SMART MONSTER™ USER MANUAL
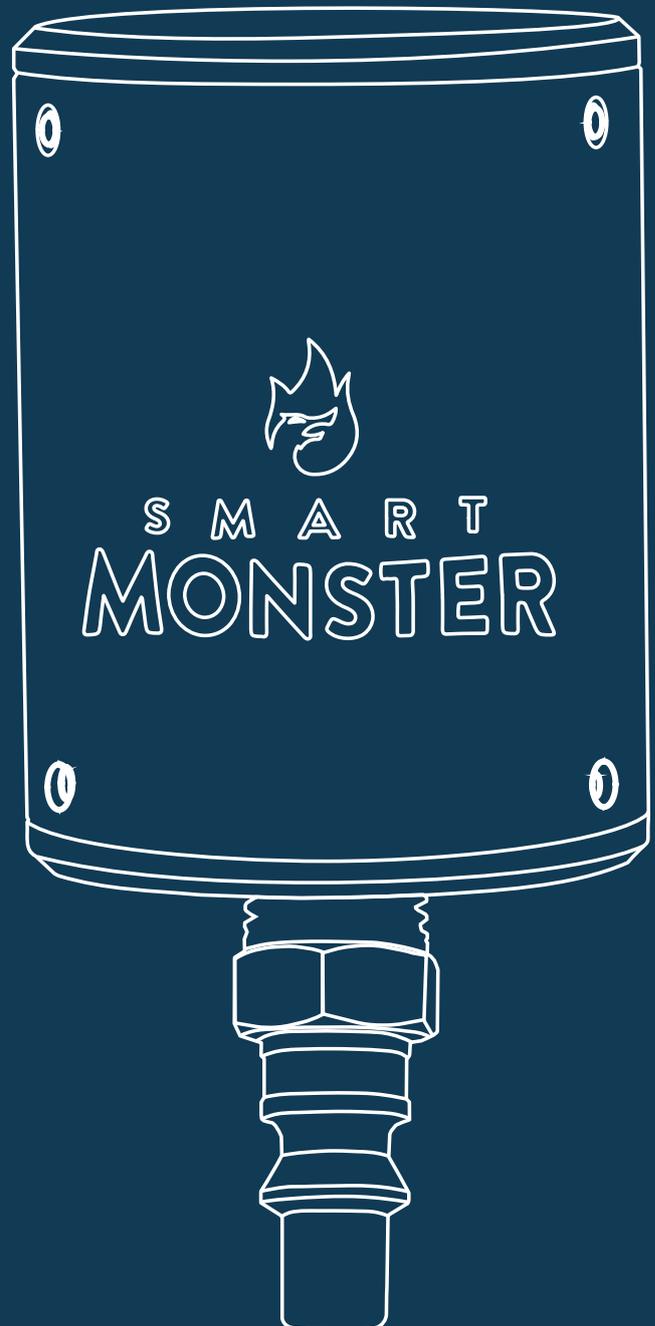
IMPORTANT INFORMATION

- Read this User Manual in full before using Smart Monster™ devices

- Keep this User Manual – save all safety and operational instructions for future reference

- Take note of the Warnings – read carefully and follow all warning labels and those described in this User Manual

- Care should be taken when handling and storing Smart Monster™ devices

- Use only approved accessories provided with Smart Monster™ and those detailed in this User Manual

SAFETY SYMBOLS & EXPLANATIONS

Summary of Safety Symbols

The following symbols are used throughout this manual to alert the operator to potential hazards and critical service requirements. Each symbol is placed next to specific instructions to ensure safe and compliant operation of the Smart Monster™.

Symbol	Definition	Application in Manual
	General Warning	Used for general field safety, trip/slip hazards, and operational risks.
	Electrical/EMI Hazard	Specifically for 500 mAh LiPo battery safety and electromagnetic interference from fire pump controllers.
	High-Pressure Hazard	Used for any instruction involving pressurized water systems and the 300 PSI operating limit.
	Service/Notice	Indicates tasks requiring factory service, annual calibration, or firmware integrity notices.
	Environmental/Disposal	Highlights instructions for the proper handling and recycling of e-waste and lithium batteries.

CONTENTS

GENERAL INSTRUCTIONS

1.1 Warranty

In addition to any other express warranty given in writing by the Company in relation to Goods, the Company warrants that the Goods supplied under these terms and conditions will be in accordance with the specification (if any) contained in the Purchase Order, and will be free from defects in workmanship and material for a period of 2 years from the date of delivery to the Buyer, or for a period of 2 years after the date of sale by the Buyer to the final customer.

1.2 Acknowledgment

Smart Monster™ is a registered trademark of Hydro Flow Products, LLC. All other brand names mentioned are trademarks or registered marks of their respective holders and are hereby acknowledged.

© Hydro Flow Products, LLC

1.3 Recycling

Recycling options may vary—refer to your local authority for specific guidelines.

1.4 Declarations & Certifications

FCC COMPLIANCE
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

1.5 Transportation and Storage Information

Transportation and Storage Information
- To maintain the precision and longevity of the Smart Monster™ gauges, they must be stored and transported in a manner that protects their internal electronic and mechanical components.

Storage Environment
- **Temperature Range:** The recommended storage temperature for the device is 35°F to 113°F (0°C to 45°C).
- **Performance Impact:** Storing the device outside of this range—particularly in extremely cold or hot conditions—may impact its performance or cause stress to internal components over time.
- **Humidity and Moisture:** Avoid getting moisture in the charging or carrying case.
- **Preparation:** Always dry off all devices prior to charging, storing, or transporting.

Physical Handling and Transport
- **Vibration Protection:** Always store and transport the Smart Monster™ in a case with foam padding to dampen any vibrations.
- **Calibration Risks:** Failure to use a padded case during transport could result in damage or the device being out of calibration.
- **Versatile Placement:** Devices may be stored in a padded gauge case in any stable orientation, including on their side.

Long-Term Storage & Battery Health
- **Deep Sleep Mode:** The Smart Monster™ gauges will automatically enter a deep sleep mode after 72 hours of inactivity to preserve battery life.
- **Reactivation:** If a device has been in storage for more than 72 hours, refer to Section 6: Deep Sleep Mode & Rebooting for instructions on how to wake the unit using the charging pad or supplied magnet.
- **Electronic Interference:** Do not place Smart Monster™ gauges on electrical components (e.g., fire pump controllers or motors), as this will impact the radio signals and cause damage to internal components.

