Lighthouse™ Liquid Level Alarm

This Lighthouse™ Installation and Operation Manual provides an overview of the sequence of operation and configuration settings available for the Lighthouse™ Liquid Level Alarm.

This manual only works with model(s): LH7001

Model	Voltage	FLA
LH7001	120/208/240VAC	1 FLA

Enclosure Mounting: NEMA 4X Rated

When mounting panel, screw down four (4) corners on integrated mounting flange.

Covers/Doors

Covers/doors have a gasket pre-assembled to seal against the base.
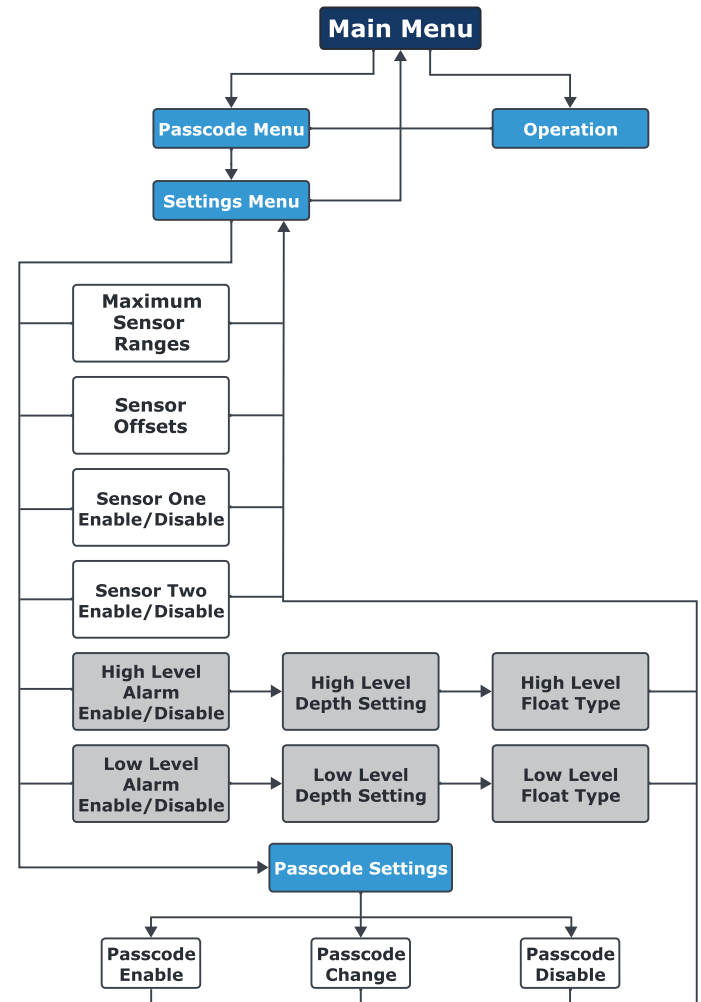
Note: The control panel should not be mounted in a location that may be subject to submersion.

Panel Installation

1. Caution: To maintain the environmental rating, make all wiring connections with seal tight cable grips or conduit connections.
2. Run transducer cables and float cables through conduit. Make field connections as shown on wiring schematic. *Note: Transducer cables require separate conduit from power and pump cables.*
3. Run power line conductor through conduit. Wire to terminals per enclosed schematic.
4. Branch circuit protection to be provided by installer.
5. Ensure floats are properly mounted at the correct levels.

Note: Floats shall have free range of motion without touching each other or other equipment.

Lighthouse™ Operation Flowchart

From the Settings Menu, the following parameters may be changed: Maximum Sensor Ranges, Sensor Offsets, Sensor One Enable/Disable, Sensor Two Enable/Disable, High Level Alarm Settings, Low Level Alarm Settings, Passcode Settings.

The Operation Menu is where the control panel reads the sensors. Alarms are only triggered in Operation.

Sensor Inputs & Settings

The Lighthouse is compatible with up to two 4-20mA 24V level sensors as well as one high level float and one low level float. High level and low level depths are configurable underneath **Settings**.

The settings are passcode protected. The default passcode is 4321. This can be changed or disabled in the Settings menu.

Pump Portal® Enabled Devices

- Remotely view alarm status and current level though Pump Portal® website and mobile app.
- Get alerts via email, text, and/or call when alarms are triggered, with settings configurable on Pump Portal®.

