Agilent

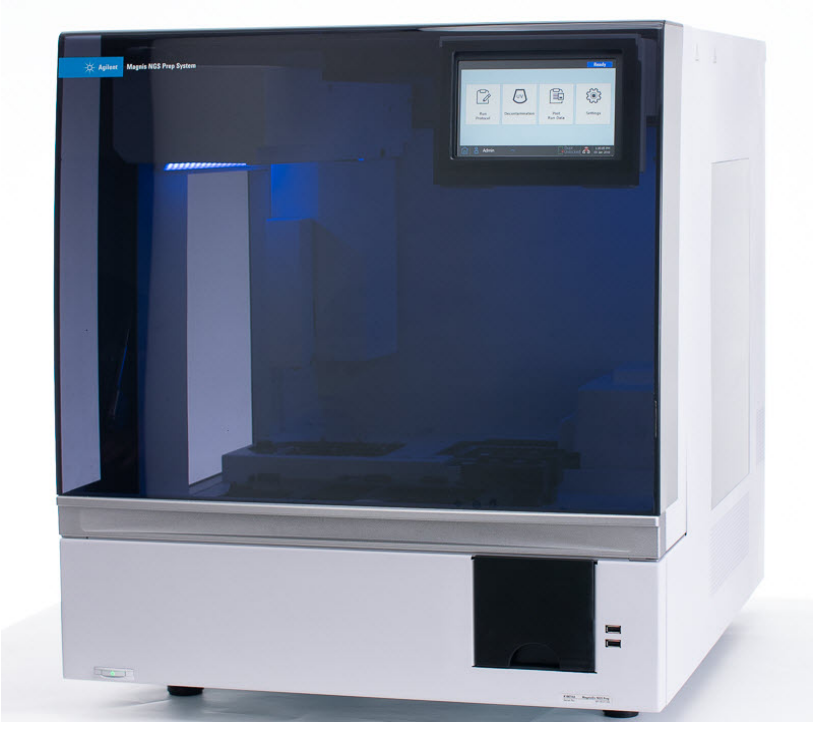
Magnis/MagnisDx NGS Prep System

User Guide

K1007A MagnisDx NGS Prep system: For In Vitro Diagnostic Use

G9710A Magnis NGS Prep system: For Research Use Only. Not for use in diagnostic procedures.

Revision E.01, December 2025



Content

1 Before You Begin

This chapter contains information for you to read and understand before you start.

Symbol Table

	European Conformity		Caution
	In Vitro Diagnostic Medical Device		CSA mark
	Legal Manufacturer		Consult Instructions for Use
	Manufacture date		Do not discard in domestic household waste
	Caution, hot surfaces		Caution, pinching hazard
	Environmentally Friendly Use Period (EFUP) of 40 years		Caution, ultra-violet light
	Authorized representative in the European Community		Earth ground
	UK Responsible Person		Unique Device Identifier
	UK Conformity Assessed		Regulatory Compliance mark
	KC EMC		Authorized representative in Switzerland
	Importer		

Legal and Regulatory

South Korean Class A EMC Declaration

This equipment has been evaluated for its suitability for use in a commercial environment. When used in a domestic environment, there is a risk of radio interference.

사용자안내문

이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서
가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다 .

Sound Emission

Manufacturer's Declaration

This statement is provided to comply with the requirements of the German Sound Emission Directive of 18 January 1991.

This product has a sound pressure emission (at the operator position) <70 dB.

- Sound Pressure Lp <70 dB (A)
- At Operator Position
- Normal Operation
- According to ISO 7779:1988/EN 27779/1991 (Type Test)

Waste Electrical and Electronic Equipment (WEEE) Directive

This product complies with the European WEEE Directive marking requirements. The affixed label indicates that you must not discard this electrical/electronic product in domestic household waste.

NOTE

Do not dispose of in domestic household waste

To return unwanted products, contact your local Agilent office, or see **https://www.agilent.com** for more information.

Product Description

The Magnis NGS Prep System is an automated liquid handling system for next generation sequencing library preparation and/or target enrichment of human nucleic acid samples.

Intended Use

The MagnisDx NGS Prep System is an automated liquid handling system for next generation sequencing library preparation and/or target enrichment of human nucleic acid samples.

The MagnisDx NGS Prep System is to be used only by operators trained in laboratory techniques and procedures.

The customer is responsible for validation of assays and compliance with regulatory requirements that pertain to their procedures and uses of the instrument.

Principle of the NGS Prep Procedure

The Agilent Magnis/MagnisDx NGS Prep System is a liquid handler that offers start-to-finish automation of library preparation and target enrichment protocols for next generation sequencing (NGS). The starting material is total RNA or fragmented genomic DNA (gDNA) purified from a cell or tissue sample, blood sample, or formalin-fixed paraffin-embedded (FFPE) sample. The end result is a target-enriched DNA library ready for sequencing.

The hardware components make up the instrument. See "Instrument Components" on page 18 for a list of these components.

The instrument is controlled through the software component of the system, which is displayed and operated through the LCD touchscreen. Chapter 3, "Getting Started," and Chapter 4, "Operating the System," include instructions on setting up and operating the Magnis/MagnisDx NGS Prep System using the software. Chapter 6, "Software User Interface Reference," provides a description of each individual software screen, detailing the purpose of each feature on the screen.

Magnis reagents must be vortexed and centrifuged as described in the target enrichment protocol for the reagents to ensure optimal performance.

Limitations of Use

The Magnis/MagnisDx NGS Prep System has been validated for use with Agilent Magnis NGS kits.

Instrument Specifications

Table 1 Technical specifications of the instrument

System Component		Specification
Thermal cycler module		
Minimum temperature of thermal block		4°C (39.2°F)
Maximum temperature of thermal block		99°C (210.2°F)
Heater/Shaker/Magnet module		
Heater	Temperature maximum	75°C (167°F)
Shaker	Maximum speed (rpm)	1800 rpm ±5%
Chiller module		
Temperature range		4–12°C (39.2–53.6°F)
Power inlet		
AC voltage		100–240 VAC ± 10%
AC frequency		50/60 Hz
Maximum power		1000 W
Input/output (I/O) connectors		
USB 2.0 port	Maximum voltage rating	5 VDC
LAN port (for Cat 5 cable‡)	Maximum voltage rating	3.3 VDC
System		
ISM Classification		ISM Group 1 Class A According to CISPR 11
Acoustic sound pressure		≤ 70 dBA
Dimensions, instrument door closed (Height × Depth × Width)		71 cm × 72 cm × 62 cm (28 inches × 28 inches × 24 inches)
Dimensions, instrument door open (Height × Depth × Width)		107 cm × 72 cm × 62 cm (42 inches × 28 inches × 24 inches)
Weight		95 kg (209 lbs)
Environmental conditions*		
Temperature		Operating: 15°C to 25°C (53.6°F to 77°F) Transport and storage: –40°C to 70°C (–40°F to 158°F)
Humidity		Operating: 30% to 70%, non-condensing
Altitude		2000 m (6562 feet)

* The listed conditions apply to instrument operation. Conditions required for assay performance may differ.

‡The maximum length of the LAN cable used for EMC testing is 1.5 meters.

NOTE This is an ISM Group 1 Class A product intended for use in industrial environment. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

Equipment Ratings

- Pollution degree 2
- Installation category II
- Altitude 2000 m (6562 feet)
- Humidity 30 to 70%, non-condensing
- Electrical supply 100–240 V, 50/60 Hz, 1000 W
- Temperature 15°C to 25°C (53.6°F to 77°F)
- For Indoor Use Only

Materials Provided

Table 2 Materials provided with the Magnis/MagnisDx NGS Prep System

Materials
Instrument with preloaded touchscreen software
Power cord
Functional test certificate

USB Drive

When needed, you can use the USB ports on the front of the instrument to connect a USB drive for transferring files to and from the system.

Do not use USB ports while a Magnis protocol is running. Do not use the USB ports for other uses including as a charging port for phones or other devices. Magnis instruments are not compatible with encrypted USB drives.

Cleaning Supplies

Use the cleaning materials listed below to manually clean the instrument. See "Cleaning the System Components" on page 50 for instructions.

Table 3 Recommended supplies for cleaning the system instrument

Description	Purpose	Vendor
Diluted bleach (10%) wipes	Surface-cleaning of the instrument deck	Hype-Wipe Bleach Towelettes, or equivalent
Alcohol (70%) wipes	Surface-cleaning of the instrument exterior and instrument deck	VWR Pre-Moistened Clean Wipes, or equivalent
Dry, lint-free, scratch-free, laboratory wipes	Surface-cleaning of the barcode scanner window	Kimwipes, or equivalent

Product Inspection

Upon receipt of the Magnis/MagnisDx NGS Prep System, carefully inspect the product box for any visible signs of damage. If damage to the product box is detected, contact **Agilent Worldwide Technical Support**.

Allow the shipping container for the Magnis/MagnisDx NGS Prep System to come to room temperature prior to unpacking.

Safety Precautions

The Magnis/MagnisDx NGS Prep System is designed for safe operation when it is used in the intended manner. Using the system for purposes other than those intended may impair those safety protections.

Safety Notices

CAUTION

A **CAUTION** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a **CAUTION** notice until the indicated conditions are fully understood and met.

WARNING

A WARNING notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

Installation

CAUTION The system must be installed by an Agilent engineer or Agilent authorized service provider.

WARNING Do not attempt to manually lift the instrument. To move the instrument, use an automated forklift or lift table that can lift at least 100 kg (220 lbs). To move the instrument onto the forklift pallet or lift table, position the instrument as close to the pallet or table as possible. Then, two people lift the instrument together, with hands placed on the bottom of the instrument, and set it down on the pallet or table.

WARNING When adjusting the placement of the instrument on the laboratory bench, take care to avoid pinching hazards on the instrument.

CAUTION Retain the locking jigs that secure the gantry during shipment. Anytime the instrument is moved, secure the gantry using the jigs.

Electrical

Standard electrical safety precautions should be applied, including the following:

WARNING Per North American and IEC requirements, install the instrument in a location where branch circuit protection is available in the power network.

WARNING Install the instrument with the Agilent supplied power cord that is compatible with the electrical outlets in your region. Do not substitute with a power cord from another source.

WARNING Install the instrument away from any flammable sources.

CAUTION Install the instrument in a location where the power cord can be easily reached for quick disconnection of the power supply.

CAUTION Make sure that the ventilation slots of the instrument are free of any obstruction. Maintain 10 cm (4 inches) of cleared space on each side of the instrument and 18 cm (7 inches) of cleared space at the back of the instrument.

CAUTION Connect the power cord to a wall output that provides 100–240 VAC, 50/60 Hz, 1000 W.

CAUTION Make sure that proper voltage is supplied before turning on the instrument for the first time.

WARNING Connect the instrument to a grounded socket. Do not operate the instrument from a power outlet that has no ground connection.

WARNING Do not connect the instrument to the same circuit as other devices with a high current draw (e.g., freezers, centrifuges). If possible, connect the instrument to an independent or dedicated AC circuit.

WARNING Do not touch any switches or outlets with wet hands.

CAUTION Before disconnecting the power cord, turn off the instrument at both the power button on the front and the power switch on the back.

WARNING Unplug the instrument before you clean any major liquid spills and before servicing any of the electrical or internal components.

WARNING Do not operate the instrument in a hazardous or potentially explosive environment.

CAUTION Do not service the electrical components unless you are qualified to do so.

Fluids and Reagents

CAUTION **Magnis reagents must be vortexed and centrifuged as described in the target enrichment protocol prior to initiating a Magnis run**. Never process reagents not intended for use with the Magnis/MagnisDx NGS Prep System.

CAUTION During deck setup, make sure that all labware is positioned flat on the designated deck platform or fully seated in the appropriate labware holder. **Improperly positioned labware can cause low or no final library yield for some or all samples.**

CAUTION **When preparing for a Magnis run, and using critical input DNA or RNA samples with limited quantity, verify that there is a sufficient quantity of sample to complete at least two Magnis runs.**

WARNING Observe the relevant safety regulations when handling pathogenic material, radioactive substances or other substances hazardous to health.

WARNING Do not submerge the instrument in any liquid.

Danger of Ultraviolet (UV) Light Exposure

The instrument door and side panels are not UV-transparent, therefore exposure to UV light is minimal. However, the following precautions are still needed.

WARNING During decontamination of the instrument deck with UV light, do not look directly or indirectly at the UV light source.

WARNING Always perform decontamination with the instrument door closed and locked. The instrument door is programmed to remain locked while the UV light is on.

WARNING Replacement UV tubes must be provided by Agilent and must be installed by an Agilent engineer or Agilent authorized service provider.

Danger of Burns

WARNING During protocol runs, the thermal block and other components of the thermal cycler module quickly attain temperatures of greater than 50°C. To ensure safe operation, the instrument door must remain closed during runs. The instrument door is programmed to remain locked while protocol runs are in progress.

CAUTION Use only Agilent materials (plates, adhesive seals, foils, mats) intended for use on the Magnis/MagnisDx NGS Prep System. These materials are sufficiently temperature-stable (up to 120°C).

Electrostatic Discharge

CAUTION The Magnis/MagnisDx NGS Prep System is static sensitive. Electrostatic discharges greater than 8000 volts may interfere with the normal operation of the USB ports on the instrument. Handling precautions are required when working in high static environments. Wear a grounded wrist strap and take other anti-static precautions prior to making contact with the instrument in high static environments. ESD STM5.1-1998 Class 3B.

Environmental Requirements

CAUTION **Operating temperature**
Keep the ambient temperature between 15°C and 25°C (53.6°F to 77°F).

CAUTION **Operating humidity**
Keep the humidity levels between 30% and 70% non-condensing.

CAUTION **Altitude**
Maximum altitude for instrument operation is 2000 m (6562 feet)

Installation Requirements

Review the **"Electrical"** safety precautions on page 12 for power supply requirements that impact safe operation of the instrument.

Place the instrument in a post-PCR laboratory environment.

CAUTION Instrument is for indoor use only.

CAUTION The laboratory humidity levels must be between 30% and 70% non-condensing. Operating the system in humidity levels outside of this range can impact performance.

CAUTION Do not place the instrument in proximity to other lab equipment that is sensitive to vibrations or that generates vibrations during use. Proximity to lab equipment that generates vibrations can impact performance.

CAUTION

Maintain the following minimum distances for cleared space around the instrument.
Instrument sides: 10 cm (4 inches) on each side to allow for proper ventilation from the side vents.
Back of the instrument: 18 cm (7 inches) at the back to allow for proper ventilation from the back vent.
Front of the instrument: 5 cm (2 inches) in front to avoid unintentional contact with the power switch.
Top of the instrument: 111 cm (44 inches) above to allow for opening the door.

CAUTION

Install the instrument in a location where the power cord can be easily reached for quick disconnection of the power supply.

WARNING

Install the instrument with the Agilent supplied power cord. Do not substitute with a power cord from another source.

WARNING

Install the instrument away from any flammable sources.

CAUTION

After installation is complete, avoid moving the instrument or making any adjustments to the placement of the instrument as it will disturb some of the settings made by the Agilent engineer or service provider, resulting in an additional service visit.

2 Hardware Overview

This chapter provides product information on the hardware elements of the Magnis/MagnisDx NGS Prep System.

Instrument Components

The Magnis/MagnisDx NGS Prep System includes the following instrument components.

Front and sides of instrument – Figure 1

- Instrument door
- Waste bin drawer containing disposable tip waste bin
- LCD touchscreen for display of the firmware software
- Power button
- USB ports (2)
- Side vents (1 on each side)

Figure 1 Instrument front, door closed

Back of instrument – Figure 2

- Power switch
- Ethernet port
- Power cord inlet
- Back vent

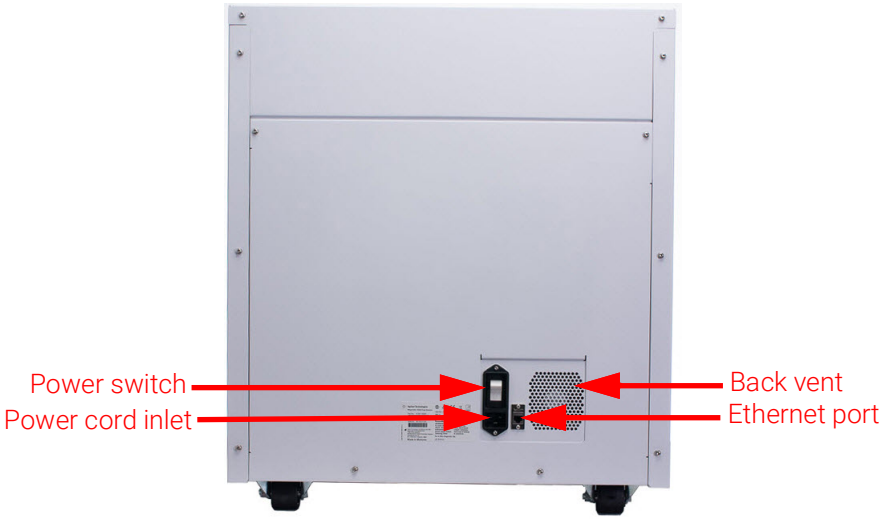


Figure 2 Instrument back

Instrument interior – Figure 3 and Figure 4

- Instrument deck consisting of the following modules:
  - Thermal cycler module for incubation and PCR steps
  - Heater/shaker/magnet (HSM) module for various processing steps
  - Chiller module for reagent storage
  - Tube holders for liquid reagents (6 total)
  - Platforms to hold tip boxes (4)
  - Platform to hold Beads/Buffers Plate
  - Opening to tip waste bin
- LED indicator lights (2)
- Micropipettor for liquid transfer
- Barcode scanner for labware verification and sample tracking
- Gantry for positioning of the micropipettor and barcode scanner
- UV tube for decontamination of surfaces of the instrument deck with UV light

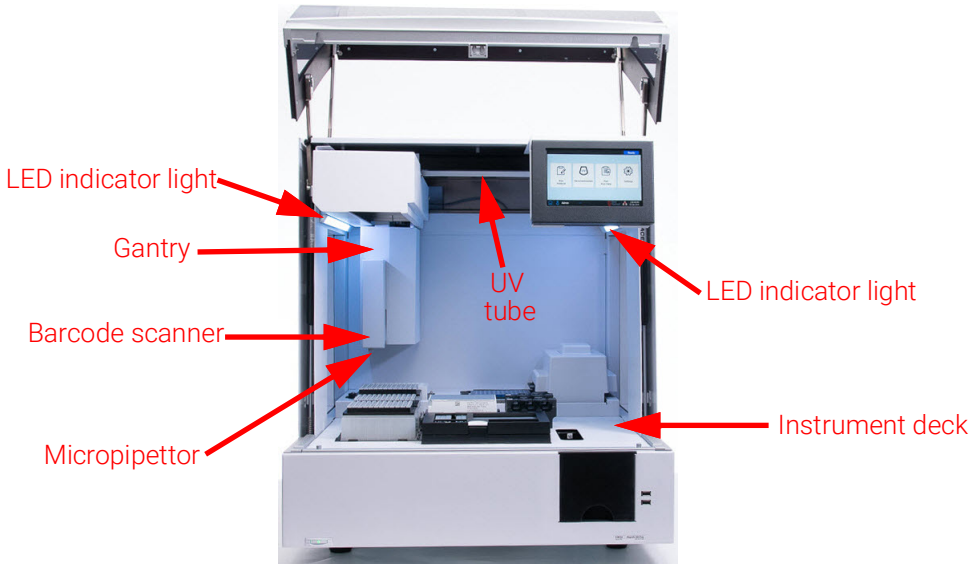


Figure 3 Instrument interior

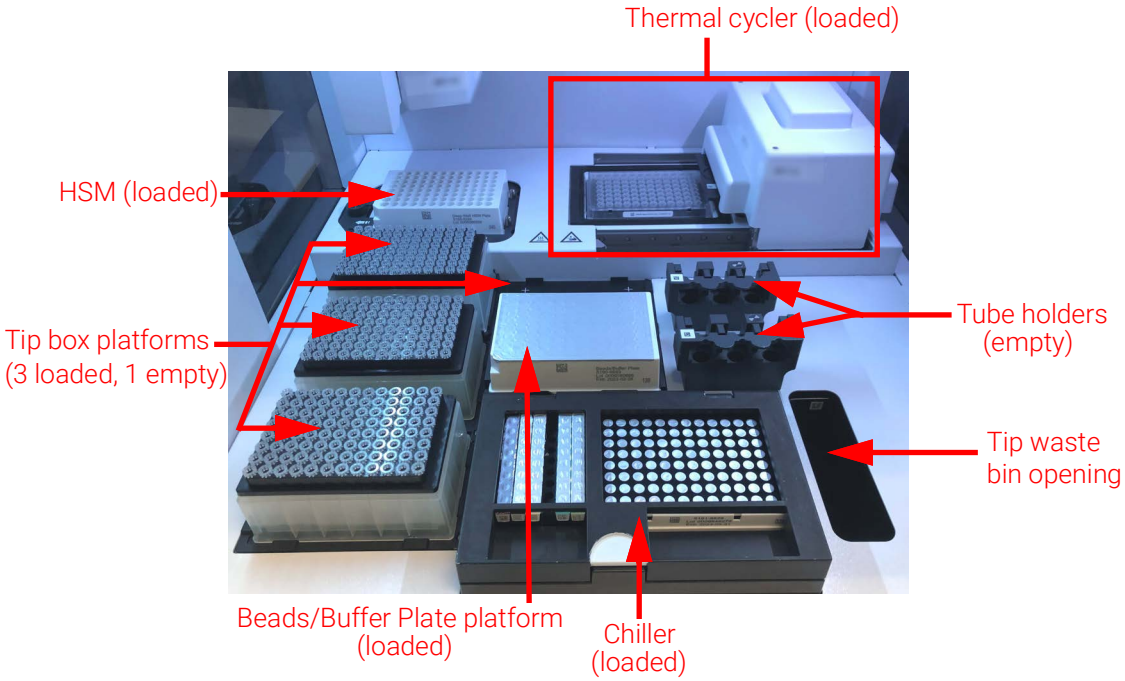


Figure 4 Instrument deck

Instrument Status Indicator Lights

You can quickly and easily check the status of the instrument based on the color of the LED indicator lights that illuminate the entire plate-filling area.

