

MURLIE User Manual

with N-Bridge

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A stylized logo for NVISAGE, featuring a yellow zigzag line that forms the letters 'N' and 'V'. The line starts with a dot, goes down to a point, up to a dot, down to a point, up to a dot, and down to a point. The word 'VISAGE' is written in a dark gray, sans-serif font to the right of the 'N' and 'V'.

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1 Instruction

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1.1 Document Guide

1.1.1 Target Audience

This manual is intended for users of MURLIE, a software for N1, NEO-E, and N2.

1.1.2 Symbols

This product should be operated under safety instructions with the warning or caution symbol in this manual. It is important for you to read and understand the contents to operate the products safely.

Warning



- This symbol provides information that the user must follow to ensure personal safety or prevent product damage.

Caution



- This symbol provides information that the user must follow to prevent data loss or damage.

Information



- This symbol provides additional information.

1.1.3 Revision History

Version	Date	Description
1.4	Aug. 25, 2026	Edited) 4.1 Program Execution
1.3	Feb. 20, 2026	The overall content has been updated.
1.2	Sept. 17, 2025	Edited) 3.1 Program UI Edited) 3.2.1 Settings – OneStop Settings Deleted) Profile Landing Page from 4.1 Program Execution Edited) 4.2 Shot Analysis Mode
1.1	Aug. 7, 2025	Added) 3. N-Bridge
1.0	June. 20, 2025	Initial release

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2.1 Installation Condition

MURLIE Software package consists of:

- MURLIE SW
- N-Bridge SW
- Re-released vs2013 package

2.1.1 Compatible PC Specifications

To execute MURLIE, the computer operating system should be Windows 10 or 11 x64.

PC Environment	Recommended Specifications	Minimum Specifications
CPU	Intel i7, 10 th generation or higher	Intel i5 8400
RAM	16 GB or greater	8 GB (16 GB for Swing Optix)
GPU	NVIDIA RTX 30 series or higher	GeForce GTX 1060
GPU Memory	16 GB or greater	-
Hard Disk	50 GB or greater	-

2.1.2 Pre-Installation Considerations

The installation procedure is introduced under the assumption that the user connects the device and the computer through a peer-to-peer communication network. Before starting the installation, ensure that the required components are in place as listed below:

- NVISAGE sensor (one among N1, N2, and NEO-E)
- A desktop computer with a GigE network card installed
 - For the N1 sensor, the use of an Intel PCI-Express network interface card is recommended.
 - If the computer's motherboard only supports PCI, use an Intel PCI network interface card (GT, MT, or PRO/1000 series).
 - The latest version of the network interface card driver can be downloaded from the manufacturer's website.
- A standard Ethernet cable.
 - For the N1 sensor, the use of a shielded (STP) Category 5 or higher Ethernet cable is recommended.



When installer.exe file download is blocked in Windows,

- 1 Click the download icon(📄) at the top-right corner of the browser, or press the shortcut **Ctrl + J** to open the downloads list.
- 2 Hover the mouse over the blocked file entry, then click the (...) icon that appears, or click the **Keep** button next to it.
- 3 If a window appears asking "Is this file trustworthy?", click the **More** button, then click **Keep Anyway** to complete the download.



- If the graphics of Murlie are distorted on low-spec or older Windows PCs, please install the **cptb (compatibility) version** from All Releases.

2.2 Reference Documents

The QR codes and URLs related to MURLIE are as follows:

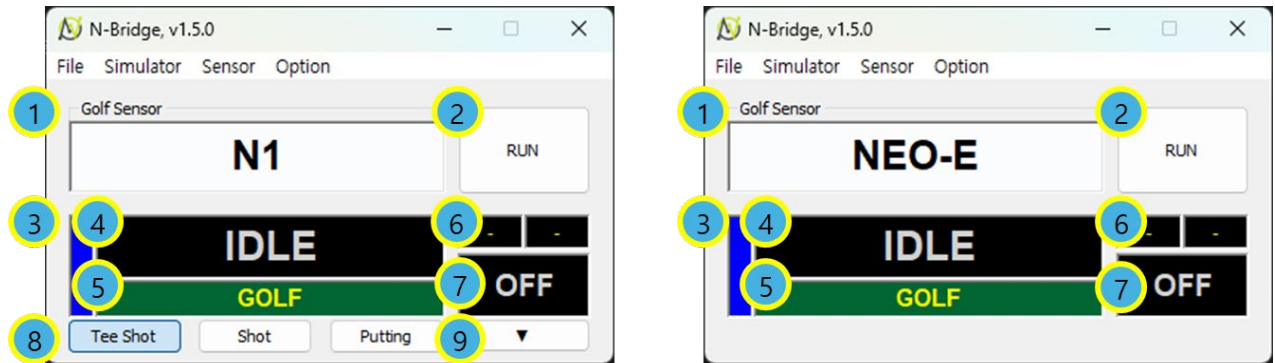
Document	QR Code	URL
NEO-E Quick Start Guide		https://qrfy.io/p/qBX0iWScNI
NEO-E User Manual		https://qrfy.io/r/zzk7HHtogP
N-Bridge User Manual		https://qrfy.io/r/LK9T_uBNNA
N-Bridge OneStop Settings Guide		https://qrfy.io/r/i0QqmNu_BM
N1 User Manual		https://qrfy.io/r/cR4VSiQlKy
N2 User Manual		https://qrfy.io/r/ePP2JmbBqa



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3.1 Program UI

N-Bridge is a software program that integrates simulator devices with MURLIE. To execute MURLIE on Windows, N-Bridge should be pre-connected to the device. The program interface is as shown below:



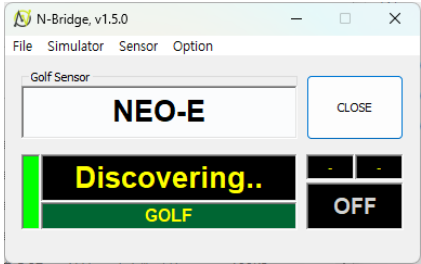
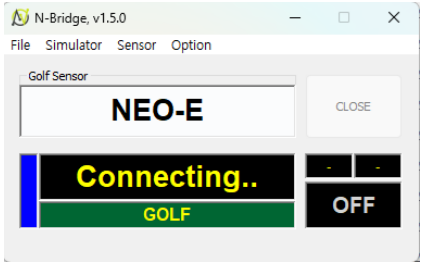
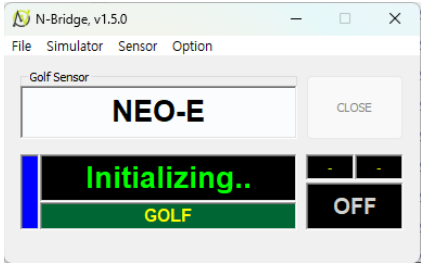
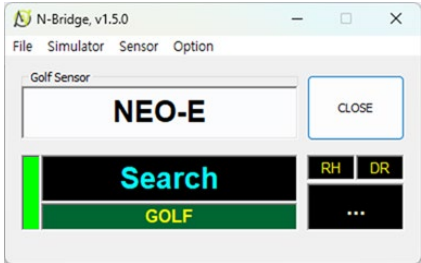
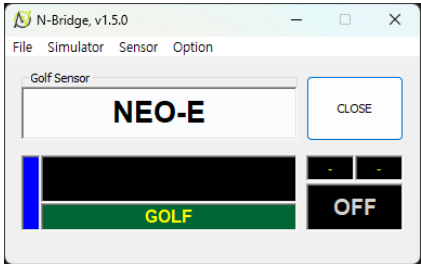
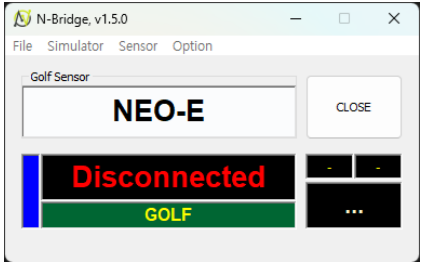
No.	Item	Description
1	Device Selector	Displays the detected device, or the device selected in Options if none is detected. Shows No Device if unavailable.
2	Run/Close Button	Opens the device to prepare data transmission or disconnects the device.
3	Connection Type	Displays wireless connections in green and wired connections in blue.
4	Connection Status	Shows connection status: IDLE, Search, and Shot.
5	Simulator Integration	Shows the connected external simulator.
6	Swing Orientation & Mode Panel	Displays the current setting: either handedness (RH/LH) or swing mode (PT/SH/DR).
7	Simulator Integration Status	Shows the connection status of MURLIE or an external simulator.
8	Club Selection	Selects the club type. Available only when the N1 or G4K sensor is connected to N-Bridge.
9	View Image	Shows the image(s) acquired by N1 or G4K sensor.