Alarms

- Red beacon alarm light
- Audible alarm buzzer sounds 85 decibels at 10' with silence button
- High level alarm is triggered by high level float or analog level sensor. Depth is configurable in **Settings.**
- Low level alarm is triggered by low level float or analog level sensor. Depth is configurable in **Settings.**
- Sensor fail alarm for each sensor that is triggered if there is an open or shorted connection

⚠ **WARNING**

Electrical Shock Hazard
- Disconnect power and lock out unit prior to servicing.
- Replace and secure access panel before operation.
- Failure to follow proper safety procedures could result in death or serious injury.

Screen Navigation

Main Menu

```
Main Menu Selection:

>Setup      Operate
```

SILENCE ∧ ∨ SELECT

Navigate between the Settings Menu (Setup) or the Operation Menu (Operate).
- Use the up and down arrows and press 'Select' to confirm your choice.
- Screen will default to the Operation Menu after a timeout period.

Operation Menu

```
Current Level:
1.1Ft

ANY BUTTON EXITS
```

SILENCE ∧ ∨ SELECT

This is where the Lighthouse™ reads the sensors. This is the screen that the Main Menu and Settings Menu screens will default to after a timeout period.
- Alarms are only triggered in Operation.
- Updates are only sent to Pump Portal® in Operation.
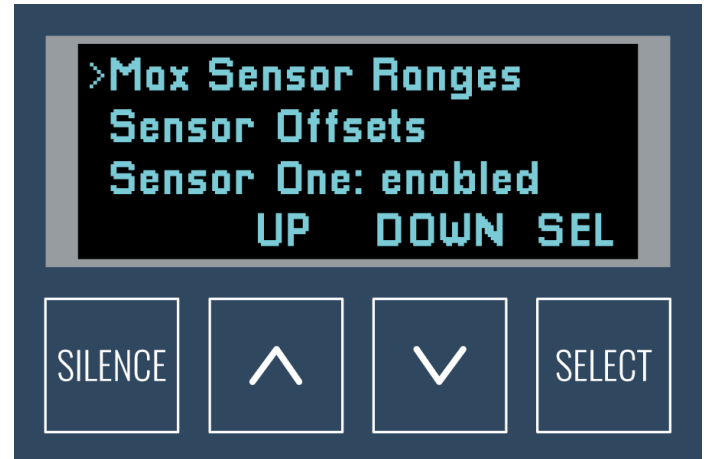- Displays current liquid level.

High/Low Liquid Level Alarm Warning

```
ALARM! ALARM! ALARM!
       11 Ft
WATER LEVEL TOO HIGH
 ANY BUTTON EXITS
```

SILENCE ∧ ∨ SELECT

In case of alarm:
- Line 3 displays type of alarm
- Beacon and buzzer energize

Settings Menu

```
>Max Sensor Ranges
 Sensor Offsets
 Sensor One: enabled
          UP  DOWN SEL
```

SILENCE ∧ ∨ SELECT

The Settings Menu is where you can configure the alarm. It is passcode-protected if enabled.
- Use the up and down arrows and confirm your choice with the 'Select' button.
- To exit the Settings Menu, scroll to the bottom of the list and select 'Exit Setup'.

Maximum Sensor Depth

```
Max Sensor 1 Depth
     10 Feet

      UP   DOWN  SEL
```

SILENCE ∧ ∨ SELECT

Set the maximum depth for both analog sensors.
- Based on Transducer PSI rating:
  - 5 PSI = 11 Ft.
  - 10 PSI = 23 Ft.
  - 15 PSI = 35 Ft.
  - 20 PSI = 46 Ft.

Sensor Offsets

```
Sensor 1 Offset
    0.0 Feet

      UP   DOWN  SEL
```

SILENCE ∧ ∨ SELECT

Add an offset to the analog sensor reading.
- For use with Transducer suspended from the bottom of the tank.

www.seewaterinc.com   951.487.8073   22220 Opportunity Way, Suite 101
info@seewaterinc.com   888.733.9283   Riverside, CA 92518

Sensor One Enable/Disable

```
        Sensor #1
     Currently enabled

  >ENABLE     DISABLE
```