1.6 Privacy Policy

Smart Monster™ is covered by The Hose Monster Company privacy policy. Full details of the policy can be found on the Hose Monster website.

https://hosemonster.com/privacy-policy-and-terms-of-use/

2 SMART MONSTER™ INTRODUCTION

Thank you for purchasing your Smart Monster™.

This manual is designed to assist you with getting the best and most efficient use of Smart Monster™ and provides all the information required to use the product with ease.

Functionality of Smart Monster™ requires the use of the Smart Monster™ App.

Scan the QR code for more information.

3 DOWNLOAD THE SMART MONSTER™ APP

Visit the App Store or Google Play Store and download the 'Smart Monster™ by Hose Monster' app

SMART
MONSTER

Download on the App Store

GET IT ON Google Play

4
CHARGING

4.1 Charging using the Charging Pad:

- Plug the charging pad into an outlet.

- Place the Smart Monster™ with the charging cap flush against the charging pad.

- Once contact is made, the indicator light will illuminate.

- The device will take approx. 4-8 hours for a full charge.

- A full charge typically lasts 7+ days depending on usage; however, we recommend charging every few days to ensure optimal performance.

NOTE:
Ensure the Smart Monster™ is fully charged before use.

Charging Pad

NOTE:

DPL= Dynamic Power Limiting means the charge pad has artificially slowed down, or in some cases paused, charging for that device. Most often this will happen to prevent overheating. It indicates that the charge pad is charging at less-than-full speed. There is no need to do anything, the device is still charging and will eventually either (A) return to normal speed, in which case the LED will begin blinking green again; or (B) complete charging in which case the LED will switch to solid green.

FOD = Foreign Object Detection.

The FOD Warning means the charge pad has detected a foreign object between the charge pad and the device. Check for loose screws, washers etc. that may have fallen into one of the pockets, these have the potential to interfere with the wireless charging and could trigger a FOD Warning. If you see a FOD Warning, check the pocket and remove the foreign object, then place the device back on the charge pad.

4.2 Charging using the Charging Case:

Connect the charging case power cord to a 120-volt outlet. Connect the male socket of the cord to the female socket located behind the case handle.

Place the Smart Monster™ gauges in the holders with the charging cap facing the surface of the charging pad.

LED

Charging Case

Charging Pad LED Status

BLUE
CHARGING

GREEN
CHARGED

NO LIGHT
CHECK OUTLET OR CONNECTION

Charging Case LED Status

FLASHING GREEN
DEVICE IS CHARGING

SOLID GREEN
DEVICE IS CHARGED

FLASHING FAST RED TO GREEN
DPL

FLASHING SLOW RED
FOD

5
GETTING STARTED

5.1 Smart Monster™ Devices

- Remove Smart Monster™ from charging case (if purchased)

- Connect the Smart Monster™ to any compatible pressure source. The device is rated for a pressure range of -15 to 300 PSI and comes equipped with a ¼" female quick connect fitting and a ¼" male NPT fitting.

- The Smart Monster™ Pressure Transducer connects to your smartphone or tablet by utilizing the Smart Monster™ mobile app and your device's 2.4 GHz radio signal. Be sure to have your Bluetooth® turned on your smartphone or tablet.

- The Smart Monster™ automatically connects to your smartphone or tablet via a 2.4 GHz radio signal, reaching your mobile device's Bluetooth® receiver at a range of up to 300 feet line-of-sight.

① Charging Cap
② LED
③ Quick Connect Fitting

5.1.1 Smart Monster™ LED Status

Each Smart Monster™ features an LED to identify the state of the device.

FLASHING BLUE (EVERY 5 SECS)
NO CONNECTION

FLASHING GREEN (EVERY 5 SECS)
CONNECTION TO 1 OR MORE DEVICES

FLASHING PURPLE (EVERY 5 SECS)
ERROR STATE*

SOLID ORANGE
FIRMWARE UPGRADE MODE (DFU)

FLASHING ORANGE
LOW BATTERY INTERWEAVE**

EVENT NOTIFICATIONS ARE ACKNOWLEDGED AS FOLLOWS:

TRIPLE FLASHING GREEN
POWER UP

TRIPLE FLASHING BLUE
BLE CONNECT

TRIPLE FLASHING BLUE, RED, BLUE
BLE DISCONNECT

TRIPLE FLASHING PURPLE
ENTER ERROR STATE

TRIPLE FLASHING RED
POWER DOWN

*The error state normally indicates a hardware fault, if problems persist after recharge and reset please contact product support.

