fireflyGO

fireflyGO
user guide



MAN-001 Ver 2.0

sptlabtech

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1 Specifications

1.1 Key concepts

fireflyGO is a benchtop liquid handling instrument designed to support start-to-finish automation of next-generation sequencing (NGS) library preparation protocols. The system has been qualified for use with selected NGS kits.

fireflyGO is equipped with a 24-channel air-displacement pipette head, enabling accurate and reproducible liquid transfer. A two-tier moving deck architecture, complemented by a basement-level plate thermal module and an Inheco® On Deck Thermal Cycler (ODTC), allows temperature-controlled steps to be performed directly on the instrument. This integrated deck and thermal design enables execution of multiple protocol steps with minimal user intervention, improving workflow efficiency, and reducing hands-on time.

fireflyGO is operated through the system software accessed via an integrated LCD touchscreen interface, which provides intuitive, guided instrument setup, step by step workflow execution, and on-screen prompts to enhance ease of use and help reduce operator error.



1.2 Safety

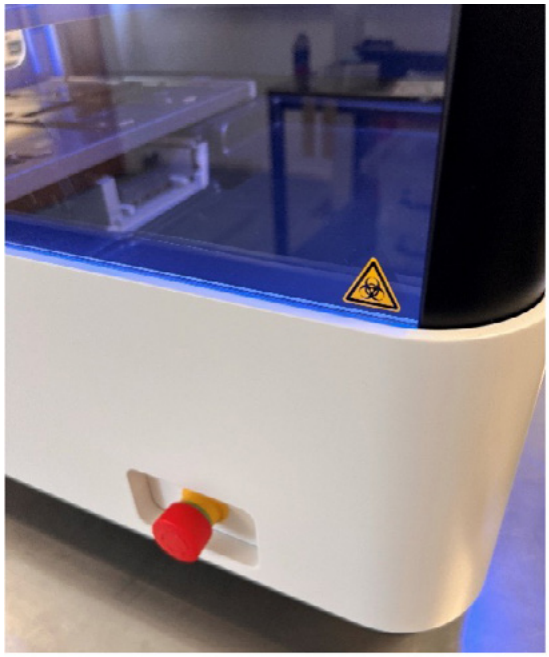
Read these safety instructions before operating fireflyGO.

- fireflyGO is designed and engineered with your safety in mind. If you use fireflyGO in a manner not specified in this manual, the protection provided may be impaired.
- Do not try to operate the instrument or carry out maintenance tasks unless you have been trained to do so.
- Do not operate fireflyGO if the instrument is visibly damaged unless a reliance service engineer has confirmed that it is safe to do so.

1.2.1 Hazard summary

DANGER: AUTOMATICALLY CONTROLLED MOVING MACHINERY
DANGER: HOT SURFACES

1.2.2 Warning symbols on fireflyGO

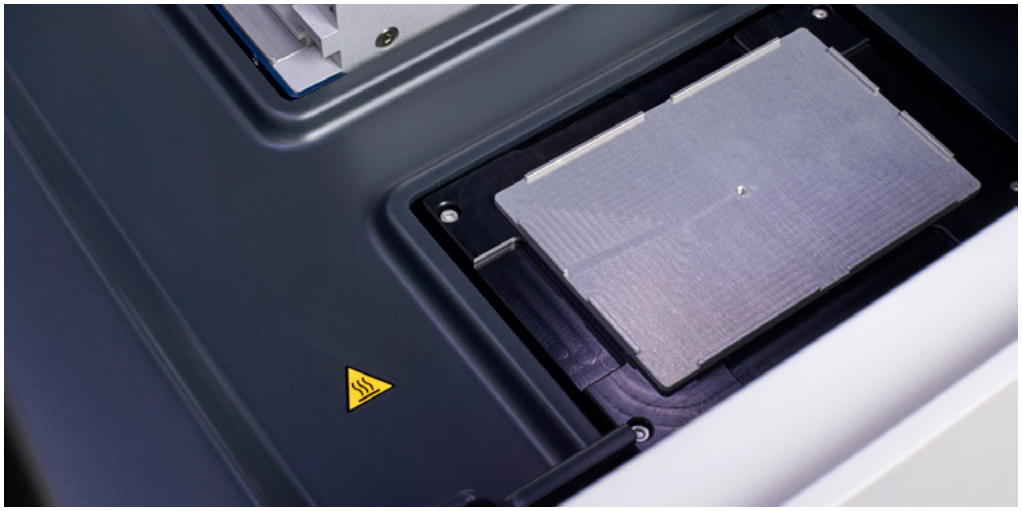


The fireflyGO enclosure does not provide protection from biohazards or other hazardous substances.

You must carry out risk assessments for the reagents you plan to use and take appropriate safety measures.

Take care when accessing the basement of the instrument if the thermal module has been used for heating, as it will remain hot for several minutes.

Take notice of the warning triangles alerting you to parts which may be hot.

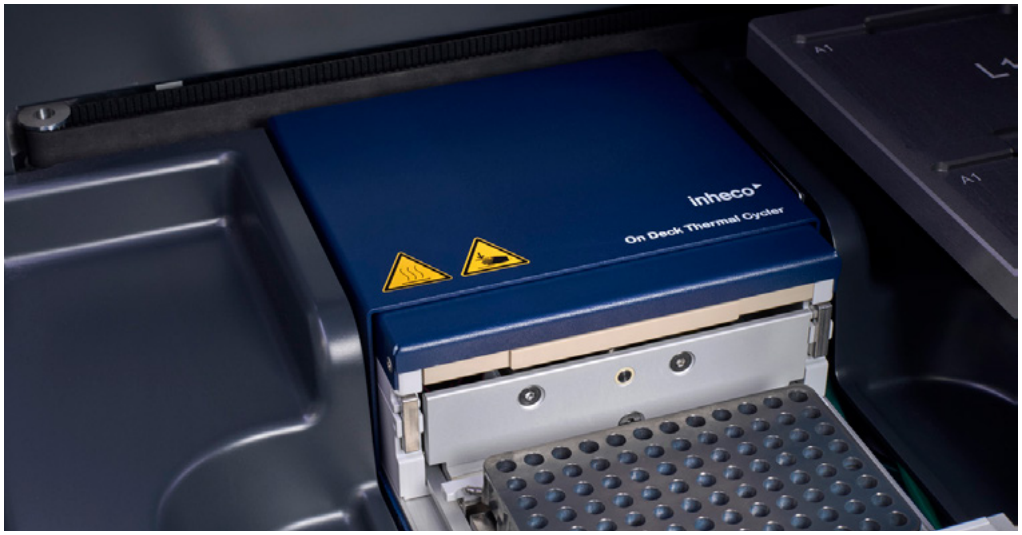


The plate thermal module is shown above.

If the thermal module has been used for cooling, do not access it immediately. Wait several minutes before accessing; this allows it to warm and avoids the possibility of cold burns.

Handle thermal blocks with care as residual heat/cold will take time to stabilize back to safe temperatures after use.

1.2.2i Warning symbols on the ODTC



Take notice of the Inheco ODTC warning symbols for hot surfaces and for crushing hazards.

Keep hands and other objects clear of the ODTC while the lid is opening or closing.

Do not put your hand in the unit until it has returned to a safe temperature, if it has been used for heating.

Following extended cooling operations, condensation may form within the ODTC. Inspect the ODTC and remove any visible condensation before further use.

The ODTC is independently powered so switching off fireflyGO does not stop the ODTC operating.

1.2.3 Accessing fireflyGO

To access fireflyGO:

- If you are loading materials, select 'Get Access' on relevant deck loading screens. The software will control moving the pipette head and decks to positions which give you easy access to the area you need, then stop the instrument.
- If you reach a 'user interaction' step in a protocol, once the instructions are shown on screen, you can open the instrument door. The pipette head and decks may be moved to safe positions before the door is opened but this depends on the protocol design. Once the instrument door is opened, the pipette head and decks can be moved freely and all labware and consumables can be accessed.
- If you need to access fireflyGO immediately, slide up the door. The door is interlocked so fireflyGO stops as soon as it is opened.
- Opening the door does not stop the ODTC operating.

To access fireflyGO when it is unpowered, you can open the instrument door and move the decks and pipette head manually.

You can move the pipette head back and forwards but not up or down after triggering the door interlock. The decks are always free for the user to slide when the door is open.

1.2.4 Stopping fireflyGO

1.2.4i Stop

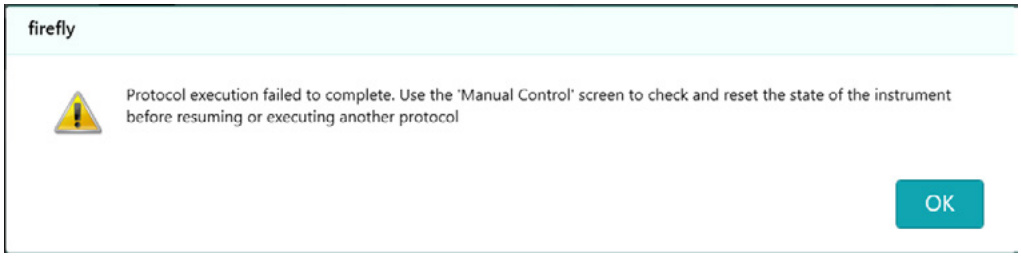
Use the Pause or Stop buttons if you need to stop fireflyGO while running a protocol outside of a user interaction step.



Pause enables you to continue running your protocol, by pressing the button again.
Stop ends protocol execution as well as stopping the instrument.

fireflyGO will not stop immediately you click Stop or Pause, it will finish the current protocol step first.

If you use Stop, fireflyGO will remind you to ***check and reset*** your instrument before further use.



1.2.4ii Emergency stop

fireflyGO has an e-stop button to stop the instrument immediately, if this would be safer than opening the door in an emergency.



DO NOT USE THE E-STOP IF YOU WANT TO STOP THE INSTRUMENT WHEN THERE IS NO DANGER. AS FIREFLYGO WILL STOP INSTANTLY, YOU MAY DAMAGE THE INSTRUMENT OR WASTE YOUR REAGENTS.

You can open the door, e.g. to remove materials, after you have used the e-stop.

You can move the pipette head back and forwards but not up or down after triggering the e-stop.

After you have used the emergency stop button, twist it clockwise to unlock it before you can restart.



DO NOT DO THIS UNTIL YOU ARE SURE THAT FIREFLYGO IS IN A SAFE CONDITION.

fireflyGO will power up when you reset the e-stop, but you will need to manually restart your protocol.

When fireflyGO is stopped, the ODTC will continue thermal operation as it is independently powered. Use *Manual Control* to stop the incubation program.

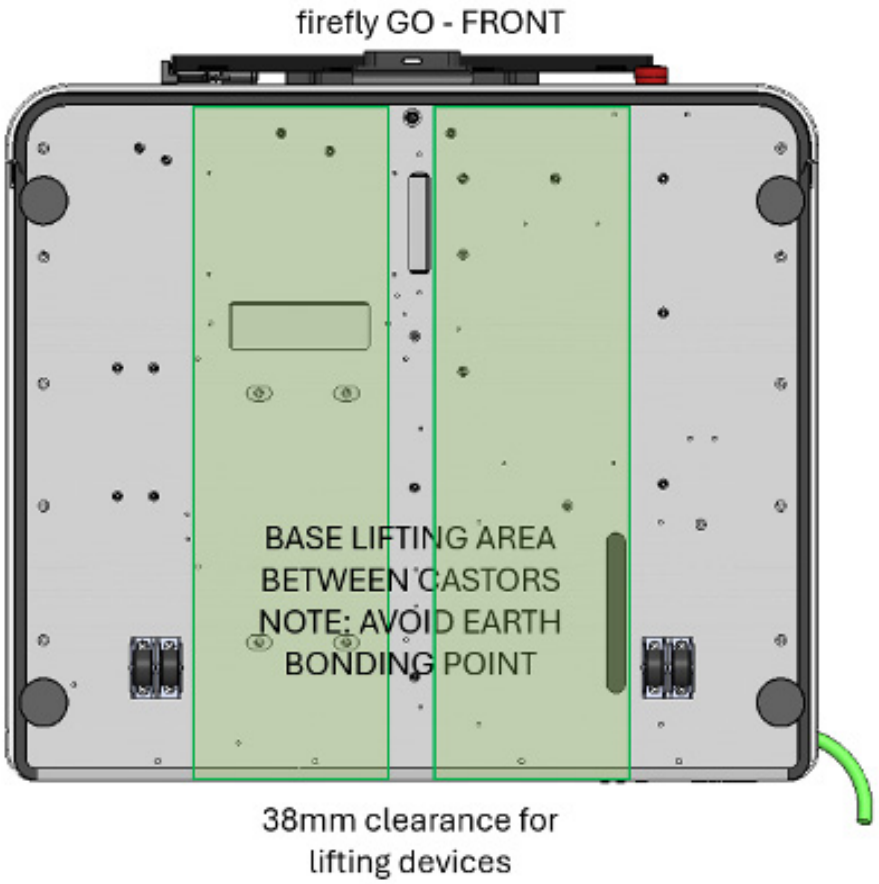
1.2.5 Moving fireflyGO safely

FIREFLYGO WEIGHS 112 KG, AND SHOULD NOT BE MOVED WITHOUT CONDUCTING A RISK ASSESSMENT.

Moving fireflyGO could affect alignment, impacting its performance.
Contact reliance for assistance if you need to move your instrument.

Do not lift fireflyGO manually. Movement, installation, or repositioning shall be carried out only by trained personnel using lifting equipment with a rated capacity of at least 150 kg.

Support the instrument from its base only, as shown in the diagram below; do not lift by the covers, panels, or any projecting parts.



Use a scissor lift or equivalent platform that supports the full base evenly.
Keep the instrument upright and the load even throughout the move.

Re-level the instrument after relocation.

1.2.6 Ergonomics

The fireflyGO touchscreen PC cannot be removed from the instrument. Use the Bluetooth keyboard and mouse if needed or use USB ports to connect peripherals as desired.

1.2.7 EMC (electromagnetic compatibility)

No specific EMC precautions are required when operating fireflyGO.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

1.2.8 Wireless Regulatory Information (EU)

This equipment incorporates the following radio devices:

- Intel® Wi-Fi 6E AX211 wireless module (WLAN and Bluetooth 5.4)
- Pilz PSEN cs3.1b RFID safety interlock

WLAN (Wi-Fi)

Frequency bands used:

- 2412–2472 MHz
- 5180–5865 MHz
- 5955–6415 MHz

Maximum transmitted RF power (EIRP):

- Up to 23 dBm (200 mW) depending on operating band.

Use of the 5 GHz and 6 GHz bands may be subject to national regulatory restrictions.

Bluetooth

Frequency band used:

- 2402–2480 MHz

Maximum transmitted RF power (EIRP):

- Up to 13.1 dBm

RFID Safety Interlock

Operating frequency:

- 122–128 kHz

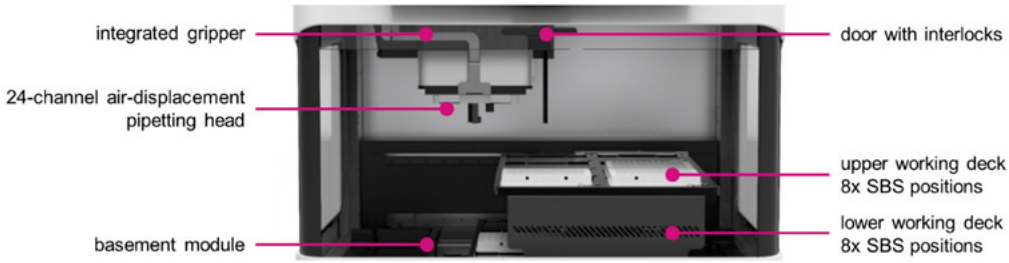
The WLAN antennas are installed internally within the equipment enclosure and are not accessible during normal operation.

