line

i. Axis

Select which axis (X-Axis, Y-Axis, or Z-Axis) to analyze in the auto-spectrum.

ii. Freq range

Displays the X-axis range of the graph. This is fixed at 100 Hz.

iii. FFT points

Shows the number of data points used for the FFT. This is fixed at 8192.

iv. Averages

Enter the number of FFT segments to average when computing the auto-spectrum.

v. Overlap

Specify the percentage (%) by which adjacent FFT segments overlap.

vi. Start/Stop

When the button reads “Start”, click to begin auto-spectrum monitoring. The label then changes to “Stop”, and all UI controls except the Y-scale settings and the Active button in the Operating Mode panel are disabled.

When it reads “Stop”, click to end monitoring. The label reverts to “Start”, and all settings UI controls re-enable.

In the Auto-Spectrum Tab, you can monitor the narrow-band auto-spectrum of the bottom and top sensors.

vii. Auto-Spectrum Graph

Displays the narrow-band auto-spectrum of the bottom and top sensors.

- Bottom sensor: red solid line.

- Top sensor: blue solid line.

viii. Fix Y scale

Toggle whether the graph’s Y-axis is fixed or automatic:

Checked → Y Max and Y Min fields appear at the top-right and bottom-right of the graph; the scale is then locked to your inputs.

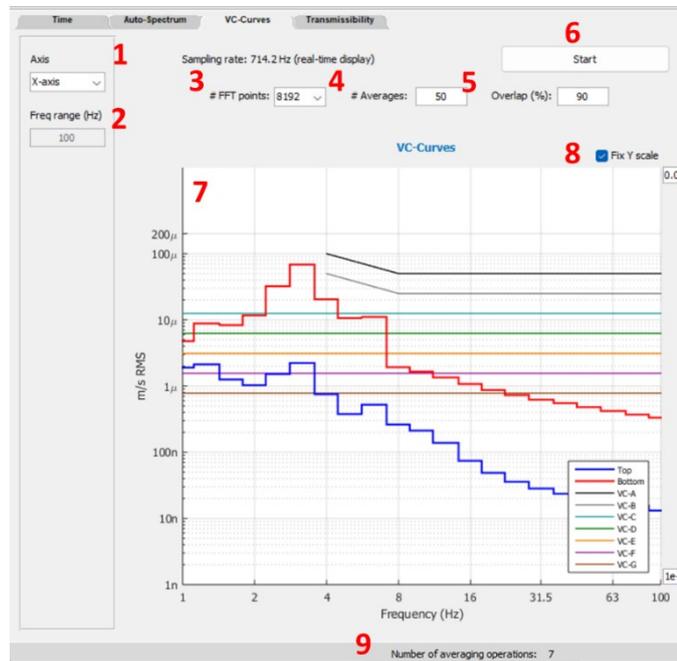
Unchecked → the Y-axis auto-scales.

ix. Average Status

Displays the number of averages collected so far.

If the number of FFT segments gathered is less than the Averages setting, it shows: “Wait collection has started. Wait for a second.”

iii. VC-Curves Tab



In the VC-Curves tab, you can monitor the VC-Curves of both bottom and top sensor signals.

i. Axis

Select which axis (X-Axis, Y-Axis, or Z-Axis) to monitor the VC-Curves.

ii. Freq range

Displays the X-axis range of the graph. This is fixed at 100 Hz.

iii. FFT points

Shows the number of data points used for the FFT. This is fixed at 8192.

iv. Averages

Enter the number of FFT segments to average when computing the auto-spectrum.

v. Overlap

Specify the percentage (%) by which adjacent FFT segments overlap.

vi. Start/Stop

When the button reads “Start”, clicking it changes the label to “Stop” and begins VC-Curves monitoring. All UI controls—except the Y-scale controls and the Active button in the Operating Mode panel—are disabled.

When the button reads “Stop”, clicking it reverts the label to “Start” and ends monitoring. All UI controls are re-enabled.

vii. VC-Curves Graph

Displays the 1/3-octave-band VC-Curves of the bottom and top sensors.