** Note: The LED pattern will alternate with an orange LED when the battery is low.
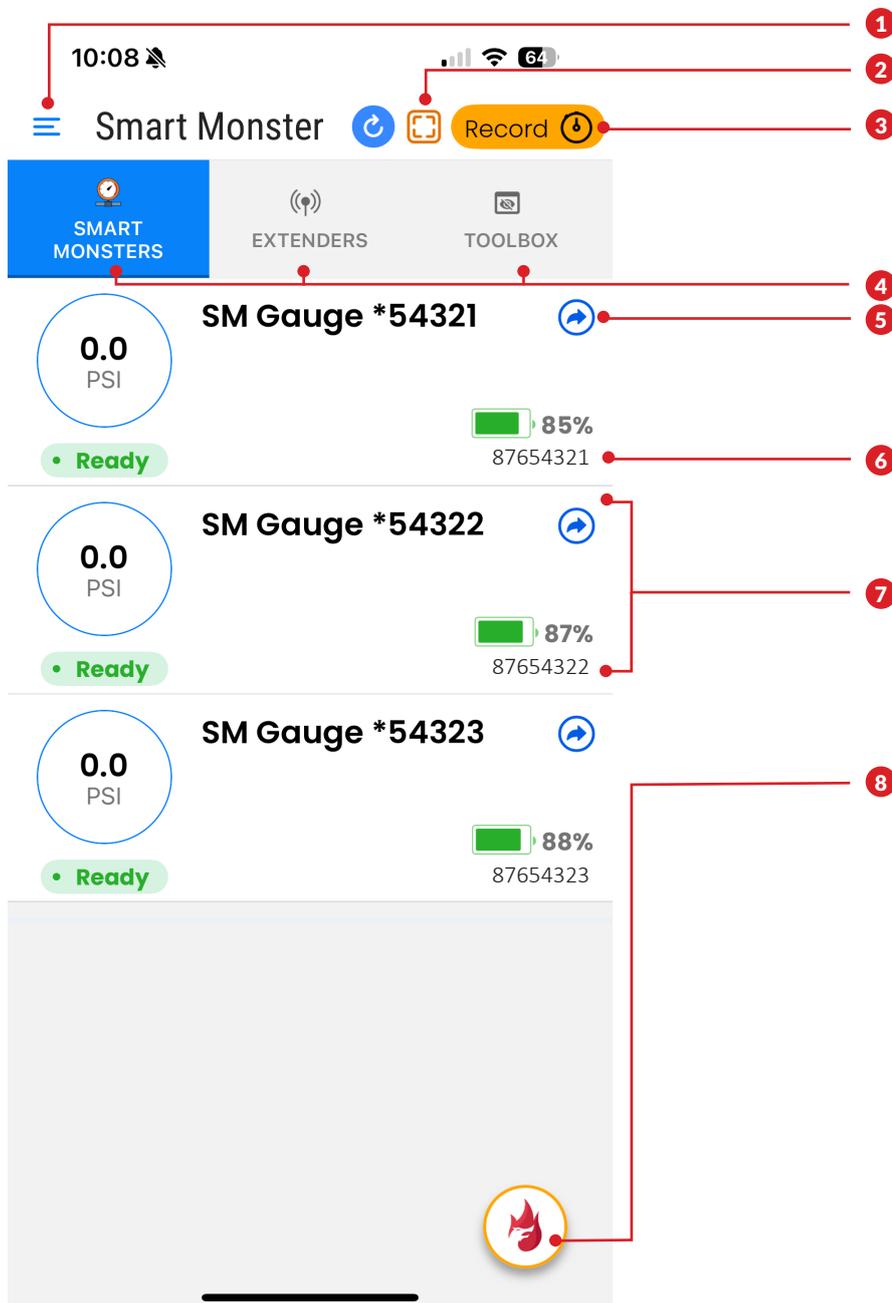
5.2 Smart Monster™ App

- Open the Smart Monster™ app
- The app will ask for permission to use:
  - ° Location (necessary for recording Geo location)
  - ° Wireless pairing function enabled (required for all connections)
- The app will then search and connect to any nearby Smart Monster™ gauges
- When connected, the indicator light will appear.

The app provides real-time visual feedback regarding the status of the **digital wireless** connection.
- **Ready (Green):** Confirms a stable connection is established and live pressure data is transmitting.
- **Initializing (Yellow):** Indicates the app has identified a nearby Smart Monster™ and is establishing a secure handshake
- **No Connection (No Display):** If a device does not appear in the app, it is either in **Deep Sleep**, the battery is discharged, or it is currently moved to the **Toolbox** tab.
  - **Action:** Verify if the device is listed under the **Toolbox** tab.
  - **Action:** If not in the Toolbox, **wake the unit** using the supplied magnet or by placing it on the **charging pad.**

5.2.1 App Screen Layout

FEATURES:

1. Access Fire Flow Testing Software
2. Screenshot
3. Start/Stop Record Data
4. Tab to switch between Smart Monster™ gauges, Range Extenders and Smart Monster™ gauges stored in toolbox
5. Send the Smart Monster™ to the toolbox
6. Serial #
7. To Navigate: Quick Tap the device to get the Device Options Screen. Long Press (press and hold) to get to the Advanced settings
8. Monster Menu

5.2.2 Renaming Devices

To rename a Smart Monster™:

- Tap on the relevant device
- Choose 'Advanced Settings'
- Tap 'Display Name'
- Enter new name
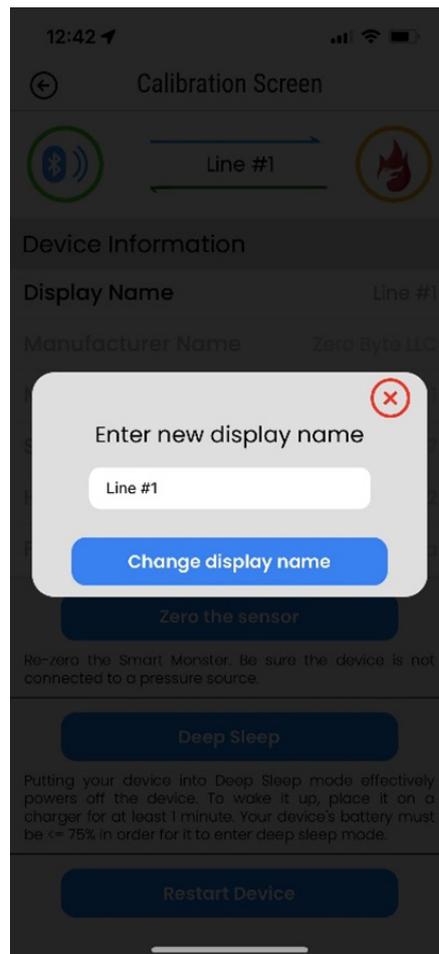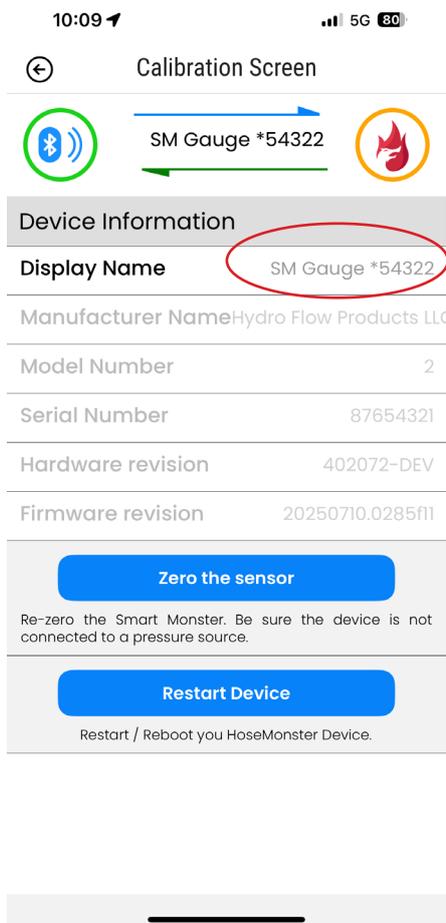
5.2.3 Selecting Flow Device