- N-Bridge is not required when connecting to MURLIE from a mobile device.

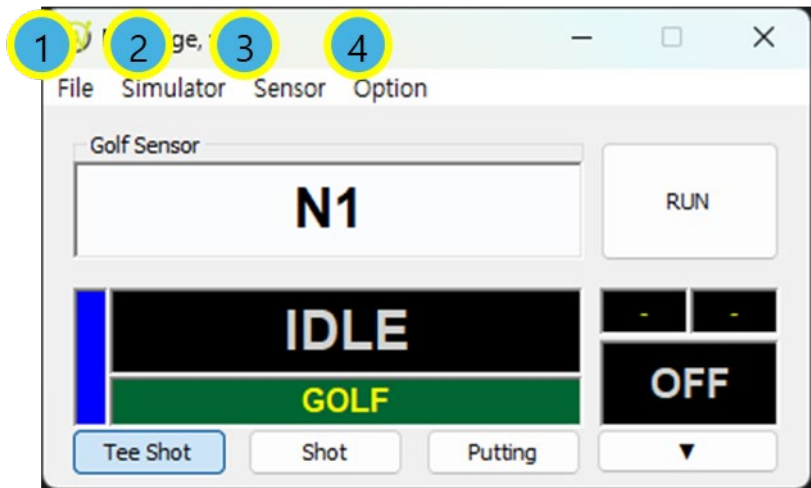
How to Execute

- 1 Select the simulator you want to connect to from the **Golf Simulator** box.
- 2 Click the **Run** button.
- 3 Check the connection status classified into the following 3 types:
 - To use **wireless connection**, the Connectivity Type in OneStop Settings should be set to Wireless in advance. Refer to <N-Bridge OneStop Settings Guide> for more details.

Type	Image	Description
Discovering	 The screenshot shows the 'N-Bridge, v1.5.0' window with a menu bar (File, Simulator, Sensor, Option). The 'Golf Sensor' section displays 'NEO-E' in a box, a 'CLOSE' button, and a large black box with 'Discovering..' in yellow. Below this is a green bar with 'GOLF' in yellow. To the right are two small black boxes with '-' and '+' signs, and a large black box with 'OFF' in white.	Indicates that it is discovering the selected golf sensor.
Connecting	 The screenshot shows the 'N-Bridge, v1.5.0' window. The 'Golf Sensor' section displays 'NEO-E' in a box, a 'CLOSE' button, and a large black box with 'Connecting..' in yellow. Below this is a green bar with 'GOLF' in yellow. To the right are two small black boxes with '-' and '+' signs, and a large black box with 'OFF' in white.	Indicates that the sensor has been discovered and is connecting. For N1 and G4K, it is displayed as Opening.
Initializing	 The screenshot shows the 'N-Bridge, v1.5.0' window. The 'Golf Sensor' section displays 'NEO-E' in a box, a 'CLOSE' button, and a large black box with 'Initializing..' in green. Below this is a green bar with 'GOLF' in yellow. To the right are two small black boxes with '-' and '+' signs, and a large black box with 'OFF' in white.	Indicates that it is initializing the sensor.
Search	 The screenshot shows the 'N-Bridge, v1.5.0' window. The 'Golf Sensor' section displays 'NEO-E' in a box, a 'CLOSE' button, and a large black box with 'Search' in cyan. Below this is a green bar with 'GOLF' in yellow. To the right are two small black boxes with 'RH' and 'DR' in yellow, and a large black box with '...' in white.	Indicates that it is successfully connected. - The left bar turns blue when wire-connected. - The left bar turns green when wirelessly connected.
	 The screenshot shows the 'N-Bridge, v1.5.0' window. The 'Golf Sensor' section displays 'NEO-E' in a box, a 'CLOSE' button, and an empty black box. Below this is a green bar with 'GOLF' in yellow. To the right are two small black boxes with '-' and '+' signs, and a large black box with 'OFF' in white.	When the external sensor is successfully connected, an empty box is displayed.
Disconnected	 The screenshot shows the 'N-Bridge, v1.5.0' window. The 'Golf Sensor' section displays 'NEO-E' in a box, a 'CLOSE' button, and a large black box with 'Disconnected' in red. Below this is a green bar with 'GOLF' in yellow. To the right are two small black boxes with '-' and '+' signs, and a large black box with '...' in white.	Indicates that it is disconnected. For N1 and G4K, a user should try to reconnect up to 3 times when reconnection message pops up.

3.2 Features

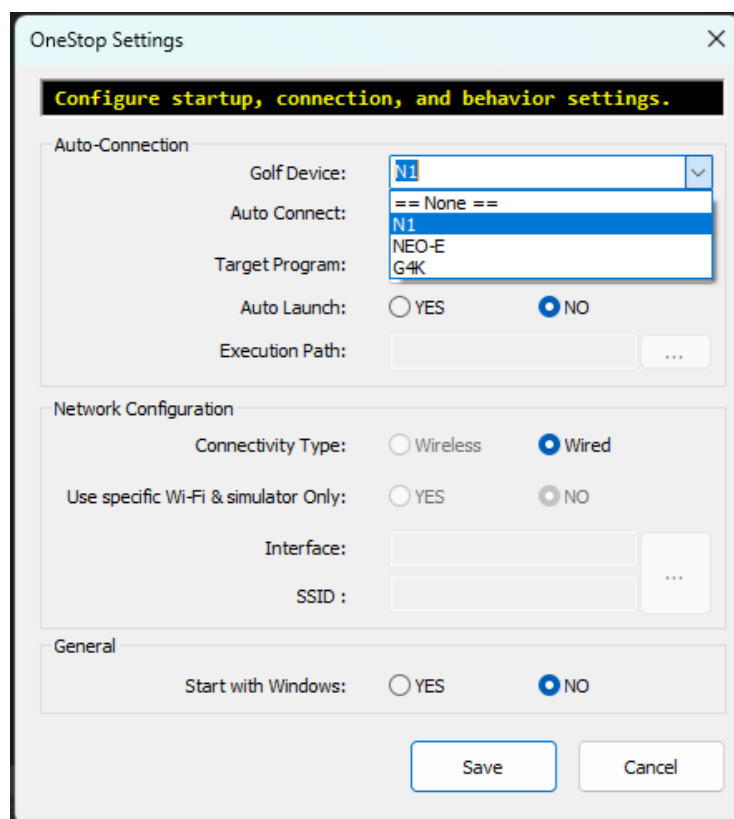
All program features can be accessed through the 3 tabs in the menu bar: File, Simulator, and Settings.



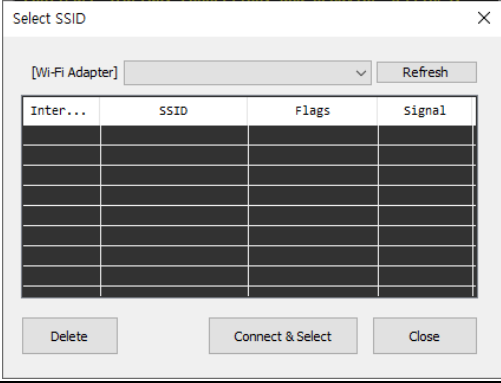
No.	Item	Description
1	File	Includes Open/Export Logs and Exit. • Open Logs: Opens the log folder saved in the PC. • Export Logs: Compresses the log to be saved and allows the user to choose a save folder. • Save Images: Saves the images acquired by N1 and G4K. • Exit: Ends the program.
2	Simulator	Includes Shot Monitor and Game Type. • For Game Type, a user can select one among the Golf, Park Golf, and SNAG. ▪ Golf: General golf game (NEO-E can only be connected in Golf mode.) ▪ Park Golf: Golf game for kids ▪ SNAG: Golf game for outdoor use
3	Sensor	Includes Device Select, Information, Calibration, Update, and Device Reset. • Device Select: Selects the sensor to connect. • Information: Displays the current information of the device. • Calibration: Performs the calibration for N1 or G4K. ▪ Perform calibration by using a checkerboard or a legacy board. ▪ The horizon of the calibration board should be adjusted using a spirit level.