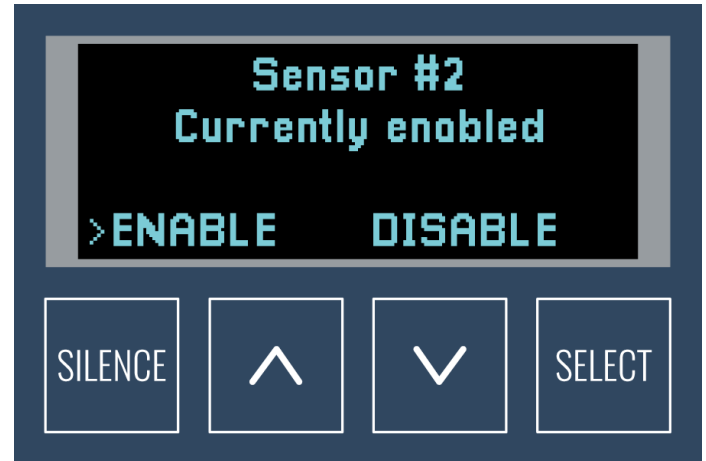| SILENCE | ∧ | ∨ | SELECT |

Enable or disable Sensor One.
• To select your choice, use the up and down arrows and press 'Select'.
• Current status displayed on Line 2.

Sensor Two Enable/Disable

```
        Sensor #2
     Currently enabled

  >ENABLE     DISABLE
```

| SILENCE | ∧ | ∨ | SELECT |

Enable or disable Sensor Two.
• To select your choice, use the up and down arrows and press 'Select'.
• Current status displayed on Line 2.

High Level Alarm Enable/Disable

```
     High Level Alarm
     Currently enabled

  >ENABLE     DISABLE
```

| SILENCE | ∧ | ∨ | SELECT |

Enable and disable the High Level Alarm.
• Choose enable or disable with the up and down arrows and press 'Select' to confirm your choice.
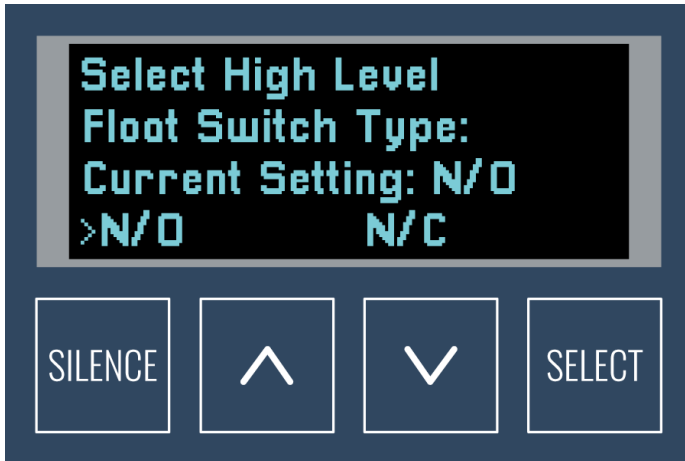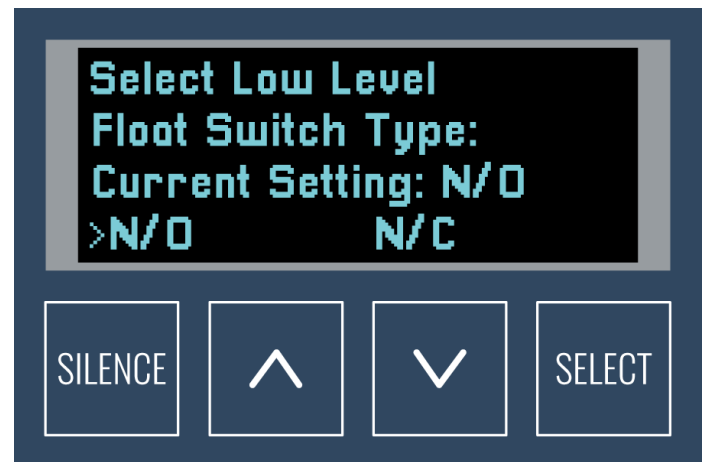• Current status displayed on Line 2.

High Level Depth Setting

```
     High Level Alarm
        10 Feet

        UP   DOWN  SEL
```

| SILENCE | ∧ | ∨ | SELECT |

Set the High Level Alarm depth.
• Use the up and down arrows to enter the desired depth, then confirm with 'Select'.
• The depth will start at the current level.

High Level Float Type

```
Select High Level
Float Switch Type:
Current Setting: N/O
>N/O          N/C
```

SILENCE ∧ ∨ SELECT

Change the float switch type between Normally Open and Normally Closed for the High Level float switch.
• To switch between options, use the up and down arrows, then confirm your choice by pressing 'Select'.