- Bottom sensor: red solid line

- Top sensor: blue solid line

viii. Fix Y scale

Toggle whether the graph’s Y-axis is fixed or automatic:

Checked → Y Max and Y Min fields appear at the top-right and bottom-right of the graph; the scale is then locked to your inputs.

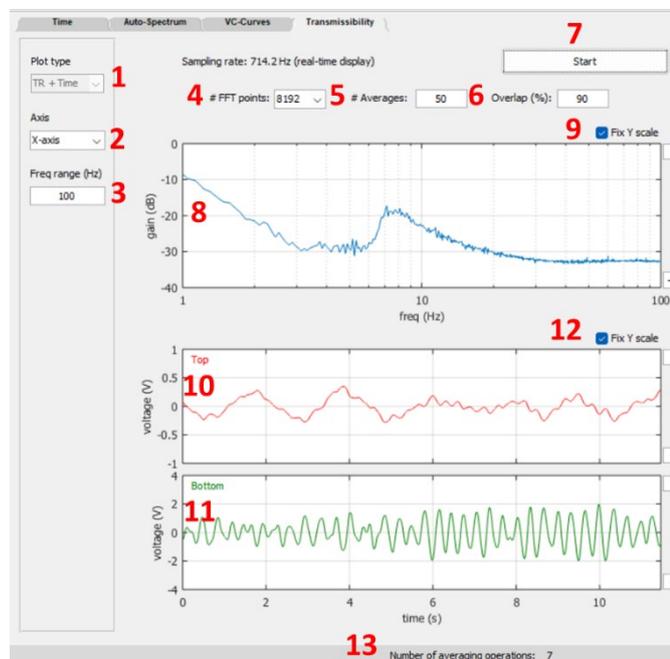
Unchecked → the Y-axis auto-scales.

ix. Average Status

Displays the number of averages collected so far.

If the number of FFT segments gathered is less than the Averages setting, it shows: “Wait collection has started. Wait for a second.”

iv. Transmissibility Tab



In the Transmissibility Tab, you can monitor both the transmissibility between the bottom and top sensors and view their real-time signals.

i. Plot Type

Displays the monitoring mode for transmissibility. Fixed to “TR+Time.”

12. Axis

Select which axis (X-Axis, Y-Axis, or Z-Axis) to analyze.

13. Freq Range

Shows the X-axis range of the graph. Fixed at 100 Hz.

14. FFT Points

Shows the number of data points used for the FFT. Fixed at 8192.

15. Averages

Enter the number of FFT segments to average when calculating transmissibility.

16. Overlap

Enter the percentage (%) by which adjacent FFT segments overlap.

17. Start / Stop

“Start” → click to begin monitoring. The button then reads “Stop,” and all UI controls except the Y-scale settings and the Active button in Operating Mode are disabled.

“Stop” → click to end monitoring. The button reverts to “Start,” and all UI controls re-enable.

18. Transmissibility Graph

Plots the transmissibility curve for the bottom and top sensors.

ii. Transmissibility graph Fix Y scale

Toggle whether the transmissibility graph’s Y-axis is fixed or auto-scaled:

- Checked → Y Max and Y Min fields appear at the top-right and bottom-right of the graph; the scale locks to your inputs.

- Unchecked → the Y-axis auto-scales.

iii. Top Sensor Graph

Shows the top sensor’s real-time signal.

iv. Bottom Sensor Graph

Shows the bottom sensor’s real-time signal.

v. Fix Y Scale (Sensor Graphs)

Toggle the Y-axis mode for both sensor graphs:

- Checked → Y Max and Y Min fields appear at the top-right and bottom-right of each graph; each graph’s scale locks to your inputs.

- Unchecked → each graph’s Y-axis auto-scales.

vi. Average Status

Displays the number of averages collected so far.

If the number of FFT segments gathered is less than the Averages setting, it shows: “Wait collection has started. Wait for a second.”

D. Menu



The Customer UI software includes four top-level menus, but only Graph Data (for saving graph data) and Help (for the About dialog) are ever enabled:

i. File

Not supported by this software.