This equipment complies with EU Directive 2014/53/EU.

1.2.9 Noise levels

fireflyGO airborne noise emissions do not exceed 70 dB(A).

1.3 fireflyGO components





1.3.1 Pipette head

The pipette head supports operation with 24, 16, 8, or a single tip to accommodate a wide range of applications and throughput requirements. Pipette tip loading and unloading are software-controlled using full and empty tip boxes placed on the deck during protocol setup.



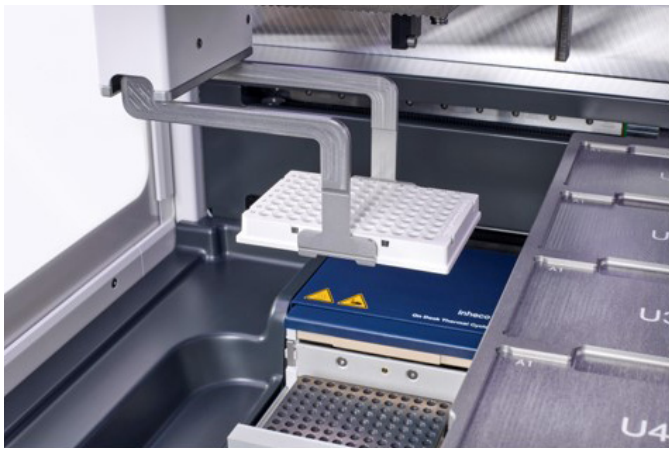
1.3.2 Decks

fireflyGO has two independently movable decks, each providing space for up to eight SBS format plates or compatible labware. The upper deck accommodates labware with a maximum height of 75 mm, while the lower deck supports taller labware with a maximum allowable height of 85 mm.

1.3.3 Gripper

The pipetting head is equipped with integrated grippers that enable automated movement of labware between decks and onto or off accessories such as the magnetic block. The grippers can also stack compatible items, for example a plate and a thermal block, and are used to transfer labware to and from the plate thermal module and the ODTC.

The gripper mechanism can move labware while pipette tips are loaded, as it reaches below the level of the tips. Alternatively, tips can be unloaded prior to gripper operation, depending on workflow requirements.



1.3.4 Plate Thermal Module

The Plate Thermal Module provides controlled heating and cooling of microplates.

The temperature setpoint can be selected from 0°C to 70°C in 0.1°C increments.

1.3.5 Thermal Cycler Module

The Inheco On Deck Thermal Cycler Module (ODTC®) 96 XL is integrated into the system and enables temperature-controlled incubation steps required for NGS workflows. The ODTC allows these steps to be performed directly on the instrument, eliminating the need to transfer plates to a separate thermal cycler.

DO NOT ATTEMPT TO USE THE ODTC STANDALONE.
IT MUST ALWAYS BE USED WITHIN A FIREFLYGO PROTOCOL.

Details of the ODTC and instructions for use are in the ***InhecoOn Deck Thermal Cycler manual.***

You can only use skirted 96-well PCR plates with the ODTC.

1.4 Labware and accessories

fireflyGO requires instrument-specific tips and compatible labware for correct operation. Only items specified within a protocol may be used, as the movements of the pipette head and integrated grippers are optimized for defined components and consumables.

USE OF NON-SPECIFIED OR INCOMPATIBLE ITEMS MAY CAUSE A PROTOCOL TO FAIL.

1.4.1 Pipetting tips

The NGS library preparation workflows have been optimized for use with 125 µL sterile, filtered pipette tips supplied by SPT Labtech. Use of alternative pipette tips is not supported.



1.4.2 Plates and plate lids

fireflyGO is compatible with skirted 96-well plates, including deep-well blocks, and selected types of plate lids as specified in a protocol.

1.4.3 Plate seals

Plates sealed with pre-pierced foil seals may be used with fireflyGO. Prior to use, verify that the foil is fully pierced by pressing a clean plate or an 8-strip tube firmly into the seal. Piercing the foil using a pipette tip is not recommended, as it may not create an opening sufficiently large to allow free movement of the pipette tips during aspiration and dispensing.

1.4.4 Tubes and microtube rack

fireflyGO is compatible with selected 1.5 mL and 2 mL microcentrifuge tubes when used with the instrument-specific microtube rack, which is supplied as standard with the system.



1.4.5 Thermal block

The plate thermal module is used in conjunction with a thermal block, which functions as an adapter positioned on top of the plate thermal module and beneath the microplate. When removed from the thermal module, the block continues to provide passive heating or cooling, reducing the rate of temperature change of the plate contents to approximately 1°C per minute.

A thermal block for 96-well PCR plates is supplied as standard with the system.

1.4.6 Magnetic block

The Alpaqua® Magnum FLX® magnetic block is supplied as standard with the system.

It is designed to support rapid magnetic bead separation and is compatible with standard 96-well PCR plates and deep-well plates. The block supports reaction volumes of up to 2 mL per well and enables efficient elution volumes as low as 10 µL.



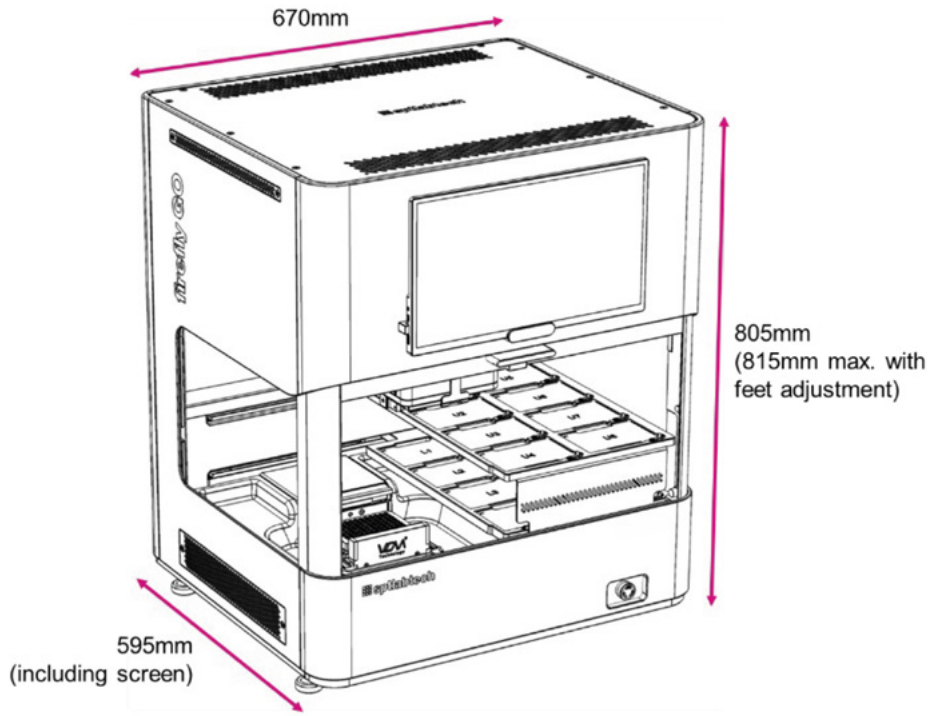
STRONG MAGNETS ARE PRESENT IN THE MAGNETIC BLOCK. KEEP MAGNETIC SENSITIVE ITEMS (E.G. PACEMAKERS, CREDIT CARDS, ELECTRONIC STORAGE MEDIA) AWAY FROM THE MAGNETIC BLOCK DURING OPERATION AND HANDLING.

2 Installation

2.1 Pre-installation requirements

2.1.1 Space

fireflyGO dimensions are W 670 mm x D 595 mm x H 805-815 mm
(the feet are adjustable).



You should allow space close to the instrument for your keyboard and mouse. It is advisable to have a small gap of 152 mm at each side of the instrument and 76 mm behind the instrument to allow for ventilation and service access.

fireflyGO weighs approximately 112 kg so it requires a sturdy lab bench. It needs to be kept stable so do not use a bench with wheels or castors, or one which is prone to rocking. The bench must be flat and level. Suitable designs are shown below.





Do not use bench types such as these.





As fireflyGO may induce some vibrations in the bench, consider what equipment shares the same bench as fireflyGO. Any equipment sensitive to vibrations such as balances or microscopes should not be placed next to fireflyGO. Conversely equipment that also generates vibrations, such as a centrifuge, should not be placed close to fireflyGO as this may impact performance.

The Inheco ODTC control unit can sit adjacent to or above/below fireflyGO and can be placed horizontally or vertically on its long side (256.5 mm x 414.5 mm x 58 mm). The only limit on where it can be placed is the length of the power cable (approx. 2 m) to connect it to fireflyGO.

2.1.2 Environmental requirements

fireflyGO requires a standard, controlled indoor laboratory environment:

- indoor use
- temperature 15 – 32°C
- relative humidity 30 - 80%, non-condensing
- altitude: up to 2000 m above sea level

Do not use fireflyGO outdoors, in explosive atmospheres, or in environments where conductive dust or precipitation are present, or where surfaces are persistently wet.

fireflyGO is rated for pollution degree 2 and overvoltage category II:

- pollution degree 2 — the instrument is designed for an environment in which only non-conductive pollution occurs, other than occasional temporary conductivity caused by condensation
- overvoltage category II — fireflyGO is intended to be supplied from normal building wiring, via a standard socket outlet

These conditions apply to the fireflyGO instrument, its external power supply unit and the ODTC power unit.

2.1.2i Cleaning

Maintaining cleanliness within both the fireflyGO instrument and its housing facility promotes the reliability of automated workflows and contributes to improved reproducibility and robustness of the workflow outputs.

The fireflyGO instrument is enclosed in panels and operates with the interlocked door closed during protocol execution, which contributes to maintaining a clean environment for automated workflows.

To further protect the interior of the instrument from contamination and accumulation of dust, you should:

- keep fireflyGO door closed when the instrument is on standby or turned off.
- minimize physical contact with the interior of the instrument and use appropriate PPE, such as disposable laboratory gloves and lab coats.
- always use clean labware and accessories which are free of dust and residues.
- regularly clean the laboratory area surrounding fireflyGO, including washing the floors and wiping the benches.

2.1.3 Power

fireflyGO is powered from an AC-DC adapter. UK, EU, and US leads are supplied as standard.

It also requires a data connection to the ODTC, which is set up when the reliance service engineer installs the instrument.

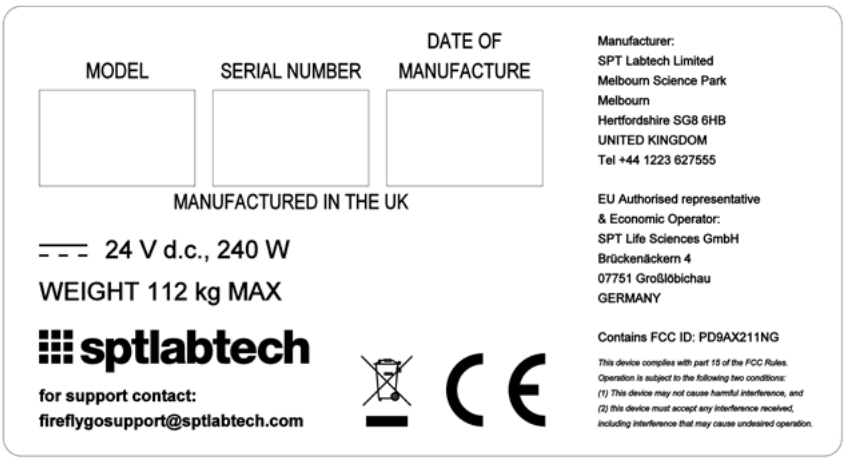
fireflyGO is supplied at 24 V DC from an external power supply unit, which connects to the mains supply and to the 24 V inlet at the side of the instrument. Mains voltage is not present inside fireflyGO.

Place the external power supply unit on a dry, clean surface where it cannot be reached by spillage and where airflow around it is unobstructed. Do not place it on the floor, cover it, or operate it where liquids are handled directly above it.

The power supply unit is not a user-replaceable part. If it or its cord is damaged, stop using fireflyGO and ***contact reliance***. Use only the mains leads supplied with fireflyGO. If a lead is damaged, or a lead for a different territory is required, ***contact reliance*** for a replacement.

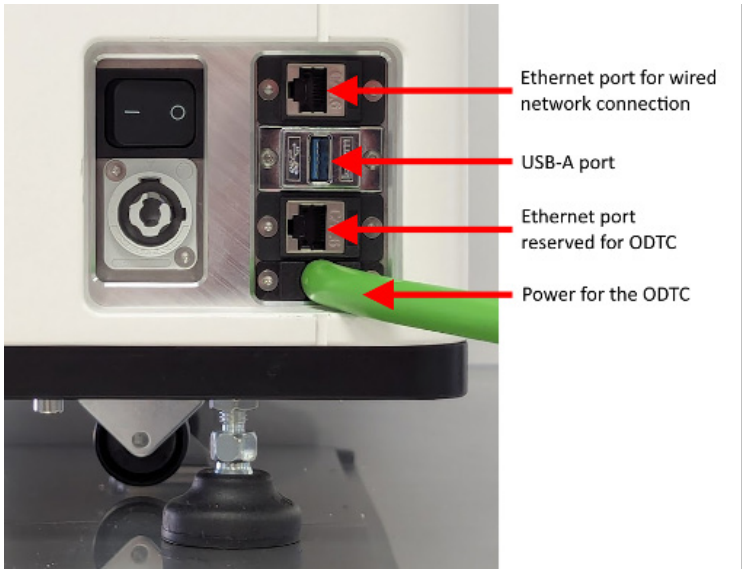
The ODTC requires a separate mains power connection, 1250 W input, to the ODTC controller, which then provides a 24 V supply to the ODTC unit within fireflyGO. It is supplied with UK, EU, and US leads as standard. The ODTC power unit connects to fireflyGO by a heavy-gauge low-voltage cable, below the data connection (Ethernet). Mains is routed only to the ODTC power unit; the cable into fireflyGO carries low voltage only.

The reliance service engineer will discuss power requirements with you as part of the pre-installation process e.g., the correct positioning of the power supply units, the number of mains sockets required or if it is safe to use adapter blocks.

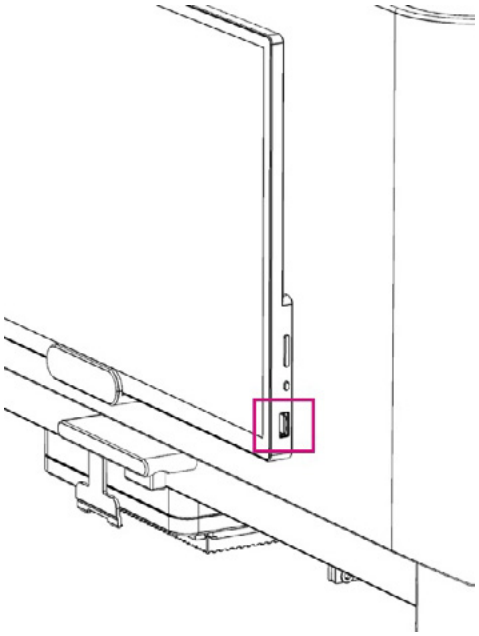


2.1.4 Network access and connectivity

The fireflyGO touchscreen PC requires internet access to connect to ***cloud storage*** and download kits and protocols. Wi-Fi is the default, but if you prefer to use a wired network, there is an Ethernet port on the right-hand side of the instrument, towards the back. Use the top port: the lower one must be connected to the ODTC.
There is also a USB-A port to use for other peripherals.



There is a second USB-A port on the side of the touchscreen, for connecting USB storage devices to transfer protocols.



2.1.5 Physical security requirements

fireflyGO should be installed in a controlled access laboratory.
Further details are provided in the Pre-Installation Guide.

