HYDRO
a DOVER company

quick start guide
Total Eclipse Controller

Safety Precautions

WARNING! Please read precautions thoroughly before operation. Meet all applicable local codes and regulations.

THANK YOU FOR YOUR INTEREST IN OUR PRODUCTS
Please use this equipment carefully and observe all warnings and cautions.

WEAR	protective clothing and eyewear when dispensing chemicals or other materials or when working in the vicinity of all chemicals, filling or emptying equipment, or changing metering tips.
ALWAYS	observe safety and handling instructions of the chemical manufacturer. direct discharge away from you or other persons or into approved containers. dispense cleaners and chemicals in accordance with manufacturer's instructions. Exercise CAUTION when maintaining your equipment. reassemble equipment according to instruction procedures. Be sure all components are firmly screwed or latched into position.
KEEP	equipment clean to maintain proper operation.

introduction

Overview

The Total Eclipse Chemical Management System uses technological advances to create an innovative system that adapts to the electronic and language needs of global clients. The easy-to-read, seven-line screen displays plain-text formula names, customized by language and customer. Formulas and controller setups can be programmed at the controller or with the Formula Editor computer software and uploaded via a USB flash drive (16 GB or smaller) to each controller. Reports on product usage, costs per formula, system settings, and diagnostics are easily downloaded to the USB flash drive and viewed or imported into various financial software.

Designed for maximum versatility in OPL or large laundry wash machines, selectable operating logic allows operation with trigger signals from fully-programmable washers or with manually triggered signals (or cycle time extenders) from non-programmable, fixed-time washer. The Total Eclipse Controller is compatible with any Hydro Laundry dispenser.

System Components

Total Eclipse Controller, Gray (HYD01-08900-11)

1) Total Eclipse Controller

2) Wall Mounting Bracket Kit (not shown)

The actual components delivered will depend on the configuration of the system ordered. The Total Eclipse Controller is an integral part of the Total Eclipse Chemical Management System, which also includes these components:

- Machine Interface (MI) – Accepts washer signals and converts them to safe, low-voltage inputs.
- Product Dispenser – Provides product transfer to the wash machine.
- Flush Manifold (optional) – Available for water flush chemical transfer applications.

Total Eclipse Controller

introduction (continued)

Support File Downloads

1) **Formula Editor Software:** Go the our website www.hydrosystemsco.com, move the cursor over the Support tab and then click on Downloads. On the Downloads page, click on the text “Total Eclipse Formula Editor Software” and select the appropriate software version for the operating system of your computer. (**Minimum requirements:** Windows XP or newer, Mac OS 10.4 or newer, Java JRE 1.5 or newer (100 MB disc space), 1024 x 768 screen resolution, 128 MB RAM, 10MB disc space, USB drive (16 GB or smaller recommended, USB 2.0 or newer) for file transfers to Total Eclipse controllers.)

2) **Total Eclipse Reference Manual:** Go the our website www.hydrosystemsco.com, move the cursor over the Support tab and then click on Manuals. On the Manuals page, click on the text “Total Eclipse” and then click on the link to the Total Eclipse Manual.

Instructions

Use this Quick Start Guide if you are already familiar with installing and using dispensing systems. Please refer to the Total Eclipse Reference Manual for detailed instructions, including information on the optional Relay, Event, Occurrence and Group Operating Modes. Refer also to the Installation and Operations manual that is included with your product dispenser or upgrade kit for additional instructions.

IMPORTANT NOTE: Quick Start instructions assume that Formula/Setup files will be loaded via a USB flash drive, which may override the following factory default settings:

Standard Operation	Eclipse Flush PI	Flush Time = 10 sec	Cycle Time = 00 min.(Off)
Signal Filter Time = 2 sec	User Prime = Disabled	Units of Measure = SAE	

Since passwords are not transferred, it is recommended that the factory default passwords be changed via the controller’s keypad (and noted) to prevent unauthorized access. To change formulas, settings or passwords using controller keys, or to add a machine or company name, see the Guide to Keypad and Menus (p. 5) and Initial Setup on Installer Menus (p. 6).

controller specifications

Category	Specification
Size	5.2” W x 4.50” H x 2.5” D (13.2 cm W x 11.4 cm H x 6.4 cm D)
Weight	0.65 lb. (0.30 kg)
Power Rating	SELV. Power source is dispenser.
System Capacity	99.99 oz. (2999 ml.) 8 product (with 3 amount settings per product) maximum
Data Input Field	15 characters maximum: (letters A-Z, numbers 0-9, hyphen [-], underscore [_] ans space [ ]
Environmental Specifications	
IP, Pollution, Installation	IP Rating : 44 Pollution Category: 2 Installation Category: II
Operating Temperature	10° to 49° C (50° to 120° F) maximum
Operating Humidity	95% relative humidity, maximum
Operating Altitude	Install at or below 6.500 ft. (2000 M) maximum
Indoor Installation	Approved for indoor use only. Must not be installed outdoors.