To select your flow device:
- Tap on the relevant device
- Follow options under 'Flow Rate' to select 'Device' and 'Device Option'

5.2.4 Long Range Connect™

Extend your wireless signal with Long Range Connect™ - Long Range Connect™ (LRC) feature overcomes the distance limitations of a standard 2.4 GHz signal by using the cloud to share data between mobile devices. This enables unlimited range, provided both mobile devices have a cellular or Wi-Fi connection.

To learn more about LRC, Sign-up through the app, or visit our website at: hosemonster.com/smart-monster/

5.2.5 Toolbox Storage

- Store unused Smart Monster™ gauges in the 'Toolbox' to clean up the screen
- Tap the 'arrows' to move between screens
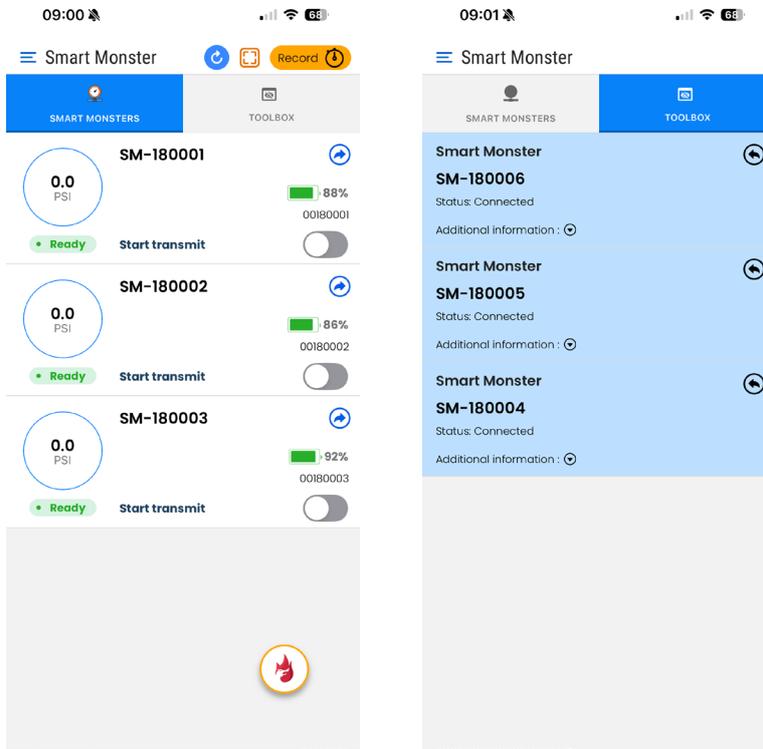
5.2.6 View Total Flow and Net Pressure

- Tap 'Monster Menu' button
- Select 'Show Live Σ (GPM)'

This will combine all Smart Monster™ gauges that have a flow device chosen (GPM) and will display GPM and Pitot PSI readings.

- Total Live Σ (GPM): This will combine all Smart Monster™ gauges that have a flow device chosen (GPM)
- Show net pressure: SM gauges marked as "supply" and "discharge" will be calculated for Net Pressure (Discharge - Supply = Net)
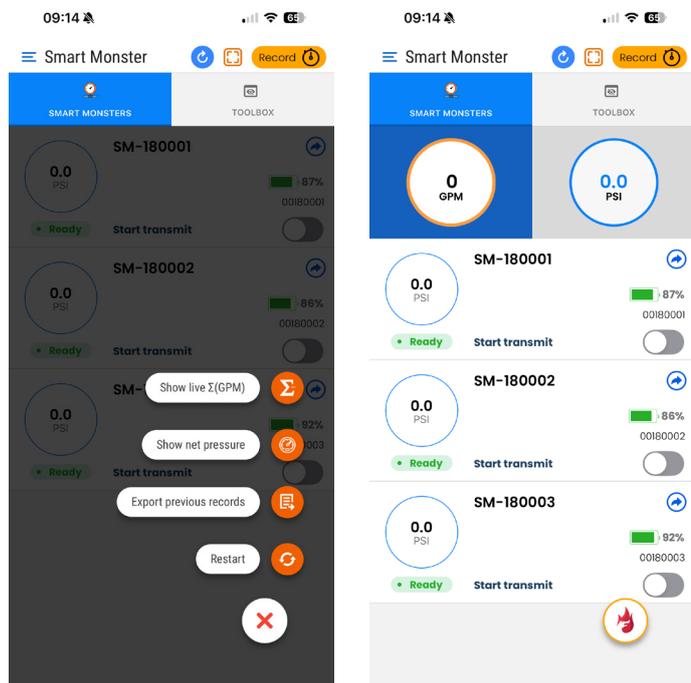
5.2.7 Capturing a Screenshot

- Store unused Smart Monster™ gauges in the 'Toolbox' to clean up the screen
- Tap the 'arrows' to move between screens
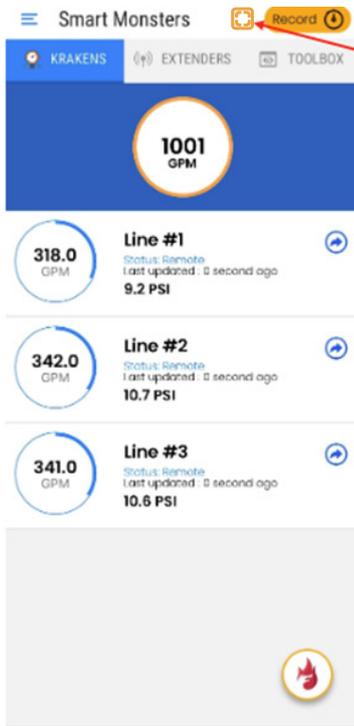
- First time will create a folder "HM APP" in your smartphone photo albums