2.2 Installing fireflyGO

fireflyGO is shipped in two crates. Do not open them when they are delivered: reliance service engineers will install and set up fireflyGO.

For the installation, reliance service engineers will require:

- use of a pallet truck or similar with a rating above 250 kg, for moving the cases
- a clear route to the laboratory where fireflyGO is to be installed.

2.2.1 User training

Your instrument will be installed by reliance service engineers. The fireflyGO Specialists will provide fireflyGO training sessions. These will include basic instructions for using the hardware and software to run a protocol, and other instrument related tasks.

2.2.2 Windows set-up

fireflyGO ships with a default Windows account password.

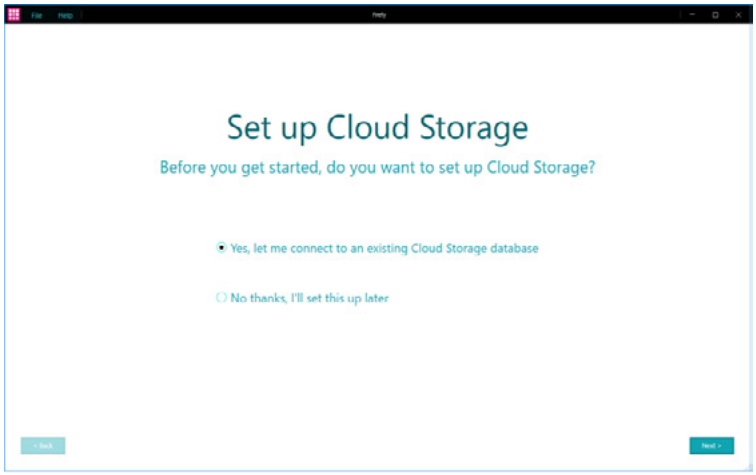
To help keep your instrument secure, change this password before opening the fireflyGO software to create user accounts.

2.2.3 User account creation

fireflyGO software is configured with an Administrator account, username ‘Firefly Admin’, which is used to ***create user accounts.***

2.2.4 Connecting to Cloud Storage

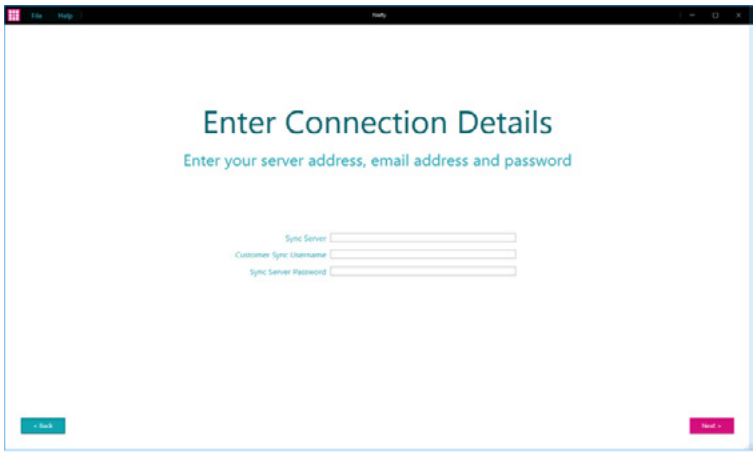
The first time you run fireflyGO, you will be asked whether you wish to set up cloud storage. If you wish to do so, click Next.



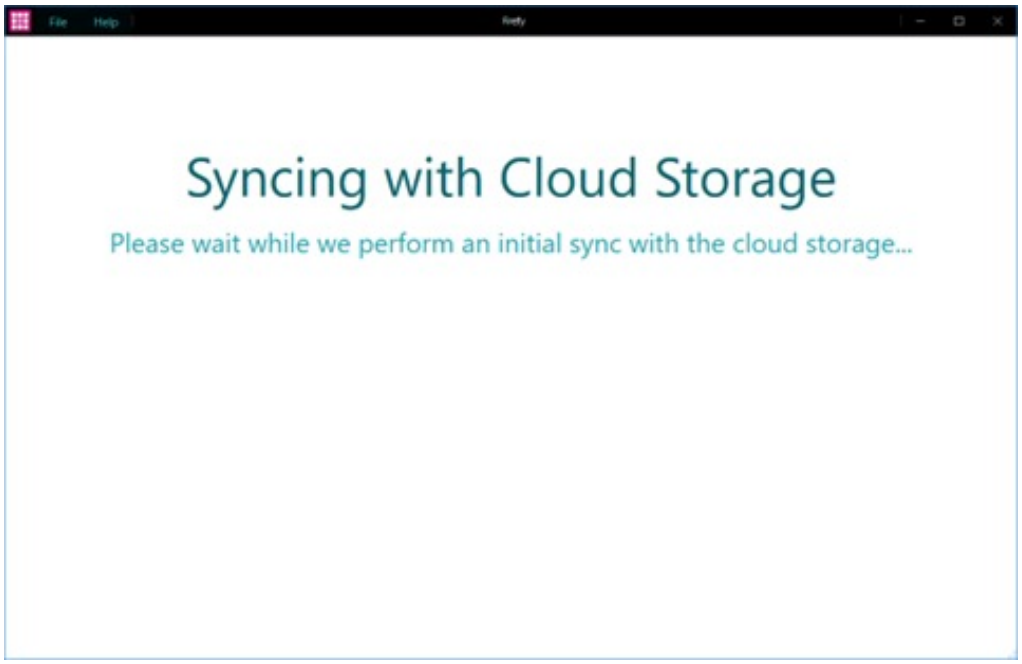
You will then be asked to provide details of the remote "Sync" server from where data from fireflyGO will be synchronized or shared with others connected to the same server.

- Database: the name associated with this cloud storage area, typically the name of your organization
- Sync Server: the host name of the server from which you wish to synchronize your fireflyGO data.
- Username: the username/email address with which you are registered with fireflyGO.
- Password: the password for your fireflyGO registration.

You should ask your fireflyGO Administrator for this information as ***reliance*** will have organized cloud storage access when setting up your fireflyGO instrument.



Once you have provided the correct credentials, the fireflyGO software will perform an initial synchronization with the server which may take a few minutes.



Once the sync is complete, you will be notified with the following screen:



You can then log in to the fireflyGO software.

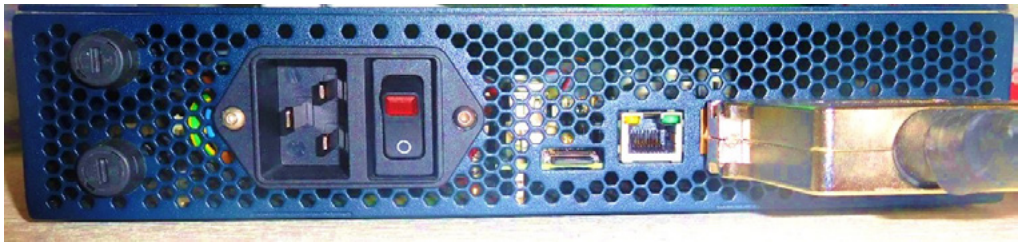
2.2.5 Connecting standalone

If you choose not to configure cloud storage, you can select the second option “No thanks, I’ll set this up later.” Selecting this option will take you straight to the log-in screen. Any data you create using fireflyGO will be saved locally to your machine and you’ll need to use a USB stick or local network drives to transfer your protocols to the fireflyGO instrument.

3 Operation

3.1 Starting fireflyGO

Switch on the ODTC control unit, which is outside of fireflyGO. The ODTC should be powered before starting fireflyGO to ensure successful communication between the instrument and the ODTC.



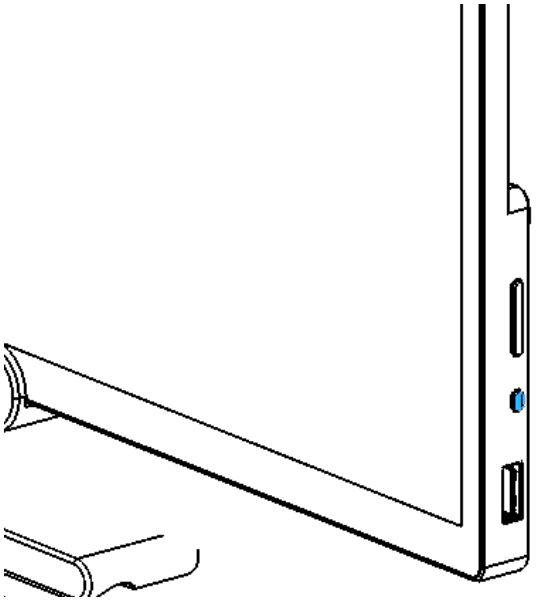
Turn on the instrument, using the power button located on the right-hand side of fireflyGO.



After a few moments, the instrument lights will come on, initially white as fireflyGO initializes, then blue, indicating that the instrument is ready for use. fireflyGO lights change color to indicate the state of the instrument.

White	White lights at start up mean that the PC has not yet established communications with the fireflyGO control boards. When the system is ready to use, the lights turn blue. The lights are also white while a protocol is executing. Slowly pulsing lights (fading in and out) indicate that a reboot sequence is in progress.
Blue	The instrument is ready to use.
Red	The instrument is in error.
Green	Protocol has finished executing. The lights stay green until the instrument door is opened, when they turn white.

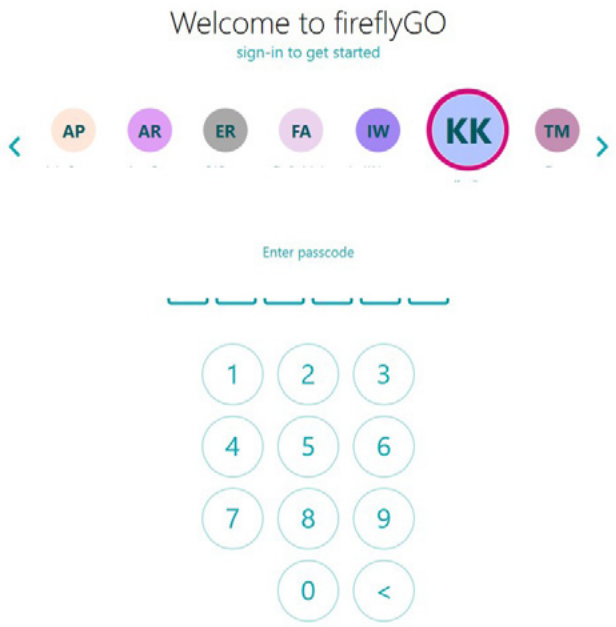
There is also a button on the right-hand side that can be held down to turn the monitor on/off.



Log in to Windows on the fireflyGO PC using the fireflyApp account.
The fireflyGO software will start automatically.



Log in to the fireflyGO software by selecting your user account icon and entering your passcode.



3.2 Prepare reagents and labware

Prepare materials and reagents needed for a protocol run according to a User Guide for your specific automated NGS library preparation kit.

3.3 Running protocols

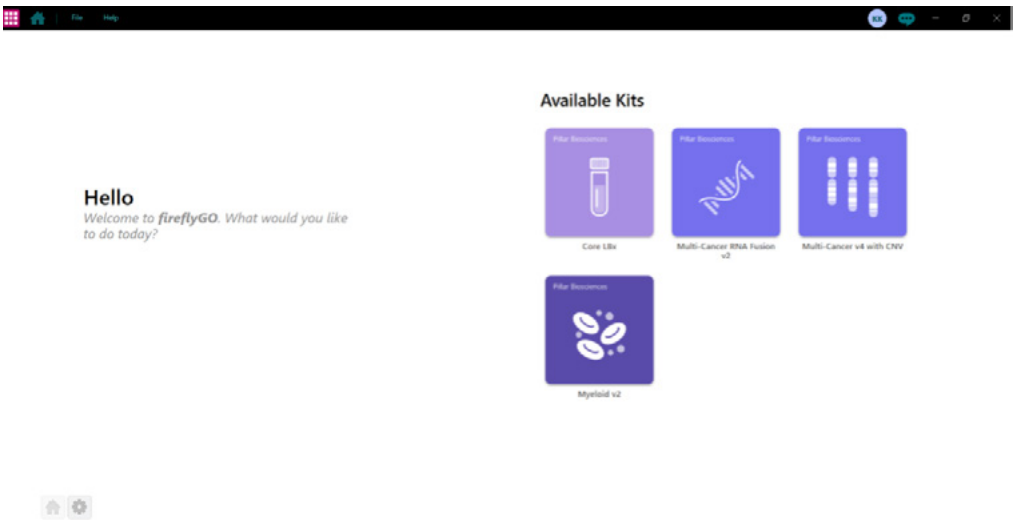
This section provides an overview of how a protocol run is prepared and initiated on fireflyGO. The workflow is guided by the software and is illustrated in the diagram below.



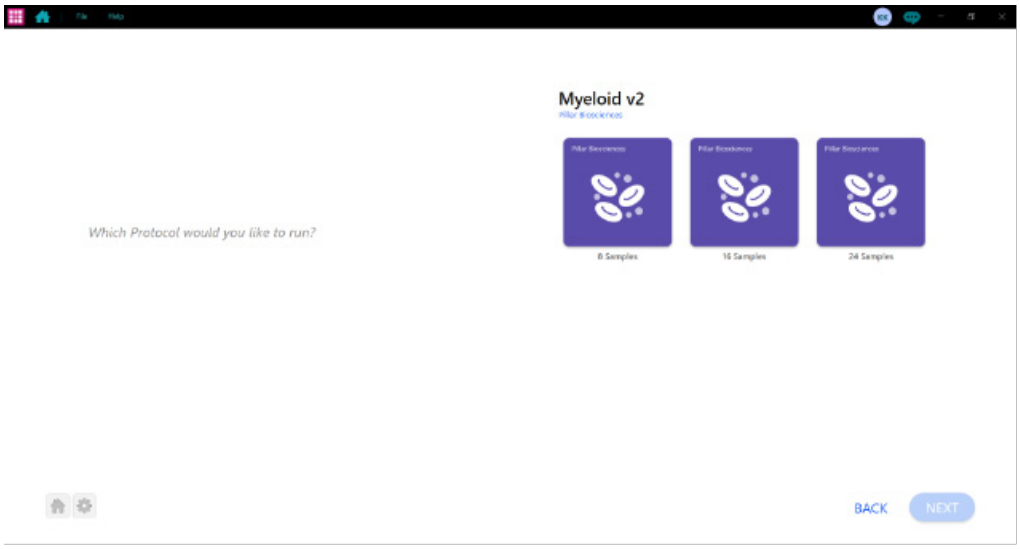
To initiate a protocol run, you select the appropriate kit and protocol, and enter the required run information. The software then guides through the deck setup, including placement of specified labware, accessories, and consumables. After the setup is confirmed, the run is started via the touchscreen interface. Upon completion, the prepared NGS libraries are available for retrieval, and the decks may be cleaned in preparation for the next run or system shutdown.

3.3.1 Opening a protocol

If you have Standard or Super User access, you will see the home screen which lists the installed kits.



