



SmartFOAM

Electronic Foam Proportioning Systems

Models:

Class A only – 1.7AHP, 2.1A

Class A/B – 3.3, 5.0, 6.5

FOAM CALIBRATION QUICKSTART

FSG-MNL-00175

HALE PRODUCTS, INC / CLASS 1
607 NW 27th Avenue • Ocala, FL 34475
U.S.A. Telephone: 352-629-5020
FAX: 800-533-3569

GODIVA LTD.
Charles Street • Warwick, England CV34 5LR
Phone: 44-1-926-623600



APPARATUS INFORMATION

Hale SmartFOAM System Serial Number

In Service Date

Fire Department

Engine Number

Calibration Factors:

Water Flow – high calibration point Water flow Pulses

Water Flow – low calibration point Water flow Pulses

Class A Foam Factor



NOTICE!

Hale Products does not assume responsibility for product failure resulting from improper maintenance or operation. Hale Products is responsible only to the limits stated in the product warranty. Product specifications contained in this manual are subject to change without notice.

All Hale products are quality components -- ruggedly designed, accurately machined, precision inspected, carefully assembled and thoroughly tested. In order to maintain the high quality of your unit, and to keep it in a ready condition, it is important to follow the instructions on care and operation. Proper use and good preventive maintenance will lengthen the life of your unit.

REVISION RECORD

REV	Date	Page	Description
A	APR2017	All	New Issue

NOTES



SAFETY



IMPORTANT!

THE HALE SMARTFOAM MODELS 2.1A AND 1.7AHP CLASS “A” ELECTRONIC FOAM PROPORTIONING SYSTEMS ARE DESIGNED FOR OPTIMUM SAFETY OF ITS OPERATORS AND TO PROVIDE RELIABLE AND SAFE FOAM CONCENTRATE INJECTION. FOR ADDED PROTECTION AND BEFORE ATTEMPTING INSTALLATION OR OPERATION PLEASE FOLLOW THE SAFETY GUIDELINES LISTED IN THIS SECTION AND ADHERE TO ALL WARNING, DANGER, CAUTION AND IMPORTANT NOTES FOUND WITHIN THIS GUIDE.

THIS SECTION ON SAFETY MUST BE CAREFULLY READ, UNDERSTOOD AND ADHERED TO STRICTLY BY ALL INSTALLERS AND OPERATORS BEFORE ATTEMPTING TO INSTALL OR OPERATE THE SMARTFOAM PROPORTIONING SYSTEM.

INCORPORATE THE WARNINGS AND CAUTIONS AS WRITTEN WHEN DEVELOPING DEPARTMENTAL APPARATUS OPERATING PROCEDURES.

SmartFOAM is a trademark of Hale Products, Incorporated. All other brand and product names are the trademarks of their respective holders.

GUIDELINES

READ ALL INSTRUCTIONS THOROUGHLY BEFORE BEGINNING ANY INSTALLATION OR OPERATION PROCESS.

- ❑ Installation should be performed by a trained and qualified installer, or your authorized Hale Products service representative.
- ❑ Be sure the installer has sufficient knowledge, experience and the proper tools before attempting any installation.
- ❑ Make sure proper personal protective equipment is used when operating or servicing apparatus.
- ❑ A foam tank low level sensor must be utilized to protect the Hale Foam proportioner from dry running. *Failure to use a low level sensor with the Hale Foam system voids warranty.*
- ❑ DO NOT permanently remove or alter any guard or insulating devices, or attempt to operate the system when these guards are removed.
- ❑ Make sure all access/service panels and covers are installed, closed and latched tight, where applicable.
- ❑ DO NOT remove or alter any hydraulic or pneumatic connections, electrical devices, etc. DO NOT tamper with or disconnect safety features or modify protective guards (such as covers or doors). DO NOT add or remove structural parts. *Doing so voids the warranty.*

Any of the above could affect system capacity and/or safe operation of the system and is a serious safety violation which could cause personal injury, could weaken the construction of the system or could affect safe operation of the SmartFOAM Proportioning System.

