

MyGlo™ Reagent Reader Operating Manual

Instructions for Use of Product MG1000



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All technical literature is available at: www.promega.com/protocols/

Visit the website to verify that you are using the most current version of this Operating Manual.

Email Promega Technical Services if you have questions on use of this system: techserv@promega.com

1 Introduction





The MyGlo™ Reagent Reader is a device that measures light output using applications accessed via the cloud-based Promega ProNect™ Data Platform. The reader and data platform control, read and analyze samples assessed by compatible Promega assays in a standard 96-well microplate.



The MyGlo™ Reagent Reader is For Research Use Only.

For more information on MyGlo™ Reagent Reader-compatible ProNect™ applications, visit: www.promega.com/pronect#apps. There are data analysis calculations and other information available for each ProNect™ application.










Note: To activate, manage and operate your MyGlo™ Reagent Reader, a ProNect™ Data Platform user account is required. See Sections 4 and 5.

1.1 Safety Symbols and Markings

	Safety Symbols and Markings
	IMPORTANT: Remove the USB cable and any plate before cleaning.
	IMPORTANT: Always wear gloves during cleaning operations that may involve contact with biological or generally hazardous materials or liquid.
	IMPORTANT: When cleaning the optical surface, avoid scratching or damaging the surface. This includes avoiding the use of scouring agents.
	IMPORTANT: Do not loosen or remove any screws. This can lead to a malfunction and will void the instrument's warranty.

Safety Symbols and Markings (continued)	
	IMPORTANT: Do not use aggressive or corrosive solvents. These chemicals are not compatible with your MyGlo™ Reagent Reader and will damage the surface.
	IMPORTANT: Do not spray cleaning solutions directly onto the interior or exterior surfaces of your MyGlo™ Reagent Reader. Only spray cleaner onto a lint-free cloth or tissue then use the moistened cloth or tissue on MyGlo™ Reagent Reader surfaces.

1.1.1 Symbols Key

Symbols	Explanation	Symbols	Explanation
	Part Number		Manufacturer
	Serial Number		Date of Manufacture (Year-Month-Day)
	Consult your local Promega Representative regarding instrument disposal WEEE Directive (European Community Directive 2012/19/EU on Waste Electrical and Electronic Equipment)		CE Compliance Mark
	FCC Compliance Mark		Regulatory Compliance Mark
	Safety Compliance Mark		

1.2 Physical Components

Your MyGlo™ Reagent Reader device has two major components: the Detection System and the light shield plate. The Detection System contains all electronic components, including the detectors. The light shield plate has been designed to hold a standard 96-well microplate. When the Detection System and light shield plate are closed, the device prevents ambient light from affecting read accuracy.