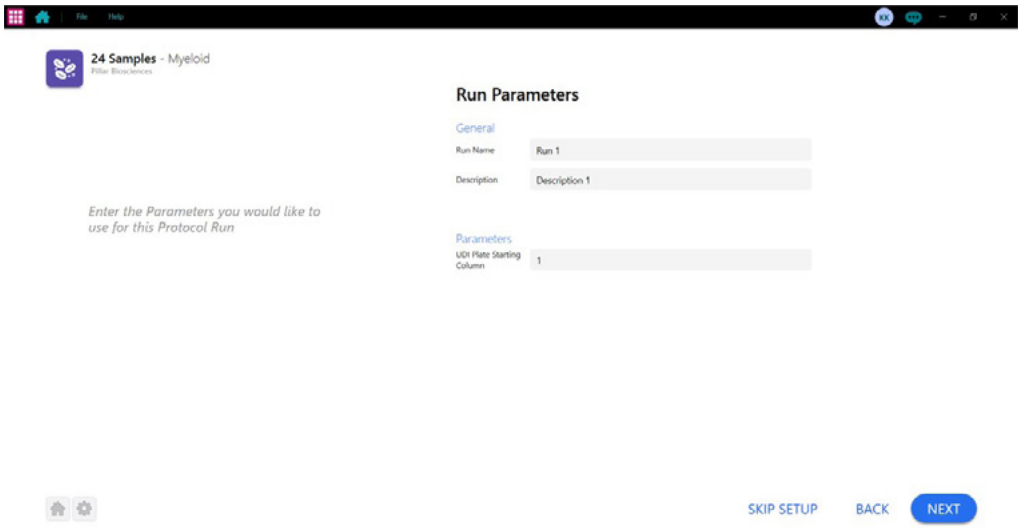
Select a kit to list its protocols as shown below, then select the protocol you wish to run.



3.3.2 Run parameters

Enter the Run Name and Description for your protocol.

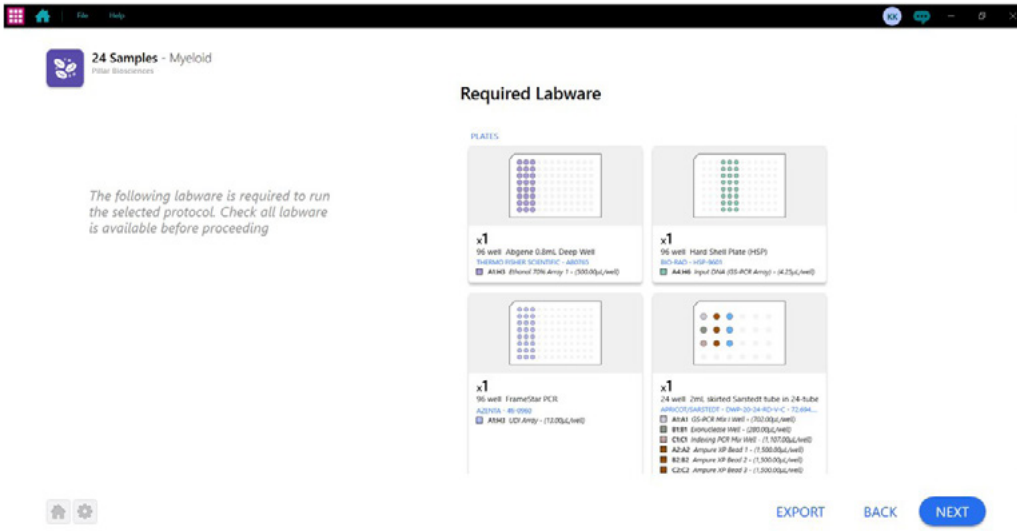
If your protocol uses variables, you now specify them.



From here you can start to set up your protocol by selecting ‘Next’.

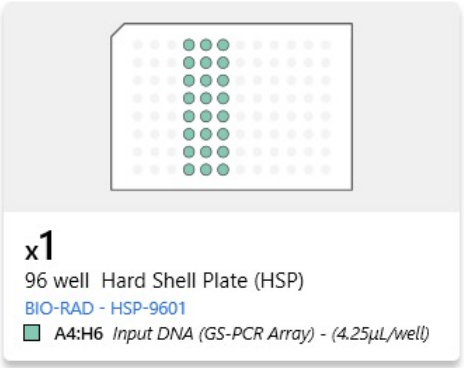
3.3.3 Checking required labware and consumables

The ‘Required Labware’ screen shows you all the materials fireflyGO needs to run your protocol (you may need to scroll down to see everything), including volumes of reagents. Verify that all required labware, consumables, and reagents are available prior to proceeding.

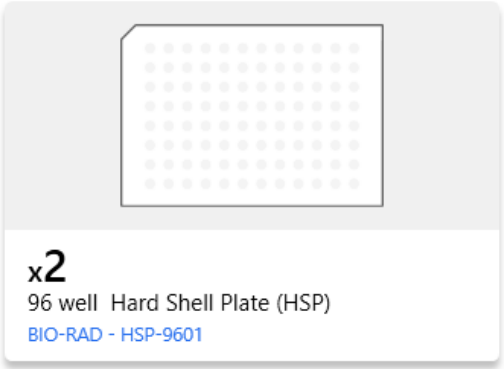


Colored squares below the plate indicate that it is filled before it is loaded. Prepare these plates before starting your protocol on fireflyGO.

Pre-filled plate



Empty plate



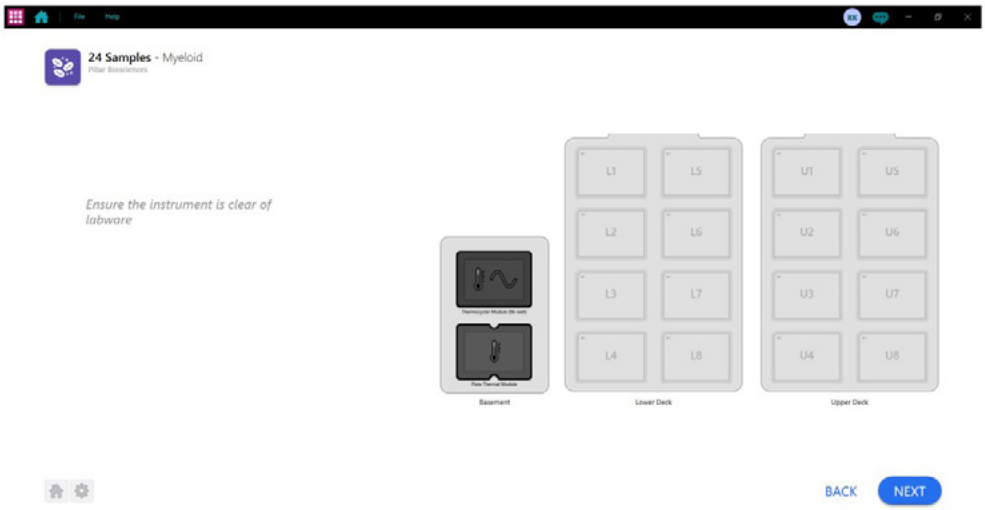
This screen does not show you the materials and equipment you will need for the steps which are not performed on fireflyGO.

Before you start you should review the appropriate method user guide for the protocol to see what additional equipment you will need. You can export the required labware details as a PDF to help with this. When you have your materials ready, click ‘Next’.

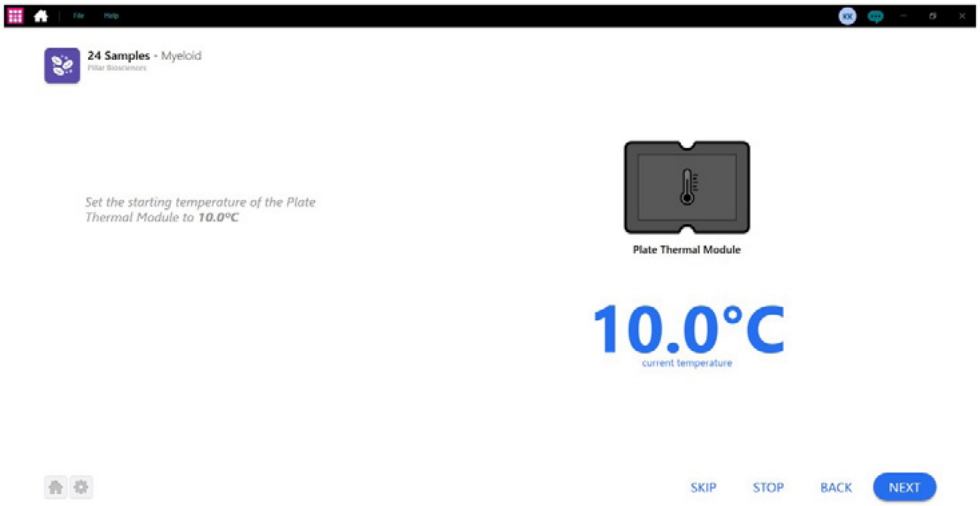
3.3.4 Preparing fireflyGO

The first screen prompts you to remove any labware remaining from a previous protocol.

Click “Next” once the instrument is empty.



If your protocol has an initial temperature setpoint for the plate thermal block, you will start heating or cooling it as part of set up. Use ‘Set temperature’ to begin heating or cooling. ‘Next’ is not enabled until the block reaches the set temperature.



If the protocol uses the ODTC for an incubate step, it will be initialized automatically.

3.3.5 Loading fireflyGO

fireflyGO will guide you through loading each item in the following screens. Each step shows one loading operation and has options for 'Skip', 'Get Access', 'Back' and 'Next'. When the buttons are greyed out, fireflyGO is operating and not ready for user access.

You can select 'Skip' to move through some or all of the sections of the loading sequence more quickly if you are an experienced fireflyGO user and you ***have permission to do so.***

Follow the on-screen instructions for loading each item and the instructions below for physical loading.

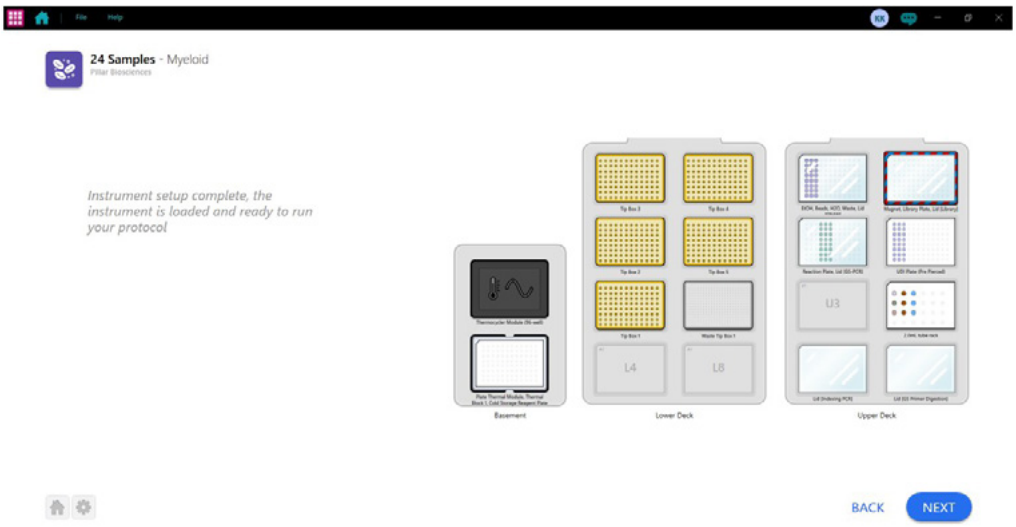
1. Select 'Get Access'. Wait for fireflyGO pipette head and decks to move to safe positions before you open the instrument door.
2. Open the instrument door.
3. Load your materials (see specific instructions below).

Follow the loading instructions exactly. fireflyGO cannot automatically verify that labware and accessories have been loaded in the correct location or orientation. Incorrect setup may result in protocol failure.

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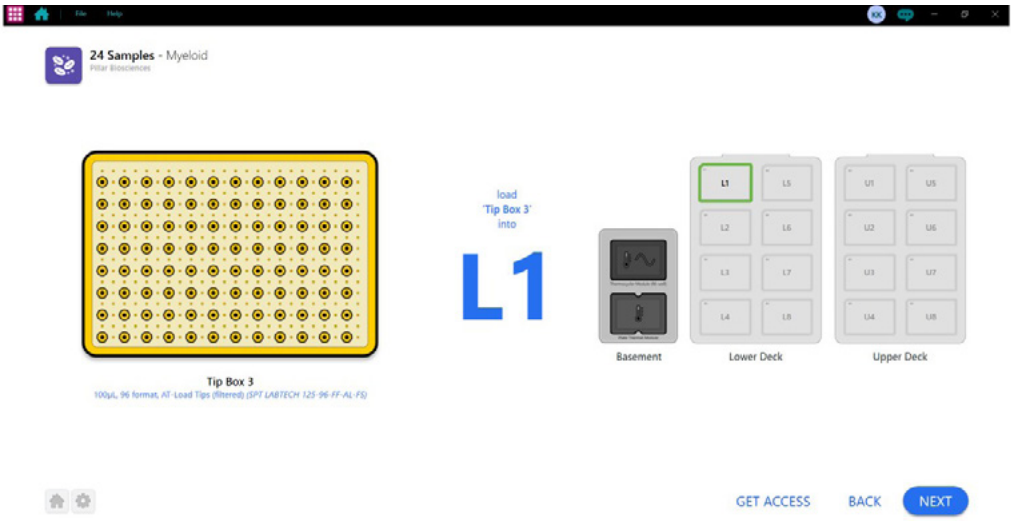
4. Close the instrument door.
5. Click 'Next' and repeat the loading process for the next item.

When all materials and consumables are loaded, you will see 'Setup complete'.



3.3.5i Loading tips

To load a tip box, remove the lid and place the tip box in the position shown on the Load Tips screen.





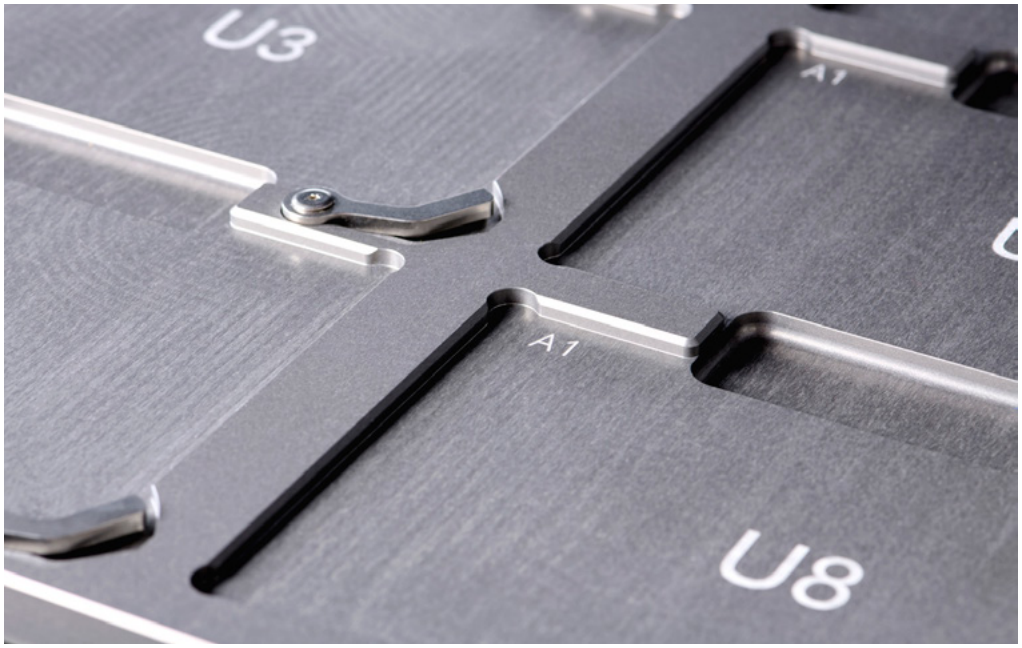
You must load a full tip box at the start of a protocol, but only the correct number of tips will be loaded on the pipette head.

3.3.5ii Loading other consumables and accessories

Load plates, lids, tube rack, magnetic and thermal blocks onto deck positions or modules as specified in fireflyGO setup. The deck locations are labelled U1-U8 on the Upper Deck and L1-L8 on the Lower Deck.



The A1 position of each plate, tip box, and tube rack must be oriented toward the back-left corner of the corresponding deck position.