**WARNING!**

NO MODIFICATIONS OR ADDITIONS MAY BE MADE TO THE SMARTFOAM PORPORTIONING SYSTEM WITHOUT PRIOR WRITTEN PERMISSION FROM:

HALE PRODUCTS, INC
 607 NW 27th Avenue
 Ocala, Florida 34475 USA
 Telephone: 352-629-5020
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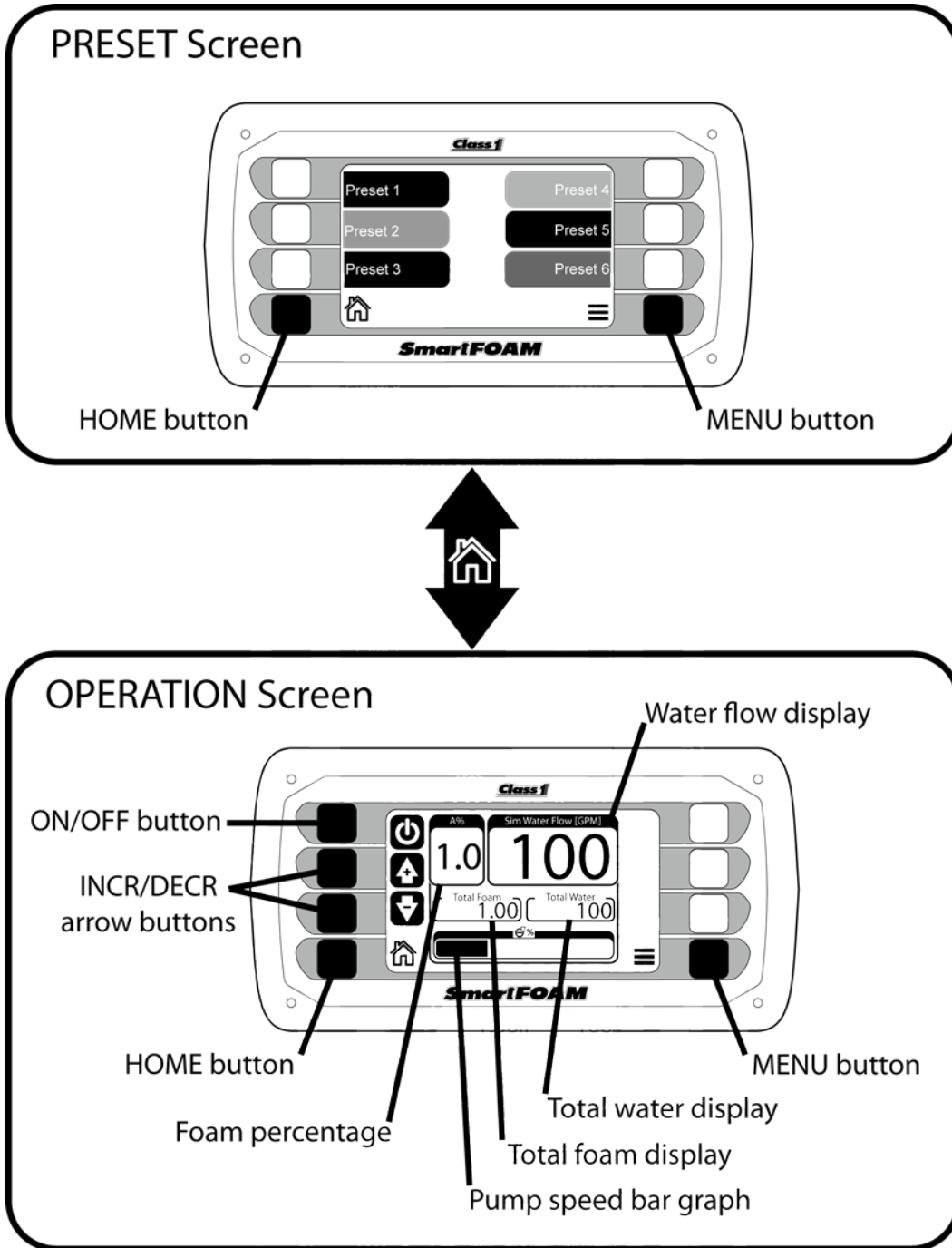
- All electrical systems have the potential to cause sparks during service. Take care to eliminate explosive or hazardous environments during service and/or repair.
- To prevent electrical shock always disconnect the primary power source before attempting to service any part of the Hale Foam system.
- To prevent system damage or electrical shock the main power supply wire is the last connection made to the Hale Foam motor controller.
- Release all pressure then drain all concentrate and water from the system before servicing any of its component parts.
- Do not operate system at pressures higher than the maximum rated pressure.
- Use only pipe, hose, and fittings from the foam pump outlet to the injector fitting, which are rated at or above the maximum pressure rating at which the water pump system operates.
- Hale Foam proportioning systems are designed for use on negative ground direct current electrical systems only.
- Do not mount radio transmitter or transmitter cables in direct or close contact with the SmartFOAM control unit.
- Before connecting the cord sets and wiring harnesses, inspect the seal washer in the female connector. If the seal washer is missing or damaged, water can enter the connector causing corrosion of the pins and terminals. This could result in possible system failure.
- Always disconnect the power cable, ground straps, electrical wires and control cables from the control unit or other Hale Foam system equipment before electric arc welding at any point on the apparatus Failure to do so could result in a power surge through the unit that could cause irreparable damage.
- DO NOT connect the main power lead to small leads that are supplying some other device, such as a light bar or siren.
- When operating the Hale SmartFOAM in Simulated Flow mode, an outlet for the foam concentrate must be provided to prevent excessive pressure build up in the discharge piping or hoses.
- Make sure the foam tank and foam concentrate suction hoses are clean before making final connection to foam pump. If necessary, flush tank and hoses prior to making connection.
- Check all hoses for weak or worn conditions after each use. Ensure that all connections and fittings are tight and secure.
- Ensure that the electrical source of power for the unit is a negative (-) ground DC system, of correct input voltage, with a reserve minimum current available to drive the system.
- The in-line strainer/valve assembly is a low pressure device and WILL NOT withstand flushing water pressure in excess of 45 PSI (3 BAR).
- When determining the location of Hale Foam system components keep in mind piping runs, cable routing and other interferences that could hinder or interfere with proper system performance.
- Always position the check valve/injector fitting at a horizontal or higher angle to allow water to drain away from the fitting. This avoids the possibility of sediment deposits or the formation of an ice plug.