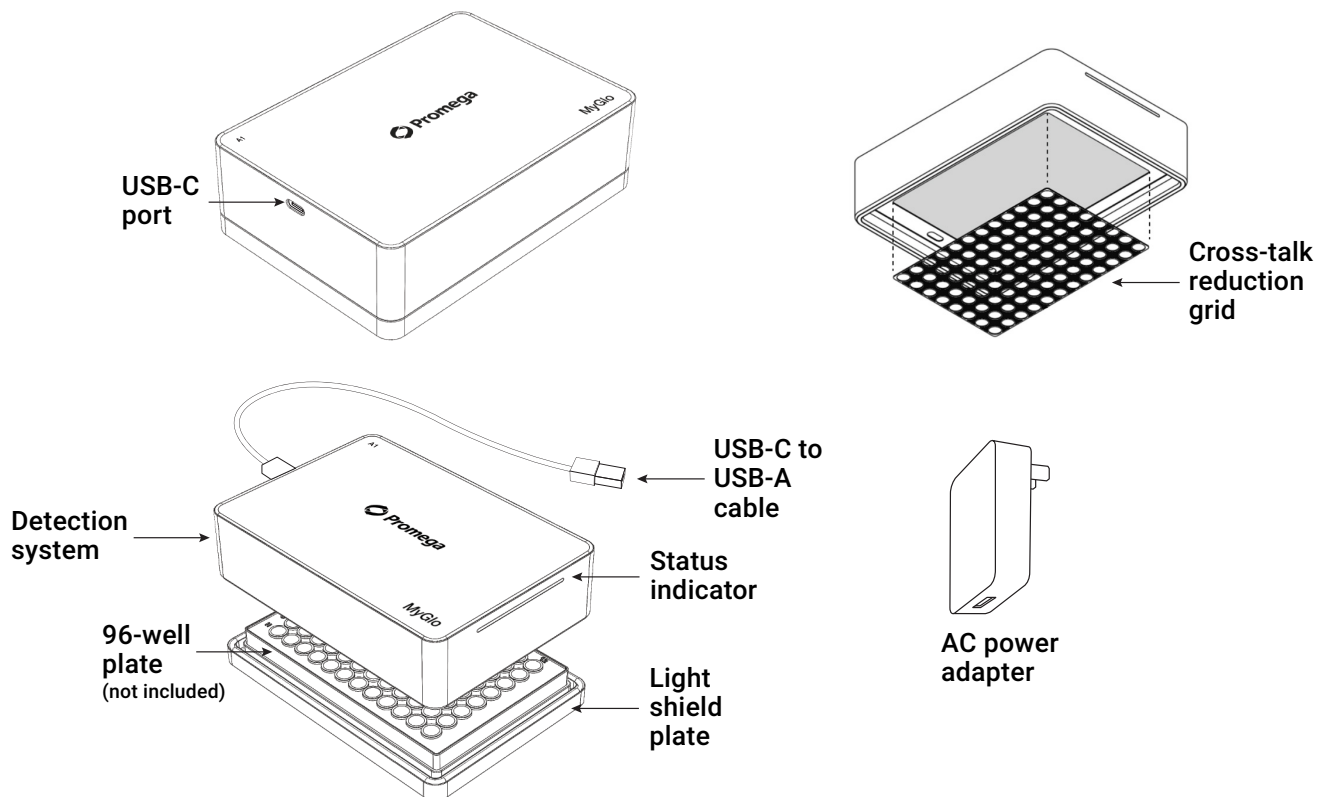


Figure 1. Parts of the MyGlo™ Reagent Reader.

1.3 Computer and Power Connection

A USB-C port is located on the side of your MyGlo™ Reagent Reader and can be used to connect to a computer for instrument administration functions (e.g., activation) and to the provided AC Power Adapter for operation.

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1.4 Shutter Mechanism

Your MyGlo™ Reagent Reader Detection System is designed with a mechanical mechanism that opens and closes multiple times during a normal measurement to monitor and measure background signal for each well.

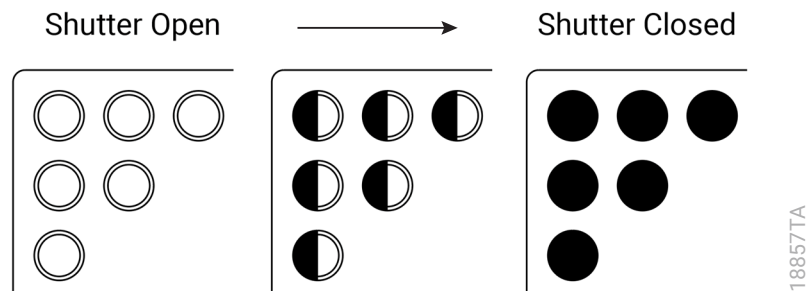


Figure 2. Diagram of shutter mechanism.

1.5 Cross-talk Reduction Grid

Your MyGlo™ Reagent Reader comes equipped with a cross-talk reduction grid to prevent light carryover from neighboring wells. The grid magnetically attaches to the interior optical surface of the MyGlo™ Reagent Reader device, forming a seal around each well of the microplate. The grid can be removed for cleaning (see cleaning instructions in Section 6).