Specifications subject to change without notice.

NOTE! As the traditional product dispensers have been pumps, some standard terms like “Count Pump” and “Pump Interface” (PI) are used in this document, even though you may be using an eductor dispenser (such as EvoClean).

installation

WARNING! The Total Eclipse controller is intended to be installed by a qualified technician only, in accordance with all applicable electrical and plumbing codes. **DISCONNECT POWER** to the laundry machine and dispenser during installation and/or any time the dispenser cabinet is opened.

WARNING! Keep the Machine Interface and the communication cables away from high voltage wires and relays. NEVER run the J1 and J2 cables parallel with high voltage lines.

NOTE: This manual describes only the installation and programming of the Total Eclipse Controller, which is a portion of the Total Eclipse Chemical Management System. Please refer to the reference manual included with your dispenser or upgrade kit for additional instructions. Electrical wiring connections for supply triggers are to be done inside the supply junction box.

NOTE: The maximum distance for the J1 cable from the product dispenser to the controller is 75 feet. “J” cables are available in 15 and 30 foot lengths. A coupler is available to join cables together for longer distances under 75 feet. “J” cable runs longer than 75 feet require the use of break out boxes and hard wiring. Contact Hydro Systems Co. for details.

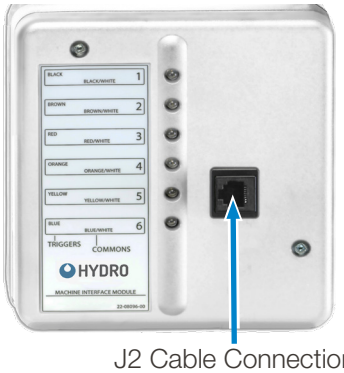
WARNING! Always verify all voltage sources with a voltage meter. **DISCONNECT POWER** to the laundry machine and dispenser during installation and/or any time the dispenser cabinet is opened.

Machine Interface Installation

1) Route Machine Interface signal wires through 1/2 inch knock-out on washer (within the wiring area). Use lock nut on the MI 1/2 inch nipple to secure the Machine Interface to washer.

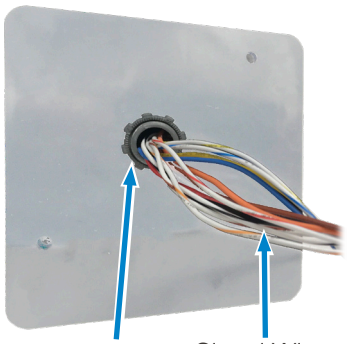
Machine Interface

Front



J2 Cable Connection

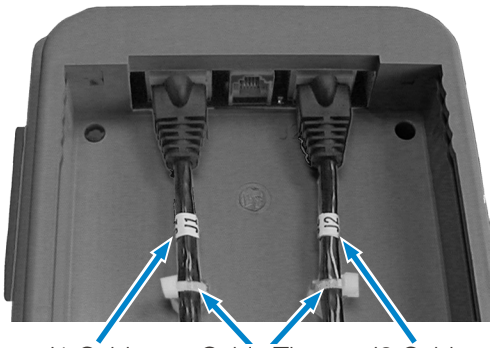
Rear



MI Lock Nut Signal Wires

Total Eclipse Controller

Rear



J1 Cable Cable Ties J2 Cable

2) Connect cable marked J2 into Machine Interface. Bundle excess J2 cable outside washer and connect other end to the connector labeled J2 on the rear of the Controller.

3) Connect cable marked J1 from the dispense module to the connector labeled J1 on the Controller.

4) For added cable strain relief, secure J1 and J2 cables to controller tie-down posts with cable ties (aka tie wraps, zip ties).

Signal Wire Installation

The Machine Interface will work with any signal voltage between 24 – 240VAC or 22 – 24VDC. With DC signals, polarity must be observed, where common connects to negative. The signals must be positive voltages.