19. Graph Data

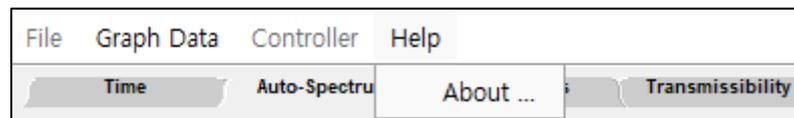


- Becomes active as soon as a serial connection is open and you've run at least one monitoring session.
- Select Graph Data ► Save Graph Data to export the currently selected Graph Tab's data into a .dat file.

20. Controller

Not supported by this software.

21. Help



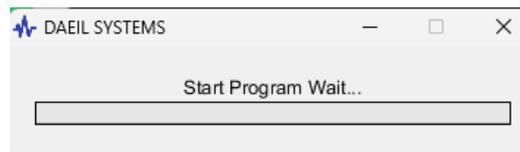
- Always enabled.
- Select Help ► About... to open the About dialog, which displays version and copyright information for the Customer UI software.

4. User Guide

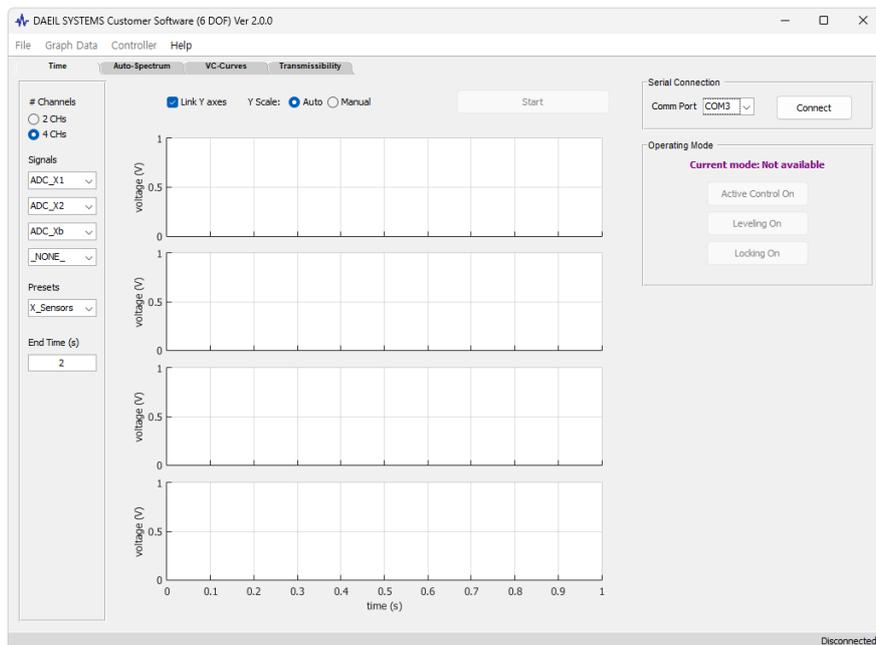
A. Launching the Customer UI Software



Double-click the desktop shortcut to start the Customer UI software. A splash screen appears while the MATLAB Runtime initializes—depending on your PC’s specs, this can take anywhere from several tens of seconds up to a few minutes.



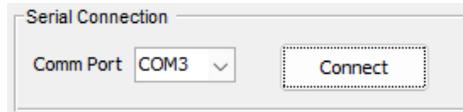
Once the runtime is up, the application initializes the UI and displays progress in a “Wait Bar.”