	▪ When selecting the User Separate Ready Zone in the Set Ready Zone screen, a user can separately configure Tee Zone and Ready Zone. • Update: Updates NEO to the latest version. • Device Reset: Reboots the N1 or G4K device.
4 Settings	Includes OneStop Settings and Options. OneStop Settings: Consists of Auto-Connection, Network Configuration, and General. ▪ Detailed information is provided in <3.1.1 Settings – OneStop Settings>. Options: Consists of General and Network Configuration. Detailed information is provided in <3.1.2 Settings – Options>.

3.2.1 Settings – OneStop Settings



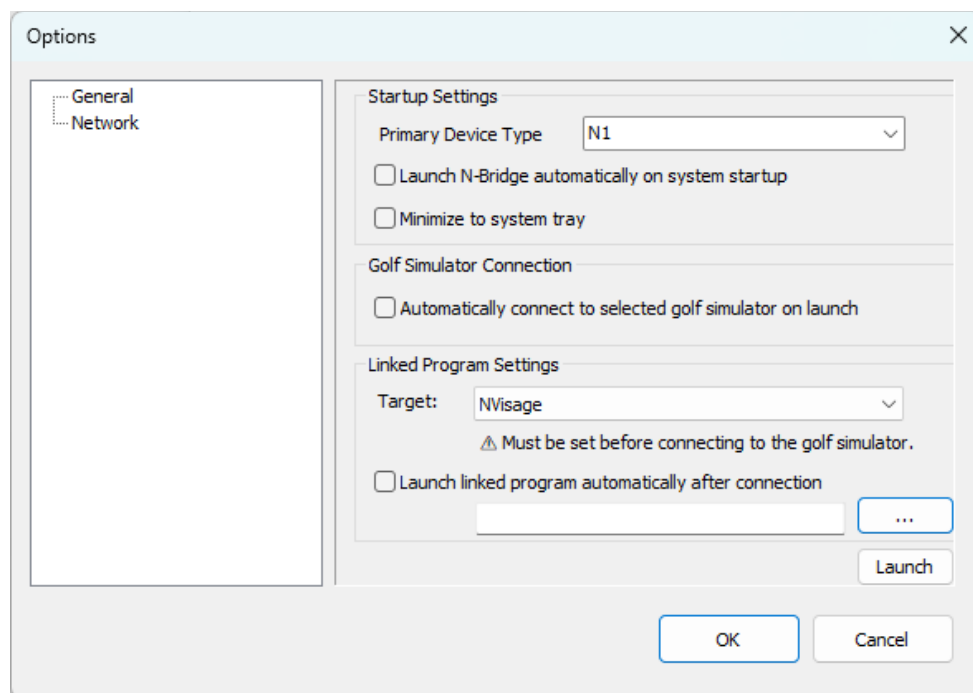
Category	Subcategory	Description
Auto-Connection	Golf Device	Selects the simulator you want to automatically connect.
	Auto Connect	• Yes: Automatically connects the selected golf simulator to the N-Bridge program. • No: Disables auto connection between the selected golf simulator and the program.
	Target Program	Selects the target program for automatic connection. ▪ If a specific program is selected, no other target programs can be launched—even when "Auto Launch" is set to No.
	Auto Launch	Decides whether to execute the target program when opening the N-Bridge.

Execution Path	Sets the path of the program selected in the Target Program. If the path is not selected, the target program does not run even if Auto Launch is set to YES.
Connectivity Type	Selects whether to use a wired or wireless connection. Yes: Specifies the Wi-Fi to connect to automatically. No: Selects directly from the PC's Wi-Fi settings. You can select, connect, and delete the SSID only when wirelessly connected.
Network Configuration	Use specific Wi-Fi & simulator Only 
General	Start with Windows Sets whether N-Bridge launches automatically when the PC is restarted.
Save	After clicking the Save button, the program closes automatically. To apply the changes, the user must restart the program.

3.2.2 Settings – Options

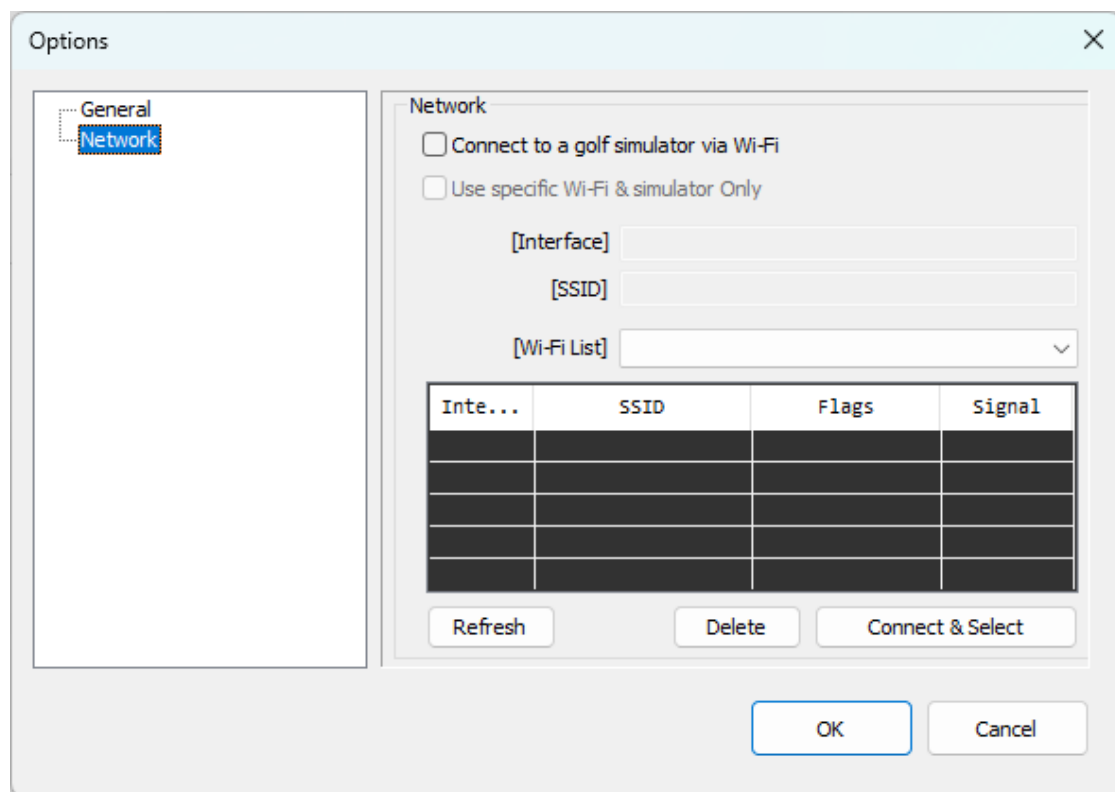
The Options window is classified into 2 categories: General and Network.

General



Category	Subcategory	Description
General	Startup Settings	Primary Device Type Selects the device type to connect when no device is connected or multiple devices are detected during scanning. If multiple devices are connected and None is selected, a selection popup will appear.
		Launch Bridge automatically on system startup Enables/disables auto execution of the N-Bridge when rebooting the system.
	Golf Simulator Connection	Minimize to system tray Decides whether to minimize to system tray.
		Decides whether to automatically connect to the golf simulator when N-Bridge is turned on.
Linked Program Settings		Target A user can select the program they want to connect to the simulator.
		Launch Runs the selected .exe file to verify that it launches correctly.

Network



Category	Subcategory	Description
Network	Network	Selects whether to use a wireless network connection.

4 MURLIE



Program Execution
Shot Analysis Mode
Third-party Play (Available only on Windows)

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4.1 Program Execution

MURLIE is a Driving Range program equipped with 4 modes: Shot Analysis Mode, Third-party Play, Putting Mode, and Course Play. The following are the steps to run the MURLIE program:



- To execute MURLIE on Windows, N-Bridge should be pre-connected to the device.
- Make sure the device is not in sleep mode to successfully connect to MURLIE.
- All the platforms, such as Windows, and MacOS, share the same UI, but some features, including **Swing Cam**, **Device Impact Spin Video**, and **Sub-Window**, are available only on Windows.