1.6 Status Indicator

Your MyGlo™ Reagent Reader is equipped with a status indicator that is easily visible to users. The status indicator depicts various states as shown in Figure 3.





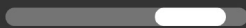







Color	Appearance	Status Name	Status Description
	Scanning	Self test	Self test in progress.
	Solid	Idle	Instrument is idle and not currently reading a plate.
	Solid center	Idle	Instrument is idle and in power-saving mode.
	Pulsing	Ready for plate	Read request received by instrument; waiting for plate to be loaded.
	Scanning	Detecting plate	Looking for a plate.
	Progress	Running	Reading a plate.
	Pulsing	Plate inside	Appears after a read is completed, reminding you to remove your plate.
	Blinking	Error	Instrument is unable to function until issue is resolved.
	Scanning	Offline	Not connected to WiFi network.
	Blinking	Not connected to ProNect	Connected to WiFi network but not connected to ProNect.
	Solid	Ready to set up	Instrument has not be activated on ProNect.
	Progress	Updating firmware	Firmware update in progress.

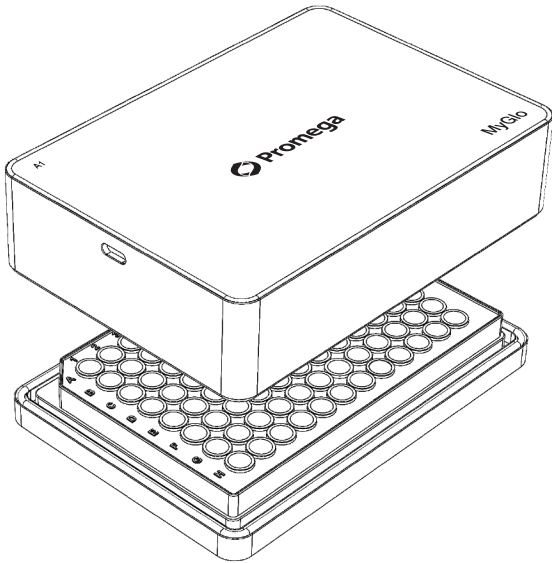
Figure 3. MyGlo™ Reagent Reader indicator states.

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1.7 Readout Orientation

To learn more about the read orientation specific to your MyGlo™ Reagent Reader-compatible Promega assay, visit www.promega.com/myglo-reagent-reader

A.



B.

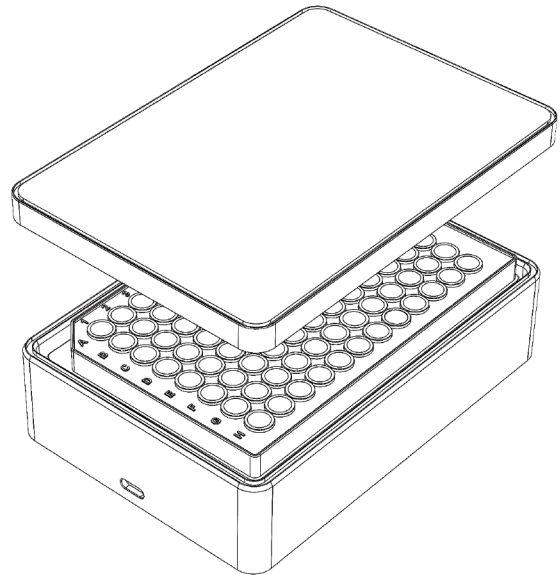


Figure 4. Panel A. Top readout orientation. **Panel B.** Bottom readout orientation.