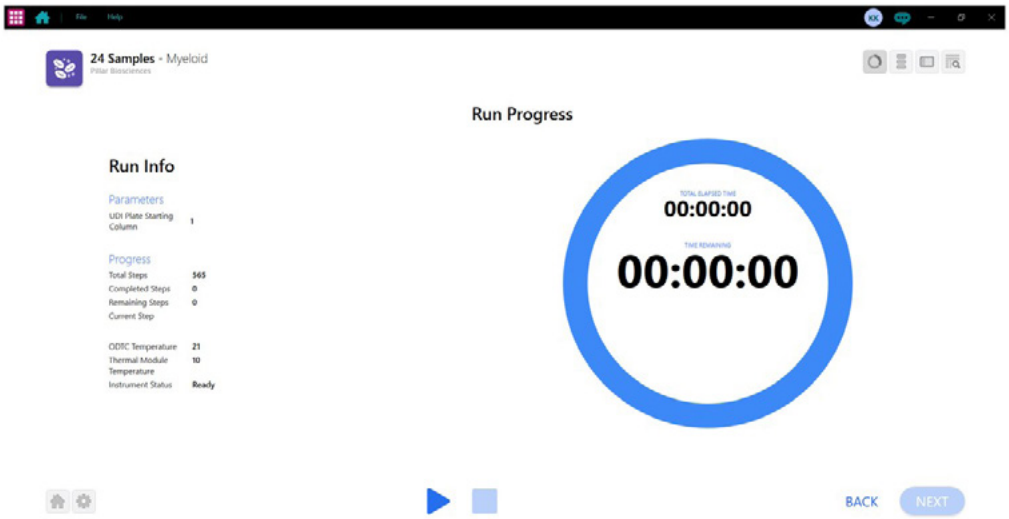


IF YOU ARE LOADING PLATES CONTAINING REAGENTS, LIDS OR NON-PIERCED SEALS MAY BE USED WHILE LOADING BUT YOU MUST REMOVE THEM BEFORE STARTING PROTOCOL EXECUTION.

Ensure your plates are seated firmly in position and flat. There is a plate clamp at the bottom right corner which engages after loading to keep the plate stationary but for it to operate correctly, the plate must be positioned correctly on the deck.

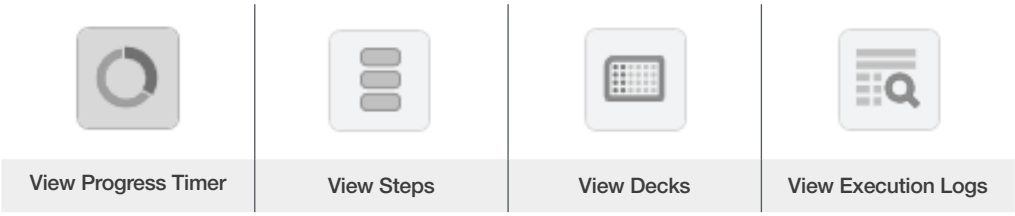
3.3.6 Running your protocol

After checking your protocol and loading its materials, select 'Next' to move to the Run screen.

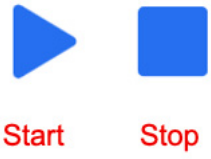


This default screen shows a progress timer. The left section details run parameters and progress, and the status of the instrument and modules.

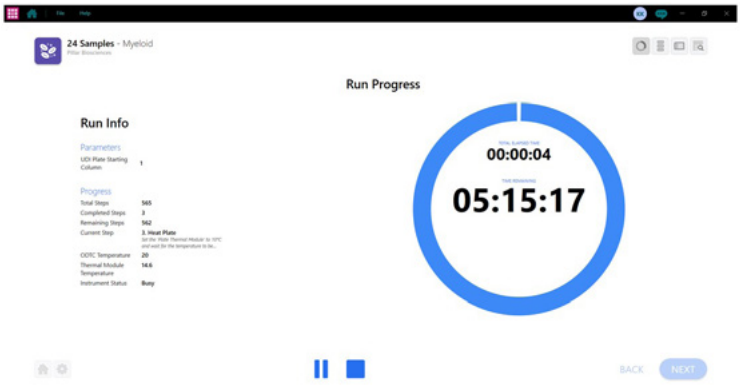
Use the icons at top right to change the view:



Select the Start button to run the protocol.



The screen will be updated with the elapsed time and the overall time remaining.



It will also start to generate the execution log: you can select this to display elapsed time (stopwatch) or actual time (clock).

If your protocol includes a pause, the pause time remaining will be shown with the overall time remaining.

If fireflyGO cannot complete the protocol, you will get feedback on the ***step which failed*** shown as red text in the Execution Logs.

You can ***pause*** a protocol at any stage, using the 'Pause' button on the Execute screen.

If you need to ***end*** a protocol for non-urgent reasons e.g., you become aware of a problem with the reagents, use the 'Stop' button on the Execute screen.

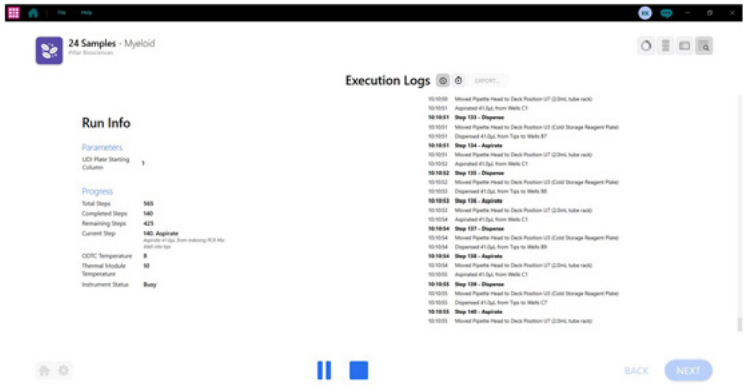
Stopping the fireflyGO protocol will not stop the ODTC running, if there is an incubation step in the protocol. Use *Manual Control* to stop the ODTC program.

---

fireflyGO will chime when the protocol is finished. Ensure that the volume on the computer is turned up in order to hear this chime.

Use the e-stop if you need to stop fireflyGO instantly for safety reasons.

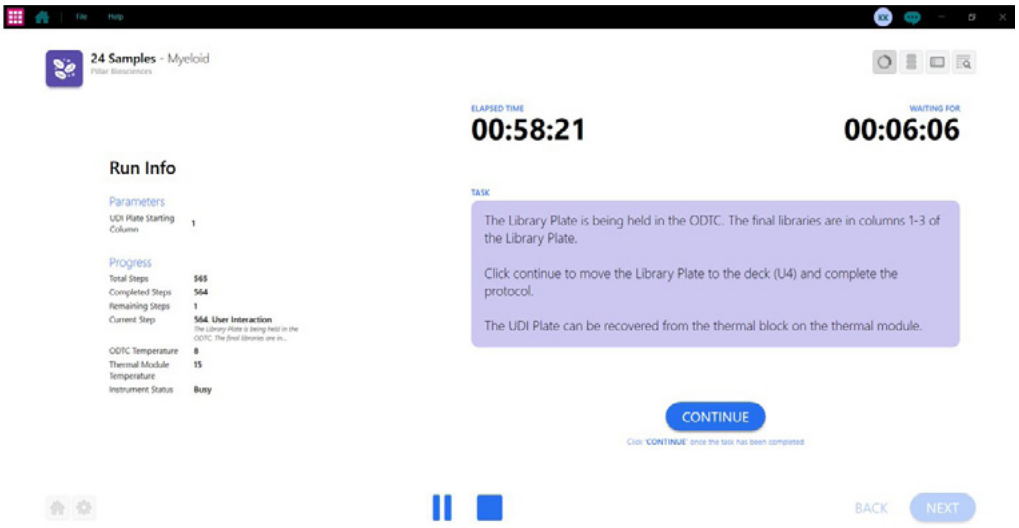
While a protocol is running, fireflyGO generates the Execution Log.



After the protocol ends, the Execution Log is automatically saved in a PDF format in C:\ProgramData\SPTLabTech\fireflyGO\Execution Logs. If you want a copy to be saved in your preferred location, use the 'Export…' button.

3.3.6i Carrying out user interactions

fireflyGO shows this screen when a user interaction is needed.



Once this screen is displayed, access fireflyGO and perform the requested user interaction. At this point, the pipette head and decks may have been moved to give you safe access to the area you require e.g., to the upper deck to remove a plate. However, this is not always practical, i.e. if the pipette head must remain in a plate, so be careful when you access fireflyGO.

Do not click 'Continue' on this form immediately: complete all required actions first. Clicking 'Continue' dismisses the form and resumes the protocol.

Open the instrument door and complete the user action. Close the door before clicking 'Continue' on the user interaction pop up form. The door indicator will be blue if the door is properly closed.



If you click 'Continue' before the door is properly closed, the protocol execution will stop.

3.4 Unloading fireflyGO

At the end of a protocol, clear all labware and consumables from fireflyGO.
If you are not running another protocol immediately, you should shut down fireflyGO.

On opening the door, the decks can be moved freely and all labware and consumables can be accessed and removed for disposal or storage according to your SOPs.

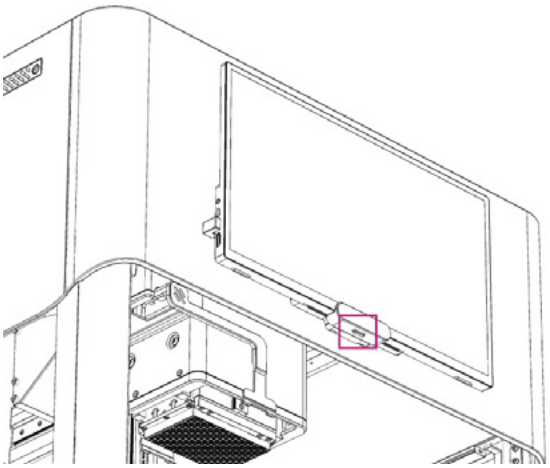
3.5 Shutting down fireflyGO

As part of SPT Labtech's ongoing sustainability efforts, we encourage all users to switch off fireflyGO when not in use. This simple step helps lower energy consumption and contributes to collective carbon-reduction goals. fireflyGO is designed for safe and efficient shutdown.

To shut down fireflyGO, use the Shutdown function on the ***Manual Control*** screen.



Alternatively, press the power button located beneath the touchscreen. When using the power button, the system will prompt for confirmation before shutting down.

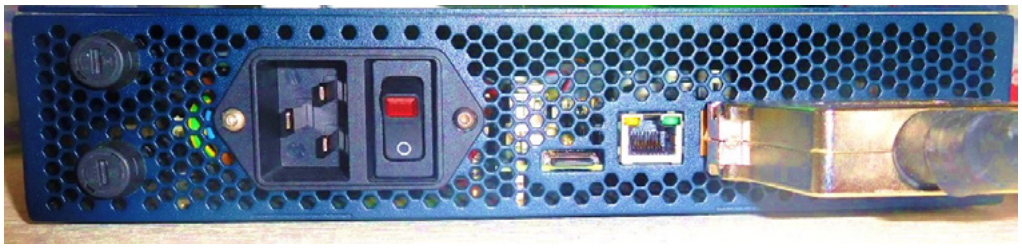


DO NOT USE THE POWER BUTTON LOCATED ON THE SIDE OF THE INSTRUMENT FOR SHUTDOWN, AS THIS MAY INTERRUPT OPERATION OR RESULT IN SYSTEM ERRORS.

After shutting down the software, switch off fireflyGO using the switch on the side.



Switch off the ODTC control unit, which is outside of fireflyGO.



Always switch off fireflyGO when it is not in use, following the shutdown instructions. fireflyGO is designed for this mode of use; it does not need to be kept powered.

3.5.1 Disconnecting fireflyGO from the supply

The means of disconnecting fireflyGO from the mains supply is the power cord of the external power supply unit.

Switching off fireflyGO does not disconnect it from the mains supply. To isolate the instrument, unplug the external power supply unit from the wall socket or disconnect the 24 V connector from the side of the instrument. No tools are required.

The ODTC power unit has a separate mains supply and must be isolated independently using its own power cord.

Position fireflyGO, the external power supply unit, and the ODTC power unit so that all power cords and associated mains socket-outlets remain easily accessible and unobstructed at all times. Do not place equipment, labware, or furniture where it could prevent a power cord from being unplugged.

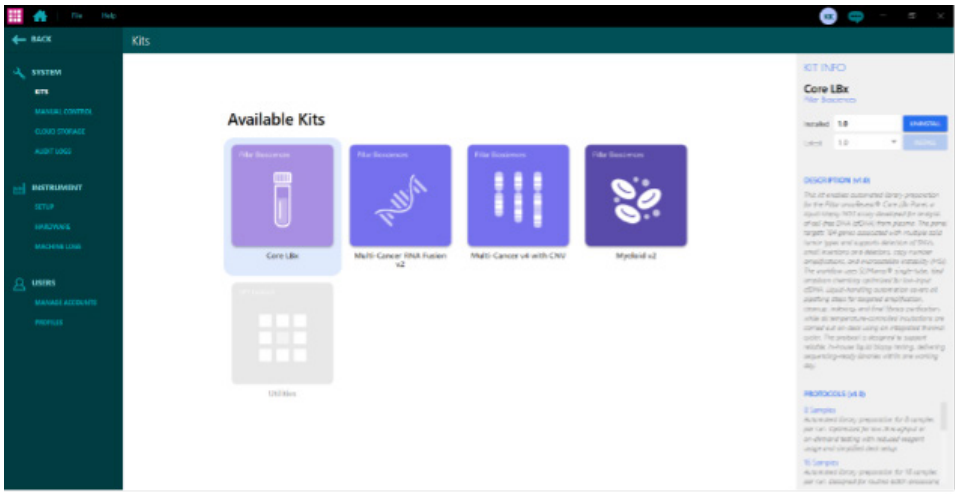
Disconnect fireflyGO from the mains supply before cleaning and before performing any maintenance that does not require the instrument to be powered.

4 System

4.1 Kits

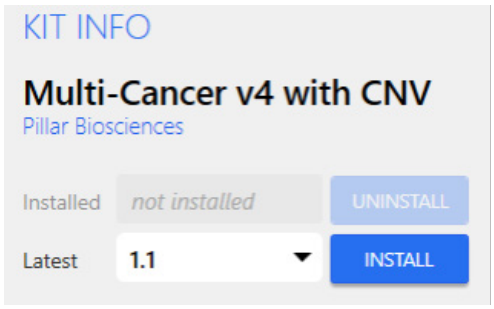
Protocols are contained in kits, which can be downloaded from the Settings screen. Installed kits are shown in color, kits available to install are shown in gray.

Select a kit to view its description and the protocols it contains in the right-hand panel.



4.1.1 Installing a kit

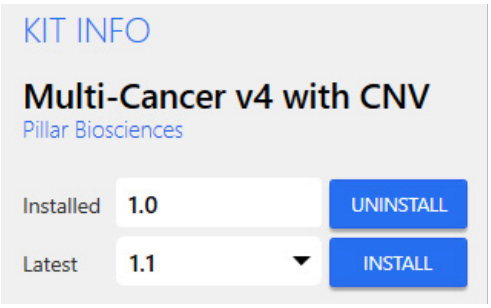
When you have identified the kit containing the required protocols, select the kit icon and click “Install.”



Once you have installed a kit, return to the home page and it will be available for use. Select the kit, then a protocol to proceed to deck setup and run.

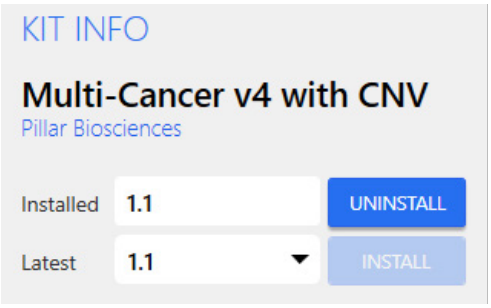
4.1.2 Upgrading a kit

The process for upgrading a kit is similar to installing one. Select the kit that is already installed, choose the latest version from the drop-down list, and click “Install”.