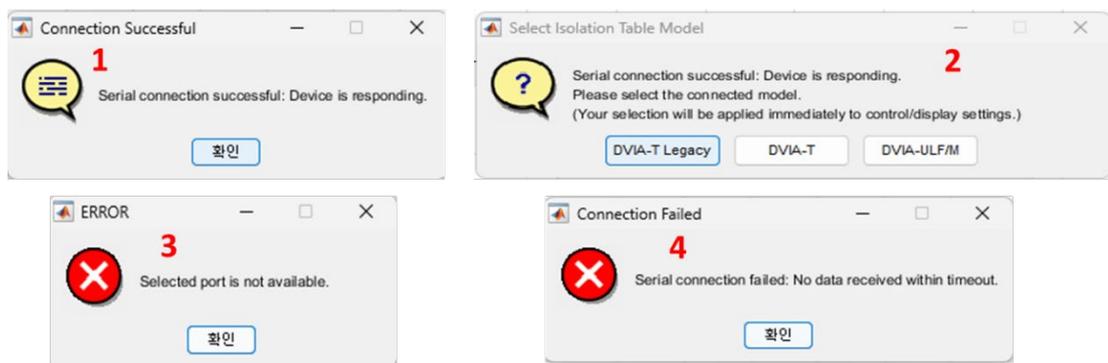
When initialization completes, the “Wait Bar” disappears and the main UI appears.

B. Connecting and Disconnecting Communication

i. Connecting



1. In the upper-right **Serial Connection** area of the UI, select the **Comm Port**.
2. Click the **Connect** button.
3. The connection result will be displayed in a message box, with outcomes classified as follows:



1. Connection Success (Firmware after Sept. 1, 2025)

The system automatically detects the vibration isolation table model and completes the communication procedure.

The detected model name is displayed in the program's title bar.

If DVIA-T is connected, the title bar displays: DAEIL SYSTEMS Customer Software DVIA-T

If DVIA-ULF is connected the title bar displays: DAEIL SYSTEMS Customer Software DVIA-ULF/M

If DVIA-M is connected the title bar displays: DAEIL SYSTEMS Customer Software DVIA-ULF/M

If model recognition fails, the user must manually select the model as in the previous firmware method (see item 2).

2. Connection Success (Firmware before Sept. 1, 2025)

The user must manually select the connected vibration isolation table model.

Available models: **DVIA-T Legacy, DVIA-T, DVIA-ULF/M**

The selected model name is displayed in the program's title bar.

If DVIA-T Legacy is selected the title bar displays: DAEIL SYSTEMS Customer Software DVIA-T Legacy

If DVIA-T is selected the title bar displays: DAEIL SYSTEMS Customer Software DVIA-T

If DVIA-ULF/M is selected the title bar displays: DAEIL SYSTEMS Customer Software DVIA-ULF/M

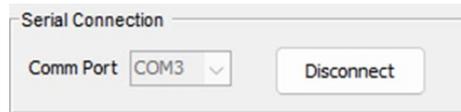
3. Comm Port Open Failure

Occurs when the wrong Comm Port is selected or when the port is already in use by another program.

4. Communication Failure with the Table

Occurs when the Comm Port opens successfully but the table does not respond within a certain time.
In this case, check the communication cable and the table's power supply.

ii. Disconnecting



Click Disconnect in the Serial Connection panel to close communication. (During active monitoring, Disconnect is disabled.)

C. Operating Mode Control

The Customer UI Software allows users to check and control the Operating Mode of the vibration isolation table. The following functions are supported:

- Auto-Leveling

Exclusive to DVIA-T. Automatically adjusts the table height to match the load weight by controlling spring compression.

- Locking

Exclusive to DVIA-T. Raises the top plate to the designated position and locks it in place.

- Active Control

Controls vibration of the table's top plate.

Depending on the model, Operating Modes are divided as follows:

- Active Control Mode

When the system is actively controlling the vibration of the top plate.

- Leveling Mode

When Auto-Leveling is in progress. Upon completion, the mode switches to Idle (Leveling complete).

- Locking Mode

When the motor is running for Locking. Upon completion, the mode switches to Idle (Locking complete).

- Idle Mode

When no functions are running and the system is on standby.