Table 4 Colors and descriptions of the LED indicator lights in the plate filling area

LED Color	Instrument Status	Description
White	Ready	The lights are illuminated white when the system is idle but the door is open, when the system is performing auto-teaching or teach-point verification, and when a user is setting up a protocol run.
Blue	Ready	The lights are illuminated blue anytime the system is idle and the door is closed, including at completion of a protocol run. The lights are also blue when the system is performing diagnostic tests.
Green	Running	The lights are illuminated green when the system is running a protocol.
Red	Error	The lights are illuminated red when the system has encountered an error. Check the touchscreen for an error message containing further details.

WARNING **During UV decontamination, the indicator lights are off and the instrument deck is illuminated by the UV light. Do not look directly at the UV light.**

3 Getting Started

This chapter contains instructions for logging in to the software, setting up and editing user accounts, and configuring system settings.

Starting Up the Magnis/MagnisDx NGS Prep System

Turn on the instrument

The power button on the front of the instrument is to toggle the instrument on and off.

1 Press the power button on the front of the instrument.

The light on the power button turns green, the instrument turns on, the LED indicator lights inside the instrument illuminate, and the software launches on the touchscreen.

If pressing the power button fails to turn on the instrument, verify that the power switch on the back of the instrument is in the ON position.

If an error message opens stating “Incorrect date reset,” and the date and time displayed on the touchscreen are incorrect, the battery that powers the touchscreen module may need to be replaced. Contact **Agilent Worldwide Technical Support** to schedule service.

Log in to the system

If you do not yet have your own personal user account, use the user name and password provided by the Agilent engineer or service provider who installed your system.

1 Access the Login screen of the software.

The Login screen opens automatically after turning on the instrument.

If another user is already logged in, press the user name at the bottom of the screen then press **Log Out**. The previously logged in user is logged out and the Login screen opens.

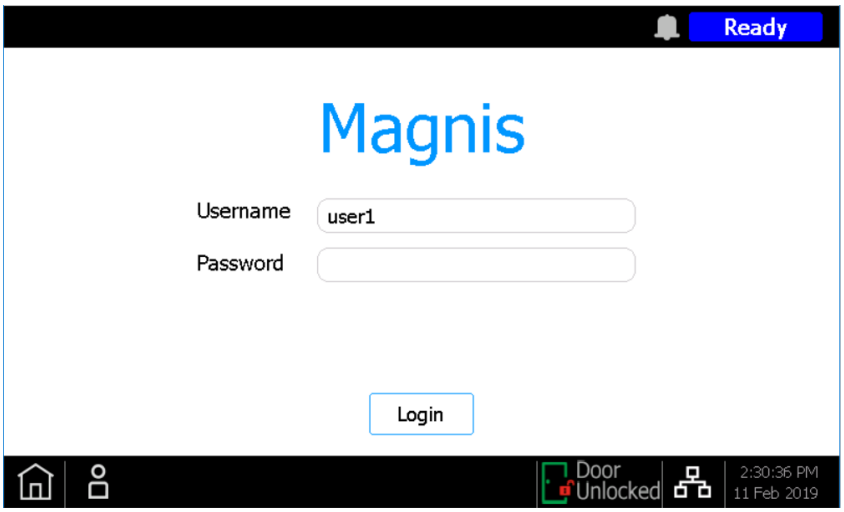


Figure 5 Login screen

2 Type the user name and password for your account into the provided fields.

The Agilent engineer or Agilent authorized service provider creates a user account during system installation that has advanced user access.

3 Press **Login**.

You are now logged in to the software.

Stand by as the system performs the series of preparatory activities described in **Table 5**. At the end of the preparatory activities, the software opens to the **Home screen**.

System startup events

Figure 6 shows the sequence of events for starting up the system. The preparatory activities, which are automatically performed by the system following software login, are described in **Table 5**.

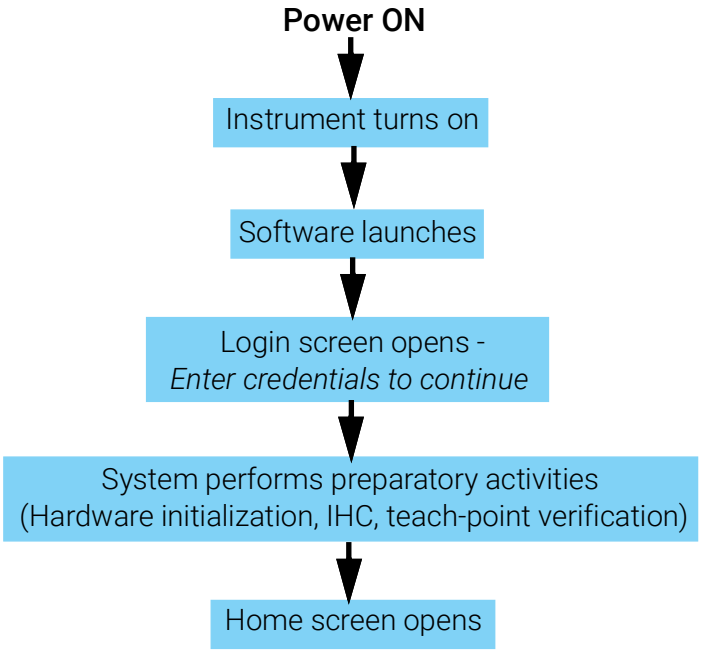


Figure 6 Sequence of startup activities

Table 5 Preparatory activities

Step	Description
Hardware initialization	During hardware initialization, the system returns all motorized parts (i.e., the gantry, HSM module, and thermal cycler) back to their home positions. Additionally, the system checks for the presence of any tips on the micropipettor and, if necessary, disposes of those tips in the tip waste bin.

Table 5 Preparatory activities (continued)

Step	Description
Instrument Health Check (IHC)	The system performs an IHC each time it is powered on (after login) and each time a protocol run is initiated. The checks performed during the IHC ensure that the hardware is functioning within specifications.
Teach-point verification	**Auto-teaching is a process in which** the system locates and records the positions of markers (called teach points) that are printed on the instrument deck. **Auto-teaching** ensures that, during a run, the micropipettor is accurately aligned with the tubes or wells at each deck position. You can configure the system settings to include teach-point verification as part of the initial IHC that is performed after powering up the instrument (see **"Running Auto-Teaching and Teach-Point Verification"** on page 43). During teach-point verification, the current teach-point locations are compared to those that were previously recorded during the most recent auto-teaching run to ensure that the values are sufficiently within range of each other. If the values do not fall within the expected range, the system prompts you to rerun auto-teaching.

Managing User Accounts

About user access levels

The access level assigned to a user account – *Standard* or *Advanced* – determines the user's access to certain software settings and functions. The table below summarizes the differences in privileges between the two access levels.

Table 6 Actions permitted for Standard and Advanced user account

Action	Permitted by Standard users?	Permitted by Advanced users?
Set up and run protocols	Yes	Yes
View data from their own protocol runs	Yes	Yes
Update the number of PCR cycles during run setup	No	Yes
View data from protocol runs of other users	No	Yes
Edit user accounts of other users	No	Yes
Edit chiller temperature setting	No	Yes
Install firmware updates	No	Yes
Install protocol updates	No	Yes
Delete diagnostic reports	No	Yes
Change default protocol version	No	Yes
Bypass reagent expiration error	No	Yes*

* Only permissible on the G9710A Magnis NGS Prep System.

Add new user accounts

Each user who uses the system needs an account.

1 From the Home screen, press **Settings**.

The **Settings screen** opens.

2 Press **User Management**.

The **User Management screen** opens listing the available user names and corresponding access levels and statuses.

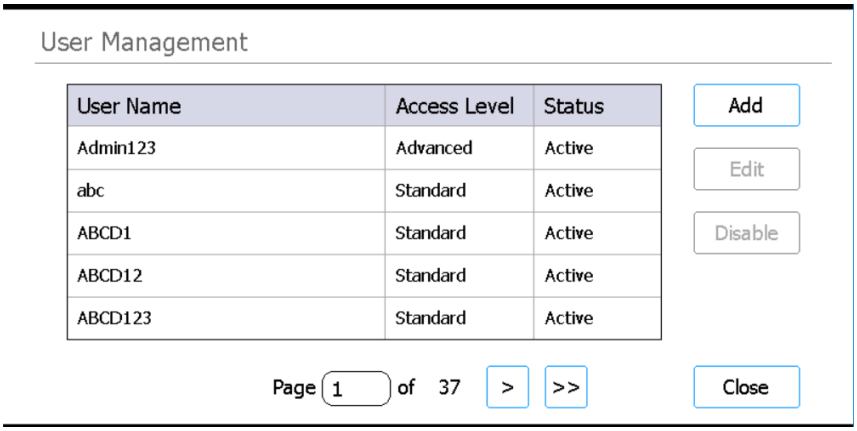


Figure 7 User Management screen

3 Press **Add**.

The **Add New User screen** opens.

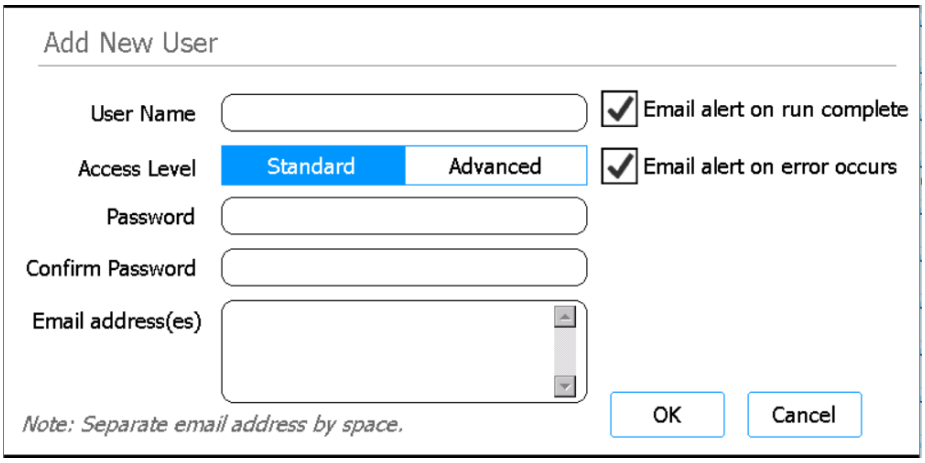


Figure 8 Add New User screen

4 In the User Name field, enter a user name for the new account.

User names can contain a combination of letters and numbers, but numbers are only permitted at the end of the user name (e.g., abc123). Do not include special characters in the user name.

5 Next to **Access Level**, select the access level (Standard or Advanced) for the new user. The default selection is *Standard*.

See **Table 6** on page 26 for a summary of the differences between the two access levels.

6 In the Password and Confirm Password fields, enter a password for the account.

7 Press **OK** to save the user account.

The Add New User screen closes and you are returned to the User Management screen. The new user name appears in the list on the User Management screen.

Edit user accounts

Only users with Advanced access are permitted to edit user accounts other than their own.

1 From the Home screen, press **Settings**.

The **Settings screen** opens.

2 Press **User Management**.

The **User Management screen** opens listing the available user names and corresponding user levels.

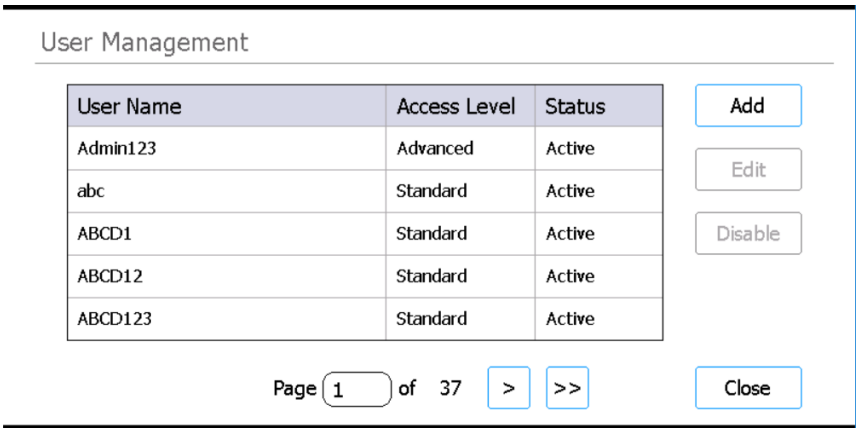


Figure 9 User Management screen

3 Select the user account to edit and press **Edit**.

The **Edit User screen** opens.

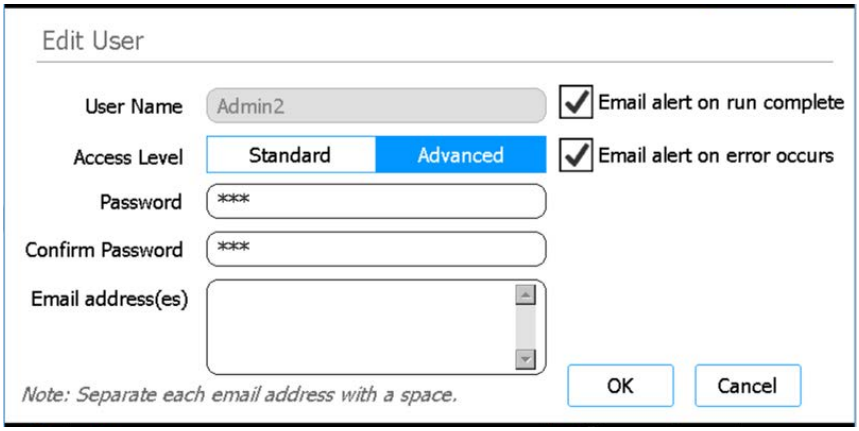


Figure 10 Edit User screen

4 On the Edit User screen, change any of the following attributes for the user account as desired.

- Access Level (Standard or Advanced)
- Password (requires updating both the Password and Confirm Password fields)

5 Press **OK** to save the changes.

The Edit User screen closes and you are returned to the User Management screen.

Disable user accounts

Disabled accounts cannot be used to log in to the system. Once a user account has been disabled, it cannot be re-enabled.

1 From the Home screen, press **Settings**.

The **Settings screen** opens.

2 Press **User Management**.

The **User Management screen** opens listing the available user names and corresponding user levels.

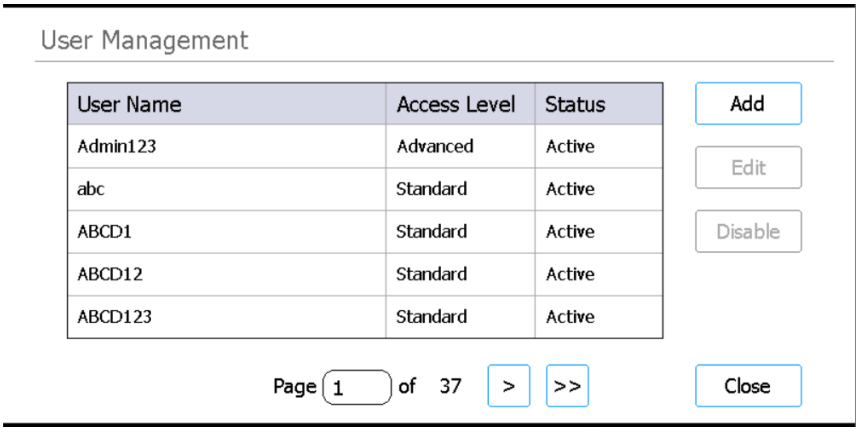


Figure 11 User Management screen

3 Select the user name for the account that you want to disable and press **Disable**.

A message box opens asking you to confirm that you want to disable the account.

4 Press **Yes** in the message box to continue.

All user permissions for that account are disabled.

5 Press **Close** to close the User Management screen.

You are returned to the Settings screen.

Programming System Settings

Set the chiller temperature

When the system is running a protocol, the temperature of the chiller is dictated by the protocol parameters. During setup of a protocol run, however, the chiller is pre-cooled to the temperature specified on the Chiller Setting screen. The temperature is set to 12°C by default, but temperatures from 4°C to 12°C are permitted.

CAUTION Lowering the chiller temperature below 12°C increases the risk of condensation forming on the tubes and plates, which may introduce contamination when the seals are pierced.

Only users with Advanced access are permitted to set the chiller temperature.

1 From the Home screen, press **Settings**.
The **Settings screen** opens.

2 Press **System Settings**.
The **System Settings screen** opens.

3 Press **Chiller Setting**.
The **Chiller Setting screen** opens.

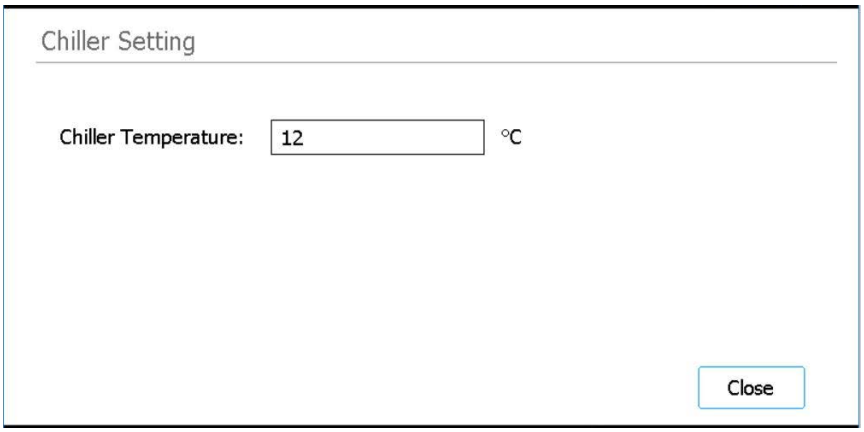


Figure 12 Chiller Setting screen

4 On the Chiller Setting screen, enter the temperature for the chiller (°C) into the provided field.

5 Press **Close** to save your changes.

Set the time and date

The times and dates recorded in the system's log files are based on the time and date settings for the system.

1 From the Home screen, press **Settings**.

The **Settings screen** opens.

2 Press **System Settings**.

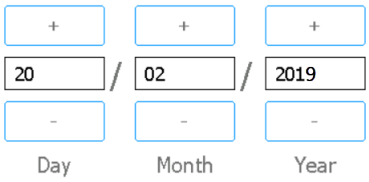
The **System Settings screen** opens.