- Tap to take a screenshot at each flow point
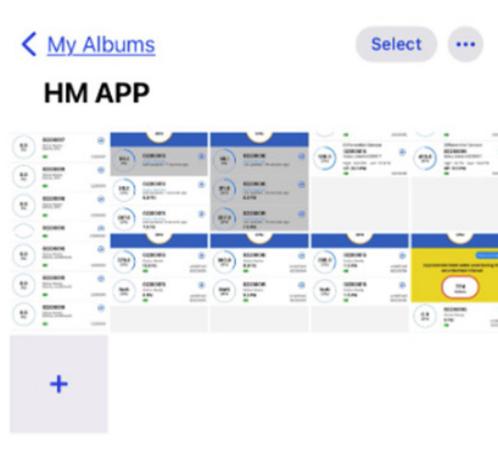
5.2.8 Record Data

- Tap the 'Record' button

This will record data from each Smart Monster™ and export an Excel file providing:

- Device setting
- Geo location
- Date and time (to seconds)
- Pitot Pressure in PSI
- Flow GPM

You can choose to export via email, text or other apps installed.

This feature will also display the approximate total water used during the test.
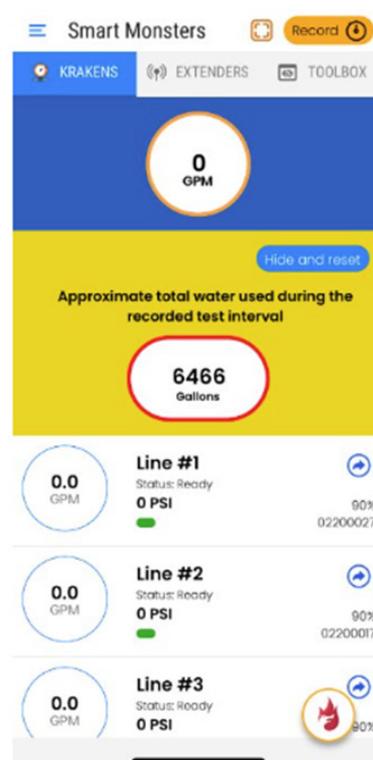
6 DEEP SLEEP MODE & REBOOTING DEVICE

To activate the magnetic switch, locate the notch on the light ring. Hold the magnet against the housing, aligning its left edge 1/4" directly below the notch.

Maintain this position for 5 seconds to trigger the switch. The deactivation of the LEDs serves as a visual confirmation that the switch has been successfully activated; however, please note that no visual indication is provided when the device is in deep sleep mode.

Once the magnet is removed, the product will automatically reboot and return to its default state.

Activation: The Smart Monster™ gauges will enter deep sleep mode after 72 hours of inactivity.

Symptoms: When in deep sleep, the unit will not appear in the Smart Monster™ app, and its LEDs will not flash.

How to wake the unit: There are two options -
1. **Charging Pad:** Place the unit on the charging pad. It should wake up within 1-2 minutes.
2. **Magnet:** Use the magnet as described in the current "Reboot" section
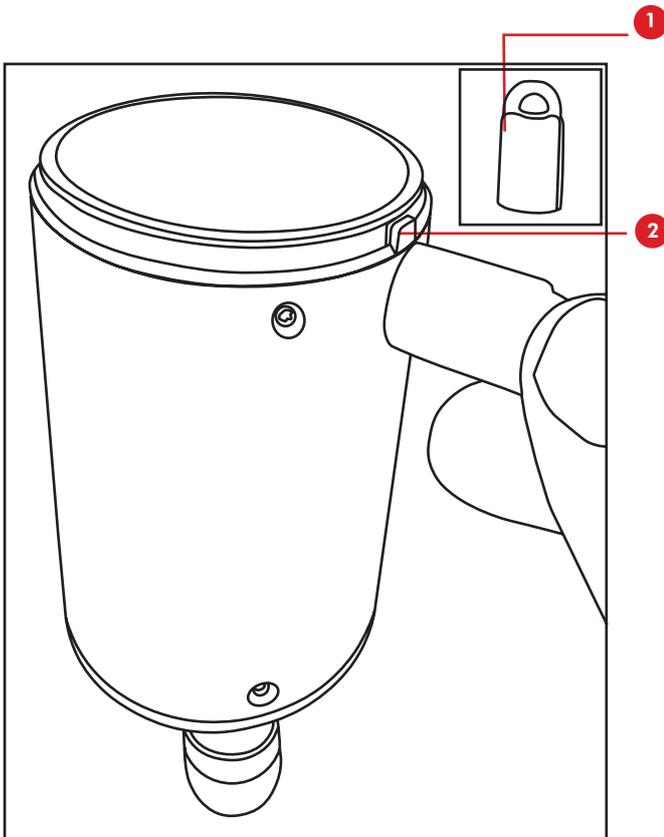
① Supplied Magnet
② Notch

7 STORING SMART MONSTER

Always store and transport in a case with foam padding to dampen any vibrations. Failure to do this could result in damage or the device being out of calibration.

Smart Monster™ gauges should be stored inside a clean, dry room with temperatures remaining between 35°F to 113°F (0°C to 45°C).

Avoid getting moisture in the charging or carrying case.

• Dry off all devices prior to charging, storing or transporting
• Store the devices in the charging case, or any foam padded gauge case.

CAUTION:
The testing location's utilities electrical signals may interfere with your mobile device's Bluetooth® reception.

DO NOT place Smart Monster™ gauges on electrical components (i.e. fire pump controller, motor etc.). Doing so will impact the radio signals of the device and cause damage to the internal components.