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2 Technical Specifications

System

Regulatory Compliance	For Research Use Only. Not for use in Diagnostic Procedures.
CE Compliance	Pollution Degree 2 Installation Category II / 230VAC Indoor Use only Mains Supply Voltage not to exceed +/- 10% of nominal supply voltage. This instrument complies with the requirements of the EU Directives for Electromagnetic compatibility (EMC Directive) and electrical safety (the LVD). Compliance with the relevant Directives was demonstrated by third party compliance Testing to the appropriate EN and IEC standards. The product bears the CE mark on its label as evidence of compliance, and an EU Declaration of Conformity for the product is available from Promega upon request.
Weight	570g/1.25lbs
Dimensions	98 x 140 x 42mm (W x L x H)
Power Supply	5V
Power input	2.5W
Control Software	ProNect™ Data Platform and MyGlo™ Reagent Reader-compatible applications
Connectivity	Wi-Fi WPA2 (i.e., WPA2-PSK or WPA2-Personal), 2.4GHz See Wi-Fi specifications at: www.promega.com/myglosetup
Operating and User Interface	Connect2ProNect application: Microsoft Windows 10+ ProNect™ Data Platform and applications: Common internet browsers including Microsoft Edge, Google Chrome, or Apple Safari

Environmental

Shipping Temperature	+4°C to +50°C
Operating Temperature	+15°C to +40°C
Operating Relative Humidity	≤80% noncondensing
Operating Altitude	<2,000m

Performance

Linear Dynamic Range	6 logs
Cross-Talk	Average <0.02%
Sensitivity	www.promega.com/myglo-reagent-reader
Microplate Types	www.promega.com/myglo-reagent-reader
Readout Orientation	www.promega.com/myglo-reagent-reader

3 Product Components

PRODUCT	SIZE	CAT.#
MyGlo™ Reagent Reader	1 each	MG1000

For Research Use Only. Includes:

- MyGlo™ Reagent Reader
- USB-C to USB-A cable
- AC Power Adapter and Power Supply
- Product Activation Card

4

MyGlo™ Reagent Reader Inspection and Setup

Upon receiving your MyGlo™ Reagent Reader, perform a complete inspection, ensuring all listed items are present and not damaged (Section 3). To set up your MyGlo™ Reagent Reader, connect the MyGlo™ Reagent Reader device to your computer using the provided USB-C to USB-A cable.

Notes:

- a. If your computer only has USB-C connections, you will need a USB-A to USB-C adapter.
- b. We recommend creating a ProNect™ user account before starting the instrument setup process. An account is necessary to activate and control the MyGlo™ Reagent Reader device. To create your ProNect™ user account, visit pronect.promega.com

1. Download and install the Connect2ProNect desktop application from www.promega.com/c2pmyglo. The Connect2ProNect icon will appear on your desktop once the application is installed.

Note: Your organization may require administrator permissions to install this software on your computer.

2. Open the Connect2ProNect application and log in using your ProNect™ account credentials. If you do not have a ProNect™ user account, follow the instructions to create an account.
3. The Connect2ProNect wizard will walk you through setting up your MyGlo™ Reagent Reader.

Note: Use the activation code printed on the Product Activation Card provided with your MyGlo™ Reagent Reader. If the activation code was misplaced, request a new activation code using the Connect2ProNect application.

4. When your MyGlo™ Reagent Reader has been successfully set up, the MyGlo™ Reagent Reader is ready to use. Disconnect the USB cable from your computer and connect it to the AC power adapter to operate your MyGlo™ Reagent Reader.
5. On your ProNect™ dashboard, your MyGlo™ Reagent Reader device will be displayed in the instrument section.

5

Operating the MyGlo™ Reagent Reader

Your MyGlo™ Reagent Reader is operated using MyGlo™ Reagent Reader-compatible ProNect™ applications that are accessible from your ProNect™ Data Platform dashboard.

1. Go to **pronect.promega.com**, log in to your ProNect™ account and select a MyGlo™ Reagent Reader-compatible ProNect™ application.
2. Each application is designed for specific Promega assays.

Note: For details on using MyGlo™ Reagent Reader-compatible applications, visit **www.promega.com/pronect#apps**. There are data analysis calculations and other information available for each ProNect™ application.