4.1.3 Uninstalling a kit

To uninstall a kit, select its icon, then click ‘Uninstall’ at the top left.



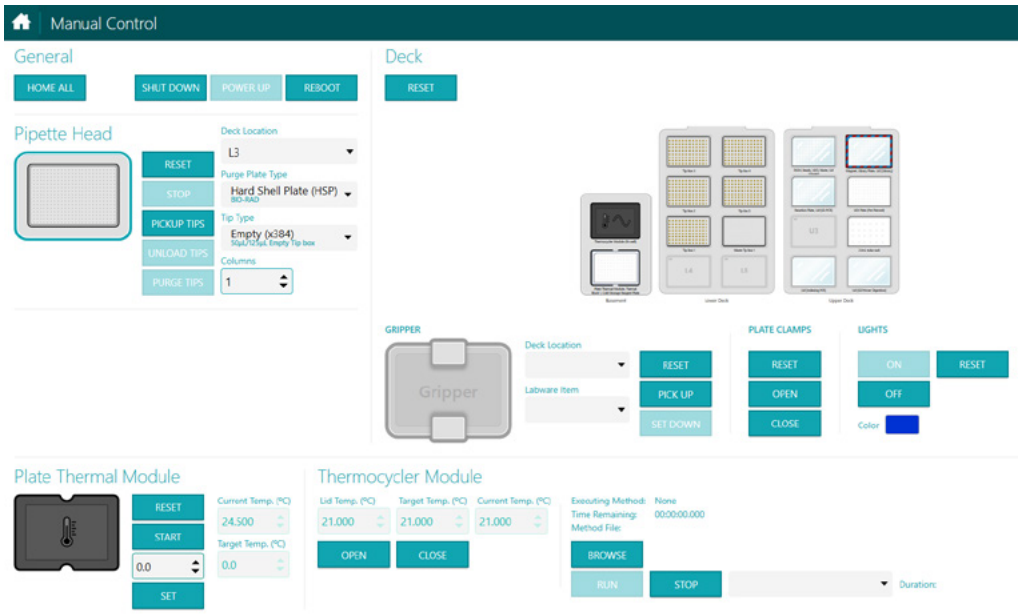
The kit icon will then appear gray, showing it is not installed.

4.2 Manual Control

Manual Control is intended primarily for recovery, troubleshooting, and service-related activities. You may need to do this to reset fireflyGO after stopping a protocol. Specific instructions for resetting are shown for the fireflyGO modules you would need to use to do this.

DO NOT OPERATE FIREFLYGO USING THE MANUAL CONTROL UNLESS YOU HAVE BEEN TRAINED TO DO SO.

If you access Manual Control during protocol execution, e.g., after you have stopped fireflyGO to resolve a problem, they will show the current arrangement of labware.



You can remove labware as you would normally, but you will need to purge and unload pipette tips that were in use when execution stopped, and you may also need to reset other modules.

TAKE CARE ACCESSING FIREFLYGO AFTER A PROTOCOL HAS FAILED TO COMPLETE AS THERE MAY BE HOT SURFACES OR AWKWARD ACCESS. HOME THE GRIPPERS TO ACCESS THE DECKS AND BASEMENT MODULES.

4.2.1 General

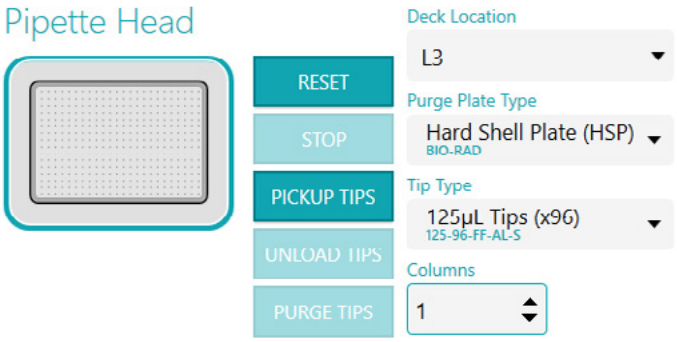


Control	Function
Home all	Moves lower deck to left position and upper deck to right position and opens the plate clamps. This also homes the pipette head.
Shutdown	Shut down the fireflyGO instrument
Power up	Start the fireflyGO instrument
Reboot	Turns off the power from the boards. This does not power off the embedded PC.

Shutting down fireflyGO does not stop the ODTC, as it has an independent power supply. Use Manual Control to stop thermal operation.

Rebooting fireflyGO does not restart the ODTC. To reboot the ODTC, switch off the control unit and then switch it on again.

4.2.2 Pipette head



Control	Function
Reset	Resets all parameters to default and initializes to ready the pipette head to perform a new function.
Stop	Cancels the current action of the pipette head.
Pickup Tips	Picks up tips from a specified deck location.
Unload Tips	Unloads tips to a specified deck location.
Purge Tips	Expels remaining liquid from all tips.

Empty loaded tips:

1. Select a deck location from the Deck Location drop-down list. Ensure a plate is present at this location to receive the liquid.
2. Select the appropriate plate type from the Purge Plate Type list.
3. Select the 125 µL Tips (x96) from the Tip Type list.
4. Click ‘Purge Tips’ to empty them.

You cannot purge into a plate that is part of a stack.

Unload tips:

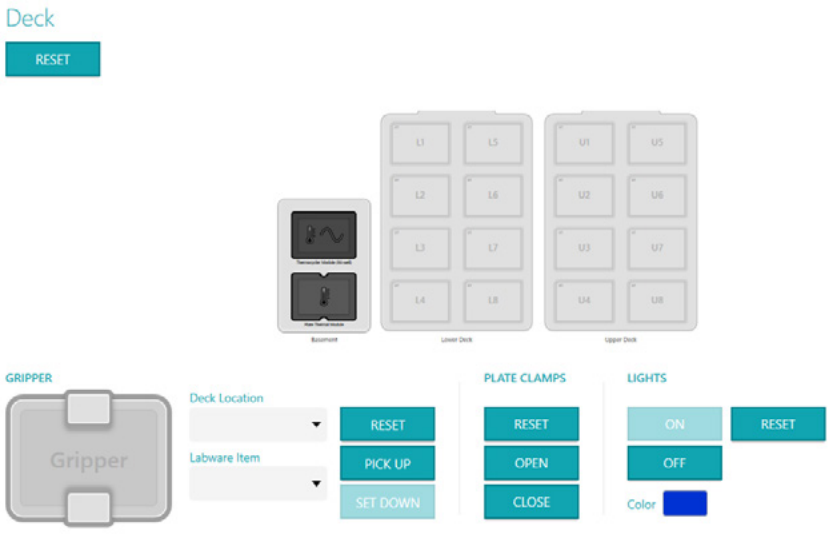
1. Select a deck location containing a tip box, which is empty (or which has enough empty space for the tips in the pipette head). If a suitable tip box used by the protocol is not available, it is also possible to temporarily add an empty tip box to the deck to unload tips into. In this case a deck location can be selected even if it does not show a tip box present in the deck diagram. The user will be prompted to confirm they have placed a tip box here and tips will then be unloaded into this tip box.
2. Select Unload Tips. This is only enabled if the tips do not contain liquid. The graphic of the pipette head will update to show it with no tips.

Pick up tips:

1. Select a deck location containing a full tip box. If a suitable tip box used by the protocol is not available, it is also possible to temporarily add a full tip box to the deck to load tips. In this case a deck location can be selected even if it does not show a tip box present in the deck diagram. The user will be prompted to confirm they have placed a tip box here and tips will then be loaded from this tip box.
2. Select Pickup Tips. The graphic of the pipette head will update to show it with tips.

4.2.3 Deck

The deck functions relate to repositioning labware e.g., to work around a problem during protocol execution. The instrument updates itself automatically when the grippers are used to reposition labware.



COLLISION VALIDATION IS NOT CURRENTLY SUPPORTED ON THE MANUAL CONTROL PAGE, SO YOU MUST BE CAREFUL WHEN MOVING ITEMS AROUND. FIREFLYGO WILL NOT WARN YOU THAT LABWARE WILL COLLIDE NOR WILL IT STOP THE PIPETTE HEAD MOVING.

4.2.3i Gripper

Control	Function
Reset	Moves grippers back to default position within the pipette head casing.
Pick up	Picks up specified labware from specified deck location
Set down	Puts down labware on specified deck location

4.2.3ii Plate Clamps

Control	Function
Reset	Resets the plate clamps in case of an error and closes clamps on both decks.
Open	Opens the plate clamps on both decks
Close	Closes the plate clamps on both decks

4.2.3iii Lights

Control	Function
On	Turns the LED lights on
Off	Turns the lights off
Reset	Reverts the lights to the previously set color
Color	Select the color for the lights

4.2.4 Plate Thermal Module

Control	Function
Reset	Resets all parameters to default to ready the module to perform a new function.
Start / Stop	Turns on or off the thermal module so that it can reach target temperature.
Set	Sets a temperature that the thermal module will adjust to over time.

4.2.5 Thermal Cycler Module

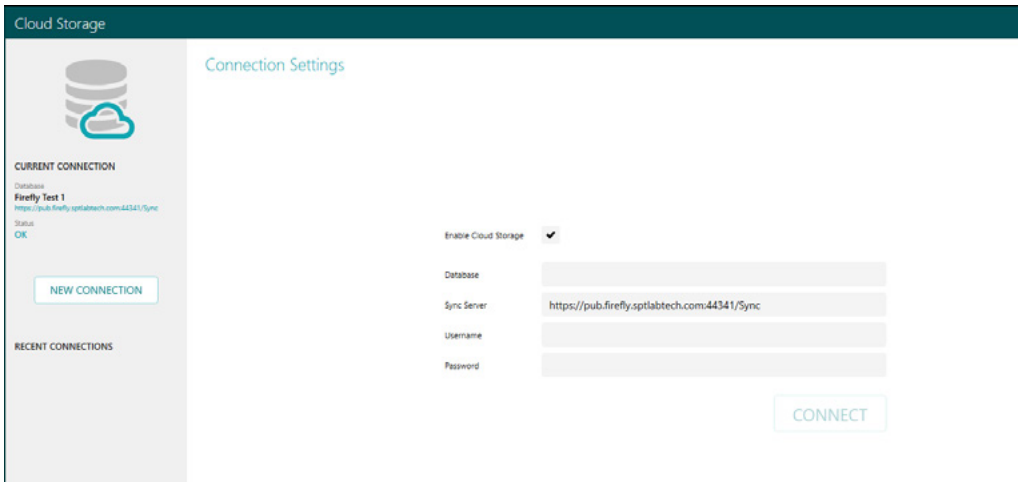
If an ODTC pre-method is running, its details will be displayed in this section.
Use the controls below to manually operate the ODTC unit.



Control	Function
Open	Opens the lid.
Close	Closes the lid.
Run	Use the drop-down menu to select and start an incubation pre-method.
Stop	Stops the currently running method.
Browse	Selects and opens an ODTC protocol.

4.3 Cloud storage

Cloud storage shows the details of your company's cloud storage connection.
As standard, it is only available to Administrators.

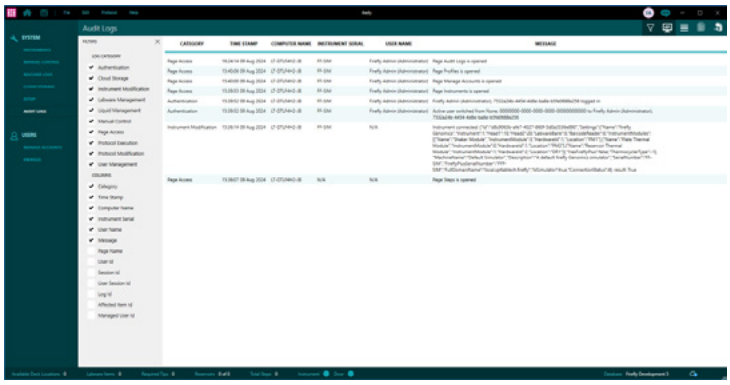


You can enable or disable cloud storage; be aware that doing this will limit users' ability to access protocols.

SPT Labtech will work with you to set up cloud storage for your fireflyGO users when setting up your instrument. You can revise your connection settings to use a new cloud Sync Server or verify your current connection status.

4.4 Audit Logs

The audit log records system and user actions performed within the fireflyGO software and instrument environment. It can be used to support compliance activities, as it includes both successful and unsuccessful actions, such as login attempts. Audit log entries are date- and time-stamped and identify the logged-in user responsible for the action.



As every action of instrument and user is recorded, there are functions to narrow the scope of data.

	Show filter panel	There are numerous filters, which can be used in combination, to view specific events or event types.
	Current session	The current log enables you to view data relating to the current session of fireflyGO use.
	All logs	All logs load all audit trail data for the fireflyGO. You can define specific users, time periods or other filters to screen the data.
	Copy selected rows	Copy selected rows enables you to copy one or more selected rows of the audit log to the clipboard. You can also use the right mouse button menu to access copy functions.
	Export to CSV	To copy all log data, use the Export to CSV option. You can select the export location.

4.5 Machine Logs

Machine Logs are available to all user profile types by default. Routine review of Machine Logs is not required during normal operation. You may be asked to check the logs by reliance service engineers if you have problems with your instrument.

There are multiple log views available from the controls on the top menu.

	**Download debug files**	Download files to assist reliance service engineers
	**Show filter panel**	Shows filter options which can be applied to log views
	**Application log**	Shows recorded events in the software
	**Machine log**	Shows recorded events in the instrument's hardware
	**Configuration**	Shows the instrument's configuration details
	**Copy selected messages**	Copies selected log lines to the clipboard
	**Clear logs**	Delete all log data

5 Error handling

fireflyGO displays error messages in red in the Execution Log when a problem occurs during protocol execution or instrument operation. If a protocol does not complete successfully, follow the guidance below to recover operation safely.

5.1 Recovering from a failed protocol

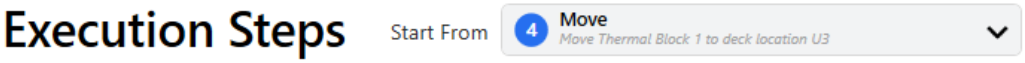
If your protocol fails to complete for any reason, before you try and run it again, you should:

1. Review the Execution Log to identify the cause of the issue.
2. Use ***Manual Control*** to return the instrument to a safe state.
3. If required:
   - purge loaded tips
   - unload tips
   - remove or secure labware
   - home the instrument
4. If the protocol uses the ODTC:
   - stop any active incubations
   - verify that ODTC pre-method requirements have been met
5. Correct the cause of the failure.
6. Restart the protocol from an appropriate step or restart from the beginning.

If recovery cannot be completed, use the fireflyGO Feedback Hub to ***contact reliance*** service engineers.

5.2 Restarting a protocol from a specific step

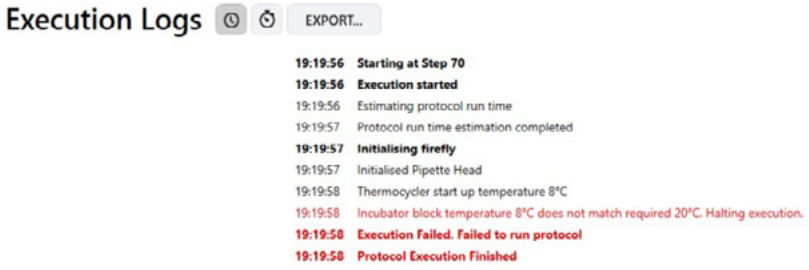
If a protocol has been stopped, it may be possible to restart it from a specific step, depending on your user permissions.