Mobile Connection

For Android or iOS operating system, the program can be executed without N-Bridge. Follow the below order to complete mobile connection:

- 1 Download the MURLIE application on your mobile device and enable Wi-Fi on the golf device. The password is PASSWORD.
- 2 On the mobile device, select the Wi-Fi starting with the golf device name. It may take about 1 minute to establish a connection.
- 3 Launch the MURLIE application.



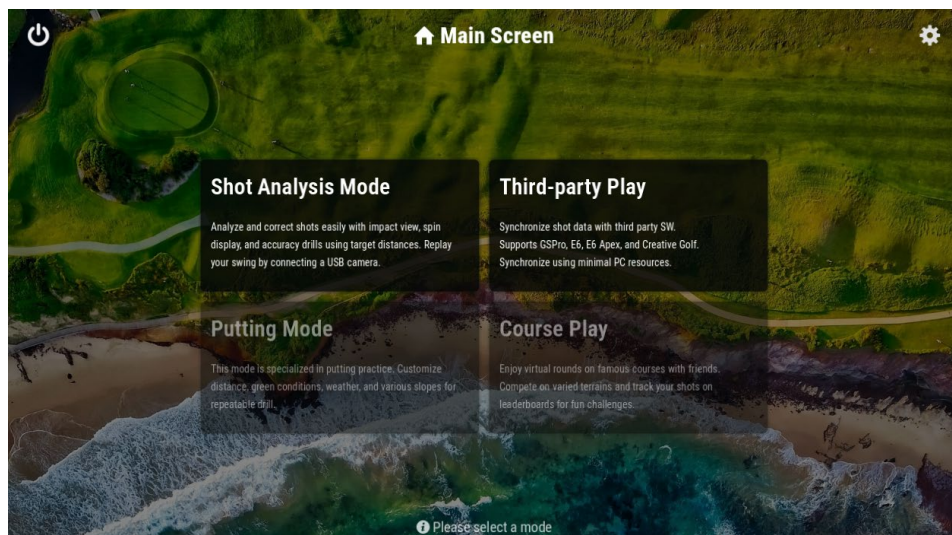
- Since the mobile version calculates shot data on the golf device, the shot response may be slower.
- The mobile version does not support Impact and Spin videos.

4.1.1 Main Screen

A user can select the desired mode by referring to the following:

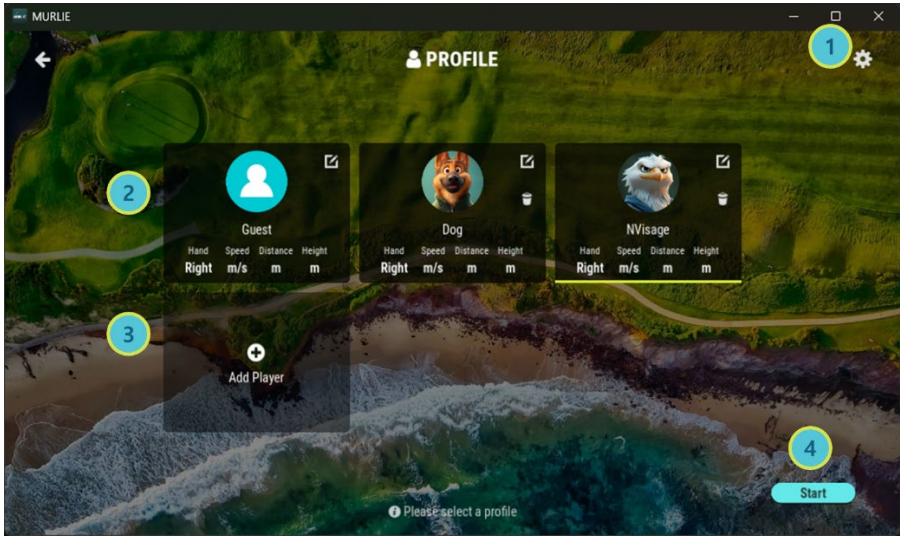


- The **Profile** and **Shot Analysis** tabs are deactivated on the Main Screen.



Name	Description
Shot Analysis Mode	Analyzes and compares shots by session External game integration is also available in Shot Analysis mode, allowing you to run the game and perform analysis simultaneously on two or more monitors.
Third-party Play	Reduces MURLIE's PC resource usage when shot data is utilized solely by third-party software or when only a single display is in use. - It is automatically disconnected when closing the window. - Handedness setting on the device is configured according to the values set in the external game. - If MURLIE needs to be reconnected to GSPro, GSPro must be restarted.
Putting Mode	Under development.
Course Play	Under development.

4.1.2 Profile



No.	Name	Description
①	Settings	Users can set units and handedness according to their preference.
②	Saved Profile	- When MURLIE is restarted, the last selected profile is automatically selected. - All records of the guest profile are deleted when exiting Shot Analysis mode.
③	Add Profile	Up to 5 profiles can be created.
④	Start	Enters the selected mode.



- You can also edit the profile options in the Settings pop-up.

Add Profile Screen Configuration



No.	Name	Description
①	Nickname	Enter the nickname up to 16 characters long.
②	Select Image	Select a profile image.
③	Set User Type	Choose your dominant hand and select the preferred speed or distance unit. • The device settings change according to the profile's grip orientation.
④	Apply	Apply the changes.

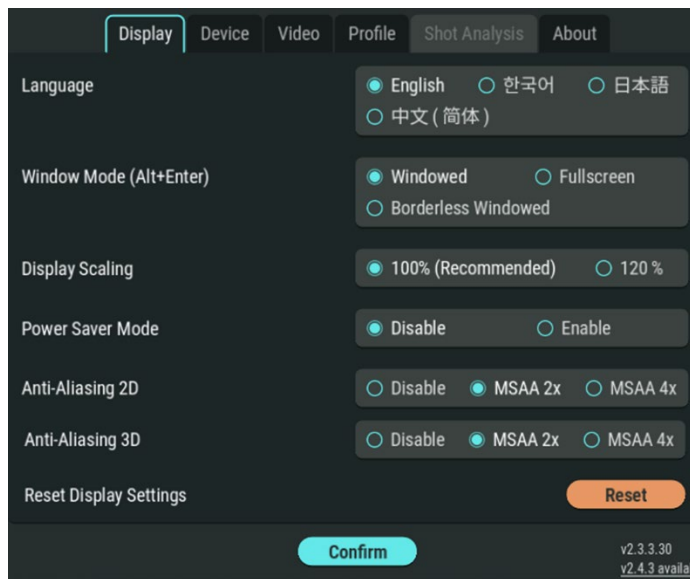
4.1.3 Settings

The settings icon can be found in the Main Screen and Profile. MURLIE options can be configured through 6 tabs in the Settings pop-up window: Display, Device, Video, Profile, Shot Analysis, and About.

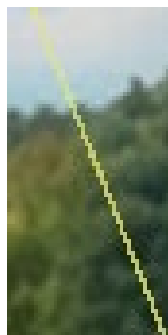


- The **Shot Analysis** tab is activated only on the Shot Analysis screen.

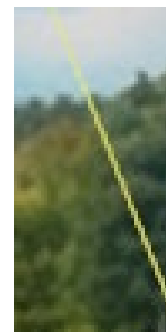
Display



- **Borderless Windowed** mode allows faster program switching with Alt+Tab, while **Fullscreen** mode switches more slowly but offers smoother performance by dedicating system resources.
- When enabling **Power Saver Mode**, UI animations may run slowly.
- As the multiple of **Anti-Aliasing 3D** increases, the graph lines are rendered smoothly, but GPU usage increases.