- ❑ The cord sets provided with each Hale Foam system are indexed to ensure correct receptacle installation (they insert one way only). When making cord set connections DO NOT force mismatched connections as damage can result in improper system operation.
- ❑ Make sure all connections are sound, and that each connection is correct.
- ❑ The cables shipped with each Hale Foam system are 100% tested at the factory with that unit. Improper handling and forcing connections can damage these cables which could result in other system damage.
- ❑ There are no user serviceable parts inside Hale Foam system electrical/electronic components. *Opening of the motor controller or controller unit voids the warranty.*
- ❑ Use mounting hardware that is compatible with all foam concentrates to be used in the system. Use washers, lock washers and cap screws made of brass or 300 series stainless steel.
- ❑ When making wire splice connections, make sure they are properly insulated and sealed using an adhesive filled heat shrink tubing.
- ❑ ALWAYS connect the primary positive power lead from the terminal block to the master switch terminal or the positive battery terminal.
- ❑ Use a minimum 8 AWG type SGX (SAE J1127) chemical resistant battery cable and protect with wire loom.
- ❑ Prevent corrosion of power and ground connections by sealing these connections with silicone sealant provided.
- ❑ Prevent possible short circuit by using the rubber boot provided to insulate the primary power connection at the Hale SmartFOAM motor controller.

The preset and operation screens:



The SmartFOAM controller will show the PRESET screen after a power cycle. This allows the user to select a preset with which to start operation. Pressing a preset button will automatically change the view to the OPERATION screen. The OPERATION screen shows the operational information for the foam system including the buttons and indicators used to control the system.

Press the HOME button to toggle between the OPERATION and PRESET screens.



To place the system in simulated flow mode:

1. Press the MENU button.
2. In the menu select the “simulated water flow” button.
3. In the simulated water flow screen press the ON/OFF button to toggle simulated water flow. The icon indicates the current state.