5.1 Guidelines for Using MyGlo™ Reagent Reader

- Operate the MyGlo™ Reagent Reader on a level surface. Avoid unnecessary exposure to vibration during operation.
- Minimize exposing the MyGlo™ Reagent Reader interior to dust by keeping the device closed when not in use.
- Avoid using the MyGlo™ Reagent Reader near sources of heat or in direct sunlight.
- For optimal performance, the MyGlo™ Reagent Reader should be used in environmental conditions described in Section 2, Technical Specifications.
- For optimal performance, avoid exposing the Detection System to oils, liquids and dust.
- Avoid spilling liquid inside the MyGlo™ Reagent Reader. If a spill occurs, immediately clean the device, following the instructions in Section 6, Cleaning and Maintenance.

5.2 Standard MyGlo™ Reagent Reader Application Workflow

For details on using MyGlo™ Reagent Reader-compatible applications, visit www.promega.com/pronect#apps. There are plate map guidelines, data analysis calculations and other information available for each ProNect™ application.

Designing a Plate Map

When using MyGlo™ Reagent Reader-compatible applications, you can design a plate map with well-specific parameters that are customized based on the Promega assay. Plate maps can be saved to ProNect for future use and modified as needed.

Note: A plate map design instructs your MyGlo™ Reagent Reader to read only the well(s) with user-input information. Wells that do not have any user-input information will not be read.

1. Start with either a blank plate map or open a plate map previously created in ProNect.
2. Select the well(s) you want to read and input assay- and well-specific information to be used for downstream analysis.
3. Use this plate map to immediately read a plate, or save it for a future read(s).

Reading Your Plate Using a Plate Map

4. After creating your plate map, select **Next**.
5. Now select the device you will use to read the plate, set the integration time, and select **Read**. This will send instructions to your MyGlo™ Reagent Reader to prepare to read your plate.

Note: The default integration time is assay specific and validated to produce sufficient read results for most experiments. You can modify the integration time between 0.1–30 seconds for your read.

6. The light on your MyGlo™ Reagent Reader will now glow white and pulse slowly, indicating the device is ready for you to insert your plate.
7. Open the device, insert your plate, and close the device to start your read. The MyGlo™ Reagent Reader is equipped with sensors to detect the plate and will start reading your plate after the device is closed and the plate has been detected. The white indicator light on the MyGlo™ Reagent Reader will show the progress of your plate read.

Note: When inserting the plate, make sure well A1 is in the indicated position on the device for top- or bottom-read orientations, respectively (see Figure 4).

8. When the read is completed, your read data file will be saved to ProNect and you will be brought to your data analysis and visualizations. Your MyGlo™ Reagent Reader LED will blink yellow to indicate that you can remove your plate.

Full-Plate Read

You can read a full 96-well microplate without creating a plate map.

1. Access a MyGlo™ Reagent Reader-compatible application from your ProNect™ dashboard.
2. Select the **Read** tile on the application home page, then select **Read Full Plate**.
3. Now select the device you will use to read the plate, set the integration time, and select **Read**. This will send instructions to your MyGlo™ Reagent Reader to prepare to read your plate.

Note: The default integration time is assay specific and validated to produce sufficient read results for most experiments. You can modify the integration time between 0.1–30 seconds for your read.

4. Open the device, insert your plate, and close the device to start your read. The MyGlo™ Reagent Reader is equipped with sensors to detect the plate and will start reading your plate after the device is closed and the plate has been detected. The white indicator light on the MyGlo™ Reagent Reader will show the progress of your plate read.

Note: When inserting the plate, make sure well A1 is in the indicated position on the device for top- or bottom-read orientations, respectively (see Figure 4).

5. When the read is completed, your read data file will be saved to ProNect, and the MyGlo™ Reagent Reader LED will blink yellow to indicate that you can remove your plate.

Analyzing Your Data

- Data visualizations have been customized for your MyGlo™ Reagent Reader-compatible Promega assay.
- Data visualizations are generated and viewable once the measurement is complete.
- Data visualizations can be downloaded from ProNect.