For **DVIA-T (firmware after Sept. 1, 2025)**, Idle Mode is subdivided into three states depending on Leveling and Locking status:

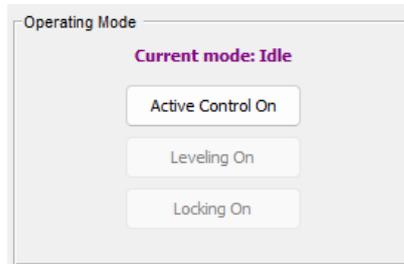
1. Leveling complete: Auto-Leveling finished successfully

2. Leveling required: Incomplete or interrupted state (Auto-Leveling must be executed)

3. Locking complete: Locking finished successfully

※ For detailed UI information, refer to section **3.2 Operating Mode**.

i. DVIA-ULF / DVIA-M



The Customer UI Software allows you to check and control the Operating Mode of the vibration isolation table. Depending on the model, the following functions are supported:

i. Active Control button (On/Off)

On: Executes Active Control → switches to Active Control Mode

Off: Ends Active Control → switches to Idle Mode

ii. DVIA-T Legacy (shipped before September 1, 2025)



The Operating Mode panel lets you enable or disable the table's vibration-control features. (Auto-Leveling and Locking apply only to the DVIA-T model.)

1. Leveling button (On/Off)

On: Executes Auto-Leveling → switches to **Leveling Mode**

Off: Ends Auto-Leveling → switches to **Idle Mode**

Auto-complete: Auto-Leveling finishes → switches to **Idle Mode**

2. Locking button (On/Off)

On: Executes Locking → switches to **Locking Mode**

Off: Ends Locking → switches to **Idle Mode**

Auto-complete: Locking finishes → switches to **Idle Mode**

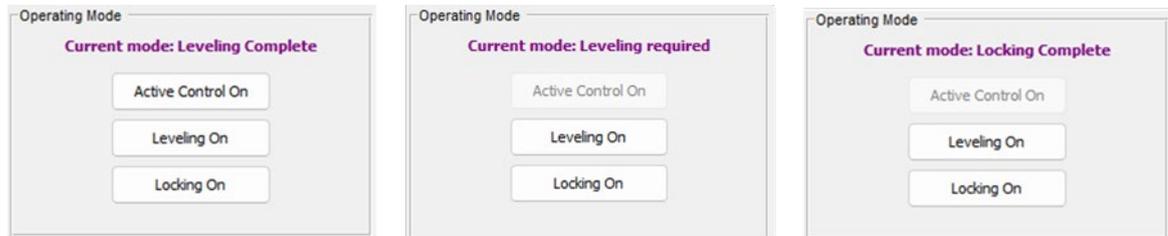
3. Active Control button (On/Off)

On: Executes Active Control → switches to **Active Control Mode**

Off: Ends Active Control → switches to **Idle Mode**

※ Must only be executed after Auto-Leveling has been completed.

iii. DVIA-T (shipped on or after September 1, 2025)



Starting with firmware released on Sept. 1, 2025, DVIA-T models include memory for Leveling and Locking status. Accordingly, the single Idle Mode is subdivided into:

- **Leveling complete:** Auto-Leveling finished successfully
- **Leveling required:** Auto-Leveling or Locking was stopped midway
- **Locking complete:** Locking finished successfully

The **Active Control** button is enabled only in the **Leveling complete** state. Therefore, Auto-Leveling must be performed before Active Control can be used.

1. Leveling button (On/Off)

On: Executes Auto-Leveling → switches to **Leveling Mode**

Off: Ends Auto-Leveling → switches to **Leveling required Mode**

Auto-complete: Finishes Auto-Leveling → switches to **Leveling complete Mode** (enables Active Control button)

2. Locking button (On/Off)

On: Executes Locking → switches to **Locking Mode**

Off: Ends Locking → switches to **Leveling required Mode**

Auto-complete: Finishes Locking → switches to **Locking complete Mode**

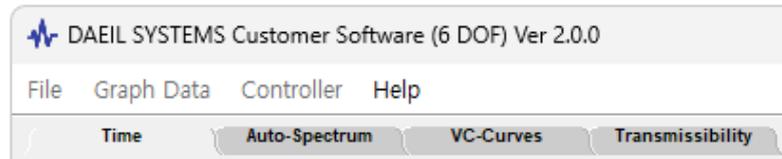
3. Active Control button (On/Off)