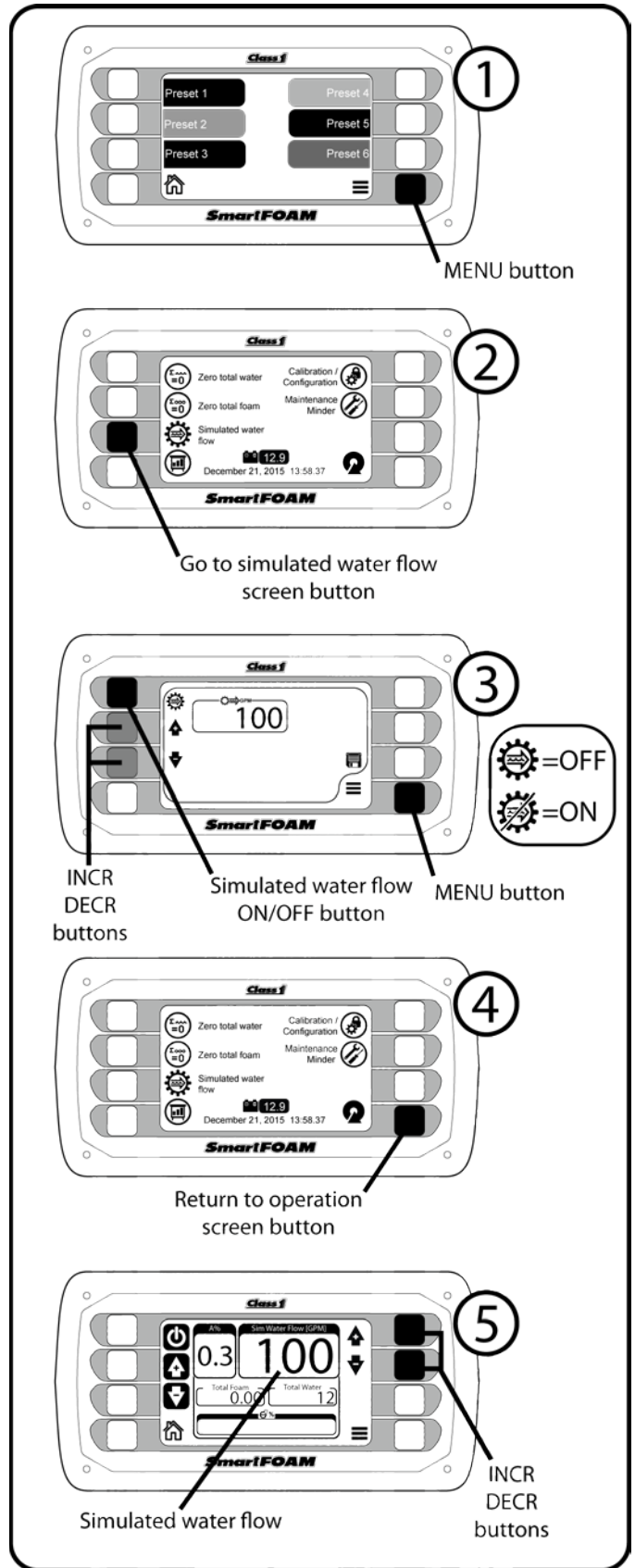
	Simulated flow is currently OFF
	Simulated flow is currently ON

Set the simulated flow to desired rate by using the INCR/DECR buttons.

Press the MENU button to return to the menu.

4. Press the RETURN button to return to the operation screen.
5. The operation page shows the simulated water flow in orange.

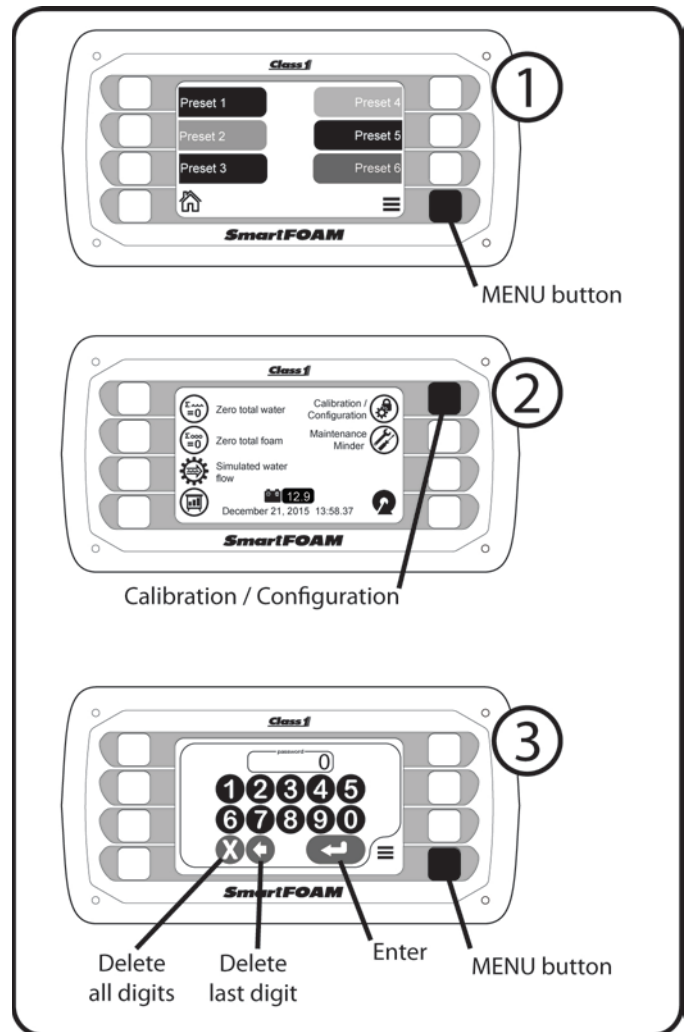
Modify the simulated flow rate by using the orange INCR/DECR buttons on the right side of the display.