3 Press **Date & time Settings**.

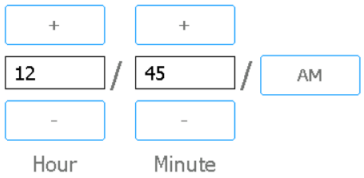
The **Date & Time Settings screen** opens.

4 Set the date, time, and time zone as needed.

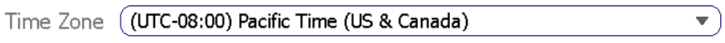
- To change the date, select the day, month, and year in the fields on the left side of the screen. Press the + and – buttons to adjust the values or type the desired values into the fields.



- To change the time, set the hour and minute using the fields on the right side of the screen. Press the + and – buttons to adjust the values or type the desired values into the fields. Press the AM or PM button to toggle between AM and PM settings.



- To set the time zone, expand the drop-down list next to Time Zone and select from the options.



5 Press **Apply** to save your changes.

Assign an instrument name

Instrument name assignments are especially useful in laboratories with multiple Magnis systems.

1 From the Home screen, press **Settings**.

The **Settings screen** opens.

2 Press **System Settings**.

The **System Settings screen** opens.

3 Press **Instrument Settings**.

The **Instrument Settings screen** opens.

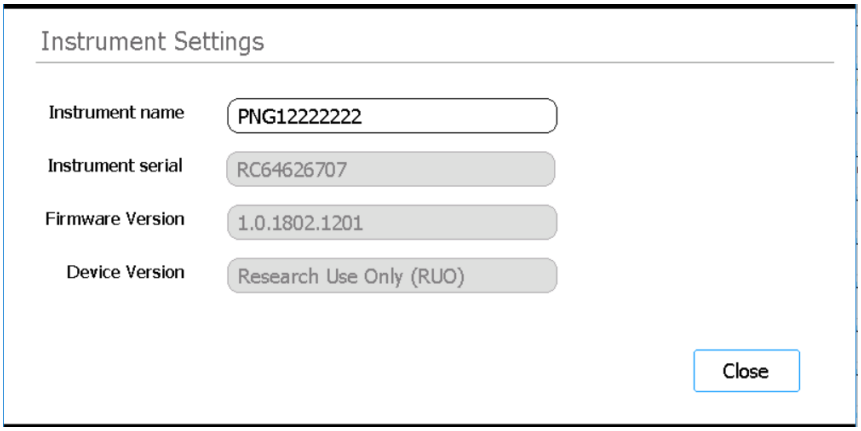


Figure 13 Instrument Settings screen

4 In the Instrument Name field, type a name for the instrument.

5 Press **Close** to save your changes.

View the instrument serial number and software version

You may need to provide the serial number of the instrument and the version number of the firmware software when scheduling service for your system.

1 From the Home screen, press **Settings**.

The **Settings screen** opens.

2 Press **System Settings**.

The **System Settings screen** opens.

3 Press **Instrument Settings**.

The **Instrument Settings screen** opens, displaying the serial number and firmware version. The instrument name and device version (*Research Use Only* or *In Vitro Diagnostic Use*) are also displayed.

Set the instrument health check settings

Based on this setting, the system can include or exclude verification of the teach points as part of the first instrument health check (IHC) that is performed each time the instrument is powered on.

1 From the Home screen, press **Settings**.

The **Settings screen** opens.

2 Press **System Settings**.

The **System Settings screen** opens.

3 Press **Other Settings**.

The **Other Settings screen** opens.

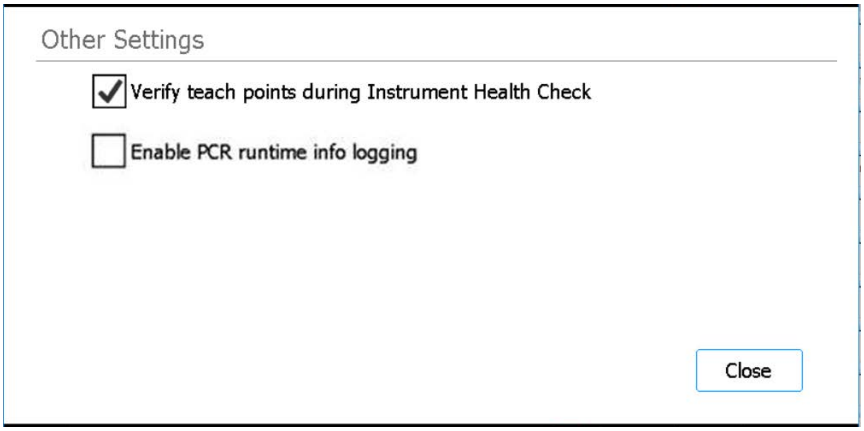


Figure 14 Other Settings screen

4 Mark the check box on the screen to include verification of teach points as part of the first instrument health check (IHC) that the system performs after being powered on. Or, clear the check box to exclude teach-point verification from the instrument health checks.

   When the check box is marked, each time the instrument is powered on, the first IHC that the system performs includes teach-point verification. If the system performs any subsequent IHCs before being powered down again, those IHCs will not include teach-point verification.

5 Press **Close** to save your changes.

4 Operating the System

This chapter contains instructions on operating the Magnis/MagnisDx NGS Prep System, including running protocols, performing diagnostic tests, decontaminating the instrument deck, running auto-teaching, and installing protocol and software updates.

NOTE To avoid introducing contaminants, always wear gloves when operating the Magnis/MagnisDx NGS Prep System.

CAUTION Keep the humidity levels in the laboratory between 30% and 70% non-condensing. Operating the system in humidity levels outside of this range can impact performance.

Running Protocols

Prepare the instrument for running a protocol

Prepare the Magnis/MagnisDx NGS Prep System so that it is ready to run a protocol.

1 Verify that the instrument deck is cleared of all labware from previous runs.

2 Turn on the instrument and close the instrument door.

See **"Turn on the instrument"** on page 23 for instructions.

3 At the **Login screen**, enter the credentials for your user account.

Each time the system is turned on, it performs a series of start up activities (see **Figure 6** on page 24) immediately after login. These activities may take several minutes to perform. Make sure the instrument door remains closed for the duration of these activities. After completion of the start up activities, the software opens to the **Home screen** and the system's LED light is blue, indicating that it is ready for use.

4 (Optional) Perform the 30-minute UV decontamination quick cycle to decontaminate the surfaces of the instrument deck. See **"Decontaminating with UV Light"** on page 41.

You can begin **"Prepare the reagents and plasticware"** while the decontamination is running.

For instructions on manually decontaminating the surfaces of the instrument deck, see **"Clean the deck surfaces and instrument exterior"** on page 51.

Prepare the reagents and plasticware

Prepare the samples, target enrichment reagents, and other materials needed for the protocol run according to the user manual for your specific Magnis Target Enrichment Kit. The user manual contains details on the materials required to run a protocol and instructions on loading your DNA samples into the Magnis Sample Input Strip.

Figure 15 describes the orientation of the Magnis Sample Input Strips. Make sure to track the locations of your samples as you load them into the strip.

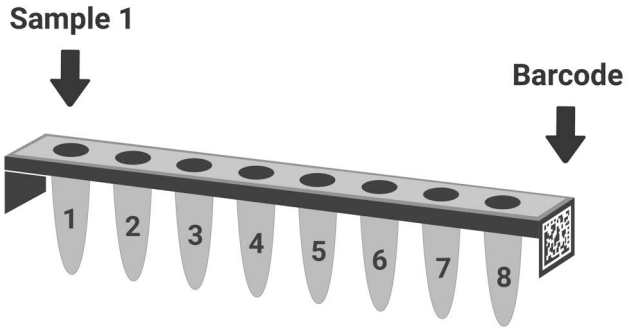


Figure 15 Orientation of the Magnis Sample Input Strips

CAUTION Avoid touching the foil seals of sample strips, reagent strips, and reagent plates, even using gloved hands. Any contaminants deposited on strip or plate foil seals can be introduced into samples during the Magnis liquid-handling steps.

CAUTION Magnis reagents must be vortexed and centrifuged as described in the target enrichment protocol prior to initiating a Magnis run.

CAUTION During deck setup, make sure that all labware is positioned flat on the designated deck platform or fully seated in the appropriate labware holder. Improperly positioned labware can cause low or no final library yield for some or all samples.

CAUTION Do not add any writing or labels to the strips, plates, and other labware that may obscure the barcodes.

Set up and initiate the protocol run

For detailed instructions on running a protocol for your particular sample type, refer to the user manual for your Magnis Target Enrichment Kit.

1 From the Home screen, press **Run Protocol**.

The system locks the instrument door and performs an IHC. At completion of the IHC, the Enter Run Info step opens.

2 Complete the Run Setup steps and start the protocol run, as instructed in the user manual for your Magnis Target Enrichment Kit.

The software walks you through the individual Run Setup steps (**Figure 16**), starting with the Enter Run Info step. Press the forward and back arrow buttons to navigate through the steps (or, if using a USB-connected mouse, click the arrow buttons with the cursor). Because the steps vary depending on the type or target enrichment you are running, you will need to refer to the instructions and screen images provided in the user manual for your Magnis Target Enrichment Kit.

After you start the run, the system's status indicator lights turn green, indicating that a protocol run is in progress. The lights change from green to blue upon completion of the run.

If the system encounters an error during the protocol, the status indicator lights change to red.

CAUTION While a protocol run is in-progress, do not plug in a USB drive or ethernet cable, use the touchscreen, pull out the waste bin, or interact with the instrument in any way. To avoid triggering an error, wait until the samples have been retrieved at the end of the run before performing these actions.

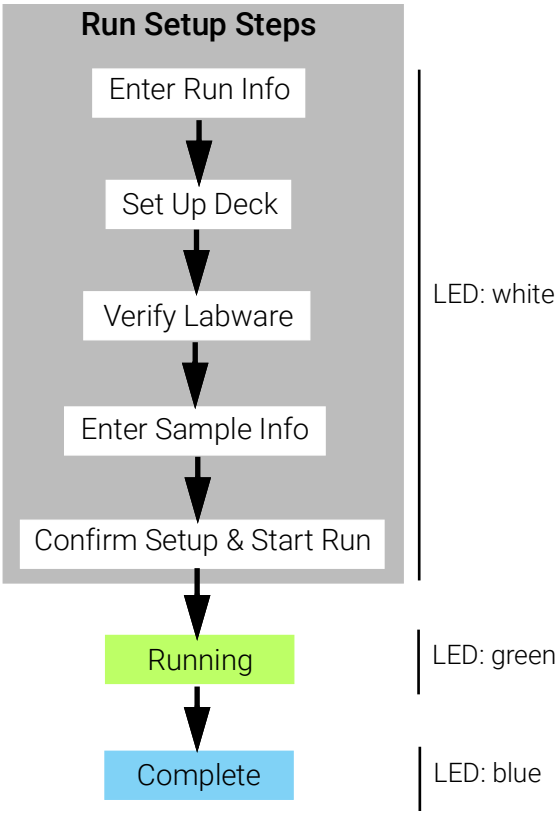


Figure 16 Protocol workflow, with corresponding color of the status indicators lights

Collect final library samples and clean up the system

At the completion of the run, the system keeps the prepared library solutions in the PCR plate on the thermal cycler module, which is held at 12°C for up to 72 hours. Collect the samples within that 72-hour period.

1. Wait until the touchscreen indicates that the run is complete. Press **OK** when you are ready to collect the library samples from the instrument.

   The system transfers the libraries from the PCR plate to the green library strip tube in the chiller. Allow the instrument-mediated transfer process to complete before continuing.

2. At the completion of the transfer process, fully open the instrument door and collect the final library samples (i.e., the green library strip tube) from the chiller module.
3. Re-seal the wells of the strip tube using a fresh foil seal strip, then store at the temperature recommended in the user manual for your Magnis Target Enrichment Kit.
4. If the optional pre-capture library QC samples were collected for the run, remove the blue QC sample strip from the chiller module. Process and store the samples as recommended in the user manual for your Magnis Target Enrichment Kit.
5. Remove all remaining consumables from the instrument deck and dispose of them according to local guidelines. Close the instrument door.
6. Log out of the software or turn off the instrument.

   To log out, press the user name at the bottom of the screen then press **Log Out**. To turn off the instrument, press the power button on the front of the instrument.

Running and Viewing Diagnostic Tests

Perform instrument diagnostic tests

Diagnostic tests verify that individual components of the instrument are functioning as intended.

1 Before you start, make sure that the tube holder lids are closed and all tip boxes, strip tubes, and plates have been removed from the deck.

2 From the Home screen, press **Settings**.

The **Settings screen** opens.

3 Press **Self Diagnostic**.

The **Instrument Diagnostic screen** opens.

4 Press **Run Diagnostic Test**.

The **Diagnostic Test screen** opens, listing all of the available diagnostic tests.

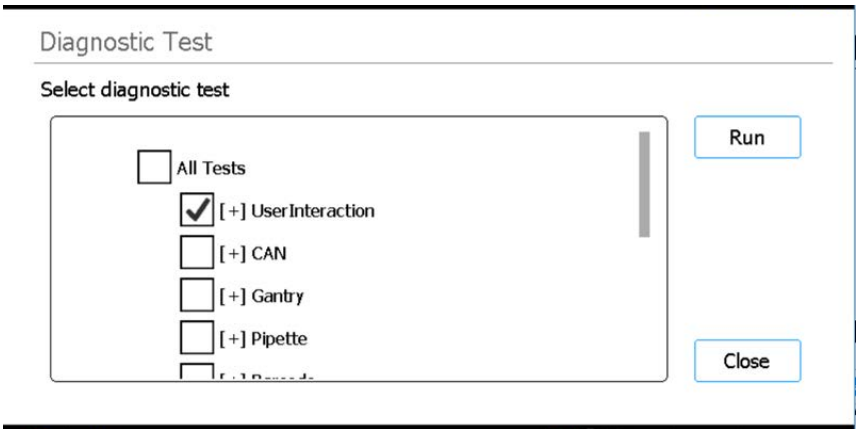


Figure 17 Diagnostic Test screen

5 Mark the tests that you want to perform. To perform all tests, mark **All Tests**.

Scroll down to see all tests in the list.

6 Press **Run**.

The system performs the selected tests.

Some tests may prompt you to perform specific actions. Follow the instructions on the touchscreen.

When all tests are completed, the **Diagnostic Test Report screen** opens.

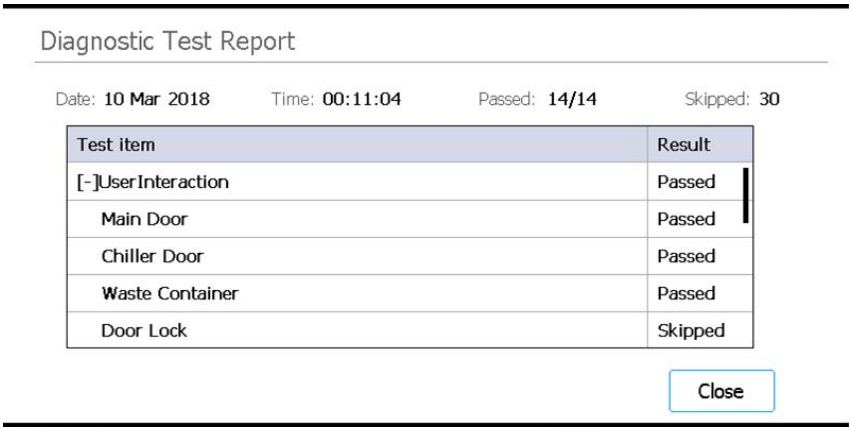


Figure 18 Diagnostic Test Report screen

7 Review the report. Make note of any test items marked as *Failed*.

If any of the items failed the diagnostic test, you will see an error icon near the bottom of the screen, like the one shown below. Press directly on the icon to view more information about the failed test items.

8 When finished, press **Close** to close the report.

View reports for diagnostic tests and instrument health checks

Each time the system performs diagnostic tests or an instrument health check (IHC), it creates a report of the results.

1 From the Home screen, press **Settings**.

The **Settings screen** opens.

2 Press **Self Diagnostic**.

The **Instrument Diagnostic screen** opens.

3 Press **Browse Report**.

The **Diagnostic Report Explorer screen** opens.

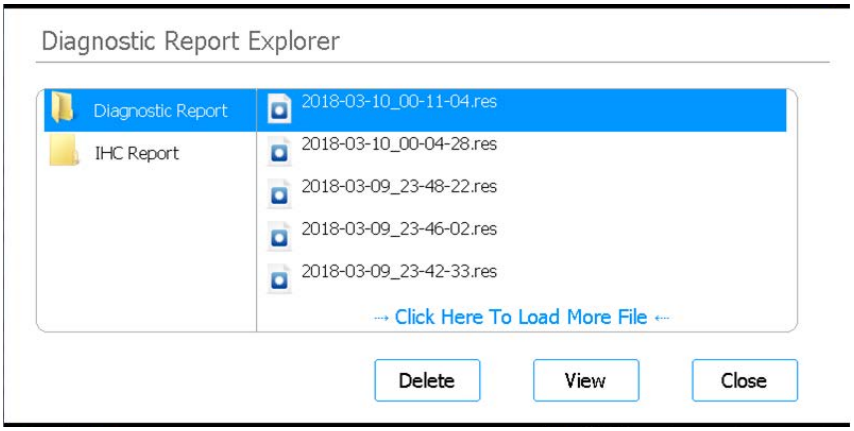


Figure 19 Diagnostic Report Explorer screen

4 On the left side of the screen, select the folder containing the report type of interest.

The Diagnostic Report folder contains reports from instrument diagnostic tests. The IHC Report folder contains reports from instrument health checks.

The right side of the screen displays the reports in the selected folder.

5 On the right side of the screen, locate the report you want to view. Press the report to select it.

6 Press **View**.

The screen displays the report in the **Diagnostic Test Report screen**. The top of the report contains summary information, including the date and time of the tests. The table lists the tests that were performed, organized by system component, and the result of each test (*Passed*, *Failed,* or *Skipped*). Note that three of the quick ramping tests are skipped by default.

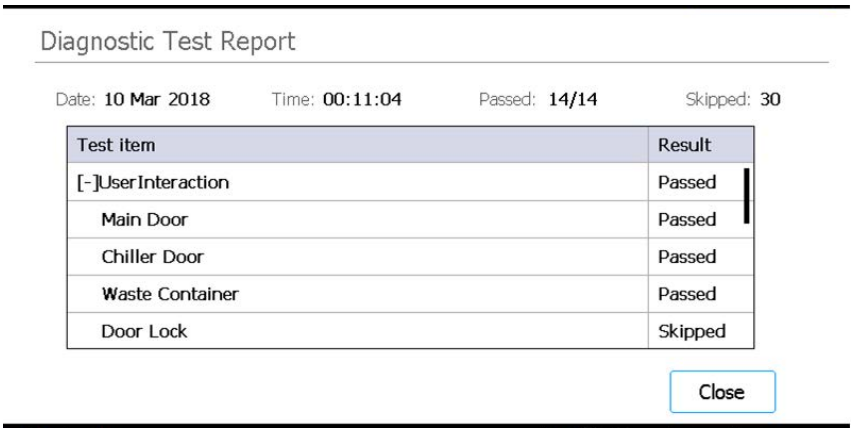


Figure 20 Diagnostic Test Report screen

7 Press **Close** to close the report.

You are returned to the Diagnostic Report Explorer screen.

Users with Advanced access can delete older reports from the Diagnostic Report Explorer screen. Locate the report you want to delete, then press the report to select it. Press **Delete** to delete the selected report. Note that you cannot delete the most recent report.

Decontaminating with UV Light

WARNING **Do not look directly at the UV light while decontamination is in progress.**

Run a decontamination “quick cycle”

The Magnis/MagnisDx NGS Prep System includes a UV tube that can be used to decontaminate the surfaces of the instrument deck. The *quick cycle* is a 30-minute decontamination. Agilent recommends running the quick cycle before each protocol run.

1 Verify that the instrument deck is cleared of all labware, then make sure that the instrument door is closed.

2 From the Home screen, press **Decontamination**.

The Decontamination screen opens.