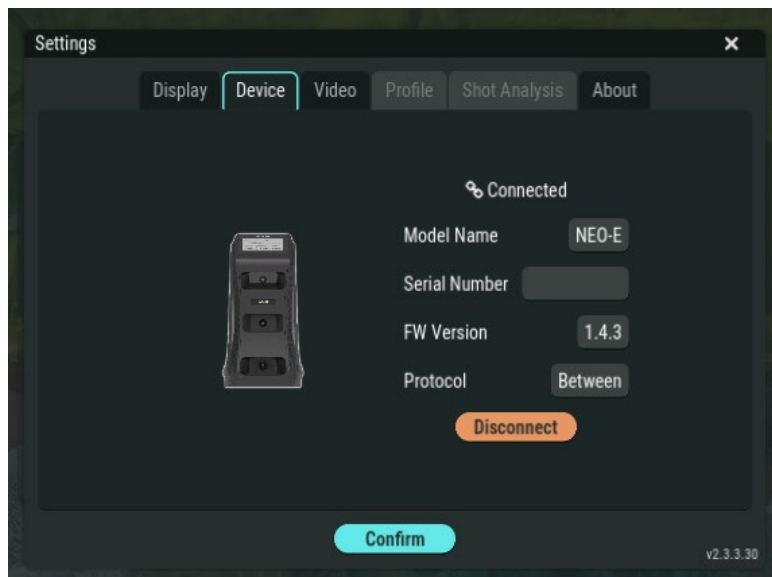


When Anti-Aliasing 3D is deactivated



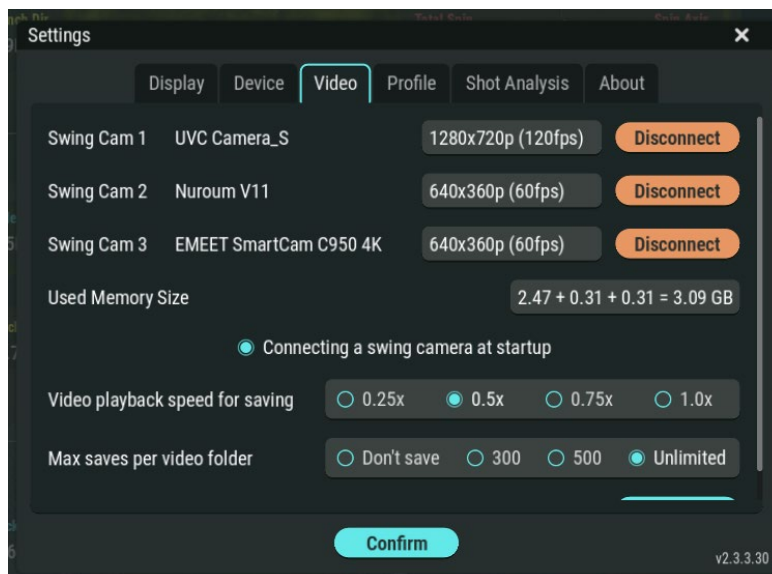
When Anti-Aliasing 3D MSAA 2x is activated

Device



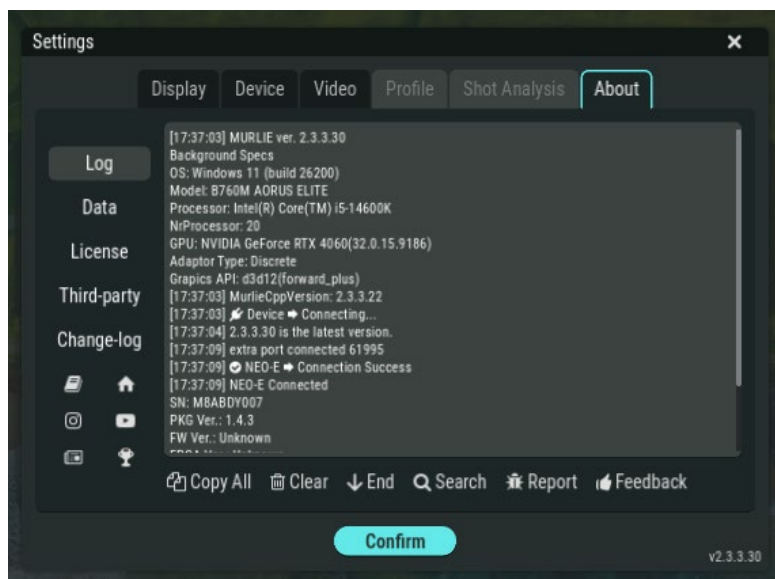
- There are 2 types of **Protocol**: Between and REO
 - Between: Used when connected via N-Bridge
 - REO: Used when directly connected to the device (mobile)

Video



- **UVC Camera_S** is the device name of the NVISAGE camera.
- SwingCam and device video functions are currently available only on Windows.
- Both Swing and device videos are saved in compressed (encoded) format, keeping file sizes small.
- To change the camera settings, reconnection is required.
- Depending on the camera settings, MURLIE significantly increases PC resource usage.
 - Setting the resolution above 1280×720 greatly increases PC usage.
 - It is recommended to increase FPS rather than resolution when adjusting settings.
- It takes about 5 seconds to complete connection. If "Auto-connect Swing Camera on startup" is enabled, the connected camera will automatically reconnect with the same settings when exiting the application.
- If a video imported via Shot Replay has resolution or FPS that doesn't match the current camera settings, the import will fail with an "Import Failed: Unmatched Params" notification.

About



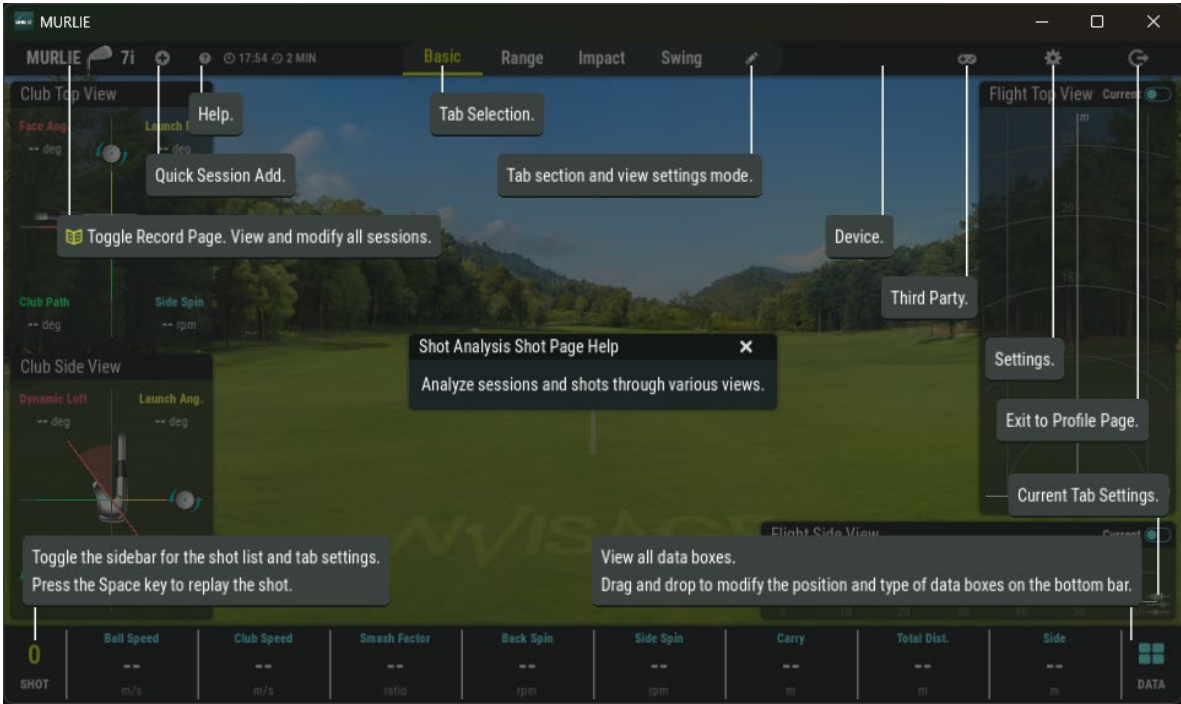
Name	Description
Log	All logs are displayed.
Data	Bugs or feedback can be submitted via Google form.
License	Opens or resets the file location.
Third Party	Licenses of used open-source software are viewable.
Change-log	The change history is viewable.

4.2 Shot Analysis Mode

The Shot Analysis Mode is composed of 4 tabs: Basic, Range, Impact, and Swing. When entering the Shot Analysis mode, each feature and its brief description are shown as in the figure below:



- **Shot Analysis Subwindow** and **Shot Analysis with Third-Party Game** in Settings are only available on Windows.
- **Third Party** icon is viewable only on Windows.