Foam calibration:

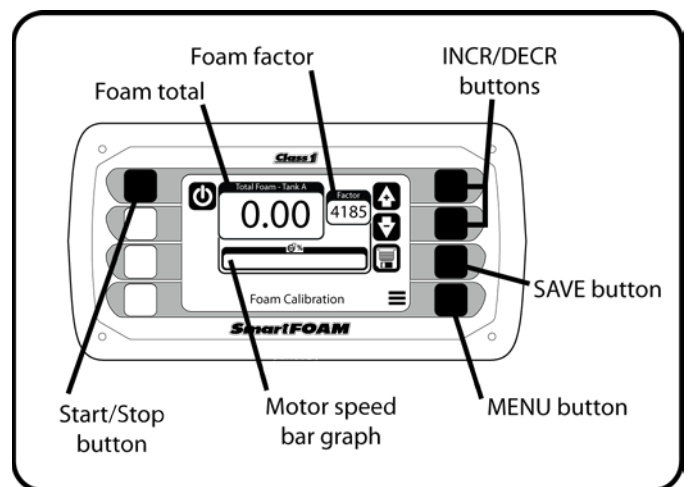
Enter the foam calibration screen

1. Press the MENU button to go to the system menu.
2. Press the Calibration/Configuration button on the system menu screen.
3. Use the touch screen keypad to enter the password **1560**.
 - a. Press the “Enter” touch screen button to submit the password.
 - b. Press the “Delete last digit” touch screen button to erase the last digit entered.
 - c. Press the “Delete all digits” touch screen button to erase all of the digits entered.



Calibrate the foam

1. Place a graduated measure container at the outlet of the bypass hose capable of containing the expected volume of foam concentrate.
2. Start the Hale SmartFOAM foam pump by pressing the Start/Stop button.
3. Watch the level of foam in the graduated measure container and stop the foam pump when at the desired level by pressing the Start/Stop button again.
4. Adjust the reading in the foam total display to match the actual volume by using the INCR and DECR arrow buttons.
5. Press the SAVE button.
6. Repeat the procedure to verify that the setting is correct.
7. Press the MENU button to exit the foam calibration screen.



EXPRESS WARRANTY

EXPRESS WARRANTY: Hale Products, Inc (“Hale”) hereby warrants to the original buyer that products manufactured by it are free of defects in material and workmanship for one (1) year. The “Warranty Period” commences on the date the original buyer takes delivery of the product from the manufacturer.

LIMITATIONS: HALE’S obligation is expressly conditioned on the Product being:

- Subjected to normal use and service.
- Properly maintained in accordance with HALE’S Instruction Manual as to recommended services and procedures.
- Not damaged due to abuse, misuse, negligence or accidental causes.
- Not altered, modified, serviced (non-routine) or repaired other than by a Hale approved service facility.
- Manufactured per design and specifications submitted by the original Buyer.

THE ABOVE EXPRESS LIMITED WARRANTY IS EXCLUSIVE. NO OTHER EXPRESS WARRANTIES ARE MADE. SPECIFICALLY EXCLUDED ARE ANY IMPLIED WARRANTIES INCLUDED, WITHOUT LIMITATIONS, THE IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE OR USE; QUALITY; COURSE OF DEALING; USAGE OF TRADE; OR PATENT INFRINGEMENT FOR A PRODUCT MANUFACTURED TO ORIGINAL BUYER’S DESIGN AND SPECIFICATIONS.

EXCLUSIVE REMEDIES: If the Buyer promptly notifies HALE upon discovery of any such defect (within the Warranty Period), the following terms shall apply:

- Any notice to HALE must be in writing, identifying the Product (or component) claimed defective and circumstances surrounding its failure.
- HALE reserves the right to physically inspect the Product and require Buyer to return same to HALE’s plant or other authorized service provider.
- In such event, Buyer must notify HALE for a Returned Goods Authorization (“RGA”) number and Buyer must return the Product F.O.B. to HALE.
- If determined defective, HALE shall, at its option, repair or replace the Product, or refund the purchase price (less allowance for depreciation).
- Absent proper notice within the warranty Period, HALE shall have no further liability or obligation to Buyer therefore.

THE REMEDIES PROVIDED ARE THE SOLE AND EXCLUSIVE REMEDIES AVAILABLE. IN NO EVENT SHALL HALE BE LIABLE FOR INCIDENTAL OR COSEQUENTIAL DAMAGE(S) INCLUDING, WITHOUT LIMITATIONS, LOSS OF LIFE; PERSONAL INJURY; DAMAGE TO REAL OR PERSONAL PROPERTY DUE TO WATER OR FIRE; TRADE OR OTHER COMMERCIAL LOSSES ARISING, DIRECTLY OR INDIRECTLY, OUT OF PRODUCT FAILURE.