8 SMART MONSTER™ SPEC SHEET

Category	Specification
Wireless Protocol	2.4 GHz (Range up to 300' in ideal situations)
Operating Pressure	-15 to 300psi
Instrumentation	Full Compound Gauge (Vacuum Measurement capable)
Cloud Connectivity	Long Range Connect™ Compatible (unlimited distance via mobile data plans)
Moisture Protection	IP-X8 Waterproof Rating
Chassis Integrity	Watertight, Drop-Tested Ruggedized Housing
System Monitoring	Integrated LED Display Ring
Battery	Wireless Charging LiPo; 7+ days life; Auto-Sleep (after 72 hrs. of inactivity)
Switch Mechanism	Magnetic Reset Switch (Internal/Sealed)

9 FREQUENTLY ASKED QUESTIONS

For troubleshooting guidance, operational insights, and product-specific clarifications, refer to the FAQ section. It contains targeted answers to technical queries related to Smart Monster™ performance and usage.
https://hosemonster.com/resources/faq/

10 SUPPORT CONTACT

To comply with NFPA standards and best practice recommendations, Smart Monster™ gauges shall be calibrated at least annually.

Please contact our team at service@hosemonster.com for information regarding calibration services.

For help and support please visit our website www.hosemonster.com. You can also contact us directly via:

Phone: 888-202-9987
Email: service@hosemonster.com

11 FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in an installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution:
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference; and
2. This device must accept any interference received, including interference that may cause undesired operation.

FCC Radiation Exposure Statement
This product complies with the US portable RF exposure limit set forth for an uncontrolled environment and is safe for intended operation as described in this manual. Further RF exposure reduction can be achieved if the product is kept as far as possible from the user body or is set to a lower output power if such function is available.

12 ISED CANADA STATEMENT

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

1. This device may not cause interference; and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. *l'appareil ne doit pas produire de brouillage;*
2. *l'utilisateur de l'appareil doit accepter tout brouillage, même si celui-ci est susceptible d'en compromettre le fonctionnement.*

Radiation Exposure Statement
The product complies with the Canadian portable RF exposure limit set for an uncontrolled environment and is safe for the intended operation as described in this manual. The minimum separation distance for portable use is 15 mm, assuming the use of an antenna with 2 dBi of gain. Further RF exposure reduction can be achieved if the product is kept as far as possible from the user's body or if the device is set to a lower output power, if such a function is available.

Déclaration d'exposition aux radiations:
Le produit est conforme aux limites d'exposition pour les appareils portables RF établies par les États-Unis et le Canada pour un environnement non contrôlé. La distance de séparation minimale pour l'utilisation portative est de 15 mm, en supposant l'utilisation d'une antenne avec un gain de 2 dBi. Le produit est sûr pour un fonctionnement tel que décrit dans ce manuel. Une réduction supplémentaire de l'exposition RF peut être obtenue si le produit est maintenu aussi loin que possible du corps de l'utilisateur ou si le dispositif est réglé sur la puissance de sortie la plus faible, lorsque cette fonction est disponible.

13 INTENDED USE STATEMENT

Product Purpose & Formal Function

The **Smart Monster™** is a professional-grade, **digital wireless** pressure transducer designed to provide high-accuracy water pressure measurements for water-based fire protection systems.

The device is formally intended to:
- **Measure & Transmit:** Capture live static and residual water pressure and transmit that data via a **digital wireless** connection to the Smart Monster™ mobile application.
- **Automate Calculations:** Work in tandem with the Smart Monster™ App to automatically convert pressure readings into flow rates (GPM) when used with Hose Monster flow devices.
- **Streamline Compliance:** Synchronize live readings directly from the app into the **Hose Monster Fire Flow Testing Software** to generate automated, error-free compliance reports.
- **System Diagnostics:** Serve as a universal gauge for fire pump testing, hydrant flow testing, and the inspection of various water-based fire protection components.

Intended User

The Smart Monster™ is intended for use by **qualified fire protection professionals**, including:

- Fire sprinkler and fire pump contractors.
- Municipal water department inspectors.
- Fire Marshals and AHJ (Authority Having Jurisdiction) personnel.
- Facility managers responsible for Water Based Fire Protection compliance testing.

Intended Environment

The device is engineered for high durability in unpredictable field conditions where environments vary drastically from job site to job site. The intended environment of use includes:

- **Mechanical Environments:** Indoor fire pump rooms and riser rooms.
- **Outdoor/Municipal Sites:** Public roadways and hydrant locations during flow testing.
- **System Integration:** Directly attached to any Hose Monster flow device or standard 1/4" NPT pressure port on water-based fire protection hardware.
- **Ruggedized Use:** Built to withstand the wet, high-vibration, and high-velocity environments typical of water discharge testing.

14
SAFETY INSTRUCTIONS & HAZARDS

General Safety Information

The Smart Monster™ is a precision **digital wireless** pressure transducer. To ensure the safety of the operator and the integrity of the fire protection system, all users must follow the safety protocols outlined below. This device should only be operated by qualified personnel trained in industry fire and water codes or recognized engineering standards (Like NFPA), as well as local fire code requirements.

Comprehensive Hazards & Precautions

⚠ Warning — High pressure

1. High-Pressure Water Hazards

- **System Pressure:** Fire protection systems frequently operate at pressures exceeding 300 PSI. The Smart Monster™ must be securely and completely attached to the test port before the introduction of pressurized water.
- **Operating Limits:** Do not exceed the device's maximum rated capacity of 300 PSI. Subjecting the gauge to pressures beyond this limit may result in equipment failure, permanent loss of accuracy, or physical injury.
- **Water Hammer:** Open and close valves slowly to prevent pressure surges that could damage the system or cause the gauge to fail catastrophically.

2. Environmental & Operational Hazards

- **Trip & Slip Hazards:** Testing environments (pump rooms, roadways) will become wet. Maintain a clear workspace and wear appropriate slip-resistant footwear.
- **High-Vibration Environments:** When attached to fire pumps or high-velocity nozzles, ensure the device is not subjected to extreme mechanical impact.
- **Traffic Safety:** When performing hydrant testing in public roadways, ensure proper traffic control (cones, vests, or barriers) is in place according to local municipality regulations.

3. Battery & Electrical Safety (LiPo 500 mAh)

- **Battery Specification:** The Smart Monster™ contains an internal **500 mAh Lithium-Polymer (LiPo) battery.** Use only approved wireless charging accessories provided with the system.
- **Charging Safety:** Ensure the Smart Monster™ is fully dry before placing it on a charging pad.
- **Disposal:** Dispose of used batteries according to local environmental laws.