Note: Data visualization reports will use default settings.

Instrument and ProNect™ Application Data Files

To view and download your MyGlo™ Reagent Reader Data Files, see the Instruments section on your ProNect™ dashboard. Select your MyGlo™ Reagent Reader. The data files will be listed in the 'Files' tab. Your MyGlo™ Reagent Reader data files will also be visible in the My Data section on your ProNect™ dashboard.

To view and download your ProNect™ Application Files, see the My Data section from your ProNect™ dashboard. You can see:

- ProNect™-created plate maps in Microsoft® Excel.
- MyGlo™ Reagent Reader raw data files in Adobe .pdf.
- Analyzed data files in Microsoft® Excel.
- Data visualization files in Adobe .pdf.

6

Cleaning and Maintenance

Your MyGlo™ Reagent Reader device has no user-serviceable parts. Opening the Detection System will void the warranty.



Failure to observe the warnings in Section 1.1 may result in damage to the MyGlo™ Reagent Reader. This can reduce the lifetime and performance of the device.

6.1 Cleaning the Exterior

The exterior surface of your MyGlo™ Reagent Reader device can be cleaned using a lint-free cloth or tissue. For heavier soiling, the surface of the housing can be cleaned using a diluted detergent solution with any residual residue removed with a cloth or tissue lightly moistened with water.

6.2 Cleaning the Interior

The internal surfaces of your MyGlo™ Reagent Reader device can be cleaned using a lint-free cloth or tissue. Remove the cross-talk reduction grid and wipe both sides down with a clean, damp cloth. The optical surface may be cleaned with a lint-free cloth or tissue and a 70% ethanol solution.

7

Troubleshooting

If you are unable to resolve any issues related to your MyGlo™ Reagent Reader or any additional questions not addressed here, please contact Promega Technical Services or your local Promega Branch Office or Distributor. Contact information is available at:

www.promega.com. Email: **techserv@promega.com**

Note: Promega Technical Services may request log files to help diagnose the problem. Follow the instructions for malfunctioning device below.

Issue	Description	Comments
Setting up your MyGlo™ Reagent Reader	Your MyGlo™ Reagent Reader arrives ready to be connected to a ProNect™ account and a Wi-Fi network. The MyGlo™ Reagent Reader Indicator status bar will be solid yellow to indicate it is ready to activate. See Figure 3.	See Section 4, MyGlo™ Reagent Reader Inspection and Setup. See Wi-Fi specifications at: www.promega.com/myglosetup
Updating firmware	When activating your MyGlo™ Reagent Reader for the first time, your MyGlo™ Reagent Reader firmware may need to be updated to the latest version. The ProNect™ Data Platform will notify you when new firmware versions are available. We recommend updating the MyGlo™ Reagent Reader to the latest firmware version.	To update the firmware, connect your MyGlo™ Reagent Reader device to your computer using the provided USB cable. <ul style="list-style-type: none">• Open the Connect2ProNect application and log in using your ProNect™ account credentials.• Connect2ProNect will automatically update your firmware, if needed.• When your MyGlo™ Reagent Reader firmware has been updated, exit Connect2ProNect, disconnect the USB cable from your computer and connect it to the AC adapter to power and operate the MyGlo™ Reagent Reader.

Issue	Description	Comments
<p>MyGlo™ Reagent Reader offline</p>	<p>Your MyGlo™ Reagent Reader is operated by a connected ProNect™ account via Wi-Fi. When the MyGlo™ Reagent Reader is disconnected from Wi-Fi, the device cannot be operated. The MyGlo™ Reagent Reader Indicator status bar will be yellow and pulsing to indicate a Wi-Fi disconnection. See Figure 3.</p>	<ul style="list-style-type: none"> • Ensure your MyGlo™ Reagent Reader is connected to the power adapter. • Ensure that Wi-Fi signal is available and the MyGlo™ Reagent Reader is connected. <p>From a connected ProNect™ account, confirm that the instrument is offline by looking at the instrument indicator status.</p> <p>If Wi-Fi is available, connect your MyGlo™ Reagent Reader to your computer using the provided USB cable.</p> <ul style="list-style-type: none"> • Open the Connect2ProNect application and log in using your ProNect™ account credentials. • Connect to an available Wi-Fi source. • Connect2ProNect will automatically update your firmware, if needed. • When your MyGlo™ Reagent Reader firmware has been updated, exit Connect2ProNect, disconnect the USB cable from your computer and connect it to the AC power adapter to power and operate your MyGlo™ Reagent Reader. • If you are unable to resolve this issue, choose Network Connection to select another Wi-Fi network, see Figure 5.