On: Executes Active Control → switches to **Active Control Mode**

Off: Ends Active Control → switches back to **Leveling complete Mode**

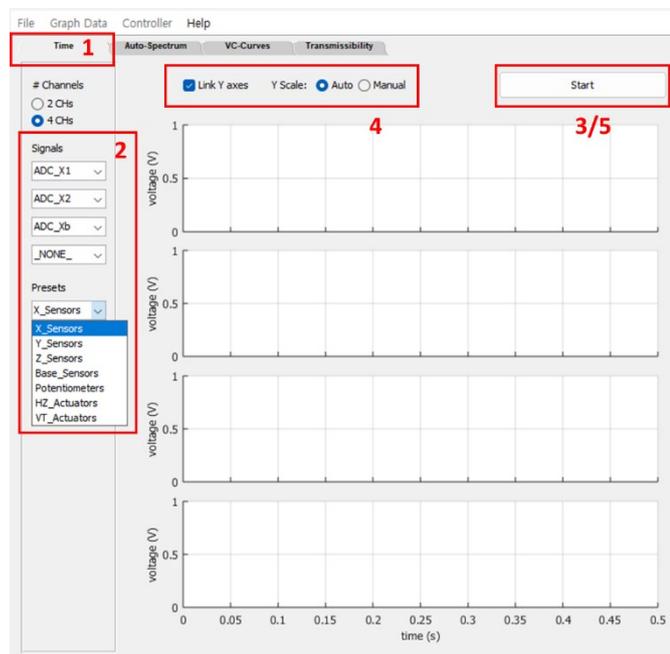
※ The Active Control button is enabled only in the **Leveling complete Mode**.

D. Monitoring



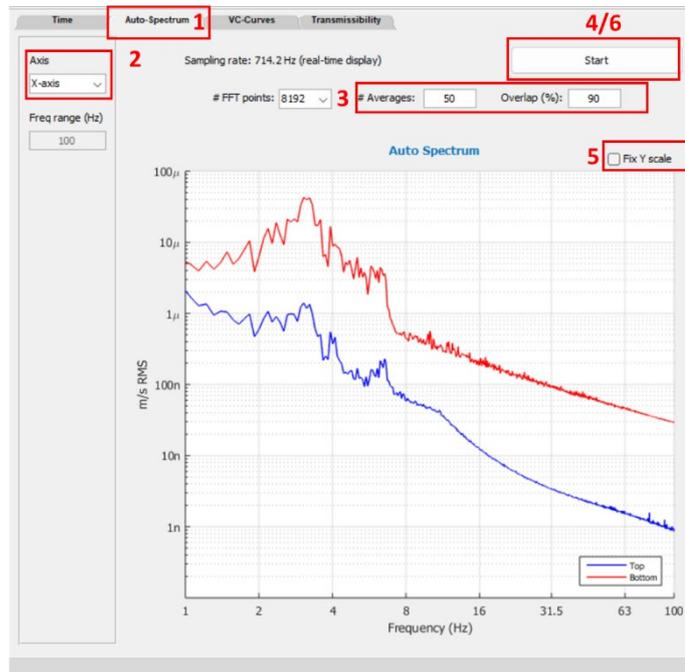
From the top Graph Tabs, select the tab which to monitor. Each tab has its own procedure—follow the steps below for best results.

i. Time Graph



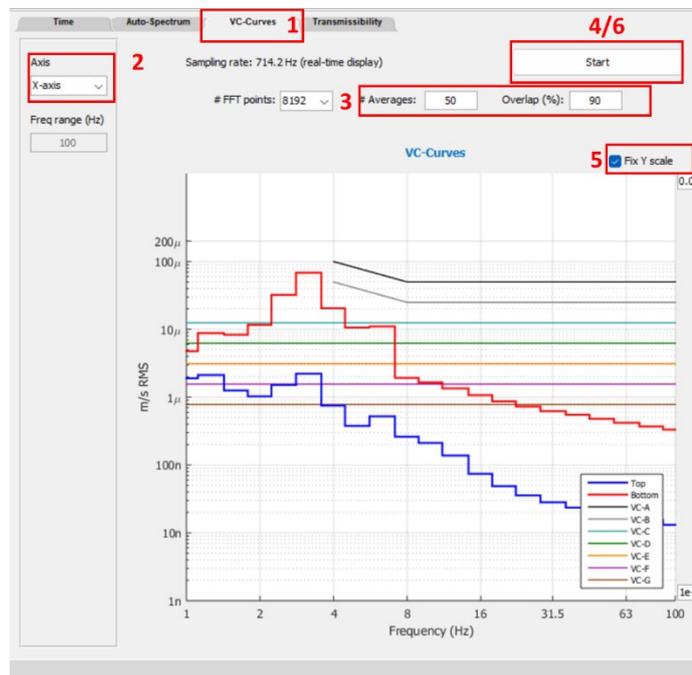
1. Click the Time tab.
2. Configure which sensors to display by choosing them under Signals, or select a preset via Presets for quick setup.
3. Click Start to begin real-time monitoring.
4. Adjust your Y-scale settings as needed.
5. Click Stop to end monitoring.