1) Identify the washer supply signals. Check with technical service or with the washer manufacturer if you are not sure of the connections.
2) Identify the Mode of Operation to be used. Use appropriate terminal connectors to connect the signal wires to the Machine Interface wires, based upon the table on the next page.
3) If one or more pump signals are not used, they do not need to be connected. Cap any wires that are not used.
4) If you are triggering more than one pump from a single signal, connect all MI signal wires for those pumps to that signal.
5) If washer has a single common, wire nut all commons together.
6) One of the 6 LEDs on the Machine Interface will light up when the corresponding valid signal is received.

Supply Trigger Wiring

Supply Trigger Wiring by Operation Mode

Trigger	Supply Signal	Signal Common	Connect by Operating Mode to: Standard or Relay	Group	Event	Occurrence
Signal 1	Black Wire	White&Black Wire	Product 1	Group 1	Washer "On" Signal	Only 1or 2 signals need to be connected, because any signal, on any trigger, will be an occurrence. Connect one trigger to the Drain Valve OR one trigger to each Hot and Cold Water Valve, if the drain valve solenoid is not accessible.
Signal 2	Brown Wire	White&Brown Wire	Product 2	Group 1	Washer Hot OR Cold Valve	
Signal 3	Red Wire	White&Red Wire	Product 3	Group 2	Washer Cold OR Hot Valve	
Signal 4	Orange Wire	White&Orange Wire	Product 4	Group 2	Washer Drain Valve	
Signal 5	Yellow Wire	White&Yellow Wire	Product 5	Group 3	(not used)	
Signal 6	Blue Wire	White&Blue Wire	Product 6	Group 4	(not used)	

Controller Mounting

The Total Eclipse controller may be mounted either horizontally (such as on top of the washer) or vertically (such as on the front of the washer).

Mount the unit using the self-adhesive strips provided, or for added security, you may use nuts and Allen bolts or other fasteners (provided) as is appropriate to the mounting surface.

1) Position the controller for easy access to the keypad and display screen.

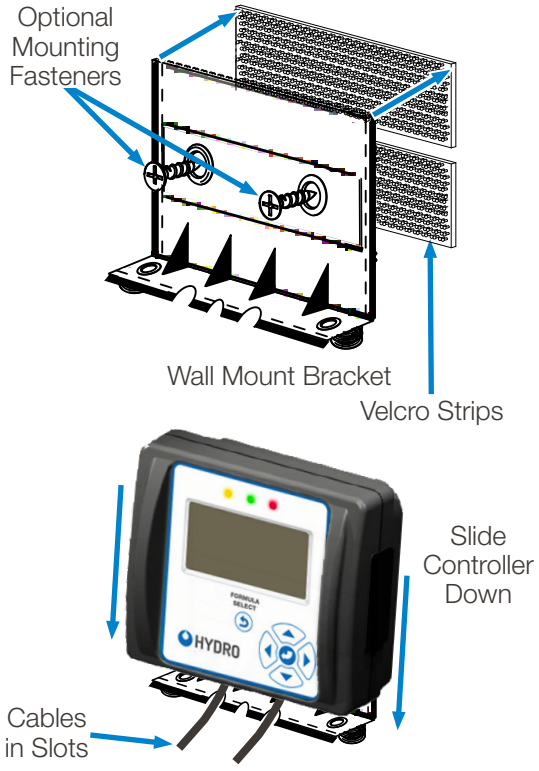
2) Mark a mounting location that is on, or close to, the washer. The mounting surface must be clean and dry.

3) Join the four Velcro-style strips firmly together to form two pair.

4) Peel backing from one strip of each pair and place, adhesive-side down, in each recess on the mounting bracket. Press firmly for good adhesion.

5) Peel backing from opposite strips and press mounting bracket onto smooth, clean surface (use alcohol wipe, if needed) at marked location.

6) With cables connected, slide controller front down onto mounting bracket (controller back), guiding cables into slots and pressing down firmly until front and back snap into place.

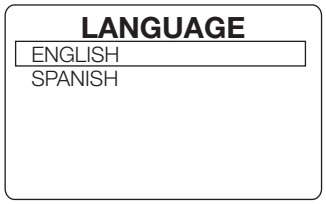


Set Operating Language, Date & Time

1) After all electrical, plumbing, and mechanical installation is complete, apply power to the Total Eclipse Controller.