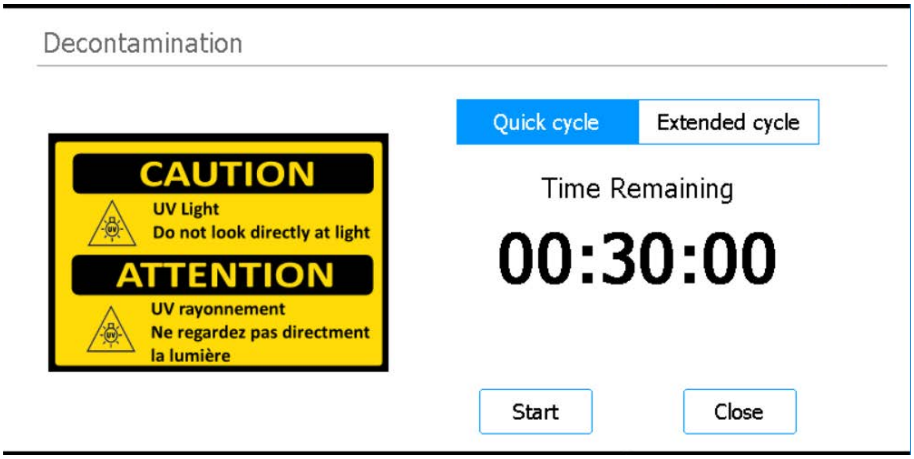


Figure 21 Decontamination screen with Quick cycle selected

3 At the top of the screen, select **Quick cycle**, as shown in Figure 21

4 Press **Start**.

The decontamination cycle begins and the screen displays a countdown of the time remaining.

At the completion of the cycle, the UV light turns off and the instrument remains idle.

If needed, press **Abort** at any time to stop the decontamination cycle.

Run a UV decontamination “extended cycle”

The Magnis/MagnisDx NGS Prep System includes a UV tube that can be used to decontaminate the surfaces of the instrument deck. The *extended cycle* is a 2-hour decontamination. Agilent recommends running the extended cycle in the event of a spill or leakage on the instrument deck. The system only permits running the extended cycle once every 7 days to protect the deck surfaces from excessive exposure to UV light.

1 Verify that the instrument deck is cleared of all labware, then make sure that the instrument door is closed.

2 From the Home screen, press **Decontamination**.

The **Decontamination screen** opens.

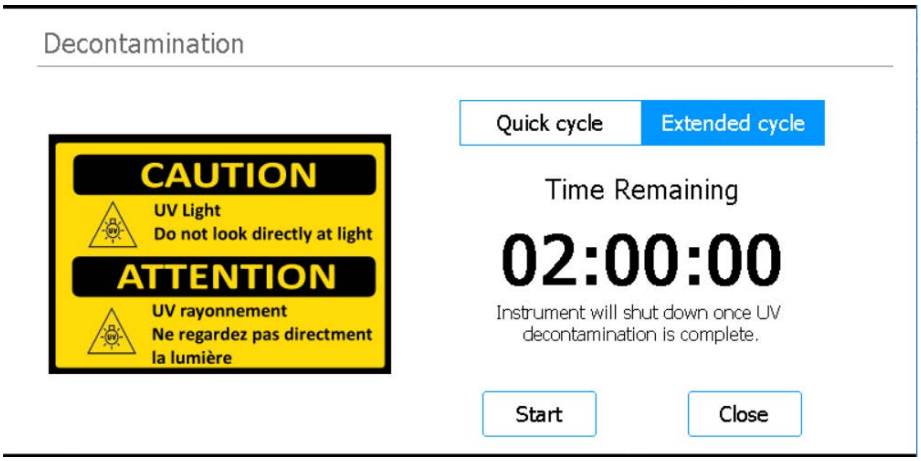


Figure 22 Decontamination screen with Extended cycle selected

3 At the top of the screen, select **Extended cycle**, as shown in **Figure 22**.

4 Press **Start**.

The decontamination cycle begins and the screen displays a countdown of the time remaining.

At the completion of the cycle, the UV light turns off and the instrument powers down.

If needed, press **Abort** at any time to stop the decontamination cycle.

Running Auto-Teaching and Teach-Point Verification

Run auto-teaching

Auto-teaching is a process in which the system locates and records the positions of markers (called teach points) printed on the empty deck, ensuring that, during a protocol, the micropipettor is accurately aligned with the tubes or wells at each deck position.

NOTE At particular points during the auto-teaching process, the system prompts you to add tips to the micropipettor and to place (and then later remove) a tip box on the instrument deck.

1 Before you start, make sure that the tube holder lids are closed and all tip boxes, strip tubes, and plates have been removed from the deck.

2 From the Home screen, press **Settings**.

The **Settings screen** opens.

3 On the Settings screen, press **Auto Teaching**.

The **Auto Teach screen** opens.

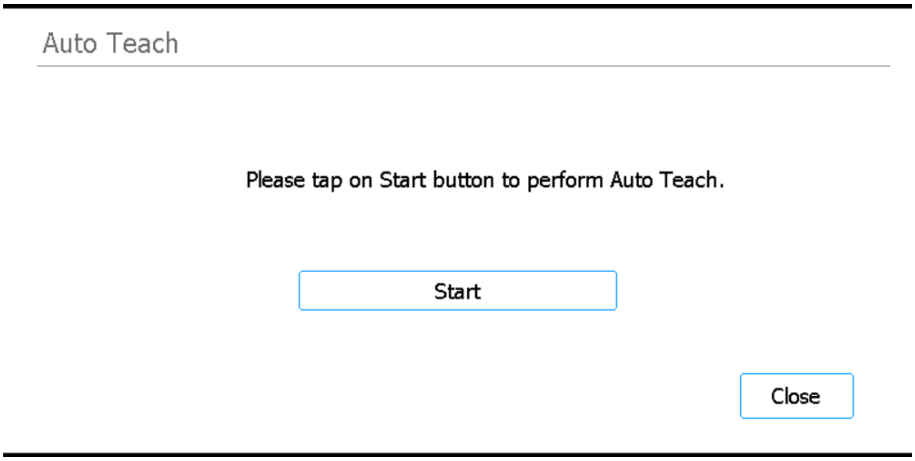


Figure 23 Auto Teach screen

4 Press **Start**.

A message box opens asking you to confirm that the tube holder lids are closed and all plasticware has been removed from the deck.

5 Press **OK** to continue.

The system initiates auto-teaching.

6 When prompted on the touchscreen for a micropipettor tip, open the instrument door and add a tip to the micropipettor at the indicated barrel position. Leaving the door open, press **Next** to continue.

7 When prompted on the touchscreen for a tip box and tip, open the instrument door, add a new tip box (with lid off) to the indicated platform, and add a tip to the micropipettor at the indicated barrel position. Close the door, then press **Next** to continue.

8 When prompted on the touchscreen to remove the tip box, open the instrument door and remove the tip box. Close the door, then press **Next** to continue.

The auto-teaching process continues until completion.

Include teach-point verification in the IHC

The system can include teach-point verification as part of the initial instrument health check (IHC) that is performed after powering up the instrument. If the system detects an error during teach-point verification, the corrective action is to run auto-teaching.

1 From the Home screen, press **Settings**.

The **Settings screen** opens.

2 Press **System Settings**.

The **System Settings screen** opens.

3 Press **Other Settings**.

The **Other Settings screen** opens.

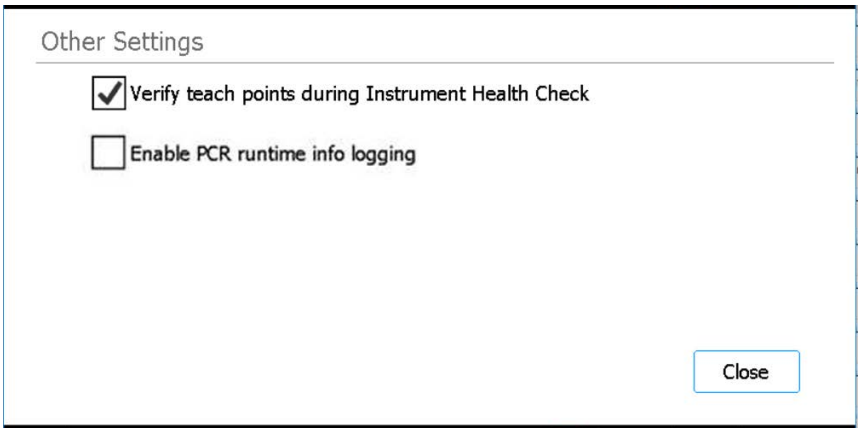


Figure 24 Other Settings screen

4 Mark the check box labeled **Verify teach points during Instrument Health Check**.

5 Press **Close** to save your changes.

Installing Updates

Install protocol updates

When Agilent releases new protocols for the Magnis/MagnisDx NGS Prep System, users with an Advanced user account can install the protocols on the system through a USB drive.

Upload a protocol from a USB drive

1 Save the protocol file (*.bjp) to a USB drive. (Do not use an encrypted USB drive.)
You may need to decompress the provided file to locate the bjp file.

2 Insert the USB drive into an available USB port on the front of the instrument.

3 From the Home screen, press **Settings**.
The **Settings screen** opens.

4 Press **Protocol Update**.
The **Protocols screen** opens

5 Press **Update Protocol**.
The **Protocol Update screen** opens.

6 At the top of the screen, select **USB Disk**.
The screen displays a browser of the USB drive contents.

7 In the browser, navigate to the protocol file (*.bjp). You can expand folders by double-pressing on them.

8 Press the protocol file to select it.

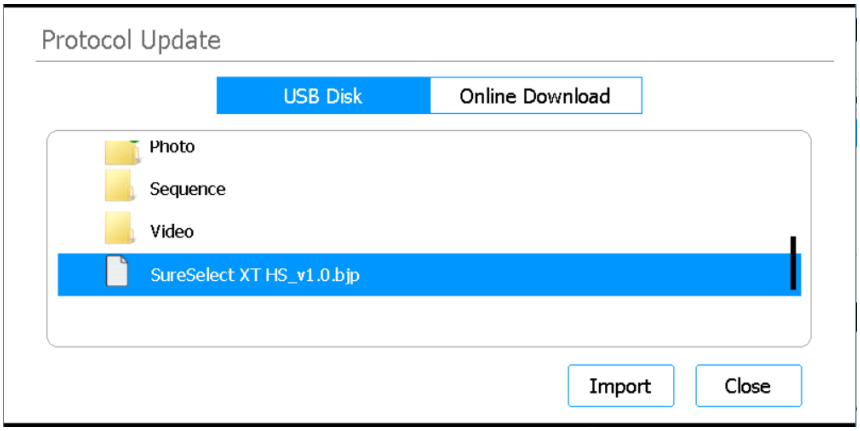


Figure 25 Protocol Update screen with protocol file selected on USB drive

9 Press **Import**.
A message box opens notifying you that the protocol was imported.

10 Press **OK** to close the message box.
You are returned to the Protocol Update screen. The protocol has been installed.

11 Press **Close**.

You are returned to the Protocols screen. The new protocol is now listed.

Change the default version for a protocol

When setting up a protocol run, the system uses the default version of the selected protocol.

1 From the Home screen, press **Settings**.

The **Settings screen** opens.

2 Press **Protocol Update**.

The **Protocols screen** opens, listing all protocols on the system.

Any protocols for which multiple versions are available have a right-pointing arrowhead (>) listed next to their name.

3 Double-press the arrowhead for the protocol of interest.

The Select Protocol's Default Version dialog box opens.

4 Press the version that you want to make the default, then press **Select**.

You are returned to the Protocols screen and the update to the default protocol version has been applied.

Install firmware updates

When Agilent releases a new version of the firmware software (i.e., the software that runs on the system's touchscreen) users with an Advanced user account can install the new firmware through a USB drive.

Upload firmware from a USB drive

1 Save the zip folder containing new firmware files to a USB drive. (Do not use an encrypted USB drive.)

2 Insert the USB drive into an available USB port on the front of the instrument.

3 From the Home screen, press **Settings**.

The **Settings screen** opens.

4 Press **System Settings**.

The **System Settings screen** opens.

5 Press **Firmware Update**.

The **Firmware Update screen** opens.

6 Select **USB Disk**.

The screen displays a browser of the USB drive contents.

7 In the browser, navigate to the zip folder containing the new firmware files.

8 Press the zip folder to select it.

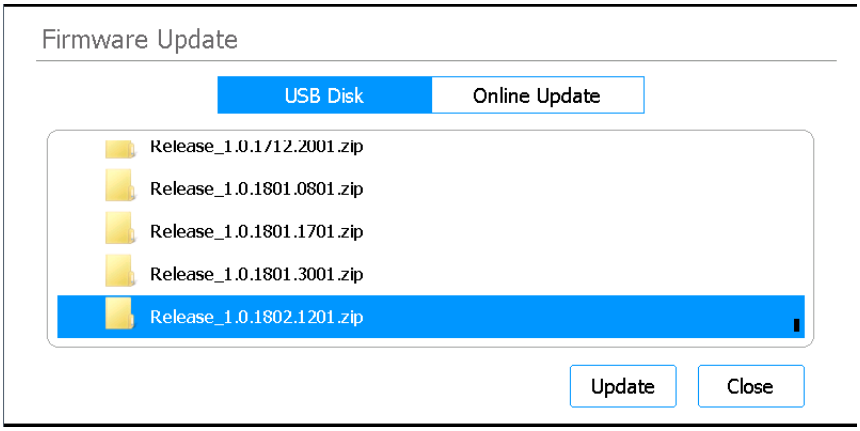


Figure 26 Firmware Update – USB Disk selected

9 Press **Update**.

A message box opens displaying the license agreement.

10 Read the license agreement, then press **Accept** to accept the terms.

The system begins the firmware update process. When the process is complete, the system automatically reboots with the new firmware version running on the touchscreen.

5 Performing Maintenance

This chapter contains instructions for cleaning and maintaining the system.

Annual Preventative Maintenance

The Magnis/MagnisDx NGS Prep System does not require calibration, however, it does require preventive maintenance annually. Preventative maintenance is performed by an Agilent service engineer or Agilent authorized service provider. This service helps ensure the reliable operation of your system. Contact **Agilent Worldwide Technical Support** for further information.

Cleaning the System Components

See **Table 3** on page 11 for a list of recommended cleaning supplies.

Precautions to take when cleaning the system components

Follow these precautions to avoid damaging the system during cleaning.

CAUTION Do not use solvents, such as acetone, benzene, or phenol-based agents to clean the system, as these could damage the instrument. If you have questions about the safety of a particular cleaning agent, contact **Agilent Worldwide Technical Support**.

CAUTION When cleaning the instrument deck, avoid the exposed electrical hardware of the heater/shaker/magnet (HSM) module.

CAUTION Do not spray water or cleaning agents directly onto the interior or exterior of the instrument. Instead, apply the cleaning agent to a soft cloth or wipe. Remove any excess liquid from the cloth or wipe before use to prevent introduction of liquid into instrument components.

CAUTION Do not use abrasive cloths or wipes to clean the system, especially on the window of the barcode scanner.

CAUTION Do not submerge the barcode scanner or any other instrument component in water.

CAUTION Wear gloves when cleaning the system.

WARNING If you are cleaning the system due to a hazardous liquid spill, use appropriate personal protective equipment before coming in contact with the liquid.

Clean the deck surfaces and instrument exterior

This procedure includes steps to clean both the interior and exterior of the instrument.

Cleaning the interior deck surfaces an be performed in addition to or as an alternative to decontamination with UV light.

Cleaning the surfaces of the Magnis instrument should be performed daily or any time pathogen contamination is suspected.

In the case of a leaking plate, tube or other observed contamination, corrective measures should be taken immediately to remove the material following the procedure below.

CAUTION Review **"Precautions to take when cleaning the system components"** before proceeding.

1. Wear appropriate personal protective equipment (PPE) — minimally, gloves and safety glasses — prior to starting the cleaning procedure.
2. Wipe down the instrument interior and exterior (see below for details).

   Use a wiping pattern that will cover all exposed surfaces. Verify that the wipe contains sufficient cleaning agent to wet the surfaces and if not, obtain a fresh wipe or reapply additional cleaning agent to the wipe. If a wipe becomes visibly soiled, change to a clean wipe.

   a **Instrument interior:** Open the instrument door and wipe down the areas of the deck that are outlined in yellow in **Figure 27** using a diluted bleach wipe. Then, wipe down these same areas again using a laboratory wipe moistened with 70% isopropyl alcohol.

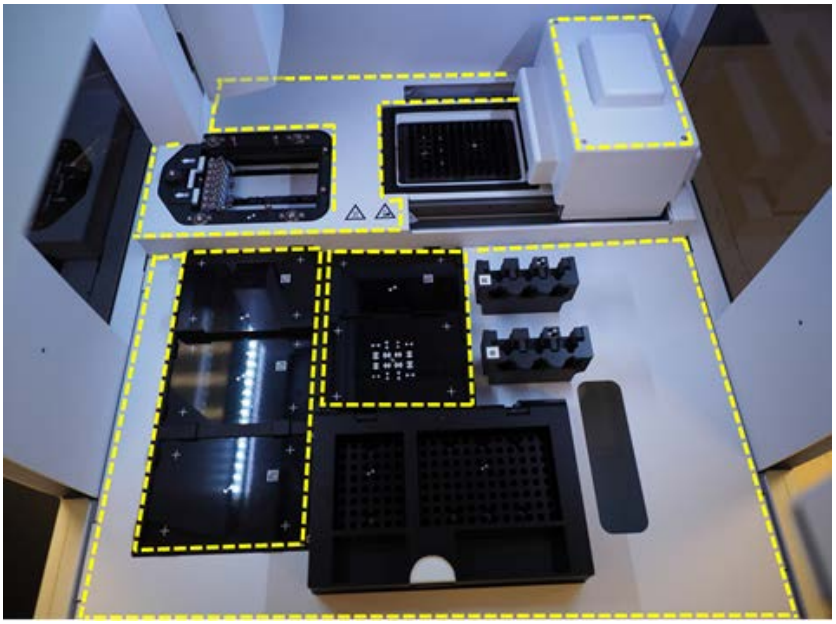


Figure 27 Deck surfaces to be wiped down

b **Instrument Exterior - Front:** Close the instrument door. Using a laboratory wipe moistened with 70% isopropyl alcohol, gently wipe down the surfaces that are outlined in yellow and red in **Figure 28**. These areas include the touchscreen, power button, waste bin door (including depression used to assist in opening/removing), and the front plexiglass. Pull out the waste bin drawer and wipe down the interior of the waste bin. Wipe down the area around the USB ports (do not wet the electrical contact points). All areas outlined in yellow require wiping down. Areas outlined in red require particular attention for careful cleaning.

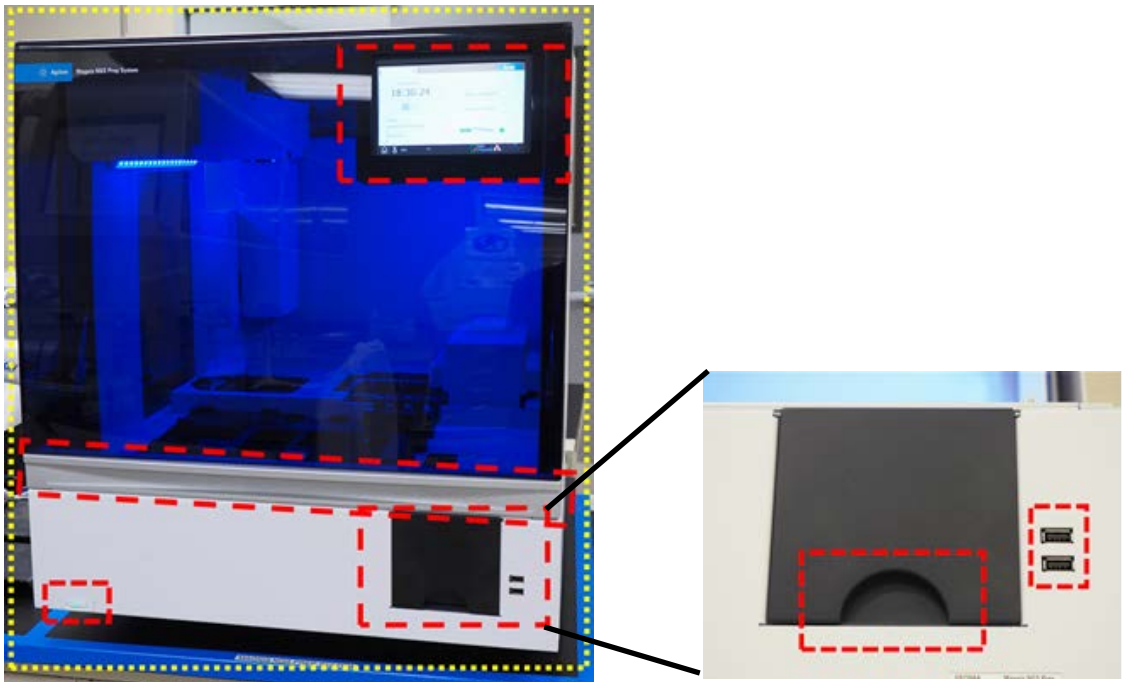


Figure 28 Exterior surfaces on the front of the instrument to be wiped down

c **Instrument Exterior - Left and Right:** Using a laboratory wipe moistened with 70% isopropyl alcohol, wipe down the left and right sides of the instrument, which are outlined in yellow in **Figure 29**. Areas outlined in red require particular attention for careful cleaning as these are the areas where the door is gripped during opening and closing.