ii. Auto Spectrum



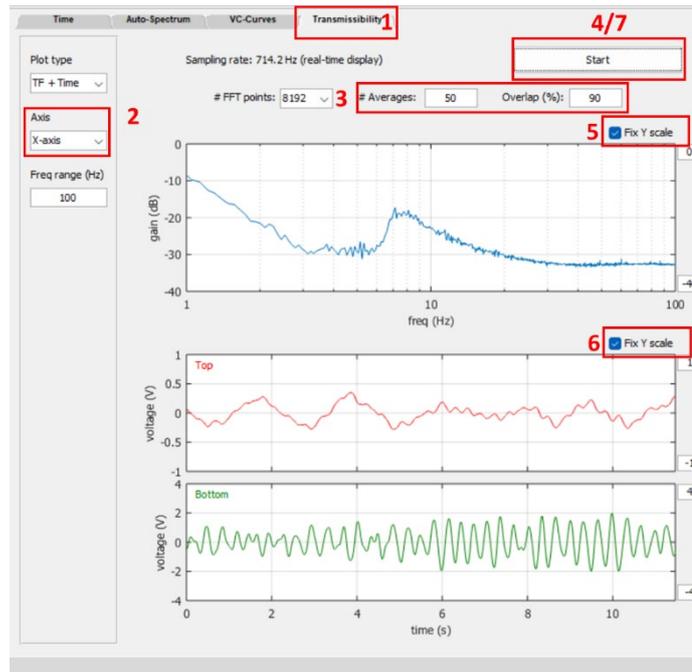
1. Click the Auto-Spectrum tab.
2. Select the axis you wish to analyze.
3. Enter Averages and Overlap (using the defaults is recommended).
4. Click Start to begin auto-spectrum monitoring.
5. Adjust your Y-scale settings.
6. Click Stop to end monitoring.

iii. VC-Curves



1. Click the VC-Curves tab.
2. Select the axis you wish to analyze.
3. Enter Averages and Overlap (defaults recommended).
4. Click Start to begin VC-curves monitoring.
5. Adjust your Y-scale settings.
6. Click Stop to end monitoring.

iv. Transmissibility

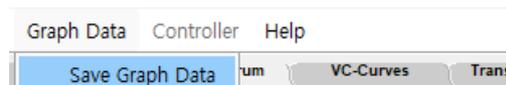


1. Click the Transmissibility tab.
2. Select the axis you wish to analyze.
3. Enter Averages and Overlap (defaults recommended).
4. Click Start to begin transmissibility monitoring.
5. Configure the Y-scale for the transmissibility graph.
6. Configure the Y-scale for the sensor graphs.
7. Click Stop to end monitoring.

E. Saving Graph Data

The Customer UI lets you export the data from any graph you've just monitored into a .dat file. The saved file is a plain text, tab-delimited format that you can open in Notepad or any text editor. Although the steps are the same for every Graph Tab, the actual columns saved depend on which tab is selected—and you can only save after you've stopped monitoring at least once.

1. Select the Graph Tab whose data you want to save (after clicking Stop).
2. From the top-level Menu, choose Graph Data ► Save Graph Data to open the Save dialog.



3. In the dialog, pick your folder and enter a filename, then click Save. The .dat file will be written to your chosen location.