2) At the first power up, the LANGUAGE menu follows the splash screen to allow menu language selection. Choose one of the menu languages that are pre-installed in each controller (English or Spanish for the Americas; English or German in the EU]; or download additional Total Eclipse Controller menu language files from the Hydro Systems website to a USB flash drive.

3) After setting the operating language, the DATE & TIME menu is shown. When installing the controller, you **must** change the Date and Time to the current date and time, as this controls the data contained in reports. The display is in ISO 8601 standard format: **YYYY-MM-DD HH:MM** (Year-Month-Day Hour:Minute). The time uses a 24-hour clock, military style, with no AM/PM setting.



US Default Language Menu

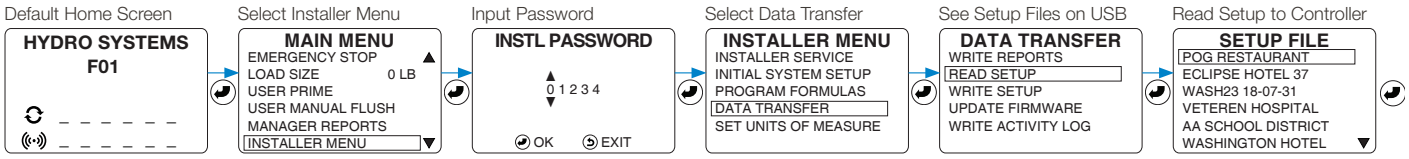
Setting the Date & Time

Program the Controller using a Setup file (Read from a USB Flash Drive)

The easiest way to program the controller is to load a previously created Setup file read from a USB flash drive. Settings that are NOT transferred via a USB drive are: **Passwords** (Manager nor Installer); **Machine Name**; **Company Name**; **Calibration**. Those will have to be defined using the display and keypad on the controller.

NOTE! It is important to select the correct PI (corresponding to the dispenser) to ensure proper and safe operation. A warning message will appear if a controller configured for eductors is connected to a peristaltic pump dispenser.

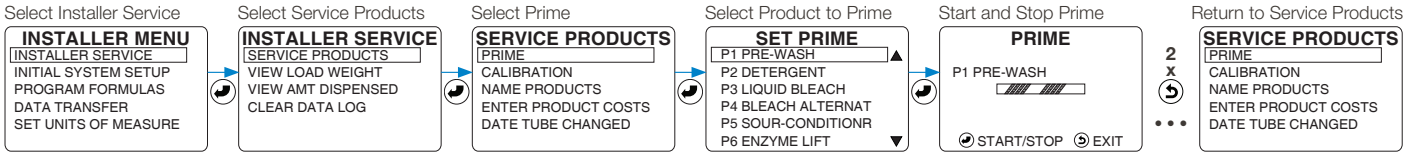
1) Connect the USB flash drive containing Setup files that were created in either the Formula Editor or on another controller.
2) From the Home Screen, press the Enter key to launch the MAIN MENU.
3) Use the Down Arrow key to move the selection box to INSTALLER MENU.
4) Press the Enter key and input the default Installer Password, 01234. Use the Up / Down Arrow keys to change the digit and the Right Arrow key to move the digit selection cursor.
5) Press the Enter to accept the input password. Select DATA TRANSFER from the Installer Menu and finish the sequence as shown below:



6) When the screen returns to the DATA TRANSFER menu, you can safely remove the USB drive. Press the Exit key to return to the Installer Menu, in order to prime and calibrate (required) the dispenser.

Prime the Dispenser (Pumps or Eductors)

At the Set Prime menu (follow the sequence below) select each product dispenser and use the Enter key to Start and Stop the priming. After all priming is complete, press the Exit key twice to get back to the SERVICE PRODUCTS menu.