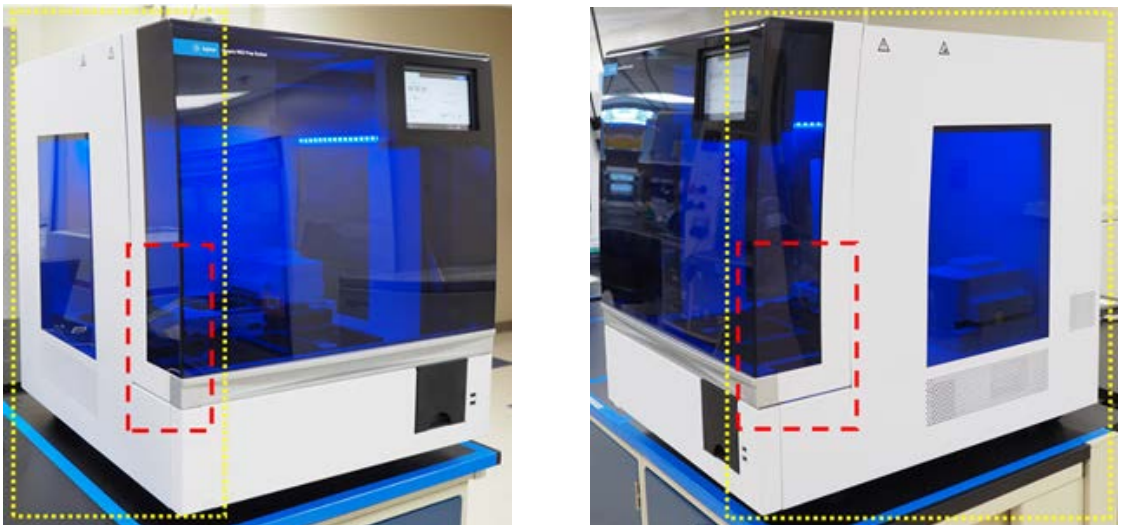


Figure 29 Exterior surfaces on the left and right sides of the instrument to be wiped down

d **Instrument Exterior - Back side:** Ensure power cord is unplugged from electrical supply. Using a laboratory wipe moistened with 70% isopropyl alcohol, wipe down the back side of the instrument, which is outlined in yellow in **Figure 30**. The area outlined in red requires particular attention as it includes the rear power button.

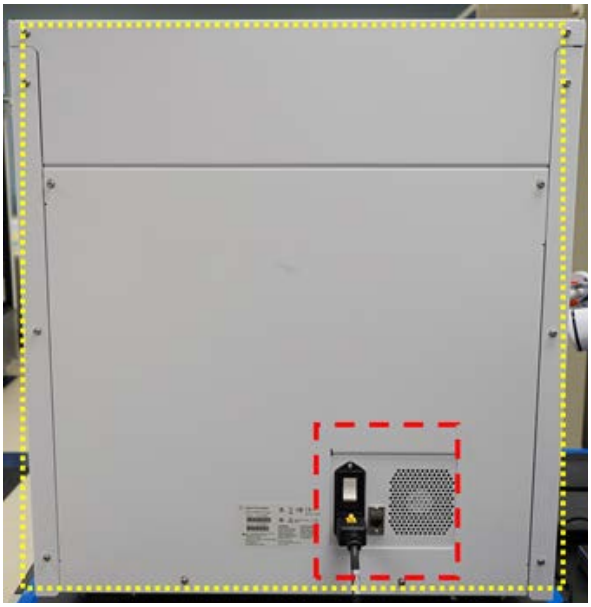


Figure 30 Exterior surfaces on the back of the instrument to be wiped down

e **Instrument Exterior - Top of the instrument**: Using a laboratory wipe moistened with 70% isopropyl alcohol, wipe the top surface of the instrument

3 Allow isopropyl alcohol to fully evaporate.

4 From the Touchscreen, initiate a 30-minute UV decontamination procedure. See **"Run a decontamination "quick cycle""** on page 41 for instructions.

Clean the barcode scanner

Agilent recommends avoiding all contact with the window of the barcode scanner. You can, however, clean the window using the instructions below if the window becomes visibly dirty or if the barcode scanner is not operating well.

CAUTION Review **"Precautions to take when cleaning the system components"** on page 50 before proceeding.

1. Turn off the instrument at both the power button on the front and the power switch on the back, and disconnect the power cord from the power supply.
2. Use a soft cloth or wipe moistened with water or a mild detergent-water solution to clean the window of the barcode scanner. If you use a detergent-water solution, follow with cleaning using a soft cloth moistened with water or 70% isopropyl alcohol.

   Do not touch the window with anything other than the soft cloth or wipe that you are using for cleaning.
3. Remove any remaining moisture with a dry, soft cloth or wipe.
4. Reconnect the instrument to power supply and turn on the power switch at the back of the instrument.

Replacing the UV Tube and Viewing UV Tube Usage

Request a UV tube replacement

After 630 hours of UV-tube usage, the next time a decontamination cycle is initiated, the system notifies you to replace the UV tube. Contact **Agilent Worldwide Technical Support** to schedule a UV tube replacement.

WARNING Replacement UV tubes must be provided by Agilent and must be installed by an Agilent engineer or Agilent authorized service provider.

View usage hours for the UV tube

After replacing the UV tube, the Agilent engineer or Agilent authorized service provider will reset its usage tracking to zero. The lifespan of the UV tube is 630 hours.

1 From the Home screen, press **Settings**.

The **Settings screens** opens.

2 Press **Hardware Usage Tracking**.

3 The **Hardware Usage Tracking screen** opens.

The screen displays the number of hours (h), minutes (m), and seconds (s) of use for the UV tube.

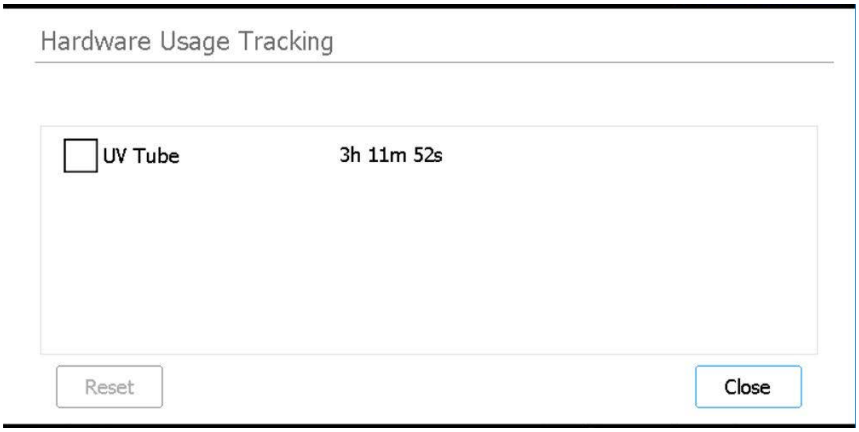


Figure 31 Hardware Usage Tracking screen

4 Press **Close** to exit the screen.

Disposing of Instrument Parts

If, at any time, the Magnis/MagnisDx NGS Prep System or any of its parts are no longer of use, you can return the unneeded items to Agilent as part of the Agilent Product Take-Back program.

See www.agilent.com/environment/product/index.shtml for information on this program.

6 Software User Interface Reference

This chapter contains descriptions of each screen of the software and the functions of all user interface (UI) elements on each screen.

Software User Interface Overview

The touchscreen displays the Magnis firmware software, which you use to operate the Magnis/MagnisDx NGS Prep System. To access the software, you must log in with a valid user name and password (see **"Log in to the system"** on page 23). Once logged in, the menu on the software's Home screen provides access to each of the functional areas within the software (see **"Home screen"** on page 61).

To interact with the software, press directly on the touchscreen. When you press on a field that requires text input, an on-screen keyboard automatically opens, allowing you to type in the field. Alternatively, you can attach a USB-connected mouse and/or keyboard using the USB ports on the front of the instrument and interact with the software using those accessories.

Each software screen includes a top banner and bottom banner, which contain information on the system and provide quick access to commonly used tools, as described in **Table 7** and **Figure 32**.

Table 7 Descriptions of the top and bottom banner elements

Element	Description
Top banner	
Instrument status	Displays the status of the instrument (*Ready*, *Running*, or *Error*). See **"Instrument Status Indicator Lights"** on page 21 for more information on the possible instrument statuses.
Bottom banner	
Home icon	Provides access to the Home screen. Press to exit the current screen and navigate to the Home screen.
User name	Displays the user name of the currently logged-in user. Press to access a button for logging out.
Network connection status (only for Agilent service engineers and authorized service providers)	Indicates the current network connection status. When the icon is illuminated white, as shown in **Figure 32**, the system is connected to a network. When the icon is displayed as crossed-out, the system is not connected to a network.
Door status	Indicates the position and lock status of the instrument door (*Door Opened*, *Door Closed,* or *Door Unlocked*).
Error icon 	Indicates the occurrence of a system error or failed diagnostic test. Press to view information on the error(s).
Time and date	Displays the time and date according to the system settings. Press to open the **Date & Time Settings screen**.

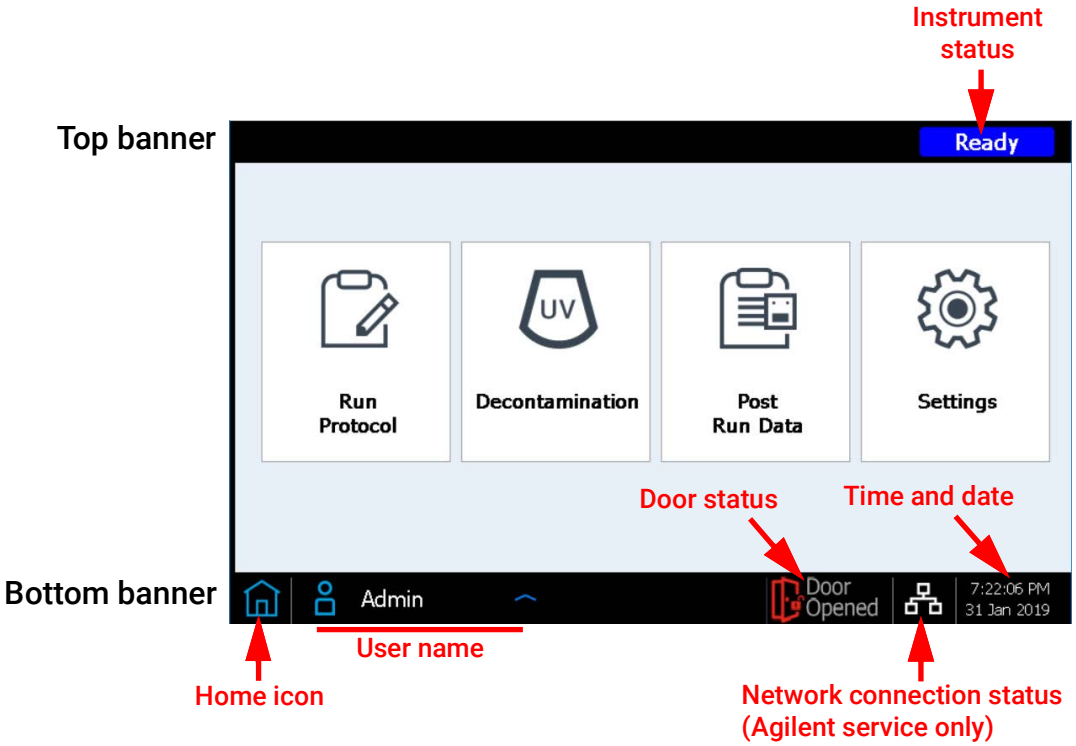


Figure 32 Image of the top and bottom banner elements

Login screen

Purpose: To log in to the software using your user account credentials. See instructions in **"Log in to the system"** on page 23.

To open: From any screen, press the user name for the currently logged-in user at the bottom of the screen, then press **Log Out**. The Login screen is also the first screen that opens when the instrument is powered on.

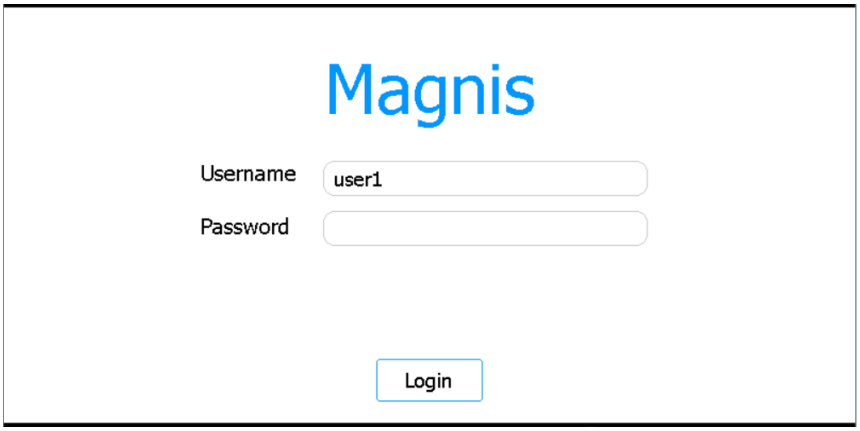


Figure 33 Login screen

Username

Type the user name for your account. See **"Managing User Accounts"** on page 26 for instructions on adding, editing, and disabling user accounts.

Password

Type the password for your account.

Login

Press to log in using the credentials entered in the Username and Password fields.

Home screen

Purpose: To provide a dashboard for accessing all areas of the software.

To open: From any screen, press the Home icon in the bottom left corner. The Home screen is also the first screen that opens after you log in to the software.

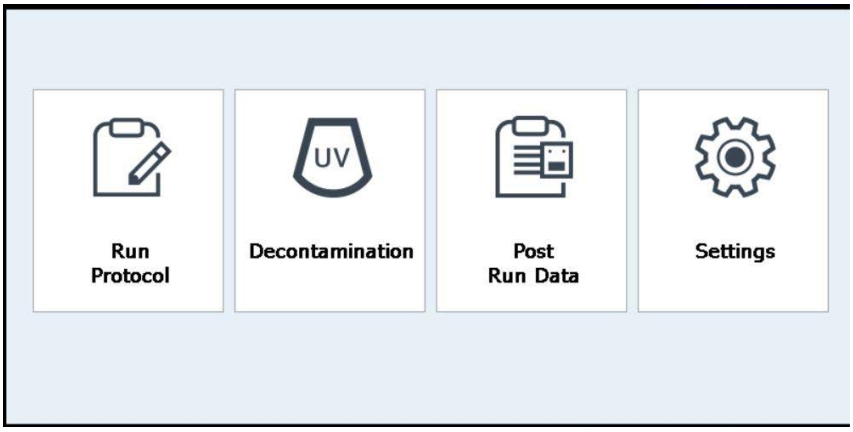


Figure 34 Home screen

Run Protocol

Press this button to launch the on-screen protocol wizard for setting up and running a library preparation protocol. Consult the user manual for your specific Magnis Target Enrichment Kit for details on the screens for the protocol wizard.

Decontamination

Press this button to open the **"Decontamination screen"**, used for performing UV decontamination of the instrument deck.

Post Run Data

Press this button to open the **"Post Run Data screen"**, which provides access to output files from your completed protocol runs.

Settings

Press this button to open the **"Settings screen"**, which provides access to tools for managing user accounts, systems settings, instrument connections, and protocol updates, as wells as links for opening the self-diagnostic and auto-teaching features and the file export screen.

Settings screens

Settings screen

Purpose: To access tools for viewing and configuring a variety of settings.

To open: From the Home screen, press **Settings**.

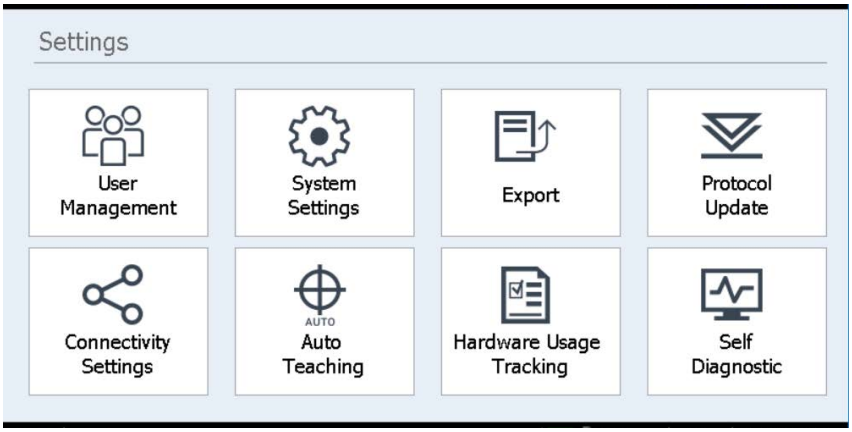


Figure 35 Settings screen

Each button on the Settings screen accesses a different area of the software. The buttons are described in **Table 8**.

Table 8 Settings screen buttons

Button	Description
User Management	Opens the **"User Management screen"** for viewing user accounts and accessing tools for adding and editing user accounts.
System Settings	Opens the **"System Settings screen"** for accessing tools to configure system-wide settings.
Export	Opens the **"Export Files screen"** for exporting post-run data files and log files.
Protocol Update	Opens the **"Protocol Update screen"** for installing new protocol files on the system.
Auto Teaching	Opens the **"Auto Teach screen"** for running auto-teaching.
Hardware Usage Tracking	Opens the **"Hardware Usage Tracking screen"** for viewing a usage counter for the UV-tube.
Self Diagnostic	Opens the **"Instrument Diagnostic screen"** for running diagnostic tests and viewing reports for diagnostic tests and instrument health checks.

User Management screen

Purpose: To view the list of user accounts and to access tools for adding, editing, and disabling user accounts. See instructions in **"Managing User Accounts"** on page 26.

To open: From the Home screen, press **Settings**. Then, press **User Management**.

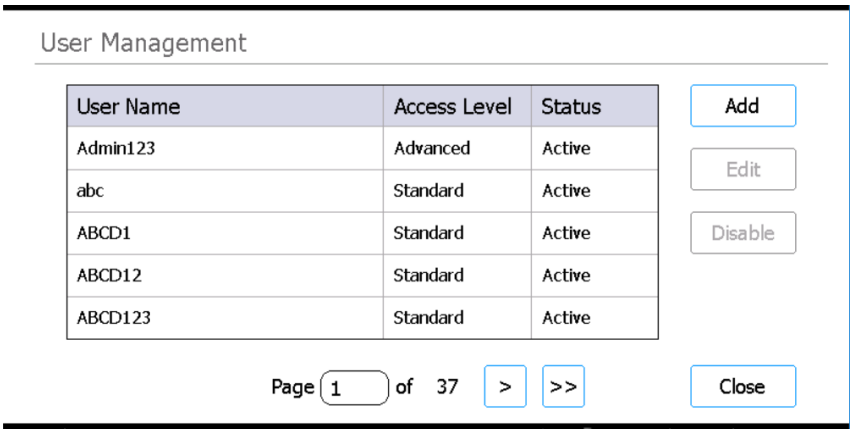


Figure 36 User Management screen

User list

The center of the screen displays a table of the existing user accounts. The table lists the user name, access level (standard or advanced), and status (active or disabled) of each user account.