Ensure that the selected step is appropriate. For example, do not select a Dispense step if no liquid has been aspirated into the pipettes.

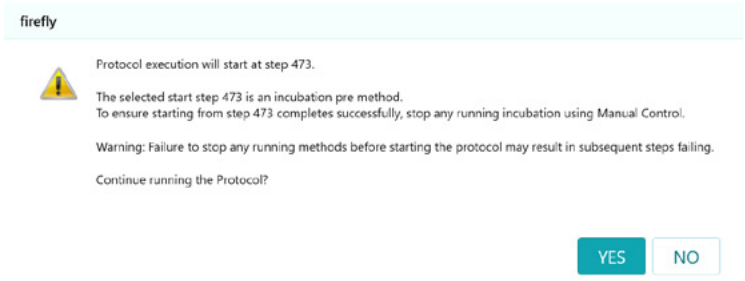
Note that a suitable ODTC incubation pre-method must always be executed before the main incubation method can run.

The pre-method heats the block to the start temperature used in the main method. After the protocol is restarted, the system verifies that the block temperature matches these requirements. If the conditions are not met, for example, if the pre-method has not been executed as required, the protocol will fail.



Ensure that any active incubation is stopped using ***Manual Control***.

Restart the fireflyGO protocol so that the ODTC incubation pre-method is performed as the first step.



Restarting from a different step may require running the ODTC incubation pre-method manually:

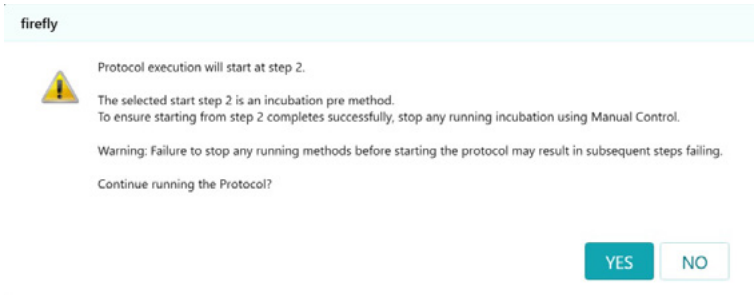
- Navigate to ***Manual Control***.
- Select the required ODTC incubation pre-method from the dropdown list.
- Click 'RUN'.



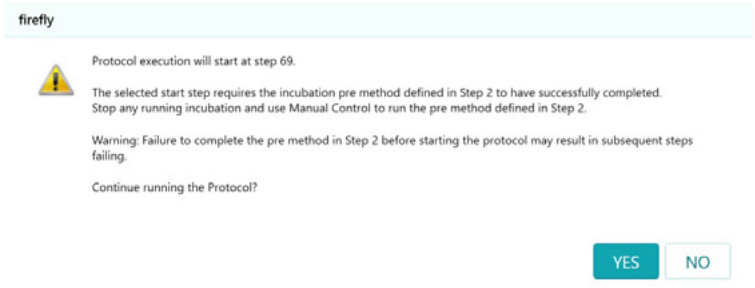
Allow the pre-method to complete before proceeding.

When restarting the protocol, the following prompts may be displayed:

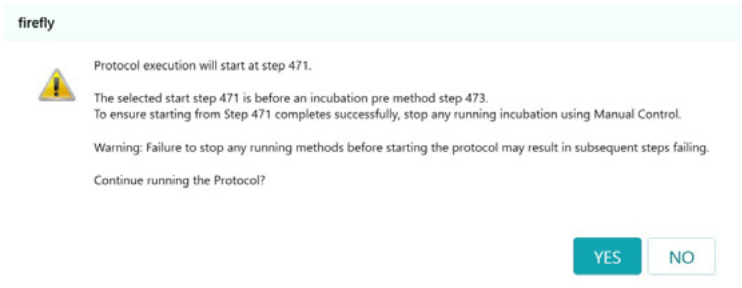
- If the incubation pre-method is already running, guidance will be provided to end the process and restart:



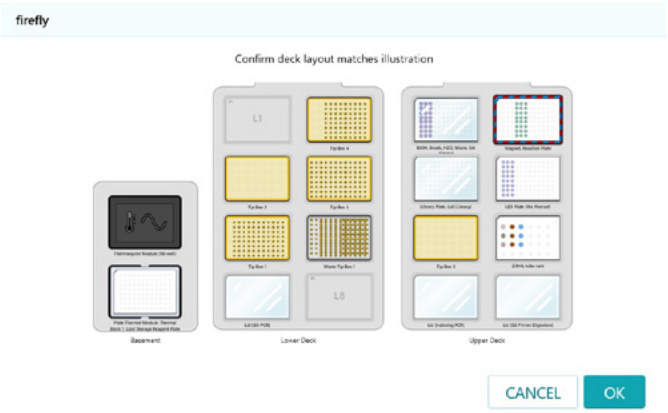
- If execution restarts after the incubation pre-method step but before the main incubation method, a prompt will indicate the current state and required action:



- If execution is resumed before the pre-method step, the pre-method will be run as normal.



- Click ‘YES’ to proceed to deck layout confirmation.



Verify that the physical presence of labware and accessories on the decks and modules matches the illustration. Note that the deck layout may differ from the initial setup. Once confirmed, click ‘OK’ to begin execution from the selected step.

5.3 Error messages and recovery actions

The following table lists common error messages and suggested recovery actions.

Error Message	Response
Validation errors	
This would display the first validation error as the reason for not executing the protocol	Make sure the Protocol has no errors before trying to execute it
Tip change errors	
Pipette Head failed to load Tips.	This is usually because tips are already loaded
Pipette Head failed to unload Tips.	This is usually because no tips are currently loaded
Pipette Head errors	
Failed to set Pipette Head to volume mode.	Pipette head error. It may need purging and resetting. You will need access to the ***Manual Control*** to do this.
Failed to set Pipette Head aspirate speed.	Pipette head error. If this persists, try power cycling your instrument.
Failed to aspirate Blowout Volume.	Pipette head error. It may need purging and resetting. You will need access to the ***Manual Control*** to do this.

Failed to aspirate Volume.	Pipette head error. It may need purging and resetting. You will need access to the ***Manual Control*** to do this.
Failed to set Pipette Head dispense speed.	Pipette head error. If this persists, try power cycling your instrument.
Failed to dispense Air Transport Volume.	Pipette head error. It may need purging and resetting. You will need access to the ***Manual Control*** to do this.
Failed to dispense Volume.	Pipette head error. It may need purging and resetting. You will need access to the ***Manual Control*** to do this.
Failed to dispense Blowout Volume.	Pipette head error. It may need purging and resetting. You will need access to the ***Manual Control*** to do this.
Failed to aspirate Mix Volume.	Pipette head error. It may need purging and resetting. You will need access to the ***Manual Control*** to do this.
Failed to set Pipette Head dispense speed.	Pipette head error. It may need purging and resetting. You will need access to the ***Manual Control*** to do this.
Failed to dispense Mix Volume.	Pipette head error. It may need purging and resetting. You will need access to the ***Manual Control*** to do this.
Failed to set Pipette Head Post Mix aspirate speed.	Pipette head error. If this persists, try power cycling your instrument.
Failed to aspirate Post Mix Aspirate Volume.	Pipette head error. It may need purging and resetting. You will need access to the ***Manual Control*** to do this.
Failed to dispense Post Mix Aspirate Overshoot Volume.	Pipette head error. It may need purging and resetting. You will need access to the ***Manual Control*** to do this.
Failed to aspirate Post Mix Aspirate Air Transport Volume.	Pipette head error. It may need purging and resetting. You will need access to the ***Manual Control*** to do this.
Failed to set Pipette Head Post Mix dispense speed.	Pipette head error. If this persists, try power cycling your instrument.
Failed to dispense Post Mix Air Transport Volume.	Pipette head error. It may need purging and resetting. You will need access to the ***Manual Control*** to do this.
Failed to dispense Post Mix Dispense Volume.	Pipette head error. It may need purging and resetting. You will need access to the ***Manual Control*** to do this.
Failed to dispense Post Mix Blowout Volume.	Pipette head error. It may need purging and resetting. You will need access to the ***Manual Control*** to do this.
Firefly HvHead Error[Aspirate]	Pipette head error during aspirate. May need purging and resetting. You will need access to the ***Manual Control*** to do this.
Firefly HvHead Error[Dispense]	Pipette head error during dispense. May need purging and resetting. You will need access to the ***Manual Control*** to do this.

5.3.1 Tip recovery

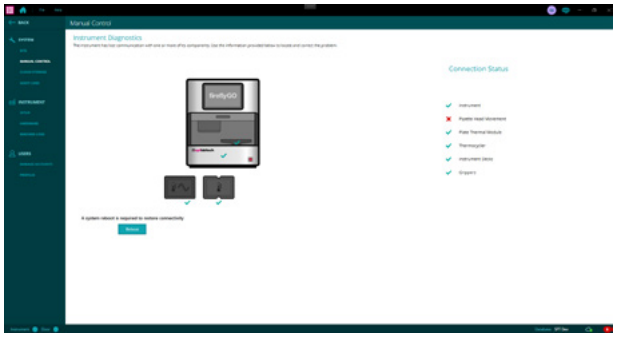
If tips have not loaded properly, use ***Manual Control*** to unload them to an empty tip box. Check that the tips are undamaged. If the tips are undamaged, restart the protocol and attempt to load them again. If the tips are damaged or cannot be unloaded into a tip box, unload them into a suitable holding container, for example a trough plate.

If tips cannot be unloaded at all, ***contact reliance*** for assistance.

5.3.2 Communication recovery

If protocol execution fails because communication with the fireflyGO control boards is lost, use the Recovery Wizard. The software will direct you to the ***Manual Control*** page. Follow the on-screen instructions to restore communication.

Contact reliance if recovery is unsuccessful.



fireflyGO contains no user-repairable parts. *Contact reliance* if you are unable to recover the instrument using the procedures described in this section.

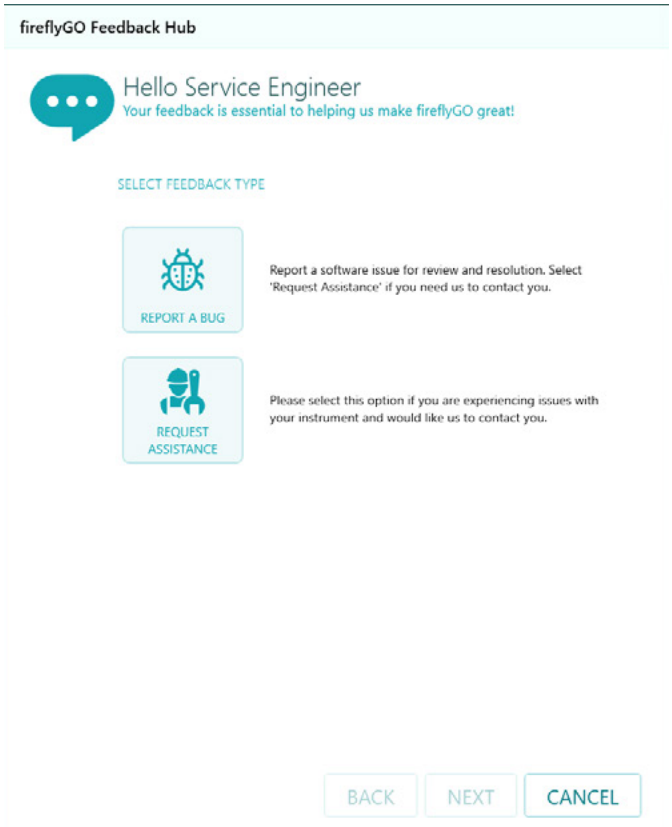
5.4 Using the fireflyGO Feedback Hub

The fireflyGO Feedback Hub is the preferred method for contacting reliance service engineers. Use it to request technical assistance, report instrument, software, or protocol execution issues, submit service requests, and provide information to assist investigation and troubleshooting. Information submitted through the Feedback Hub helps reliance service engineers investigate issues and provide support more efficiently.

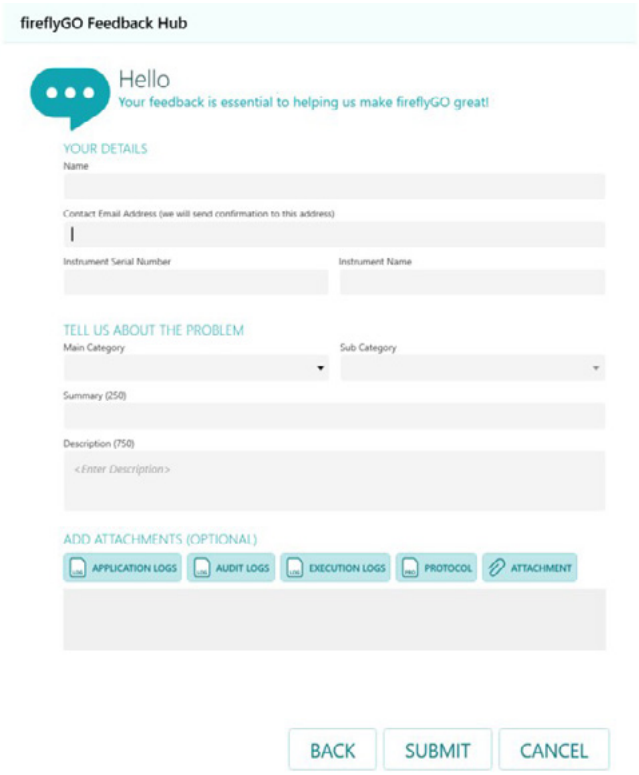
To open the fireflyGO Feedback Hub, select the Feedback Hub icon from the menu bar (circled in red). This function is available to all user account types.



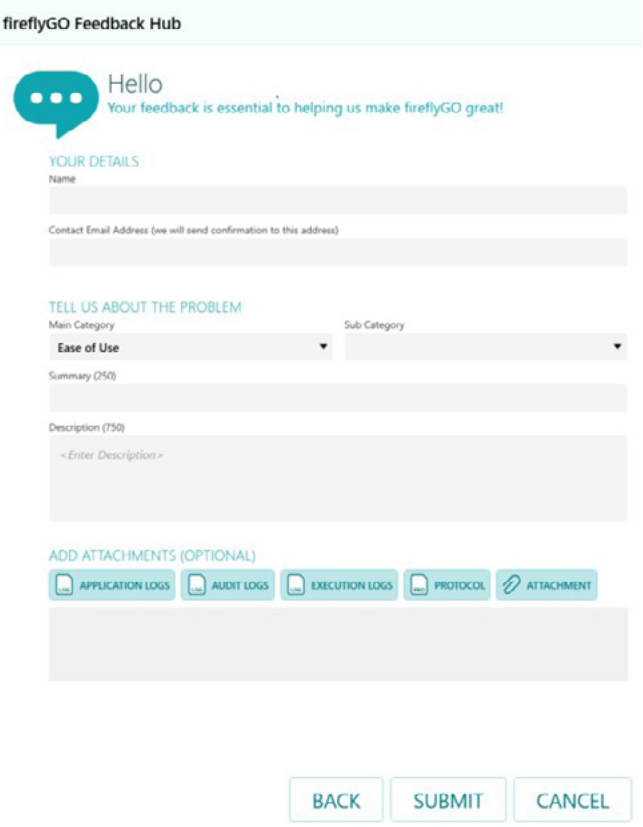
Use the opening form to select the appropriate feedback category.



If you require assistance operating your instrument, select Service Request. To support efficient investigation, include relevant information where available, such as issue description, protocol, logs, screenshots, and photographs.



The process is similar when reporting software issues:



6 User management

6.1 Overview

fireflyGO software is very flexible and allows user permissions to be configured to support the needs of your laboratory.

fireflyGO software uses user accounts and permission profiles to control access to system functions. Profiles define what actions users are permitted to perform, while user accounts identify individual users.

fireflyGO software includes three standard profiles:

- Standard User: routine protocol execution.
- Super User: advanced operation, kit management, and troubleshooting.
- Administrator: system configuration and user management.