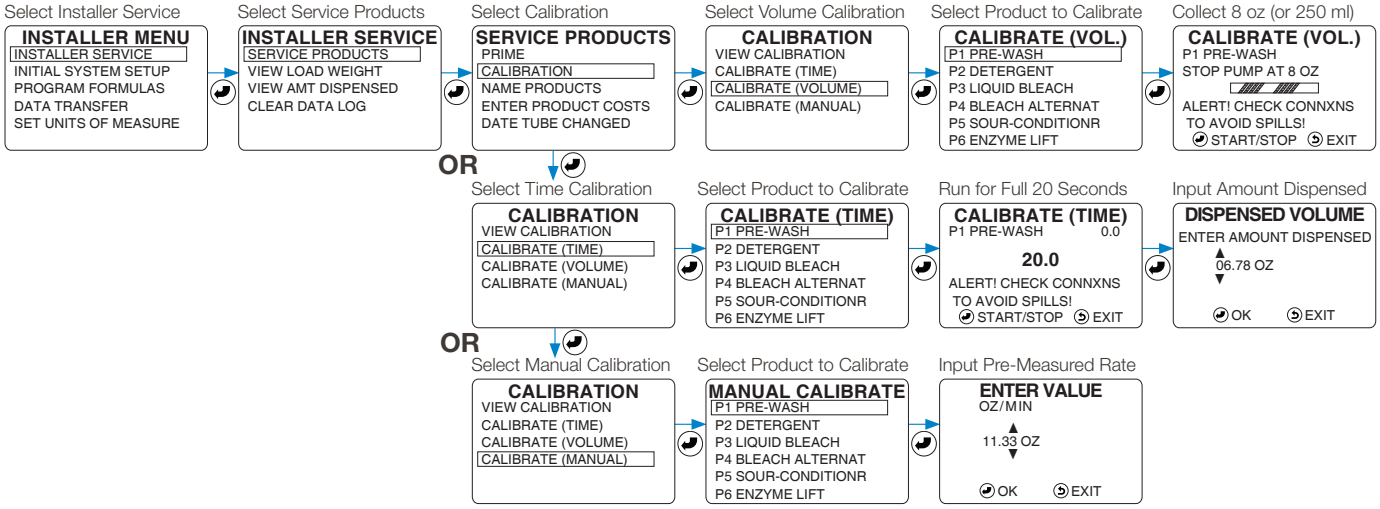
Calibrate (Pumps or Eductors)

You must calibrate all product dispensers to be used. Programmed amounts will not run if the dispenser is not calibrated.

Use **CALIBRATE (VOLUME)** only for medium displacement pumps, i.e.,12 to 18 oz or 355 to 532 ml per minute.

Use **CALIBRATE (TIME)** for larger pumps, eductors or any flush installation. Press START and the timer will count down 20 seconds. Do not stop the delivery; let it run the full 20 seconds, then enter the amount dispensed. When calibrating the a pump, measure the product dispensed. To calibrate an eductor system, measure the product the chemical intake draws in.

Use **CALIBRATE (MANUAL)** when provided with a known delivery rate of ounces or milliliters per minute.

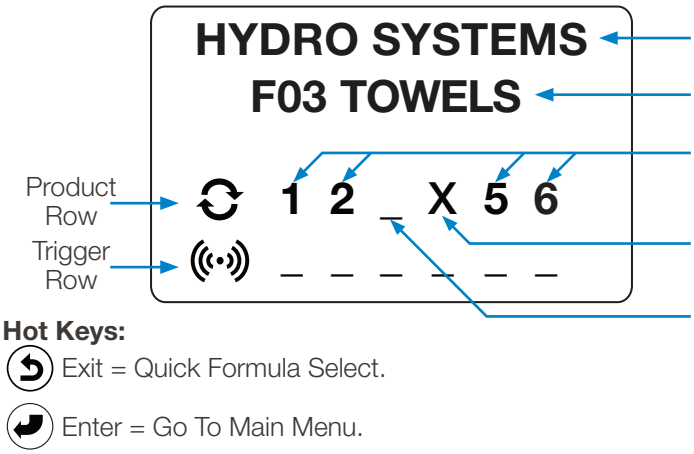


description of controls

Home Screen

The Home Screen appears initially after the controller language is selected or whenever the controller is active. If no key is pressed for 15 minutes, Power Save turns off the display backlight. Press any key to turn the backlight on and resume normal operation. If the controller is powered off, the last formula selected will be the active formula on the Home Screen when power is turned back on. See below for an explanation of the information and symbols that may appear on the Home Screen.

Home Screen: (Idle - No formula running.)



Company Name

Last Formula Selected

Programmed Products (These products have an amount programmed for this formula.)

Product Error (This product has an amount programmed for this formula, but has not been calibrated.)