4. Electromagnetic Interference (EMI) & Firmware Integrity

- **Avoid High**-Voltage Equipment: Do not place the Smart Monster™ directly on or near electrical components such as **fire pump controllers, motors, or variable frequency drives (VFDs).**
- **Firmware Damage:** Exposure to the electromagnetic fields generated by these components can impact **digital wireless** radio signals and may corrupt the device's internal firmware.
- **Service Requirement:** Firmware corruption caused by electromagnetic interference typically cannot be resolved in the field and may require the device to be returned to the manufacturer's office for service.

15
STEP BY STEP OPERATION PROCEDURE

IMPORTANT:

The Smart Monster™ is a measurement tool; it does not replace established industry safety and testing protocols. Always refer to Jurisdictional Fire Codes and standards, or local AHJ (Authority Having Jurisdiction) codes and guidelines for proper test procedures.

15.1 Pre-Test Inspection

- **Battery Check:** Open the Smart Monster™ App and verify that all gauges intended for use have sufficient battery life (typically 7+ days on a full charge).
- **Hardware Condition:** Ensure the 1/4" NPT or quick-connect fittings are clean and free of debris.
- **Site Safety:** Confirm that proper traffic control and water drainage measures are in place according to local regulations.

15.2 Establishing Connectivity

- **Wake Devices:** If a device has been inactive for more than 72 hours, it may be in Deep Sleep. Wake the unit by placing it on the charging pad or using the supplied magnet.
- **Wireless Pairing:** Ensure your mobile device's **digital wireless** (2.4 GHz) signal is active.
- **Verify Status:** Confirm the app shows a **Ready (Green)** status for each gauge. If a gauge is **Initializing (Yellow)**, wait for the secure handshake to complete before pressurized water is introduced.

15.3 Installation

- **Secure Attachment:** Thread the Smart Monster™ onto the test port or flow device. Ensure it is securely and completely attached while the system is unpressurized.
- **Device Configuration:** Within the app, tap the relevant device to select the specific Hose Monster flow device or nozzle being used to ensure accurate GPM calculations.

15.4 Performing the Test

- **Pressurization:** Open valves slowly to avoid water hammer. Monitor live pressure on the app, ensuring the system does not exceed the 300 PSI limit of the gauge.
- **Data Capture Options:**
  To ensure accurate documentation for compliance and reporting, users may utilize any of the following three methods to capture test data:

1. **Screen Capture:** Tap the **Screenshot** button within the app to save a high-resolution image of the current screen directly to a dedicated "HM APP" folder in your smartphone's photos application.
2. **Continuous Data Logging (Excel):** Tap the **Record** button to log continuous real-time data. This generates an exportable Excel spreadsheet containing pressure readings captured every second, along with GPS location and precise timestamps.
3. **Direct Software Integration:** Utilize the **Fire Flow Testing Software** feature to import live readings directly into a professional compliance report, eliminating manual entry and transcription errors.

15.5 Post-Test Storage

- **Depressurize:** Close valves slowly and bleed off remaining pressure before removing the Smart Monster™ from the test port.
- **Dry and Clean:** Thoroughly dry the device chassis and charging cap before storage to prevent moisture buildup in the case.
- **Inventory:** Check the app to ensure no devices are left in a disconnected state. Move unused gauges to the **Toolbox** tab to organize your workspace.
- **Transport:** Return the Smart Monster™ to its padded carrying case to protect the internal components and maintain calibration.

16 CONSUMABLE REPLACEMENT INSTRUCTIONS

Maintenance and Service Policy

The Smart Monster™ is a precision-engineered device with no user-serviceable internal components. To maintain the integrity of the system and ensure continued safety, the following policies apply:

- **Service Requirement:** The user must send the unit into Hose Monster for any and all maintenance, internal cleaning, or repair services.
- **Warranty Warning:** Opening the gauge housing or attempting unauthorized repairs will immediately void the manufacturer's warranty.
- **Internal Components:** This service requirement includes the replacement of the internal 500 mAh LiPo battery and any necessary hardware adjustments.
- **Factory Recalibration:** Because the device must be calibrated at least annually to meet NFPA standards, it is recommended to schedule battery health checks and general maintenance during your annual calibration window.

17 CLEANING INSTRUCTIONS

To maintain the visibility of the LED ring and the efficiency of the internal digital wireless charging system, the Smart Monster™ should be cleaned regularly after field use.

Approved Cleaning Methods

- **General Cleaning:** Use a clean, soft, lint-free cloth to wipe away water, mud, or debris from the gauge chassis after every test.
- **Debris Removal:** If dirt or grit is trapped in the 1/4" NPT threads or the quick-connect fitting, use a soft-bristled brush or compressed air to clear the area.
- **Dry Before Storage:** It is critical to thoroughly dry the entire device chassis—especially the charging cap area—before placing it back into a carrying case or onto a charging surface.
- **No Submersion for Cleaning:** While the device has an **IP-X8 waterproof rating**, do not submerge it in cleaning tanks or use high-pressure power washers directly on the LED ring or the area housing the internal charging coil.

Approved Cleaning Agents

- **Recommended:** Use only a mild soap and water solution applied to a damp cloth.
- **Prohibited Agents:** Do not use harsh industrial solvents, bleach, or abrasive scouring pads, as these may cloud the LED display ring or damage the housing.

18
DISPOSAL INSTRUCTIONS & ENVIRONMENTAL GUIDANCE

To protect the environment and comply with international regulations regarding electronic waste, the Smart Monster™ must be disposed of according to the following guidelines.

18.1 Battery Disposal

The Smart Monster™ contains an internal, non-user-replaceable 3.7V 500 mAh Lithium-Polymer (LiPo) battery.

- Do Not Trash: Under no circumstances should the device or its battery be disposed of in standard municipal waste or trash bins.
- Specialized Recycling: Lithium-Polymer batteries require specialized recycling to prevent environmental contamination and potential fire hazards.
- Authorized Collection: Use only authorized battery collection points or hazardous waste disposal facilities.

18.2 Waste Handling (E-Waste)

The Smart Monster™ consists of electronic circuitry and a metal chassis that are subject to e-waste regulations.