The screenshot shows the MURLIE Shot Analysis Mode interface. Callouts include: 'Help.' (top left), 'Quick Session Add.' (top left), 'Tab Selection.' (top center), 'Tab section and view settings mode.' (top center), 'Device.' (top right), 'Third Party.' (top right), 'Settings.' (top right), 'Exit to Profile Page.' (top right), 'Current Tab Settings.' (top right), 'Shot Analysis Shot Page Help' (center), 'Analyze sessions and shots through various views.' (center), 'Toggle the sidebar for the shot list and tab settings. Press the Space key to replay the shot.' (bottom left), 'View all data boxes. Drag and drop to modify the position and type of data boxes on the bottom bar.' (bottom center), and 'Toggle Record Page. View and modify all sessions.' (bottom left).

Shortcuts

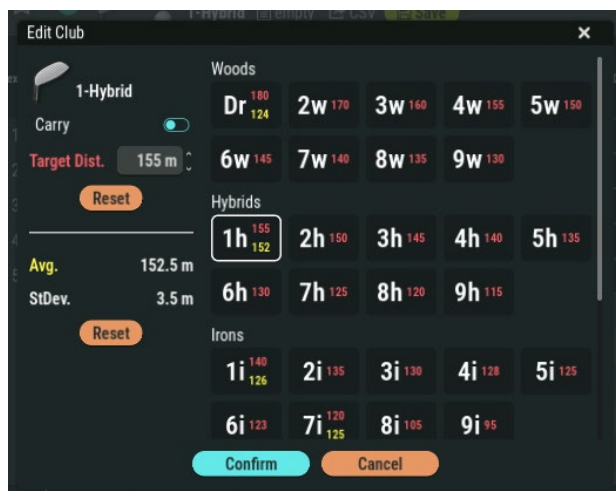
Key	Description
Alt+Enter	Fullscreen (borderless) / windowed mode for the focused window
Esc	Go back / Close popup
Space	Current shot replay / Load video
`	Open Records page
1	Open Default tab
2	Open Distance tab
3	Open Impact tab
4	Open Swing tab



- To see the brief description on each feature, click the Help icon at the top left.

4.2.1 Preset Configuration

Adding a Session



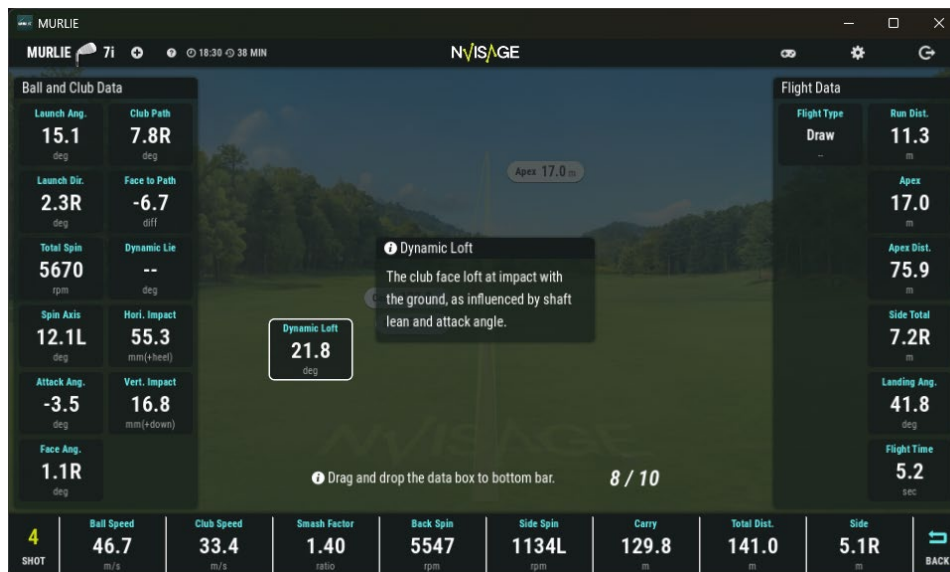
1 Add a session with 2 methods:

- Click the + button next to the Toggle Record Page icon at the top-left of the screen.
- Enter the Toggle Record Page and click the >> button. Then, you will see the + button in blue at the left bottom.

2 Review the following information and select your desired club.

- Target Distance is indicated in red while the average distance is indicated in yellow.
 - The average distance is displayed when you have hit 5 or more shots with a club.
- Distance standard can be either Carry or Total Distance.
 - In Carry Mode, you can set target distances based on carry, and the average distance will also change according to the selected standard (Carry/Total).
 - You can customize the target distances for Carry and Total Distance separately for each club.
- Please refer to the NEO-E or N1 User Manual for instructions on how to attach stickers to the club.

Configuring Bottom Data Box



To select which data to display at the bottom bar of the screen:

- 1 Click the DATA button () at the bottom-right corner.
- 2 Drag and drop the data you want to display from the Ball and Club Data and Flight Data boxes to the bar at the bottom of the screen. Up to 10 data can be added into the bar. Conversely, you can move unwanted data from the bottom bar back to the Ball and Club Data and Flight Data boxes.
- 3 To apply changes, click the Back button.

Category	Terminology	Description	Unit	Note
Flight Data	Carry Distance	The distance between the ball's starting point and the first point where the ball lands on the ground.	m, yards	
	Total Distance	The distance between the ball's starting point and the point where the ball stops.	m, yards	
	Run Distance	The distance between the first point where the ball lands and the point where the ball stops.	m, yards	
	Side Distance	The carry point where the ball lands to the left or right of the target line.	m, yards	+ : Right - : Left
	Side Total	The point where the ball stops to the left or right of the target line.	m, yards	+ : Right - : Left
	Apex	The maximum height of the ball's trajectory.	m, ft	
	Apex Distance	The distance on the ground when the ball reaches its maximum height.	m, yards	
	Flight Time	The flight time until the ball first hits the ground.	sec	
	Flight Type	The flight path of the ball.	-	
	Landing Angle	The angle of incidence of the ball when it first hits the ground.	deg	

Ball and Club Data	Ball Speed	The ball speed immediately after impact.	km/h, m/s, mph	
	Launch Angle	The launch angle (angle at which the ball leaves the ground).	deg	
	Launch Direction	The horizontal angle of the ball relative to the target line (measured immediately after the ball leaves the clubface).	deg	
	Total Spin (Spin Rate)	The spin amount immediately after impact (around the spin axis).	rpm	
	Spin Axis	The angle between the ball's rotation axis and the horizontal plane.	deg	
	Side Spin	The side spin of the ball.	rpm	
	Back Spin	The backspin of the ball.	rpm	
	Smash Factor	Ball speed / Head speed Accuracy of hitting the sweet spot with the ball.	-	
	Club Path	The direction of the clubhead at the moment of impact.	deg	+ : Right - : Left
	Club Speed	The clubhead's speed just before impact.	km/h, m/s, mph	
	Attack Angle	The upward/downward movement direction of the clubhead.	deg	+ : Upward - : Downward
	Face Angle	The direction the clubface is pointing relative to the target line at impact.	deg	+ : Right - : Left
	Dynamic Loft	The vertical angle of the clubface at the point of contact with the ball.	deg	
	Dynamic Lie	The horizontal angle of the clubface at the point of contact with the ball.		
	Face to Path	The difference between the face angle and the club path.	deg	
	Horizontal Impact	The exact point where the ball contacts the clubface in the horizontal direction at impact. The Club Sticker is measured as the origin, and the Heel direction is expressed as a positive number.	-	
	Vertical Impact	The exact point where the ball contacts the clubface in the vertical direction at impact. The Club Sticker is measured as the origin, and the ground direction is expressed as a positive number.		



- To restore the default settings, go to Settings→Shot Analysis tab and click the Reset button next to Bottom Data Box Settings.

Editing the Layout of Each Tab



To edit the layout of each tab:

- 1 Click the blue pencil icon in the Current Tab Settings or the pencil icon at the top right.
- 2 Users can arrange views and adjust the size of each view under the following conditions:
 - Up to 8 of the 14 available views can be arranged in the layout.
 - Size adjustment is performed by setting the ratio between two sections. To vertically or horizontally extend one view to full size, return to the Shot Analysis window and drag the desired view to the size you want.
 - Assigned areas appear dark with a red icon button, while unassigned areas appear transparent with a blue icon button.
 - Clicking the red button removes the assigned view. Clicking the blue button opens a popup to select a view.
 - The same view cannot be assigned multiple times within a tab. If the same view is selected again, it will be moved from its previous location to the newly selected location.