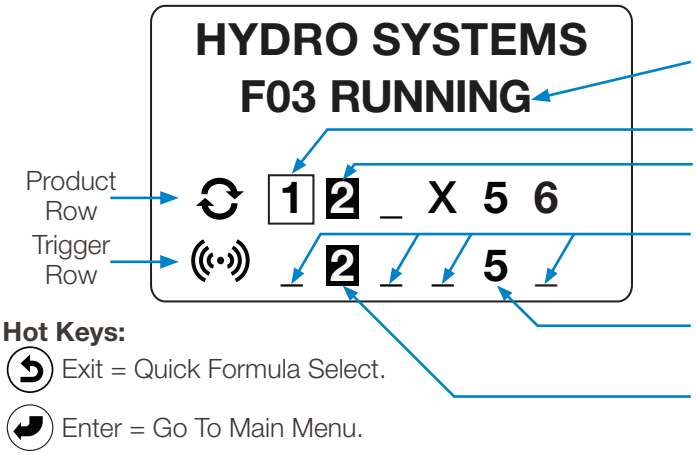
Unused Product (This product does not have any amount programmed for this formula.)

Hot Keys:

Exit = Quick Formula Select.

Enter = Go To Main Menu.

Home Screen: (Active - Formula running.)



Active Formula (Notice name gets replaced by "RUNNING".)

Completed (The programmed amount has been dispensed.)

Active Product (This product is being dispensed.)

No Signal (These triggers are not currently receiving a signal.)

Signal Received (This trigger signal is being received, but it has not yet been qualified.)

Qualified Signal(This trigger signal has been qualified, so the product is being dispensed.)

Hot Keys:

Exit = Quick Formula Select.

Enter = Go To Main Menu.

Formula Quick-Select

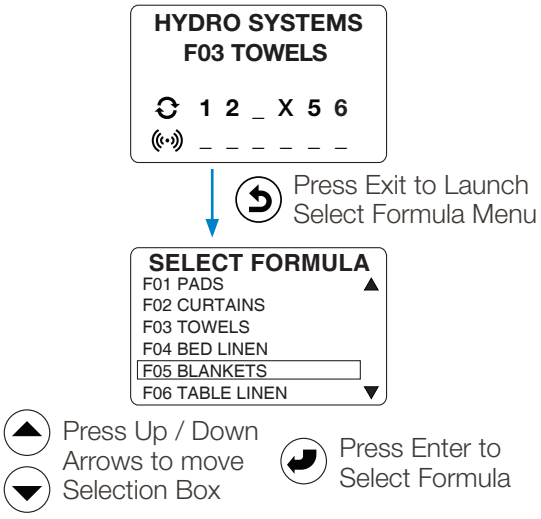
To prevent data logging errors, the operator must select a formula before washer operation starts; and all programmed products must be triggered during the cycle. (Formula 20 will add to load count for special operations.)

1) From the **Home Screen** press the **Exit ("Formula Select")** key.

2) Press the **Up / Down Arrow** keys to move selection box to the correct formula. All formulas appear, but only formulas with programmed products are selectable.

3) Press the **Enter** key to select the formula and return to the **Home Screen**, which will display the new formula selected.

4) (Optional) Press the **Enter** key to go the **Main Menu** where the load weight can be adjusted.

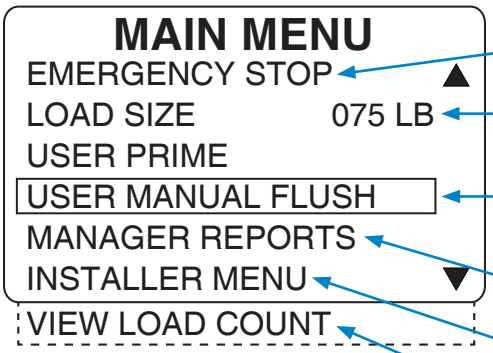


operator menu

Operator Main Menu

To reach the **Main Menu** from the **Home Screen** press any key (except the **Exit** key).

Main Menu:



Emergency Stop: Stops all dispensing and formulas.

Load Size Menu: Displays the default load weight for the current formula.

Selection Box: Use **Up / Down Arrow** to move to the desired menu. Press **Enter** key to launch the menu.

Print Manager Reports: Enter FROM and TO date range.

Installer Programs and Settings: Enter Installer password.

View Load Count: View the number of loads run for each formula.
(The View Load Count menu will appear when the Selection Box is moved below the Installer Menu using the Down Arrow.)