If the table extends to multiple pages, use the Page field or arrowheads below the table to navigate between pages.

Add

This button opens the **Add New User screen**, which has tools for adding a new user account.

Edit

This button opens the **Edit User screen**, which has tools for editing the currently selected user account.

Disable

The Disable button changes the status of the selected user account from active to disabled. Disabled accounts cannot be re-enabled.

Close

This button saves your changes and returns you to the Settings screen.

Add New User screen

Purpose: To create new user accounts and configure the settings for the account. See instructions in **"Add new user accounts"** on page 26.

To open: From the Home screen, press **Settings**. Press **User Management**. Then, press **Add**.

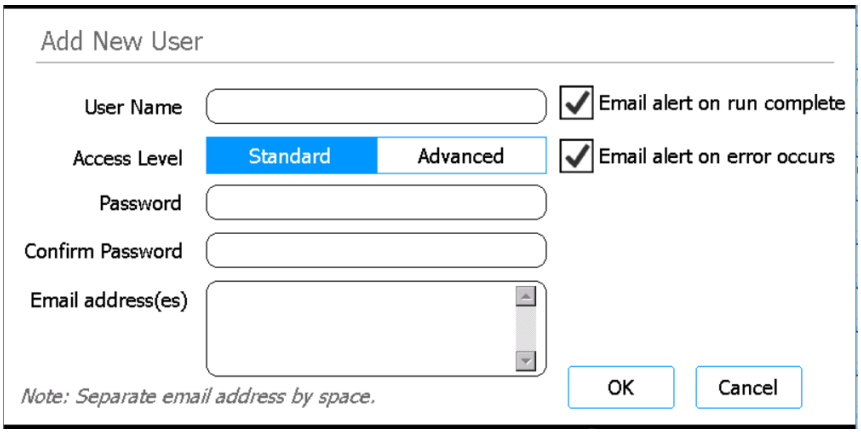


Figure 37 Add New User screen

User Name

In this field, type the user name for the new account.

Access Level

Select the access level for account (standard or advanced).

Password / Confirm Password

In these fields, type the password for the new account.

OK

This button saves the new user account.

Cancel

This button cancels creation of the new user account and returns you to the User Management screen.

Edit User screen

Purpose: To edit configurations, including resetting the password, for existing user accounts. See instructions in **"Edit user accounts"** on page 28.

To open: From the Home screen, press **Settings**. Press **User Management**. Then, press **Edit**.

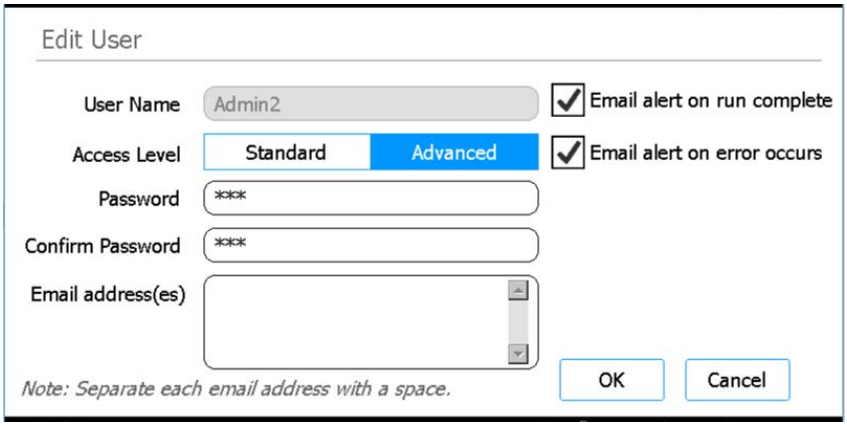


Figure 38 Edit User screen

User Name

Displays the user name for the account. Note that you cannot edit the user name for existing accounts.

Access Level

Select the access level for the account (standard or advanced).

Password / Confirm Password

To reset the password for the account, type a new password into these fields.

OK

This button saves any changes made on this screen.

Cancel

This button cancels any changes made on this screen and returns you to the User Management screen.

System Settings screen

Purpose: To access tools for configuring settings that are applicable to the entire system.

To open: From the Home screen, press **Settings**. Then, press **System Settings**.

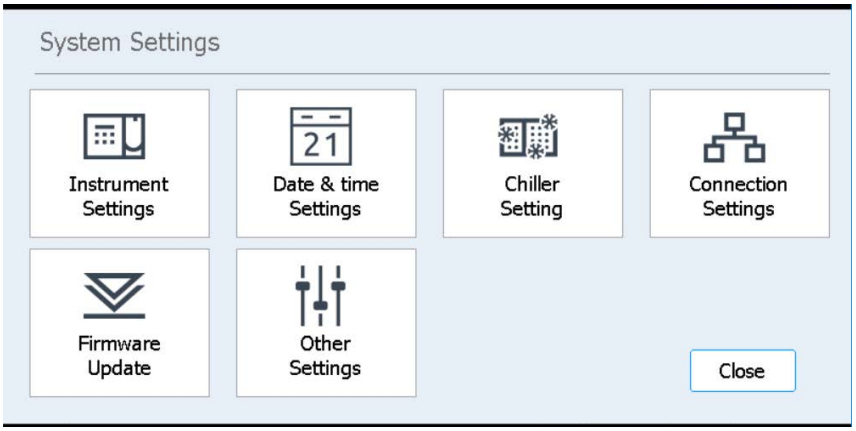


Figure 39 System Settings screen

Table 9 System Settings screen buttons

Button	Description
Instrument Settings	Opens the **"Instrument Settings screen"** for viewing and/or setting the instrument name, serial number, firmware software version, and device version.
Date & Time Settings	Opens the **"Date & Time Settings screen"** for setting the date and time of the system.
Chiller Setting	Opens the **"Chiller Setting screen"** for setting the temperature of the chiller module.
Firmware Update	Opens the **"Firmware Update screen"** for installing a new version of the firmware software from a connected USB drive.
Other Settings	Opens the **"Other Settings screen"** which has a setting to verify teach points during the IHC.

Export Files screen

Purpose: To export post run data files, system logs, error logs, and debug logs.

To open: From the Home screen, press **Settings**. On the Settings screen press **Export**.

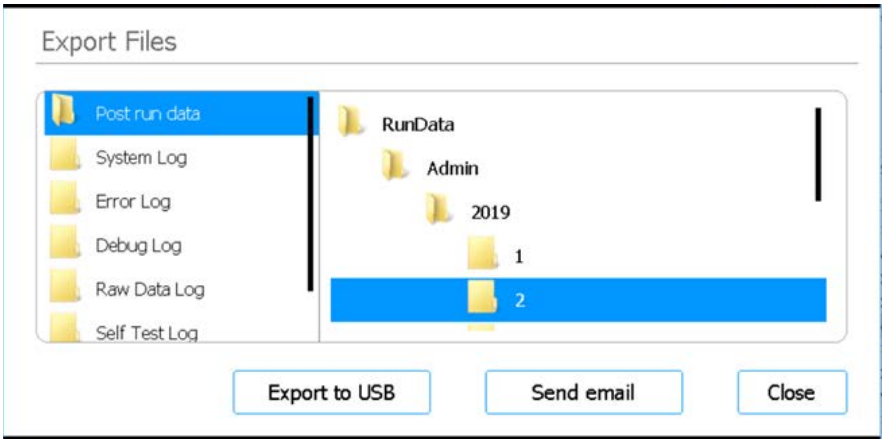


Figure 40 Export Files screen

File folders

The panel on the left of the screen lists the folders from which you can export files. The folders are described below.

- Post run data folder: Contains data files for completed runs.

  In the RunData folder, subfolders are organized by user account, then by year, then numerically by month. For file export, select the desired subfolder; the system will export all post run data files in that folder.
- System Log folder: Contains log files of system-level actions, such as powering on of the instrument and diagnostic tests.
- Error Log folder: Contains log files of system errors.
- Debug Log folder: Contains log files of debugging actions. The files are organized by instrument module into separate subfolders.
- Raw Data Log folder: Contains log files about the controller area network (CAN) communication messages received and sent by the touchscreen application.
- Self Test Log folder: Contains log files of the CAN communication messages and results of the most recent self diagnostic tests.
- PCR Runtime Info Log folder: Contains log files created during PCR cycling.
- Diagnostic Report folder: Contains the results of the 10 most recent self diagnostic tests.

Browser

The panel on the right of the screen is a browser. Use the browser to navigate to the desired folder. *To export an entire folder, do not select any subfolders.*

Export to USB

Exports the selected folder or files to a connected USB drive. Button remains unavailable until a USB drive is plugged into a USB port on the instrument. *The USB drive must be formatted as FAT32 and must be unencrypted.*

Protocols screen

Purpose: To view the list of protocols and their version numbers, and to provide access to tools for changing the default version of a protocol and for uploading new and updated protocols.

To open: From the Home screen, press **Settings**. On the Settings screen press **Protocol Update**.

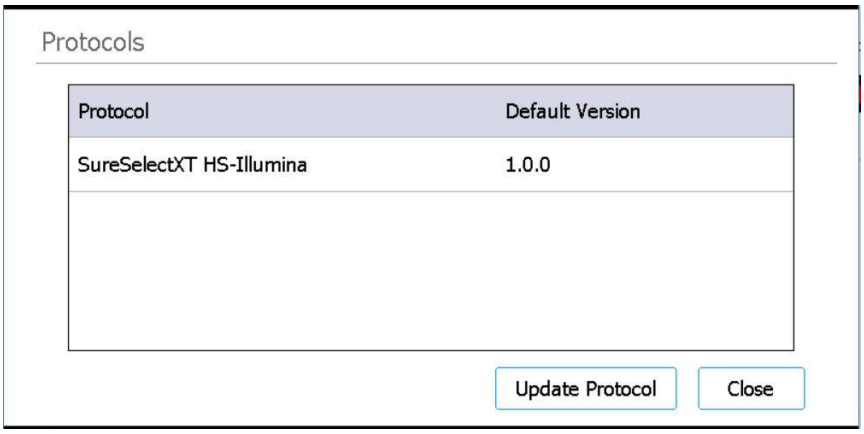


Figure 41 Protocols screen

Protocols table

This table lists the name (Protocol column) and default version (Default Version column) of each protocol on the system.

For protocols that have more than one version available, an arrowhead appears to the right of the Current Version column. See **"Change the default version for a protocol"** on page 46 for instructions.

Update Protocol

This button opens the Protocol Update screen (described below), which has tools for uploading new protocol files from a USB drive.

Close

This button returns you to the Home screen.

Protocol Update screen

Purpose: To upload new protocol files into the software from a connected USB drive. See instructions in **"Install protocol updates"** on page 45.

To open: From the Home screen, press **Settings**. On the Settings screen press **Protocol Update**.Then, press **Update Protocol**.

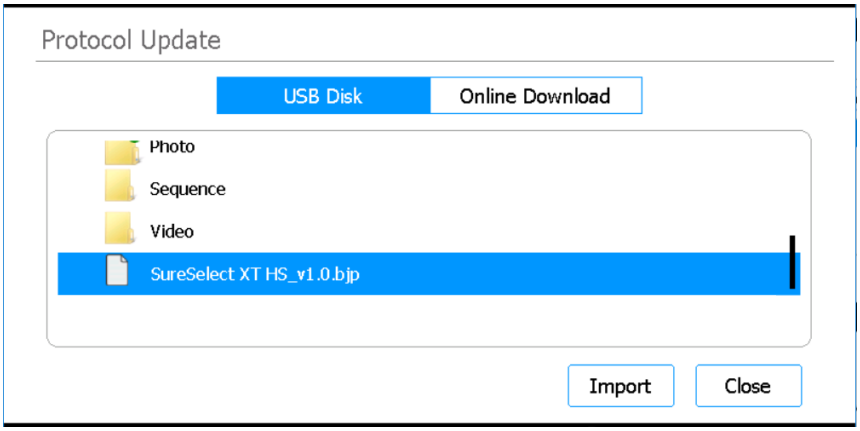


Figure 42 Protocol Update screen – USB Disk selected

USB Disk

Select the USB Disk option to import a protocol file from a connected USB drive. When the USB Disk option is selected, the screen displays a browser of the folders and files on the connected USB drive. Select the protocol files you want to install on your system.

Import

This button is available when the USB Disk option is selected. It initiates import of the selected protocol file.

Close

This button returns you to the Protocols screen.

Auto Teach screen

Purpose: To run auto-teaching, a process that locates and records the positions of the teach points that are printed on the empty deck. See instructions in **"Running Auto-Teaching and Teach-Point Verification"** on page 43.

To open: From the Home screen, press **Settings**. On the Settings screen press **Auto Teaching**.

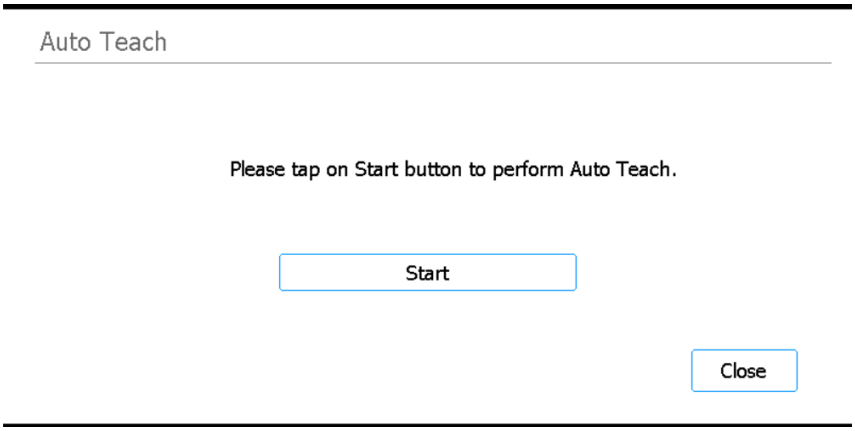


Figure 43 Auto Teach screen

Start

Starts the auto-teaching process.

NOTE

At a particular points during the auto-teaching process, the system prompts you to perform specific actions. Monitor the touchscreen during auto-teaching for instructions.

Close

This button returns you to the Settings screen.

Hardware Usage Tracking screen

Purpose: To track the usage of the system's UV tube. For Agilent engineers and Agilent authorized service providers, to reset the tracker following replacement of the UV tube. See instructions in **"Replacing the UV Tube and Viewing UV Tube Usage"** on page 55.

To open: From the Home screen, press **Settings**. On the Settings screen press **Hardware Usage Tracking**.

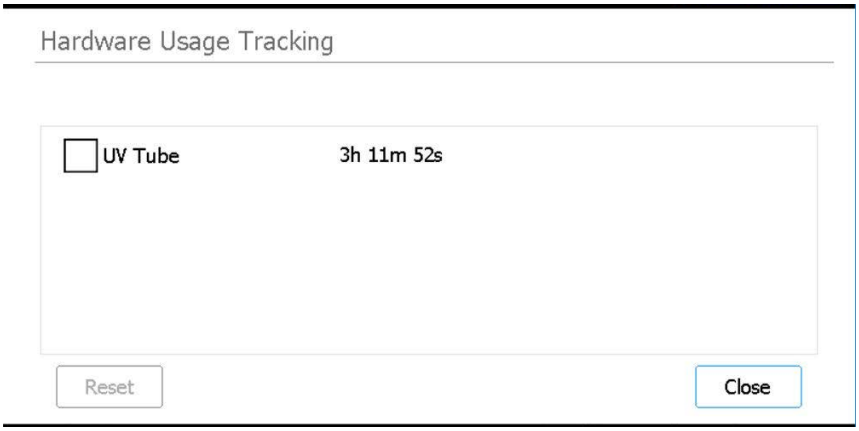


Figure 44 Hardware Usage Tracking screen

UV Tube

Next to this check box is displayed the number of hours, minutes, and seconds of usage for the UV tube. Marking the check box enables the Reset button

Reset

This button resets the usage tracker for the UV tube to zero. Once reset, the usage is displayed as **0h 00m 00s**. *This action should only be performed by an Agilent engineer or Agilent authorized service provider following replacement of the UV tube.*

NOTE The lifespan of the UV tube is 630 hours. After 630 hours of usage, when a decontamination cycle is initiated, the system notifies you to replace the UV tube.

Close

This button returns you to the Settings screen.

Instrument Diagnostic screen

Purpose: To run diagnostic tests on the instrument and access reports for previous diagnostic tests and instrument health checks. See instructions in **"Perform instrument diagnostic tests"** on page 38.

To open: From the Home screen, press **Settings**. On the Settings screen press **Self Diagnostic**.

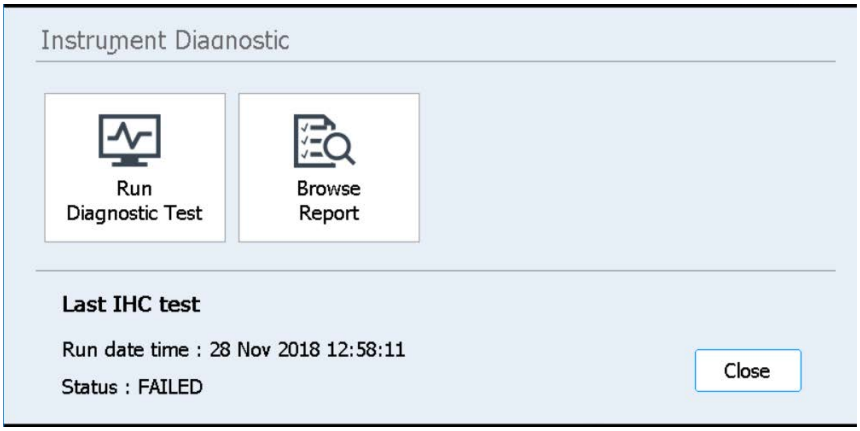


Figure 45 Instrument Diagnostic screen

Run Diagnostic Test

Opens the **Diagnostic Test screen**, which allows you to select from a list of diagnostic tests.

Browse Report

Opens the **Diagnostic Report Explorer screen**, which contains a list of completed diagnostic tests and instrument health checks.

Close

This button returns you to the Settings screen.

System Settings screens

Instrument Settings screen

Purpose: To view and/or set the instrument name, serial number, firmware software version, and device version. See instructions in **"Assign an instrument name"** on page 31.

To open: From the Home screen, press **Settings**. On the Settings screen press **System Settings**. Then, press **Instrument Settings**.

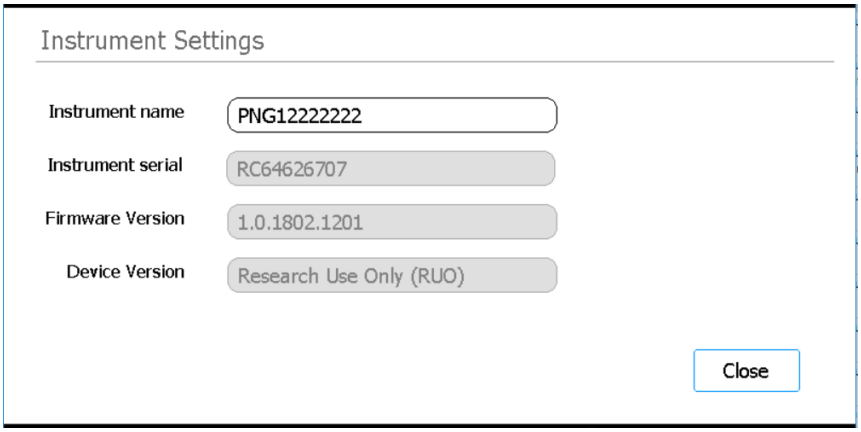


Figure 46 Instrument Settings screen

Instrument name

This field displays the name of the instrument. If desired, edit the text in the field to rename the instrument.

Instrument serial

This non-editable field displays the instrument serial number.

Firmware Version

This non-editable field displays the version number of the firmware software that is currently being used on the instrument.

Device Version

This non-editable field displays the type of device (*Research Use Only* or *For In Vitro Diagnostic Use*).