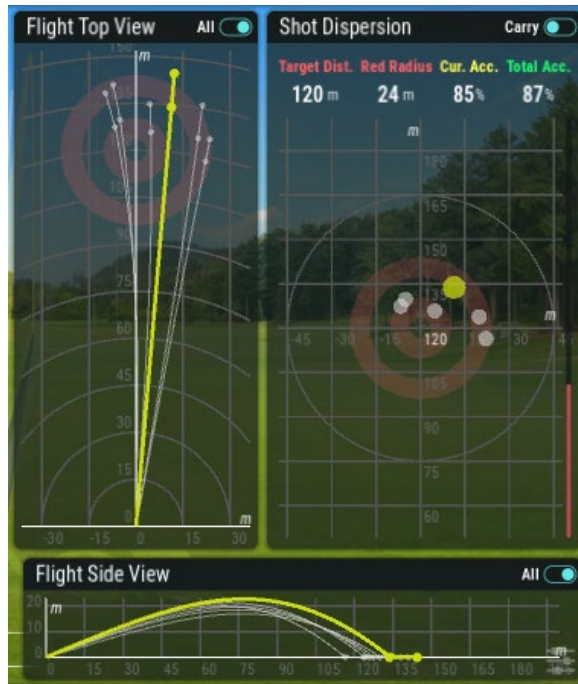
Club and Ball Views



- If the device supports impact position analysis, the impact location is displayed in the Club Face View, and the origin in the Top and Side views shifts according to the impact position.
- In the Club Front View, the impact position of the current shot is highlighted from yellow to red. A more yellow color indicates a strike closer to the ideal impact point.
- The club image is mirrored according to the left/right-handed setting defined in the profile.
- Using the toggle button located at the top-left of the Ball Rear View, you can choose to display spin data either as total spin and spin axis or separated into backspin and sidespin.

- The red bar indicates the spin axis, and the yellow arrow reflects the ball's launch direction, angle, and speed.
- Ball flight is predicted based on the spin axis and launch direction.
- The ball rotation shown in the Club Top View, Club Face View, and Ball Rear View moves proportionally to the actual spin rate.

Flight View and Shot Dispersion



- Shot Dispersion displays both the overall accuracy of all shots in the session and the accuracy of the current shot, based on the target distance set by the user for each club.
- The red radius is proportional to the target distance.
- Using the toggle button at the top-right of the Flight Views, you can choose to display only the current shot or all shots in the session.
- Using the button at the top-right of the Shot Dispersion panel, you can select whether accuracy is calculated based on carry distance (landing position) or total distance (including roll).
- Drag the graph of Shot Group Accuracy up or down, or use the mouse wheel to quickly adjust the target distance for the current club.
 - Alternatively, the target distance can be changed via the Club Change or Add Session pop-up.
- The Session/Shot button is synchronized within the tab, and its setting is saved.
- The Carry/Total button is synchronized across the profile, and its setting is saved.

Composite Metrics and Distance Table

Composite Metrics			Dist. Table			Carry ☒
Ball Speed	Club Speed	Smash Factor		Carry	Side	Apex
45.5	33.8	= 1.35	now	134.3	11.3R	22.7
m/s	m/s	ratio	max	134.3	22.2R	22.7
Face Ang.	Club Path	Face to Path	min	118.5	4.8R	17.0
3.9R	- 6.1R	= -2.2	avg	126.9	11.6R	19.9
deg	deg	diff	stdev	5.2	7.6	2.0

- The statistics in the Distance Table reflect values for the current session.
- Using the Carry/Total toggle button at the top-right of the Distance Table, you can switch between viewing carry and side distances or total distance (including roll) and side distances.
- The Carry/Total toggle is synchronized with the buttons in the Side Shot List, Club pop-up, and Shot Dispersion view.

Impact and Ball Videos

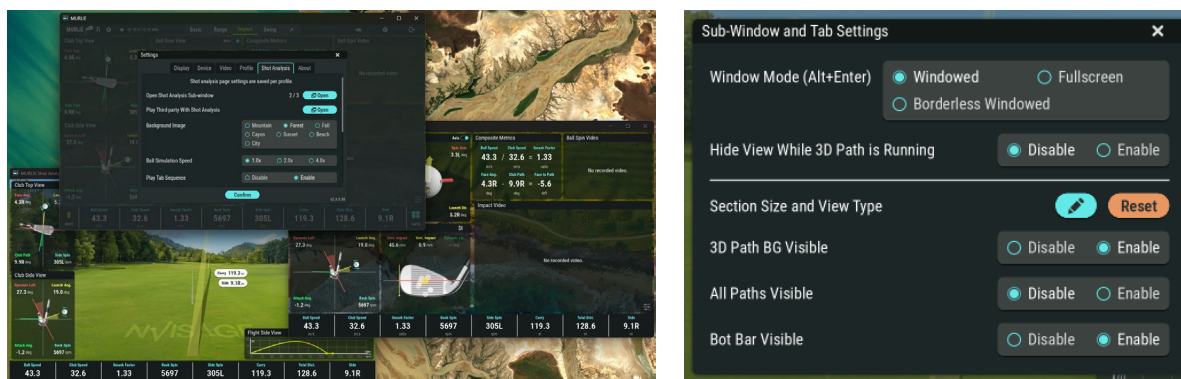


- The ball spin video is displayed from a different perspective than the Ball Rear View.
- Floor-mounted devices, such as NEO-E, show the side view, whereas ceiling-mounted devices, like N1, show the top view.



- To restore the default settings, go to Current Tab Settings and click the Reset button.

Setting Sub-Window (Available only on Windows)



- This feature is useful when using multiple displays to view several views simultaneously.
- To activate the feature, go to Settings → Shot Analysis Tab and click the Open button next to the Open Shot Analysis Sub-window.
- Sub-windows can also be toggled between full-screen and windowed mode using the Alt+Enter shortcut.
- On the sub-windows, you can choose whether to display the bottom data box synchronized with the main window. However, configuring the data box is available only on the main windows.

4.2.2 Records and Analysis

The screenshot shows the 'Records and Analysis' section in the MURLIE software. It displays a table of shot data for a 1-Hybrid club. The table has columns for Index, Side Spin, Club Speed, Smash Factor, Attack Ang., Face Ang., Club Path, Face to Path, Dynamic Loft, Dynamic Lie, and Hori. Impact. The table also shows an average and standard deviation for the data.

Index	Side Spin	Club Speed	Smash Factor	Attack Ang.	Face Ang.	Club Path	Face to Path	Dynamic Loft	Dynamic Lie	Hori. Impact
	rpm	m/s	ratio	deg	deg	deg	diff	deg	deg	mm(+heel)
1	1474L	37.2	1.41	1.1	1.6R	7.8R	-6.2	17.5	--	34.2
2	679L	38.2	1.35	-0.4	7.1R	6.8R	0.3	12.2	--	22.5
3	593L	38.1	1.36	-1.2	3.1R	7.2R	-4.1	14.0	--	30.2
4	228R	38.2	1.39	-1.8	6.8R	5.2R	1.6	13.2	--	31.7
5	382R	37.9	1.39	-2.5	8.8R	6.1R	2.7	13.1	--	35.7
Avg.	427L	37.9	1.38	-1.0	5.5R	6.6R	-1.1	14.0	--	30.9
StdDev.	753	0.4	0.03	1.4	3.0	1.0	3.8	2.1	--	5

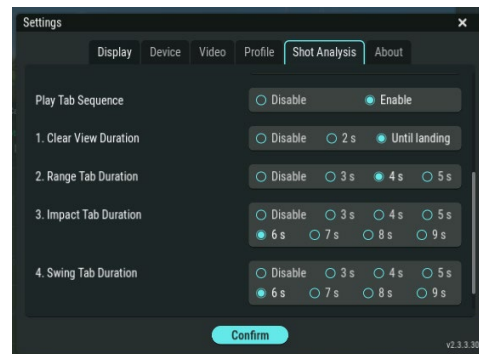
1 Click the Toggle Record Page (A) or the session list (B) to see the records and Analysis in detail.