Return to HOME SCREEN:

You can press the Exit key, or wait 15 seconds without pressing any keys.

warranty

Limited Warranty

Seller warrants solely to **Buyer** the Products will be free from defects in material and workmanship under normal use and service for a period of one year from the date of completion of manufacture. This limited warranty does not apply to (a) hoses; (b) and products that have a normal life shorter than one year; or (c) failure in performance or damage caused by chemicals, abrasive materials, corrosion, lightning, improper voltage supply, physical abuse, mishandling or misapplication. In the event the Products are altered or repaired by **Buyer** without **Seller's** prior written approval, all warranties will be void.
No other warranty, oral, express or implied, including any warranty of merchantability or fitness for any particular purpose, is made for these products, and all other warranties are hereby expressly excluded.

Seller's sole obligation under this warranty will be, at **Seller's** option, to repair or replace F.O.B. **Seller's** facility in Cincinnati, Ohio any Products found to be other than as warranted.

Limitation of Liability

Seller's warranty obligations and **Buyer's** remedies are solely and exclusively as stated herein. **Seller** shall have no other liability, direct or indirect, of any kind, including liability for special, incidental, or consequential damages or for any other claims for damage or loss resulting from any cause whatsoever, whether based on negligence, strict liability, breach of contract or breach of warranty.