Date & Time Settings screen

Purpose: To set the date and time on the instrument. See instructions in **"Set the time and date"** on page 30.

To open: From the Home screen, press **Settings**. On the Settings screen press **System Settings**. Then, press **Date & time Settings**.

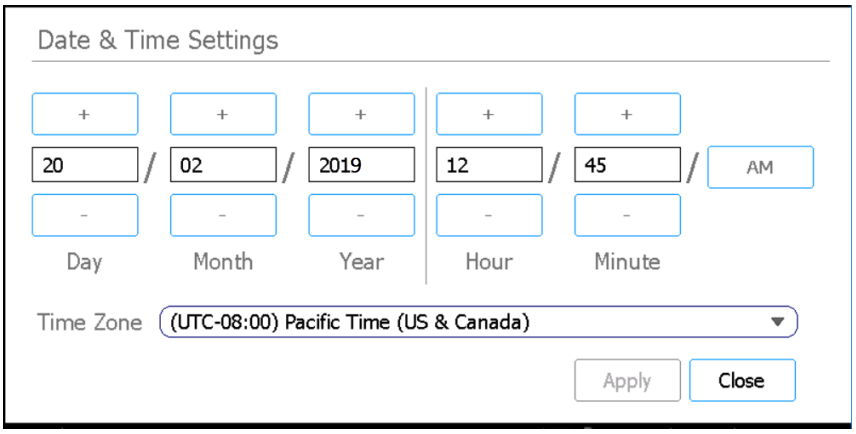


Figure 47 Date & Time Settings screen

Date settings

The settings on the left of the screen are for setting the date. In the Day, Month, and Year fields, type the correct values, or press the +/– buttons to adjust the values.

Time settings

The settings on the right of the screen are for setting the time. In the Hour and Minute fields, type the correct values, or press the +/– buttons to adjust the values. Press the AM/PM button to toggle between AM and PM.

Time Zone

Select the correct time zone from the drop-down list.

Apply

This button applies the date and time as entered on the screen.

Close

This button returns you to the System Settings screen.

Chiller Setting screen

Purpose: To set the temperature of the instrument's chiller module. See instructions in **"Set the chiller temperature"** on page 30.

To open: From the Home screen, press **Settings**. On the Settings screen press **System Settings**. Then, press **Chiller Setting**.

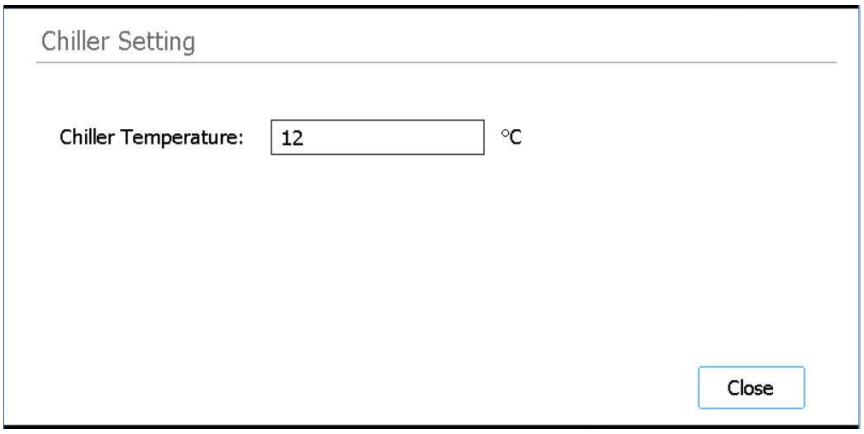


Figure 48 Chiller Setting screen

Chiller Temperature

Type the desired temperature for the chiller (in °C) into the field. Note that this field is only editable for Advanced users. Temperatures from 4°C to 12°C are permitted.

Firmware Update screen

Purpose: To install a new version of the firmware software from a connected USB drive. See instructions in **"Install firmware updates"** on page 46.

To open: From the Home screen, press **Settings**. On the Settings screen press **System Settings**. Then, press **Firmware Update**.

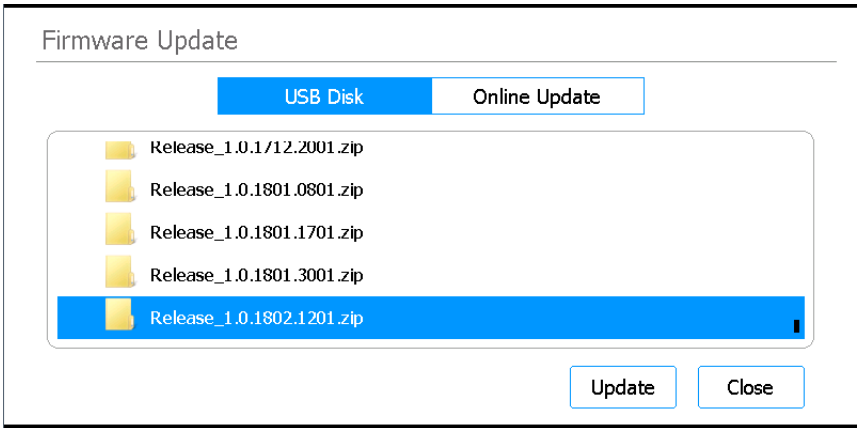


Figure 49 Firmware Update screen – USB Disk selected

USB Disk

Select the USB Disk option to install firmware files from a connected USB drive. When the USB Disk option is selected, the screen displays a browser of the folders and files on the connected USB drive. Select the zip folder containing the firmware files you want to install on your system.

Update

This button opens the license agreement for the new firmware. Accepting the license agreement initiates the firmware update process. The instrument automatically reboots upon completion of the process.

Close

This button returns you to the System Settings screen.

Other Settings screen

Purpose: To set the system to verify teach points during the Instrument Health Check (IHC).

To open: From the Home screen, press **Settings**. On the Settings screen press **System Settings**. Then, press **Other Settings**.

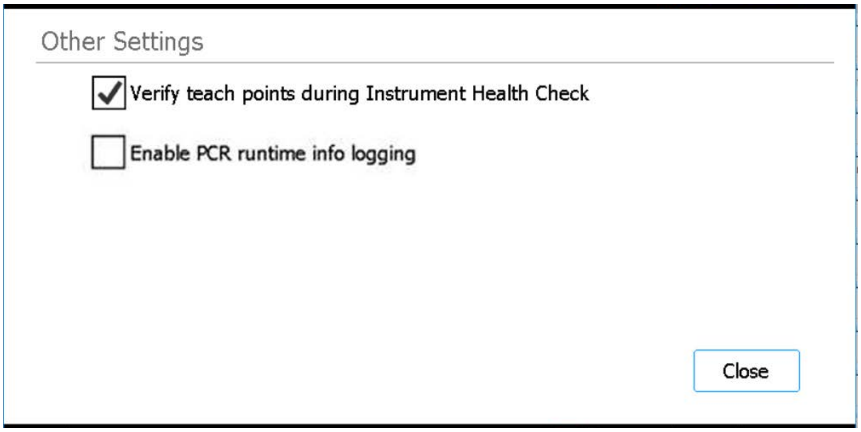


Figure 50 Other Settings screen

Verify teach points during Instrument Health Check

When this check box is marked, each time the system is powered on, the first IHC that it performs includes verification of the teach point positions. If the system identifies a mis-alignment with the teach points, it displays an error message instructing you to run auto-teaching. See **"Running Auto-Teaching and Teach-Point Verification"** on page 43.

Enable PCR runtime info logging

When this check box is marked, the system logs the temperature and related PCR cycling information during protocol runs.

Close

This button returns you to the System Settings screen.

Instrument Diagnostic screens

Diagnostic Test screen

Purpose: To run diagnostic tests on the instrument. See instructions in **"Perform instrument diagnostic tests"** on page 38.

To open: From the Home screen, press **Settings**. On the Settings screen press **Self Diagnostic**. Then, press **Run Diagnostic Test**.

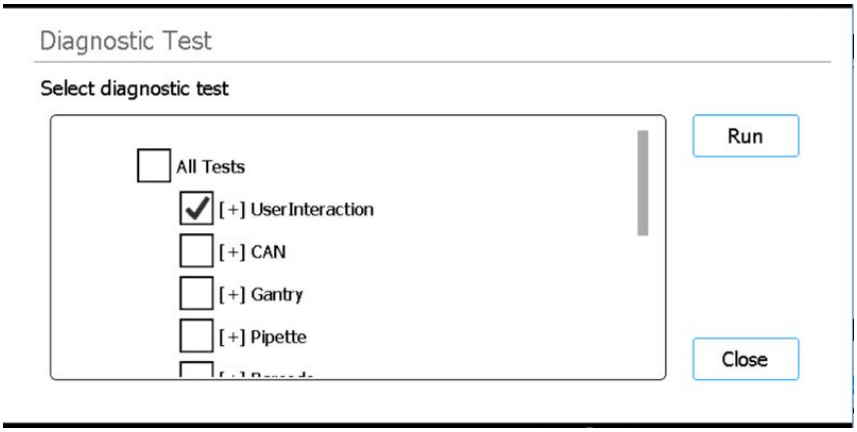


Figure 51 Diagnostic Test screen – Prior to starting diagnostic test

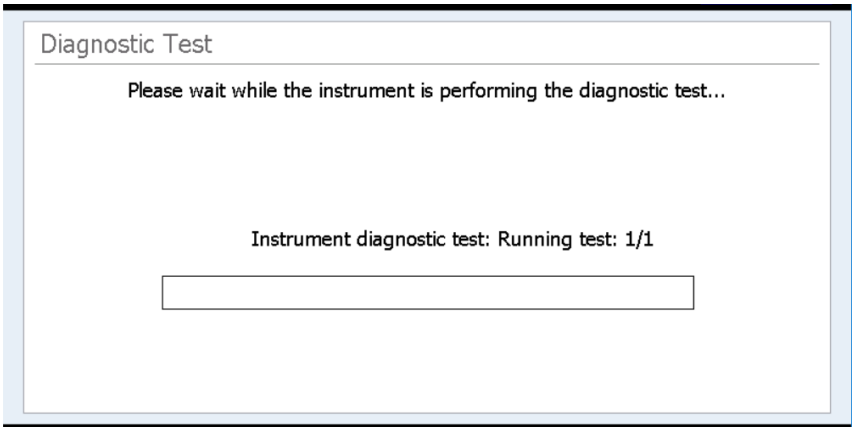


Figure 52 Diagnostic Test screen – During running of diagnostic test

Select diagnostic test

Use the check boxes in this list to select which diagnostic tests to perform. To quickly select all tests, mark the All Tests check box at the top of the list.

Run

This button initiates the selected diagnostic tests. During the diagnostic test run, the screen appears as in **Figure 52**. At completion of the test, the **Diagnostic Test Report screen** opens.

Close

This button returns you to the Instrument Diagnostic screen.

Diagnostic Test Report screen

Purpose: To view the results of instrument diagnostic tests. See instructions in **"View reports for diagnostic tests and instrument health checks"** on page 39.

To open: From the Home screen, press **Settings**. On the Settings screen press **Self Diagnostic**, then press **Browse Report**. to open the Diagnostic Report Explorer screen. Then, select a report and press **View**.

Note that this screen opens automatically after completion of diagnostic testing.

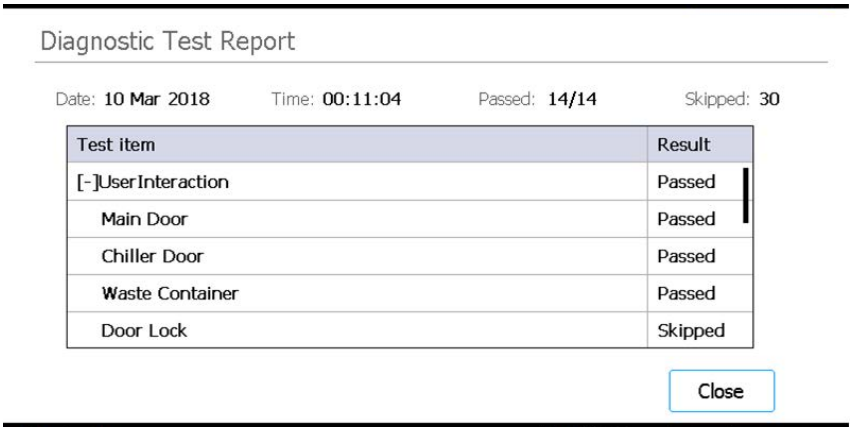


Figure 53 Diagnostic Test Report screen

Report table

The table in the center of the screen lists the diagnostic tests that were performed and the result of the test (Passed, Failed, or Skipped).

When viewing the diagnostic test report for a test that just completed, if any of the items failed, you will see an error icon near the bottom of the screen, like the one shown below. To view more information about the failed test items, press directly on the icon at the bottom of the screen.

Close

This button returns you to the Diagnostic Report Explorer screen.

Diagnostic Report Explorer screen

Purpose: To view the results of instrument diagnostic tests or an instrument health check. See instructions in **"View reports for diagnostic tests and instrument health checks"** on page 39.

To open: From the Home screen, press **Settings**. On the Settings screen press **Self Diagnostic**. Then, press **Browse Report**.

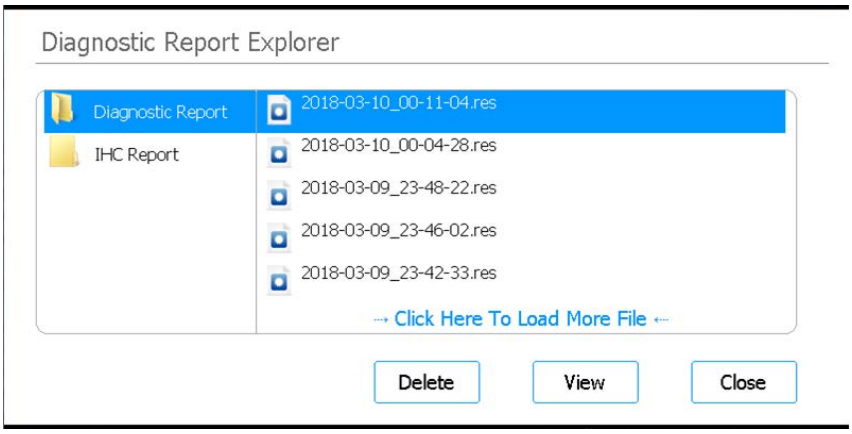


Figure 54 Diagnostic Report Explorer screen

Diagnostic Report folder

This folder contains reports on instrument self diagnostic tests.

IHC Report folder

This folder contains reports on instrument health checks.

Delete

This button deletes the selected report file.

View

This button opens the selected report file.

Close

This button returns you to the Instrument Diagnostic screen.

Decontamination screen

Purpose: To perform UV decontamination of the instrument deck. See instructions in **"Decontaminating with UV Light"** on page 41.

To open: From the Home screen, press **Decontamination**.

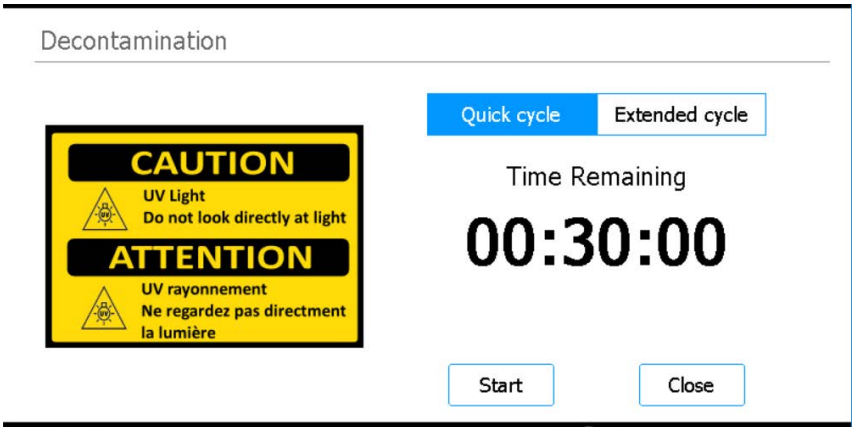


Figure 55 Decontamination screen

WARNING During decontamination of the instrument deck with UV light, do not look directly or indirectly at the UV light source.

WARNING Always perform decontamination with the instrument door closed and locked. The instrument door is programmed to remain locked while the UV light is on.

Quick cycle / Extended cycle

Select between the quick cycle and extended cycle decontamination procedures.

The quick cycle takes 30 minutes to complete. Agilent recommends running the quick cycle prior to each protocol run.

The extended cycle takes 2 hours to complete. Agilent recommends running the extended cycle in the event of a spill or leak that resulted in potential contamination of the instrument deck. At the end of the extended cycle, the instrument automatically powers off. The system only permits running the extended cycle once every 7 days to avoid excessive UV light exposure on the deck.

Time Remaining

The time displayed is the time remaining (hh:mm:ss) in the selected decontamination cycle.

Start

This button initiates the decontamination cycle.

Close

This button is available before the decontamination cycle is started. It returns you to the Home screen.

Abort

This button is available while a decontamination cycle is in-progress. It stops the cycle and turns off the UV light.

Run Data Explorer screen

Purpose: To browse to a completed protocol run and open the **Post Run Data screen** for that run.

To open: From the Home screen, press **Post Run Data**.

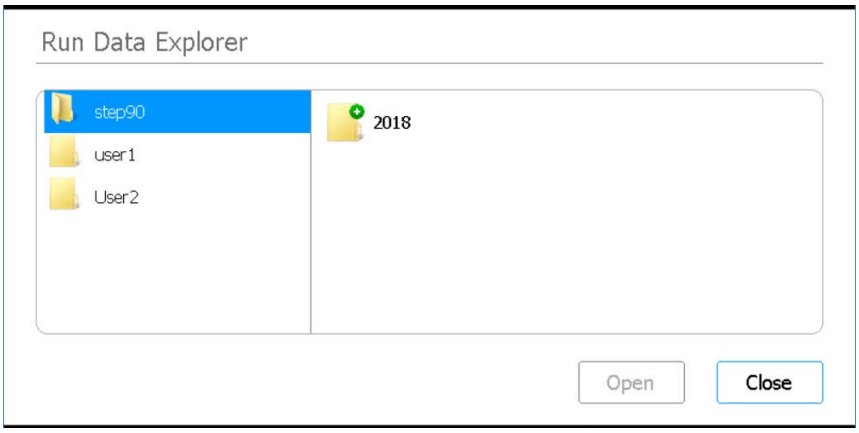


Figure 56 Run Data Explorer screen

Browser

Use the browser to navigate to the folder for the desired protocol run. The panel on the left side of the browser has a folder for each user account. The subfolders in the right panel are organized by year, then numerically by month. The subfolder for the month contains the XML files for all of the protocol runs performed by the selected user during the selected year and month. There is one XML file for each protocol run.

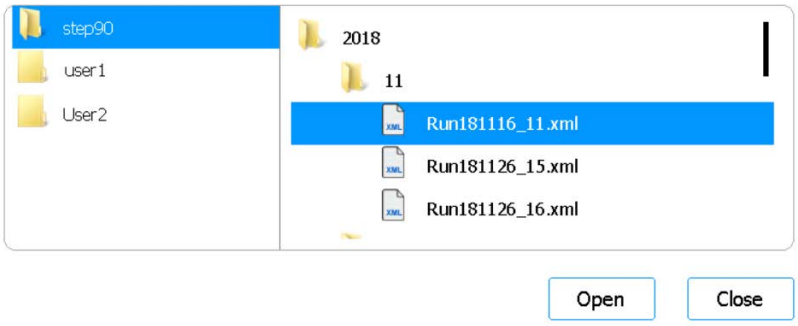


Figure 57 Run Data Explorer browser with expanded folders

Open

This button expands the folder that is selected on the right side of the browser. Or, if an individual XML file is selected folder, then it opens the **Post Run Data screen** for that run.

Close

This button returns you to the Home screen.

Post Run Data screen

Purpose: To view information on a protocol run, including the sample names, number of PCR cycles, sample type, labware serial numbers, and audit trail. The screen has four tabs: Run Setup, Run Info, Labware Info, and Audit Trails.