2 Review the following information and edit or save the session.

- Saving the session is available only for user-created profiles, excluding the Guest profile.
- Use the yellow download button below the profile to load the session saved to that profile. After loading, the button will disappear, and you can view the previously saved session and its shots.
- For saved sessions, the Save button next to the CSV button will be disabled (grayed out), and a save icon will appear in the session list on the left.
- You can add a session by tapping the "+" icon next to the MURLIE button at the top-left, or the blue "+" button at the bottom-left of the Records page.
- When adding a session, if the current session contains no shots, a new session will not be created. Instead, the club type of the current session will be changed.
- If there is only one session, the Delete Session button at the bottom-left will be hidden.
- Each session can be distinguished by color and star mark.
- The CSV file is saved in English, regardless of the app's language settings.
- For numeric data, L/R indicators are converted to negative/positive values in the exported file.

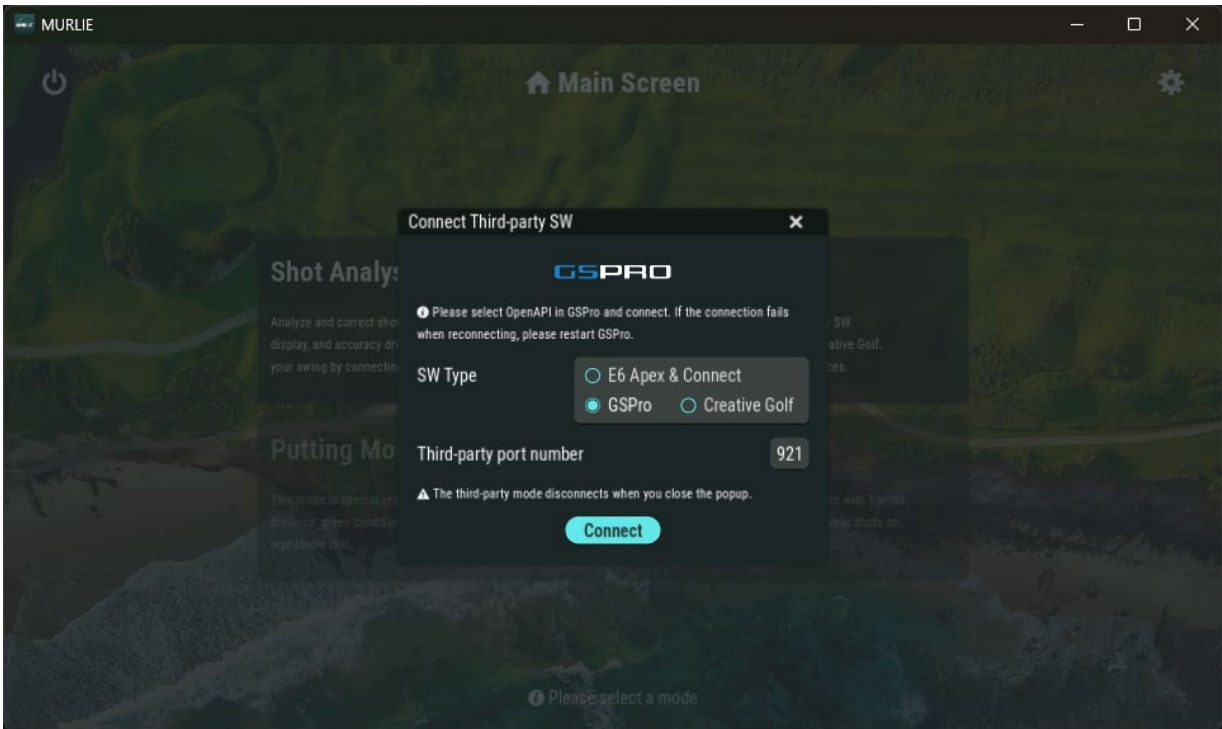
Tab Sequence Mode



Tab sequence mode is useful for viewing various data from the hitting area without using a mouse in one display. When the **Tab Sequence** function is enabled in the Shot Analysis settings, the tabs will automatically switch after each shot according to the configured time settings.

- The **Default** tab is not included in the tab sequence. You can sequentially view the **Clear View**, **Range**, **Impact**, and **Swing** tabs.
- During the sequence, you can cancel it by pressing the **X** button on the right side.
- The **Clear View** tab includes a special option that allows you to display the trajectory until the ball lands. In the case of a putter, even if the "until landing" option is selected, the screen will be displayed for 2 seconds. Additionally, the tab settings for **Clear View** follow the settings of the Default tab.

4.3 Third-party Play (Available only on Windows)



This is a mode that minimizes MURLIE’s PC resource usage when the device’s shot data is used only by a third party or when only a single display is in use. The connection is automatically disconnected when the window is closed. The left/right-handed setting is applied to the device based on the value configured in the external game.



- If MURLIE needs to be reconnected to GSPRO, GSPRO must be restarted.

5 Troubleshooting

NVISAGE
TECH
NOLO
GIES

5.1 Troubleshooting

1 Windows – No Response to Click or Touch Input

Conditions

- When switching between programs (e.g., using **Alt + Tab**) in borderless window mode, input may not work after returning to MURLIE.
- When touching a text input UI, the virtual keyboard opens. After returning to MURLIE, input may no longer function.

Recommended Action

- Press **Alt + Enter** to switch to windowed mode, then switch back to full-screen mode. This should restore normal operation.
- In a touch environment, press and hold the screen for 2 seconds to regain focus.

2 MURLIE Does Not Launch or Malfunctions After Downgrading

If you downgrade to a lower version of MURLIE, the application may fail to launch or behave abnormally.

Recommended Action

Delete all the files stored in C:\Users\UserName\AppData\Roaming\Nvisage\MURLIE and restart the program.

3 Camera Issues

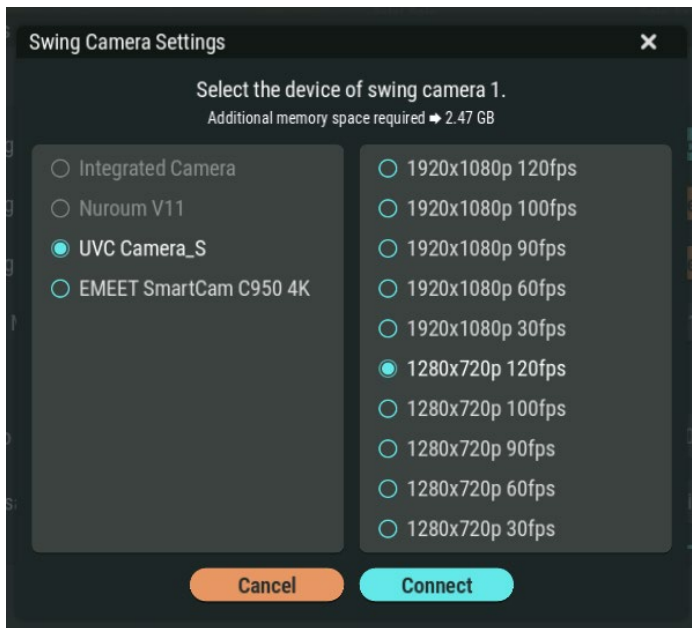
Conditions

- The connection is disconnected with a **“Real Failed”** notification after starting the connection or during operation.
- The video appears to stutter or drop frames.
- The video appears corrupted or distorted.
- A black screen is displayed.
- After recording, the following message appears:
“Frames Dropped. Because CPU is busy. Please reconnect using the low camera option.”

Recommended Action

- Make sure the USB camera is connected directly to a rear USB port on the PC, not through a USB hub.
- Lower the camera settings/options and reconnect.
- Check whether another application is currently using the USB camera.
- Consider upgrading your PC hardware if performance is insufficient.
- If multiple cameras of the same model are connected, the driver may not support multiple identical devices, which can cause disconnections.
- USB serial communication is vulnerable to static electricity; connections may drop if static discharge occurs.

4 Frame Dropping Issue with the NVISAGE SwingCam Model



The device name of the NVISAGE camera is **UVC Camera_S**. You should repeat the steps below and check whether 120 fps runs smoothly in Live Mode:

- Reconnect the USB cable.
- Change the camera options and reconnect multiple times.
- Restart MURLIE.
- Restart the PC.
- Verify that the camera operates normally in the Windows Camera app.