Issue	Description	Comments
<p>Moving your MyGlo™ Reagent Reader to a new Wi-Fi connection</p>	<p>You need to change the Wi-Fi connection for your MyGlo™ Reagent Reader.</p>	<p>To update your Wi-Fi configuration, connect your MyGlo™ Reagent Reader to your computer using the provided USB cable.</p> <ul style="list-style-type: none"> • Open the Connect2ProNect application and log in using your ProNect™ account credentials. • Use the Network Connection tool to update your configuration. • When Wi-Fi is successfully connected, exit Connect2ProNect, disconnect the USB cable from your computer and connect it to the AC power adapter to power and operate the MyGlo™ Reagent Reader.
<p>Self-test failure</p>	<p>When your MyGlo™ Reagent Reader is powered on, a self-test is performed to ensure the MyGlo™ Reagent Reader is functioning properly. The MyGlo™ Reagent Reader indicator status bar will flash a rainbow light to indicate that it is performing a self-test. If Self Test fails, the indicator will blink red.</p>	<p>If the self-test fails, unplug the power and then plug in the MyGlo™ Reagent Reader to reinitiate the self-test.</p> <p>If the self-test fails twice, connect MyGlo™ Reagent Reader to your computer using the USB cable.</p> <ul style="list-style-type: none"> • Open the Connect2ProNect application and log in using your ProNect account credentials. • Connect2ProNect will automatically update your firmware, if needed. • When your MyGlo™ Reagent Reader firmware has been updated, exit Connect2ProNect, disconnect the USB cable from your computer and connect it to the AC power adapter to power and operate the MyGlo™ Reagent Reader.

Issue	Description	Comments
Malfunctioning device	If your MyGlo™ Reagent Reader experiences issues not related to WiFi connection or self-test failure, contact Promega Technical Services. They may request log files to help diagnose the problem.	<p>To generate log files, connect your MyGlo™ Reagent Reader to a computer with the provided USB cable.</p> <ul style="list-style-type: none"> • Open the Connect2ProNect application and log in using your ProNect™ account credentials. • Select Retrieve Logs to extract and save the instrument log files onto your computer. See Figure 5, Home screen of Connect2ProNect for MyGlo™ Reagent Reader. • Once the log files have been saved, exit Connect2ProNect, disconnect the USB cable from your computer and connect it to the AC power adapter to power and operate your MyGlo™ Reagent Reader device. <p>Note: You can share requested log files with Technical Services by sending the files via email.</p>
Reassigning a user	The MyGlo™ Reagent Reader device needs to be reassigned to a new user.	<p>Connect your MyGlo™ Reagent Reader to a computer with the provided USB cable.</p> <ul style="list-style-type: none"> • Open the Connect2ProNect application and log in using your ProNect™ account credentials. • Select Deactivate (see Figure 5). • Once you have deactivated the MyGlo™ Reagent Reader, exit Connect2ProNect. • When you are ready to reactivate your MyGlo™ Reagent Reader, see Section 4 for instructions. <p>Note: You will need to select Request code to be provided with a new, single-use only activation code.</p>