- Electronics Recycling: At the end of its service life, the device should be treated as professional electronic equipment.
- Local Authorities: Refer to your local municipal or state authority for specific guidelines on the recycling of industrial electronic devices.
- Return to Manufacturer: Hose Monster encourages environmental responsibility; users may contact us to discuss returning sunsetted or end-of-life units for proper factory-managed recycling.

18.3 Environmental Responsibility

- Continuous Improvement: As part of our policy for continuous improvement and environmental stewardship, we strive to ensure our products are designed with durability and responsible end-of-life handling in mind.
- Hazardous Substances: The Smart Monster™ is designed to meet standard environmental requirements to minimize the use of hazardous substances in its construction.

19 MALFUNCTION INSTRUCTIONS

In the event of a device failure, erratic pressure readings, or connectivity loss, the operator must immediately cease testing and follow this diagnostic checklist.

19.1 Immediate Actions

- Safe System State: If a malfunction occurs during a live test, slowly close all valves to depressurize the fire protection system before inspecting the gauge.
- Verify Physical Integrity: Inspect the Smart Monster™ chassis for signs of impact or damage. If the 300 PSI limit was exceeded, the device must be removed from service for Pressure Transducer Replacement.
- Isolate Interference: Ensure the gauge is not resting on or near high-voltage electrical components (e.g., fire pump controllers), which may cause firmware corruption or signal loss.

19.2 Troubleshooting Checklist

Symptom	Recommended Action
App Cannot Find Device	Check the Toolbox tab for a disconnected device. If not found, wake the unit using the supplied magnet or place it on the charging pad.
Flashing Purple LED	This indicates an Error State or hardware fault. Attempt to reboot using the magnet. If the state persists after a full recharge, the unit requires factory service.
Static or Frozen Reading	Verify the digital wireless connection status (LED should flash Green every 5 seconds). Restart the Smart Monster™ App and re-zero the sensor if the device is unpressurized.
No Status LED	The battery may be fully discharged or the unit is in Deep Sleep. Charge the device for 4–8 hours.

19.3 Factory Service Protocol

If the steps above do not resolve the malfunction, the device must be returned to Hose Monster for professional evaluation.

- Authorized Service Only: Do not attempt to open the gauge housing. Unauthorized disassembly voids the warranty and compromises the waterproof seal.
- Contact Support: Reach out to service@hosemonster.com or call (888) 202-9987 to obtain a Return Merchandise Authorization (RMA).

20
STATEMENT ABOUT IMPROPER USE

The **Smart Monster™** is a precision diagnostic instrument. Improper use of the device can lead to equipment failure, compromised data integrity, and significant safety risks to the operator and the facility.

Prohibited Uses and Actions

To ensure the safety of personnel and the longevity of the device, the following actions are strictly prohibited:

- **Exceeding Pressure Limits:** Do not subject the device to pressures exceeding its maximum rated capacity of **300 PSI**. Doing so may result in catastrophic equipment failure or permanent loss of accuracy.
- **Unauthorized Disassembly:** Never attempt to open the gauge housing or perform internal repairs. The device contains no user-serviceable parts; opening the unit will void the warranty and compromise the **IP-X8 waterproof seal.**
- **Improper Placement (EMI):** Do not place the Smart Monster™ directly on high-voltage electrical components, such as fire pump controllers, motors, or variable frequency drives. Exposure to strong electromagnetic fields can damage internal components and corrupt the device firmware.
- **Unsafe Installation:** Never attempt to attach or remove the gauge while the system port is under pressure. Always ensure a secure, leak-free connection is established before introducing water flow.
- **Ignoring Calibration:** Using the device beyond its **annual calibration** interval constitutes improper use. Out-of-calibration gauges may provide inaccurate readings, leading to incorrect assessments of life-safety systems.
- **Environmental Misuse:** While the device is ruggedized and waterproof, it should not be stored in environments outside the approved temperature range. Prolonged exposure to extreme heat or cold may cause stress to internal components.
- **Inappropriate Charging:** Only use the approved wireless charging accessories provided by Hose Monster. Using third-party charging pads may damage the **500 mAh LiPo battery** or internal charging coil.

Consequences of Improper Use

Failure to adhere to the guidelines provided in this manual may lead to:

1. **Safety Hazards:** Serious physical injury resulting from pressurized component failure.
2. **Loss of Data Integrity:** Corrupted test results that fail to meet industry fire and water codes or recognized engineering standards.
3. **Warranty Voidance:** Forfeiture of all express or implied warranties provided by Hydro Flow Products, LLC.
4. **Hardware Damage:** Permanent firmware or mechanical failure requiring costly factory-level service.

21
PREVENTIVE MAINTENANCE AND SERVICE RECOMMENDATIONS

Preventive maintenance is essential for ensuring that high-accuracy digital instrumentation meets the rigorous demands of field testing. Adherence to this schedule ensures compliance with **applicable fire protection codes and industry standards.**

21.1 Daily/Pre-Test Maintenance

- **Visual Inspection:** Check the gauge chassis for cracks and ensure the **IP-X8** waterproof seal is intact.
- **Connection Port Cleaning:** Inspect the 1/4" NPT and quick-connect fittings for debris or mineral buildup that could cause leaks.
- **Battery Verification:** Confirm the device has a sufficient charge (typically 7+ days of life) via the Smart Monster™ App.
- **Deep Sleep Wake:** If the unit has been inactive for over 72 hours, use the magnet or charging pad to wake it before arriving at the job site.

21.2 Post-Test Maintenance

- **Moisture Removal:** Thoroughly dry the entire device with a soft cloth to prevent corrosion and ensure efficient digital wireless charging.
- **Debris Clearing:** Clear any grit from the threads or internal wireless charging cap area.
- **Storage Check:** Verify the device is not stored near high-voltage motors or fire pump controllers to avoid electromagnetic interference and potential firmware corruption.

21.3 Scheduled Factory Service

- **Annual Calibration (Mandatory):** To maintain the accuracy required for compliance, the Smart Monster™ must be sent to the office for professional calibration at least every 12 months to comply with codes and standards.
- **Automated Firmware Updates:** The Smart Monster™ App automatically monitors the device status and will notify the user with an on-screen prompt whenever a firmware update is available. Ensure these updates are installed to maintain the latest safety and performance optimizations.

HOSE MONSTER

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