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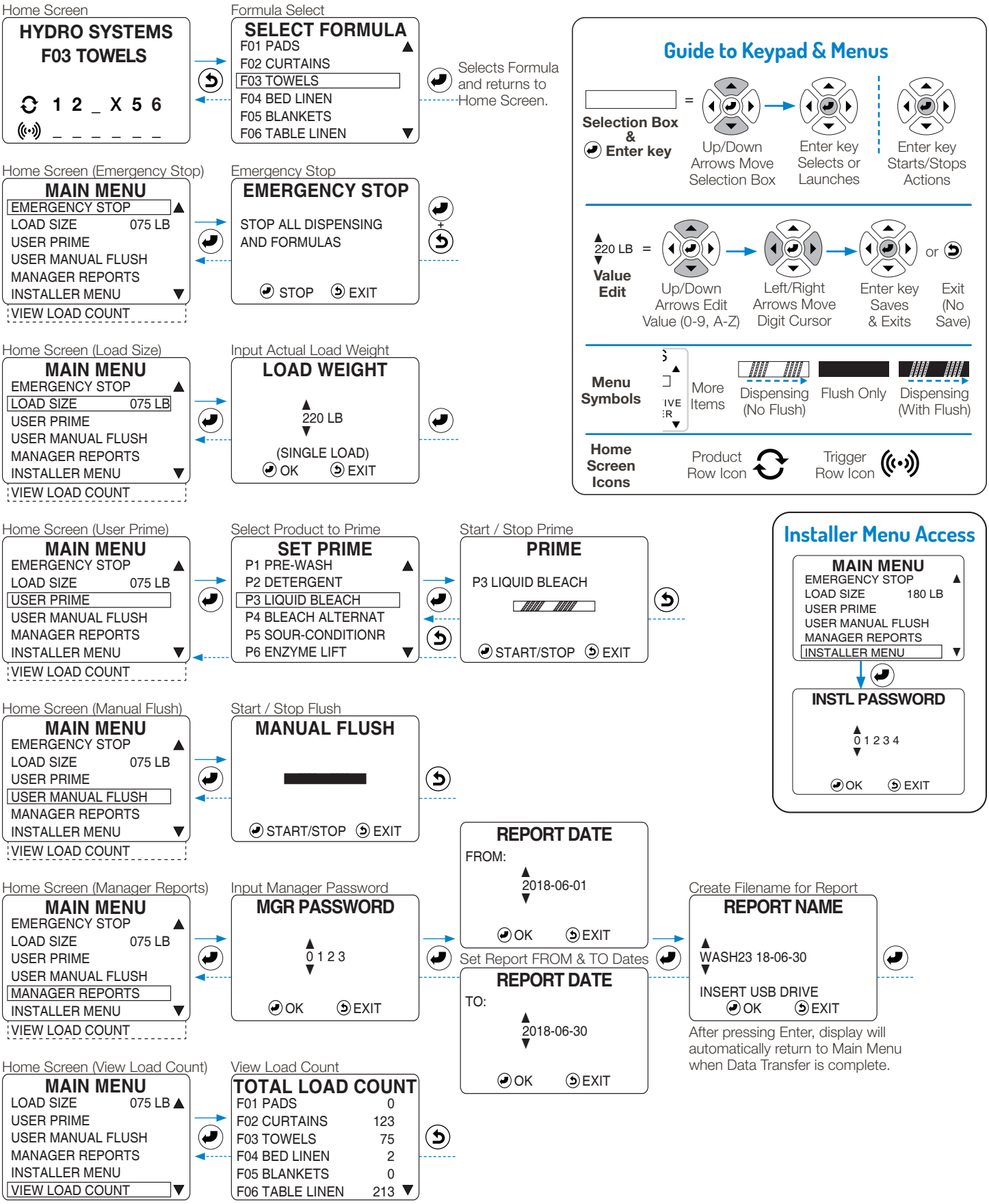
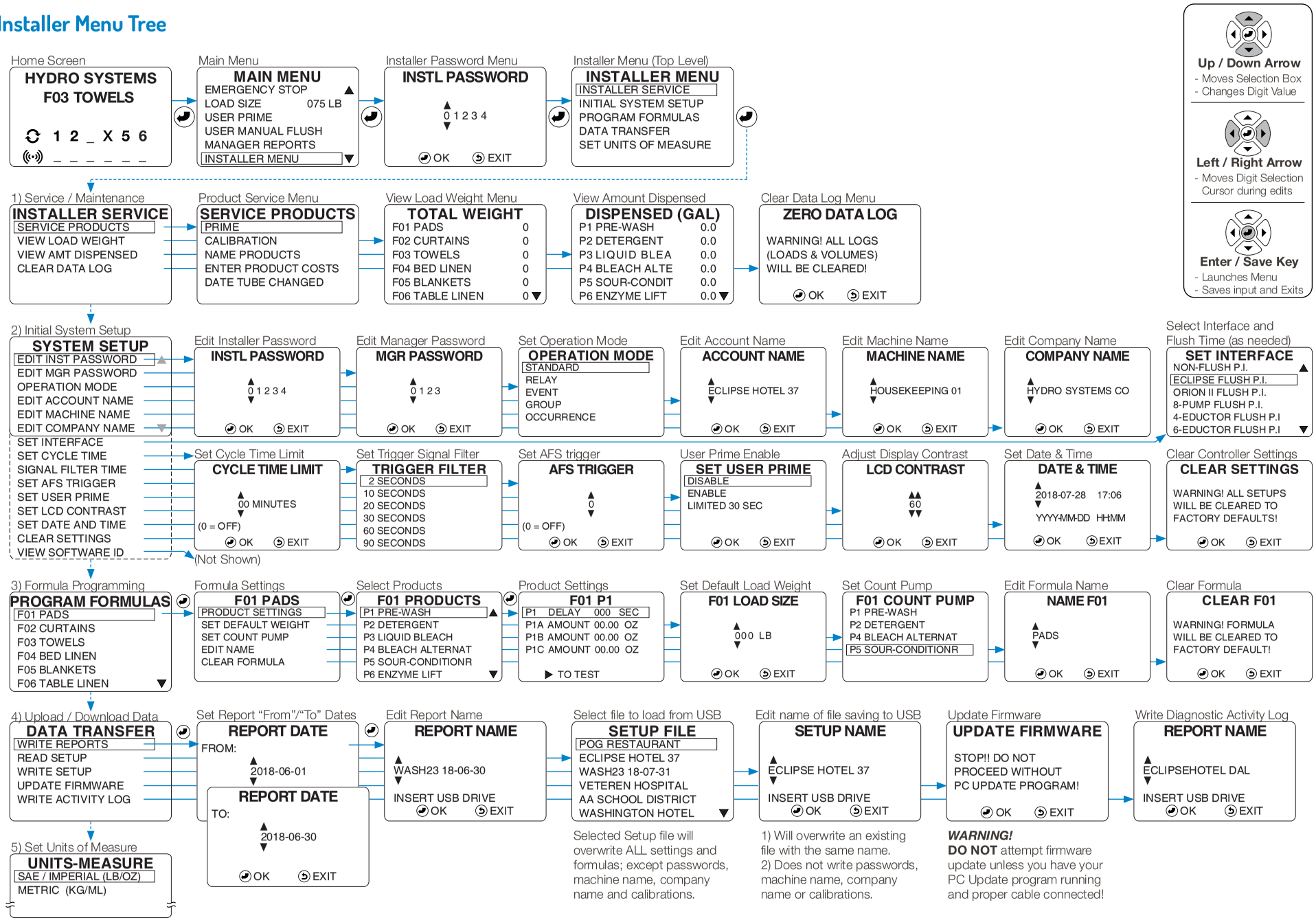
HYD20-08808-00 Rev E 03/18

operator menus

Operator Menu Tree



installer menus

Installer Menu Tree