You may modify these profiles or create additional profiles to suit your organization's requirements.

As standard, only Administrators can access user and profile management functions. All users can modify details of their own account.

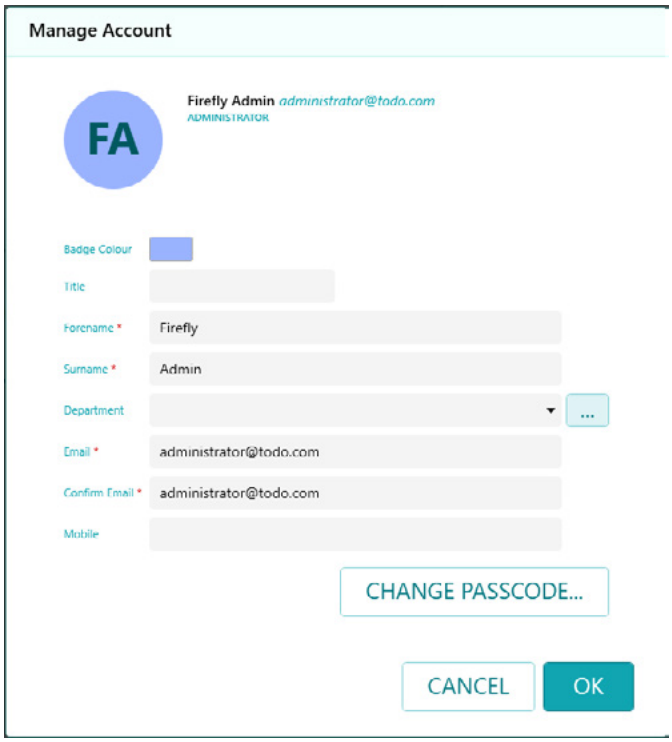
6.2 Managing your own account

To access your account details, click on the user account button (circled in red).

This function is available to all users.



Select 'Manage Account…' to update your personal details, change your passcode, select alternative badge color, review or update department information.



Select your department from the dropdown list. If it is not shown correctly, click the '...' button to ***add or modify department information***.

When a user account is first created, the Administrator assigns an initial passcode. This passcode should be changed immediately, using Change Passcode.

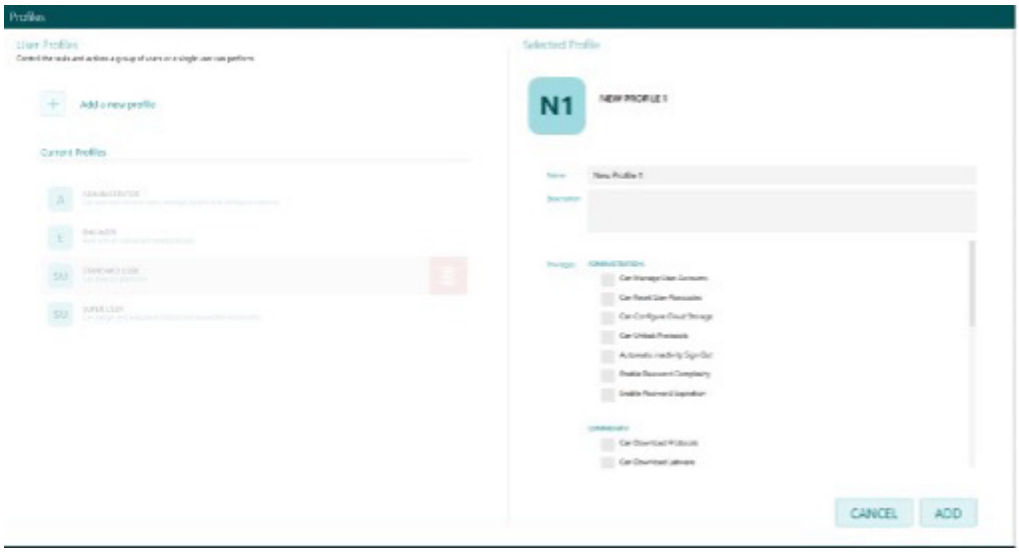
Your organization may implement passcode complexity requirements. These may include:

- no digit repeated more than 3 times consecutively
- no digit repeated more than 4 times within a passcode
- at least 3 different digits included within the passcode

Your organization may also require periodic passcode changes. The default expiry date is 90 days.

6.3 Managing profiles

Profiles define the functions available to users. Use 'Users' → 'Profiles' to review, modify, or create profiles. Select Add a new profile to create a profile with a custom set of permissions.



Modify profile privileges by selecting or clearing the appropriate options, then select Save.

Profiles may be configured to support organizational roles and regulatory requirements. For example, specific privileges may be restricted to system administrators or QA personnel.

The default profile privileges are shown below.

Privileges	Standard User	Super User	Administrator
Protocols			
Can Execute protocols	Yes	Yes	No
Can Execute Protocols in Debug Mode	No	Yes	No
Can Adjust Protocol Variables	Yes	Yes	No
Instrument			
Can Control Instrument Manually	Yes	Yes	No
Can Access Machine Logs	Yes	Yes	Yes
Community			
Can Download Protocols	No	Yes	Yes
Administration			
Can Manage User Accounts	No	No	Yes
Can Access Audit Logs	Yes	Yes	Yes
Can Reset User Passcodes	No	No	Yes
Can Configure Cloud Storage	No	No	Yes

In addition to the privileges assigned to the default profiles, the following options are available.

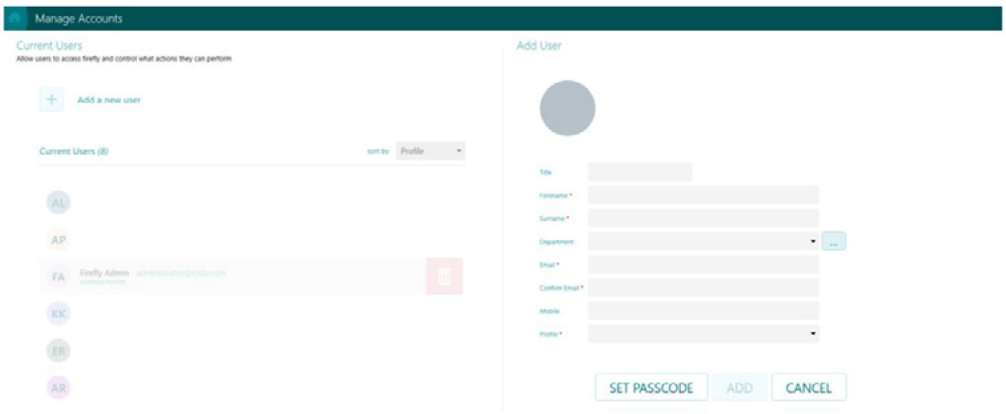
Privileges	Description
Administration Privileges	
Automatic Inactivity Sign Out	This is not enabled by default but may be appropriate for regulated labs.
Enable Password Complexity	This is not enabled by default but may be appropriate for regulated labs.
Enable Password Expiration	This is not enabled by default but may be appropriate for regulated labs. The default is expiry after 90 days.
Instrument Privileges	
Can Control Instrument Hardware Directly	This enables low level control of fireflyGO instruments and is ordinarily reserved for service engineers.
Can Access Instrument Setup	This gives limited access to the setup functions. It is not ordinarily required.
Can Skip Execution Step	This is not enabled by default and is not ordinarily required.
Can Execute Protocols with containing Script Steps	This is not enabled by default and is not ordinarily required.
Can Digitally Sign Execution Reports	This is not enabled by default but may be appropriate for records required for regulated labs.

Use descriptive profile names that align with organizational responsibilities or SOP terminology, for example, Senior Technician, Laboratory Supervisor, or QA Reviewer.

6.4 Creating user accounts

Before creating users, ensure that the required profiles have been defined.

To create a user account, select: ‘Users’ → ‘Manage Accounts’ → ‘Add a new user’. For each account, complete all mandatory fields marked with a star. Set an initial passcode. Use the ... button if new department information needs to be created.



6.5 Updating or deleting user accounts

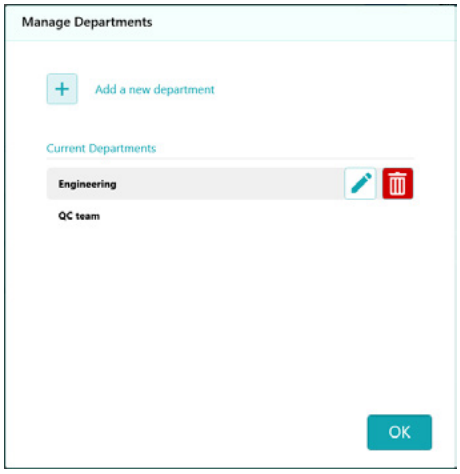
Users may update all their details except for their profile.

Administrators can also edit users’ details and additionally revise their profile.

To delete a user, select the red bin next to the username within the ‘Managing Accounts’ view.

6.6 Managing departments

Departments can be managed from either the Manage Account popup or Manage Accounts forms using the '...' button.



Available actions include:

- add a new department using the + icon, then enter a department name
- edit a department's name using the pencil icon
- delete a department using the bin icon

6.7 Deleting profiles

Before deleting a profile, all users assigned to that profile must either be reassigned to a different profile or be deleted.

To delete a profile, select the red bin icon in the Profiles view.

Profiles currently assigned to users cannot be deleted.

7 Care & Maintenance

7.1 Managing condensation in the ODTC

If the ODTC was used to cool a plate for longer than 2 hours as part of the protocol, condensation may be present inside the unit. Inspect the ODTC and wipe away any visible condensation using a lint-free tissue.

7.2 Cleaning

Regular scheduled cleaning of fireflyGO surfaces and components helps to sustain consistent instrument performance. The frequency of regular (maintenance) cleaning can vary depending on several factors, including your specific laboratory protocols, the types of liquids and samples being handled, existing cleaning requirements of your facility, and the overall usage of your fireflyGO instrument.

You should inspect your instrument regularly for stains, dust or debris accumulation and adjust your regular cleaning interval based on your workflow requirements, usage of the instrument and existing cleaning procedures in your facility.

7.2.1 Cleaning materials

Low-lint paper tissue or cloth are recommended for cleaning the fireflyGO instrument and accessories. Avoid using abrasive materials.

The preferred cleaning solutions for the fireflyGO instrument and accessories are 70% alcohol (e.g., ethanol or isopropanol) and distilled water.

Corrosive cleaning solutions, such as bleach or acid-based solutions (e.g., LookOut DNA Erase), may lead to corrosion of instrument components. Such solutions should be avoided and only used with care if crucial for the workflow. If the use of such solutions is deemed essential, spray the cleaning solution onto a tissue or cloth first and then wipe the surfaces as needed. This operation must always be followed by wiping the surfaces with a tissue soaked in 70% alcohol solution.

Disinfectants and detergents (e.g., Chemgene Medlab, RNase Zap) should be used sparingly and only if crucial for the workflow. If the use of such solutions is deemed essential, spray the cleaning solution onto a tissue or cloth first and then wipe the surfaces as needed. This operation must always be followed by wiping the surfaces with a tissue soaked in 70% alcohol solution.

It is recommended that cleaning solutions with less than 1% of sodium hydroxide are used.

7.2.2 Routine cleaning

For general cleaning of a clean, dry instrument:

1. ***Switch off*** fireflyGO then disconnect it from the supply as described in section 3.5.1.
2. Gently wipe the exterior of the instrument with a clean lint-free cloth or cleanser wipe. You can use dilute (70% v/v) ethanol to moisten the cloth, or as a spray. If necessary, the exterior surfaces of the fireflyGO instrument can be cleaned with tissue soaked in disinfectant or detergent, followed by tissue soaked in 70% alcohol.
3. Clean the decks, inner surfaces of the instrument panels and the pipette head cover with tissue soaked in disinfectant or detergent, followed by tissue soaked in 70% alcohol.

Avoid spraying cleaning solutions directly into the fireflyGO instrument. It is recommended to spray the cleaning solutions onto a low-lint paper tissue or cloth first and then wipe the surfaces inside the instrument.

---

4. Clean the ODTC in accordance with the instructions in the ***Inheco On Deck Thermal Cycler manual.***
5. Gently wipe the monitor with a soft, dry, lint-free cloth.

7.2.3 Clearing up spillages

Clean up all spillages inside the instrument as soon as possible.

If you have a spillage:

1. Stop fireflyGO before you do anything else.
2. ***Switch off*** then disconnect it from the supply as described in section 3.5.1.

If the spillage is small and easily contained:

1. Mop up the liquid, using appropriate PPE for the reagents in use on fireflyGO.
2. Select cleaning agents which are compatible with the spilled material and will not react with it. Minor spills can be cleaned with a low-lint paper tissue or cloth soaked in 70% alcohol. If cleaning with a disinfectant or detergent is deemed necessary due to the nature of the spilled liquid or workflow, wipe the spill with tissue soaked in the desired cleaning solution, followed by tissue soaked in 70% alcohol.
3. Using appropriate PPE for both the reagents and the cleaning agent, clean where the spillage occurred.
4. Clean the ODTC in accordance with the instructions in the ***Inheco On Deck Thermal Cycler manual.***
5. Gently wipe the monitor with a soft, dry, lint-free cloth.

Spill trays are located at the bottom of the interior of the fireflyGO instrument and will contain spills and prevent damage to the electrical components underneath. If the spillage is a larger volume and you suspect that it may have contaminated the instrument basement, mop up the liquid you can easily reach and ***contact reliance*** for assistance.

7.3 Routine preventative maintenance

Proper instrument care and maintenance is an important part of user safety. It can help to prolong the equipment's life and have a positive impact on your results as well.

Follow the periodic maintenance instructions in the ***Inheco On Deck Thermal Cycler manual.***

7.3.1 Safety function check (monthly)

Carry out this check once a month. It must be done by a user trained to use ***Manual Control.***

1. Press the e-stop.
2. In ***Manual Control***, select Reset for the Pipette Head. The Pipette Head must not move, and an error message should be displayed.
3. Clear the error message.
4. Release the e-stop by turning it clockwise
5. Select Reset for the Pipette Head again. The reset operation must complete successfully.

If the Pipette Head moves while the e-stop is engaged, stop using fireflyGO immediately and ***contact reliance***.

7.3.2 Software updates

reliance will inform you when fireflyGO software updates are ready.
Updates will not be installed automatically.

7.3.3 Servicing requirements

fireflyGO contains no user-serviceable parts. Repairs and maintenance requiring access beyond routine user procedures must be performed by reliance service engineers.

Yearly servicing is recommended.

7.4 Putting fireflyGO into storage

If you need to put fireflyGO into storage, ***clean*** it thoroughly first.

Plan to move it according to the ***handling instructions***, and store in a clean location which meets fireflyGO ***environmental conditions***.

8 Customer support

reliance

reliance is your support partner throughout the life of your instrument, minimizing downtime, maintaining optimal performance, and giving you absolute confidence to assure research success. SPT Labtech products are renowned for their industry-leading reliability and efficiency. With our reliance service, you have access to a dedicated support team to safeguard your investment and secure your productivity.

To request support from reliance, please use the *fireflyGO Feedback Hub* or the contact information below:

+1 (855) 601-5867 (USA)
+44 (0)1223 627500 (UK/Europe)

fireflyGOsupport@sptlabtech.com

sptlabtech.com/reliance

9 Compliance information

fireflyGO is designed and manufactured in the United Kingdom by:

SPT Labtech Ltd
Melbourn Science Park
Melbourn
Hertfordshire
SG8 6HB

The environmental ratings given in section 2.1.2, including pollution degree and overvoltage category, are as defined in IEC 61010-1.

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