Issue	Description	Comments
Plate detection error or failure	Plate detection failures happen when a MyGlo™ Reagent Reader is in Ready mode and fails to detect a plate. For example, if you initiate a read and do not insert a plate, the MyGlo™ device will be reserved for that initial read and not be available for another read. In ProNect, the MyGlo™ Reagent Reader will be listed as Ready with a blue bar. When plate detection is in progress, the MyGlo™ device changes its LED signal from solid white to scanning (left to right) white. After plate detection failure, the MyGlo™ device will revert back to solid white.	<p>There are two options to override a plate detection error or failure:</p> <ul style="list-style-type: none"> • To force a read, turn or hold the detection unit so the LED status bar is facing down, then close the MyGlo™ Reagent Reader with the plate inside to force a read. • To reset the plate detection mechanism, close the MyGlo™ device without a plate inside, turn the MyGlo™ Reagent Reader so the LED status bar faces up, and hold in this position for 20 seconds. Wait until the LED status bar stops changing color and displays a full color bar. This will reset the MyGlo™ plate detection baseline.

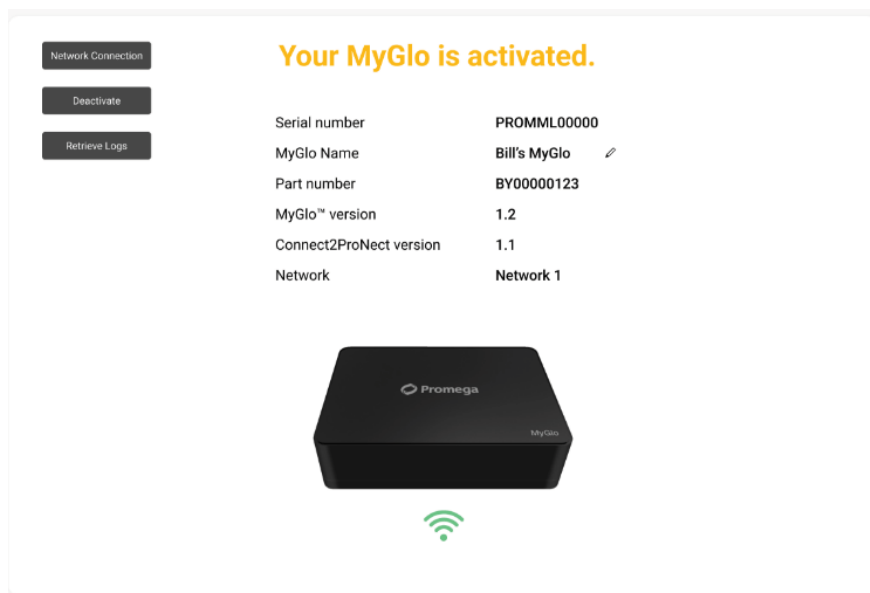


Figure 5. MyGlo™ Reagent Reader Connect2ProNect Home screen.

8

Warranty and Service

Your MyGlo™ Reagent Reader instrument comes with a 12-month* warranty. Warranty coverage includes all parts, labor, and shipping to and from our authorized service locations. The warranty does not include repair or replacement necessitated by accident, neglect, misuse, unauthorized repair or modification of the instrument.

If a problem arises with the instrument, contact Promega Technical Services for support. Contact information is available at: www.promega.com. Email: techserv@promega.com. If further action is required, you will be given repair options and assigned a return authorization number. Promega is not responsible for instrumentation returned without an authorization number.

To obtain service during the warranty period, please take the following steps:

- Contact Promega Technical Services.
- Carry out troubleshooting procedures as suggested by your Technical Services Scientist.
- If further action is required, you will be provided options and assigned a return authorization number. Promega is not responsible for instrumentation returned without an authorization number.
- Before returning the instrument, you will be responsible for cleaning it. If the instrument has been exposed to any chemical, biological or radioactive hazards, contact Promega Technical Services for decontamination instructions before shipping.

*May vary based on location. Contact your local Promega representative for more information.

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Product claims are subject to change. Please contact Promega Technical Services or access the Promega online catalog for the most up-to-date information on Promega products.