To open: From the Home screen, press **Post Run Data**. On the **Run Data Explorer screen**, use the browser to locate and select the XML file for the protocol run of interest, then press **Open**. Press the individual tabs on the Post Run Data screen (Run Setup, Run Info, Labware Info, or Audit Trails) to display different types of information on the run.

Run Setup tab

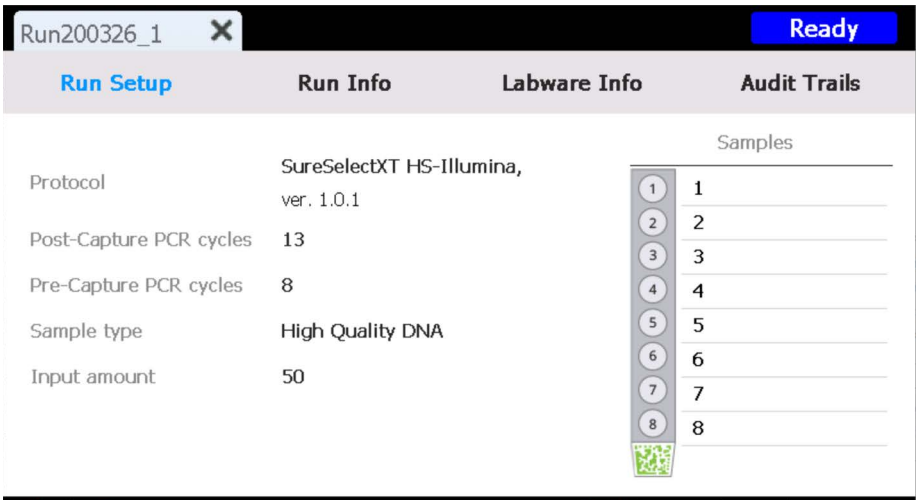


Figure 58 Post Run Data – Run Setup tab

The Run Setup tab contains information pertaining to the setup of the selected protocol run, including the names of the samples processed in the run.

Run Info tab

Figure 59 Post Run Data – Run Info tab

The Run Info tab contains information pertaining to the selected protocol run and the system on which the run was performed.

Labware Info tab

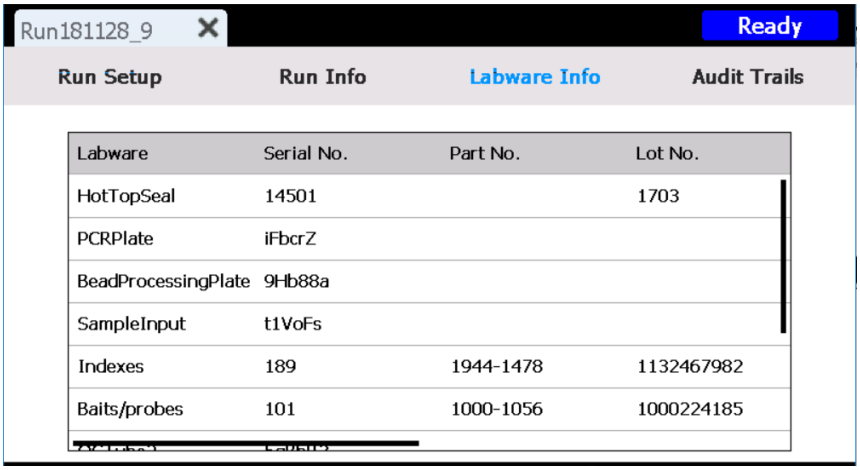


Figure 60 Post Run Data – Labware Info tab

The Labware Info tab lists the serial number and, where available, the part number and lot number of each piece of labware used in the protocol run. These numbers are obtained by the system using the barcodes on the labware.

Audit Trails tab

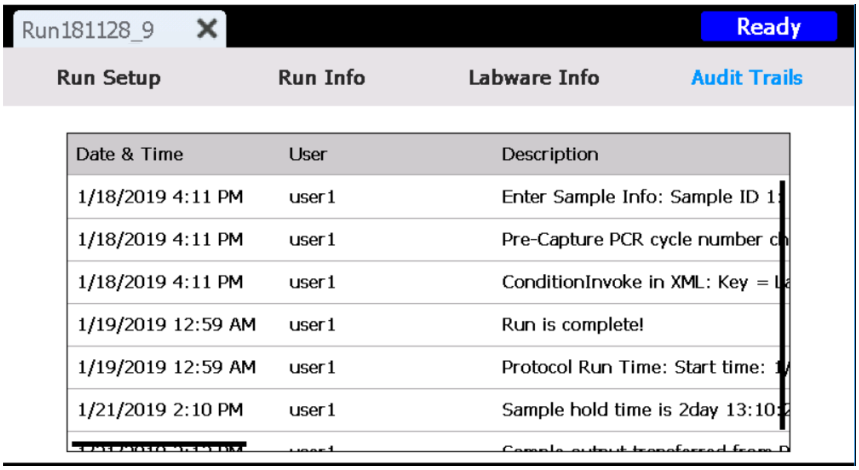


Figure 61 Post Run Data – Audit Trails tab

The Audit Trails tab provides a list of user actions that occurred during the setup and execution of the protocol run. For each action the tab shows the date and time of the action, the user name of the user who performed the action, and a description of the action.

Protocol Wizard screens

When setting up a protocol run, the protocol setup wizard walks you through a series of screens that provide step-by-step instructions on how to set up and start the run. Press the forward arrow button to advance to the next screen. If necessary, press the back arrow button to return to the previous screen.

The steps vary depending on the type or target enrichment you are running. Refer to the user manual for your Magnis Target Enrichment Kit for images and instructions pertaining to each setup screen.

Run screens

Run screen when run is in-progress

Purpose: To monitor the real-time progress of a protocol run.

To open: Opens automatically after starting a protocol run.

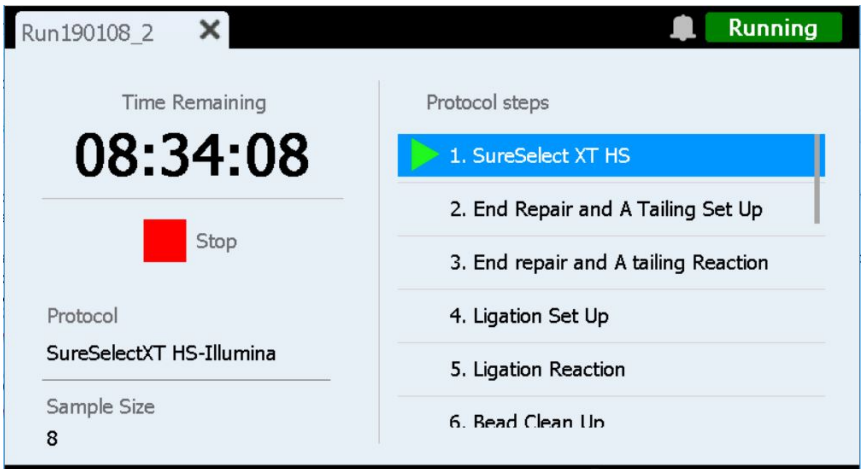


Figure 62 Run screen when protocol run is in-progress

CAUTION While a run is in-progress, do not plug in a USB drive or ethernet cable, use the touchscreen, pull out the waste bin, or interact with the instrument in any way. To avoid triggering an error, wait until the samples have been retrieved at the end of the run before performing these actions.

Time Remaining

The time displayed is the estimated time remaining (hh:mm:ss) until completion of the protocol.

Protocol steps

List of protocol steps. Current step is highlighted.

Stop

Press the red square next to **Stop** to abort the run. A warning message opens asking you to confirm that you want to abort the run.

NOTE Once you stop a run, the run cannot be resumed, and the labware used in that run cannot be reloaded for a future run.

Run screen when run is complete

Purpose: To initiate sample collection.

To open: Opens automatically after the system completes a protocol run.

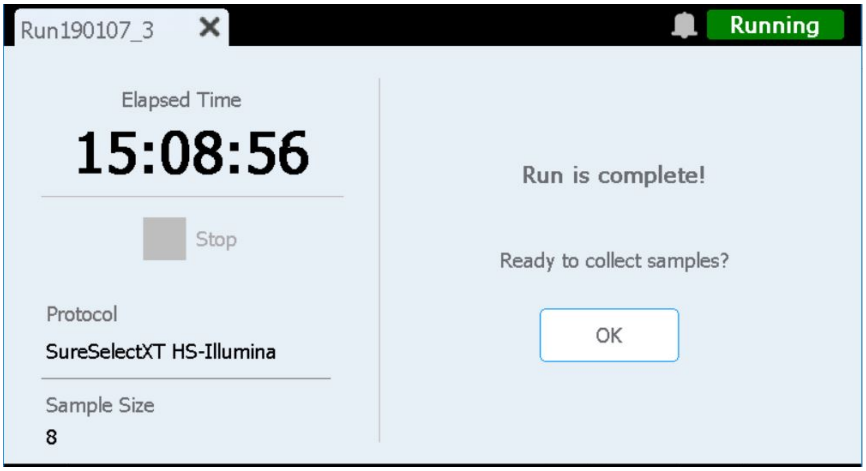


Figure 63 Run screen when protocol run is complete

Elapsed Time

The time displayed is the total time (hh:mm:ss) that has elapsed since the protocol run started.

OK

This button initiates library sample collection. During sample collection, the system transfers prepared library solutions from the PCR plate to the green library strip tube in the chiller.

Run screen when sample collection is in-progress

Purpose: Displayed while the system transfers the prepared library samples.

To open: Opens automatically after pressing **OK** at the **Ready to collect samples?** prompt.

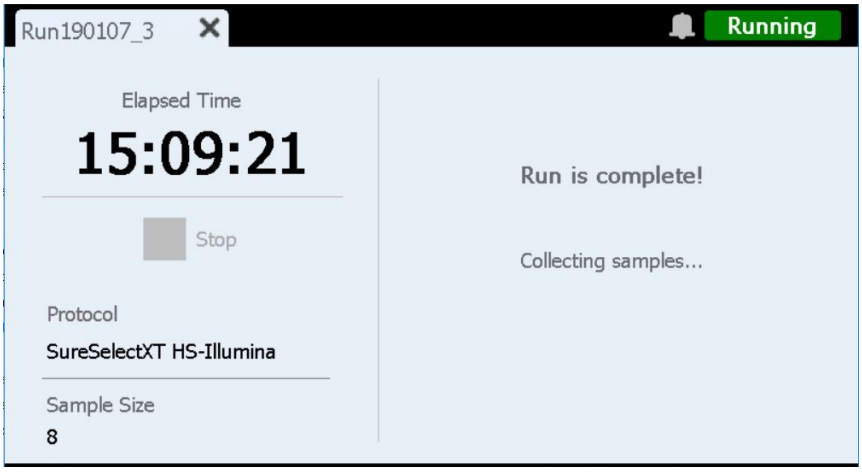


Figure 64 Run screen when sample collection is in-progress

Run screen when libraries are ready

Purpose: Displayed when the prepared library samples are ready to remove from the chiller.

To open: Opens automatically after the system completes library sample collection.

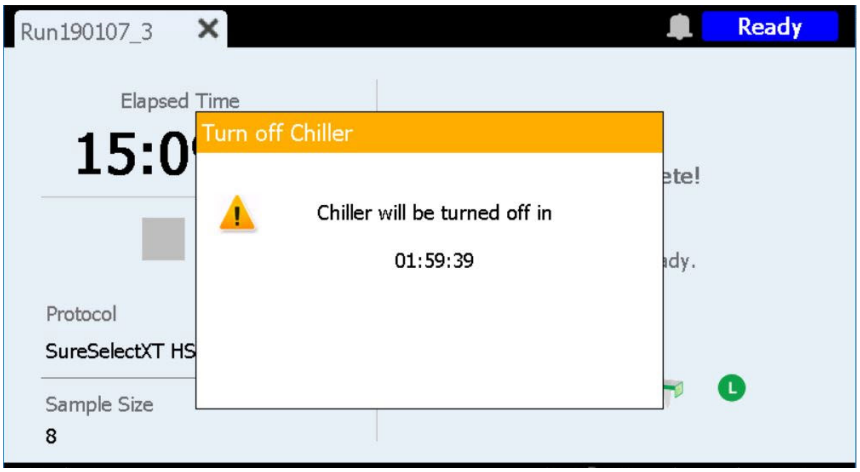


Figure 65 Run screen when libraries are ready – Chiller notification

The instrument door is now unlocked, allowing you to remove from the chiller the green library strip tube containing the libraries. Until you fully open the instrument door, the screen is obscured by a notification message that counts down the remaining time before the chiller is shut off (as shown in **Figure 65**). The chiller remains at its set temperature (12°C, by default) for 2 hours before automatically shutting off.

After you open the instrument door, the chiller notification closes and the screen appears as in **Figure 66**.

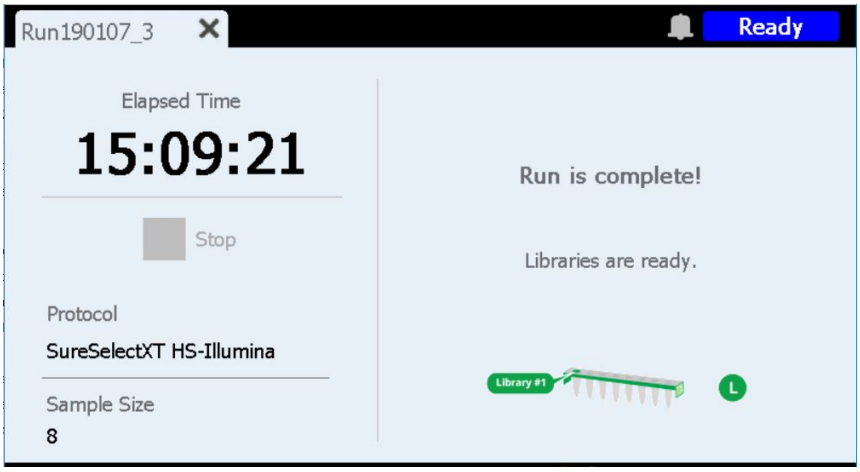


Figure 66 Run screen when libraries are ready

To close the Run screen, press the X on the tab.

NOTE Closing the screen may take several seconds. Do not repeatedly press the X button.

7 Troubleshooting

This chapter contains troubleshooting suggestions to help you solve potential problems and errors encountered during system operation or downstream library sequencing.

Troubleshooting Suggestions

Magnis system issues

The instrument has an error

- Agilent recommends the following actions in the event of an instrument error.
  1. Press the error bubble on the touchscreen and take a photo of the error message.
  2. Press **Export SysCanBus** if available.
  3. Take photos of the deck. Include all reagent plates, tip boxes, and strips in the photos.
  4. Turn off the instrument.
  5. If necessary, move the gantry carefully up and to the side while the instrument is turned off (refer to **Figure 3** on page 20). You will feel a light resistance, but no force is required to move the gantry. Only touch the sides of the gantry!
  6. Remove any tips from the micropipettor, if attached.
  7. Take photos of barrels to document any damage.
  8. Clear the deck of all labware and consumables. If the error occurred during the final sample transfer step, the libraries may be recovered from column 12 of the PCR plate.
  9. Reboot the instrument and wait for the Instrument Health Check (IHC) to finish.
  10. Run a diagnostic test (Home > Settings > Self Diagnostic).
  11. Export log files (see **"Export Files screen"** on page 66).
  12. Contact **Agilent Worldwide Technical Support**.

Touchscreen presents usability issues or appears unresponsive.

- As an alternative to the touchscreen controls, you can use a USB-connected mouse to make selections and enter data. Connect the mouse using either of the two USB ports on the front of the instrument. Once connected, use the mouse point-and-click functions to make selections on the touchscreen interface.
- Reboot the system to reset touchscreen functionality.

Waste container does not slide open or does not slide open easily.

- Gently shake the waste container so that the tips inside fully settle to the bottom. Then, attempt to open the waste container again.

An unattached micropipettor tip is sitting on the instrument deck.

- Occasionally, when the instrument ejects used tips into the waste container, a tip may bounce out and land on the instrument deck. With a gloved hand, move the tip to the waste container or dispose of it as you would when emptying the waste container.

The *Verify Labware* screen reports an issue with one or more labware components after scanning the labware barcodes.

- If all or most of the labware failed verification, then the barcode scanner window may require cleaning. See **"Clean the barcode scanner"** on page 54 for instructions. Once cleaning is complete, repeat the *Verify Labware* step.
- If only one or a few labware components failed verification, then press the error icon at the bottom of the screen and expand the information for the failed position to view the reason for the failure.

  If the barcode scanner failed to scan a particular labware component

  Verify that the labware is present at the required deck position and oriented correctly, with the barcode facing the front of the instrument. Correct the omission or positioning error(s) and then repeat the *Verify Labware* step. If the failed labware components are present and correctly positioned, then visually inspect the barcode to verify integrity. For successful scanning, barcodes must be free of scratches, smudges, condensation, obstruction by foil seals, and writing or other marks on the plasticware. If barcode damage or obstruction is suspected, adjust or replace the labware component and repeat the *Verify Labware* step.

  If the scanned labware is past its expiration date

  Replace any expired components with unexpired components then repeat the *Verify Labware* step. The expiration date can be found on the Certificate of Analysis provided with each component kit containing pre-filled reagents. Components provided as empty plasticware do not have an expiration date.

  If the scanned labware was identified as the wrong piece of labware

  Replace the misplaced labware with the correct labware component and repeat the *Verify Labware* step.

Auto-teaching failed.

- The barcode scanner may have failed to capture images of the teach points. See **"Clean the barcode scanner"** on page 54 for instructions on cleaning the barcode scanner, then re-run auto-teaching. If auto-teaching continues to fail, contact **Agilent Worldwide Technical Support**.
- The teach points may be covered. Make sure the instrument deck has been cleared of all tip boxes, plates, and strip tubes prior to starting auto-teaching. If auto-teaching continues to fail, contact **Agilent Worldwide Technical Support**.

Pressing the power button on the front of the instrument fails to turn on power.

- Make sure that the power switch at the back of the instrument is in the ON position. If it is, then make sure that the power cord is fully inserted into the power cord inlet, and that the other end of the power cord is connected to a wall output that provides 100–240 VAC, 1000 W. If the problem persists, contact **Agilent Worldwide Technical Support**.

The touchscreen *Time Remaining* display does not read 0:00 immediately before proceeding to completed run/sample collection screens.

- The Time Remaining value displayed on the touchscreen is only an estimate of time left in the run. The counter may adjust the remaining time estimate during the run and may display time greater than 0:00 when the system is ready to begin sample collection. This is not indicative of an issue with the run or the instrument.

After turning on the instrument, an error message opens stating “Incorrect date reset” and the date and time displayed on the touchscreen are no longer correct.

- The battery that powers the touchscreen module needs to be replaced. Contact **Agilent Worldwide Technical Support** to schedule service.

Library/sequencing issues

Refer to the user manual for your specific Magnis Target Enrichment Kit for more tips on troubleshooting issues with the library and sequencing data.

Library quality is low.

- Check if your DNA samples meet the guidelines for quality and concentration range specified in the user manual for your Magnis Target Enrichment Kit. If the quality or concentration did not meet the guidelines, then repeat the protocol using a DNA sample of adequate quality that is within the recommended concentration range.

The sequencing reads do not cover the expected genomic regions.

- The wrong probe design may have been used in the protocol run for target enrichment. Review the sample and probe tracking that was recorded during the run. Repeat the protocol run with the correct probe design, if necessary.

Revision Log

Revision	Change
E.01	• Additional details added to the Warning statement on moving the instrument with a forklift or lift table. • Added 10% allowance to AC voltage specification.

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Agilent Worldwide Technical Support

Telephone support for US and Canada

Call 800-227-9770

Telephone and email support for all regions

Agilent's world-wide Sales and Support Center contact details for your location can be obtained at **www.agilent.com/en/contact-us/page**.

When contacting Agilent Worldwide Technical Support with a support issue, please be prepared to provide the following information:

- Instrument serial number
- Description of the issue
- Photos of the deck and barrels
- Log files (see **"Export Files screen"** on page 66)
- TapeStation QC files

Any serious incident that has occurred in relation to the device shall be reported to the manufacturer and the competent authority of the country in which the user and/or the patient is established.

Revision E.01, December 2025

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