Low Level Alarm Enable/Disable

```
Low Level Alarm
Currently enabled

>ENABLE      DISABLE
```

SILENCE ∧ ∨ SELECT

Enable and disable the Low Level Alarm.
• Choose enable or disable with the up and down arrows and press 'Select' to confirm your choice.
• Current status displayed on Line 2.

Low Level Depth Setting

```
Low Level Alarm
1.0 Feet

    UP   DOWN  SEL
```

SILENCE ∧ ∨ SELECT

Set the Low Level Alarm depth.
• To set the distance, use the up and down arrows to enter the desired depth, then confirm with 'Select'.
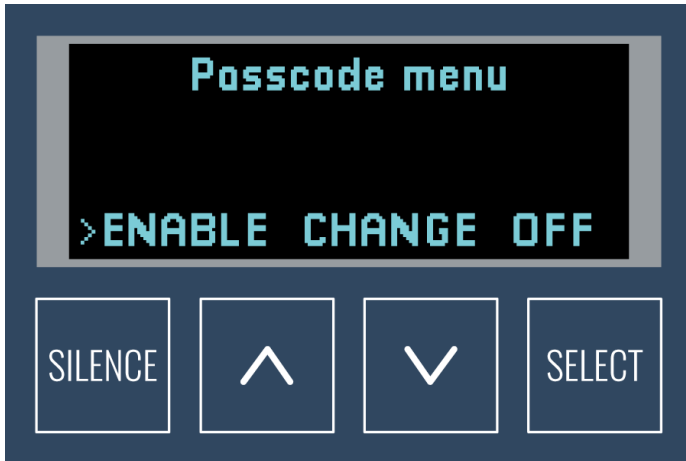• The depth will start at the current level.

Low Level Float Type

```
Select Low Level
Float Switch Type:
Current Setting: N/O
>N/O          N/C
```

SILENCE ∧ ∨ SELECT

Change the float switch type between Normally Open and Normally Closed for the Low Level float switch.
• To switch between options, use the up and down arrows, then confirm your choice by pressing 'Select'.
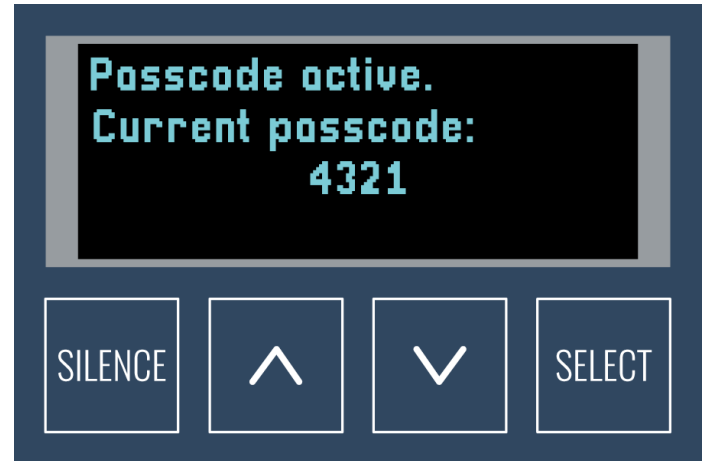
Passcode Settings

With this screen, you have the ability to enable, disable, or change the passcode.
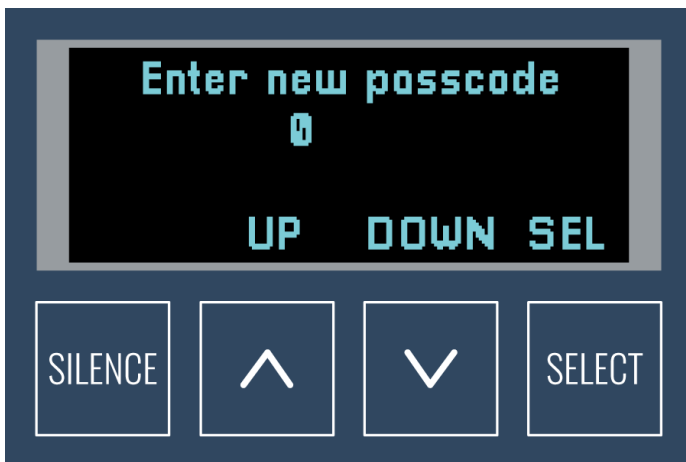• Choose enable, change, or off (disable) and press 'Select' to confirm your choice.
• Passcodes can only be a 4-digit pin of numbers 0-9.

Passcode Enable

If you chose 'Enable,' the previously set passcode will be displayed and set to active.
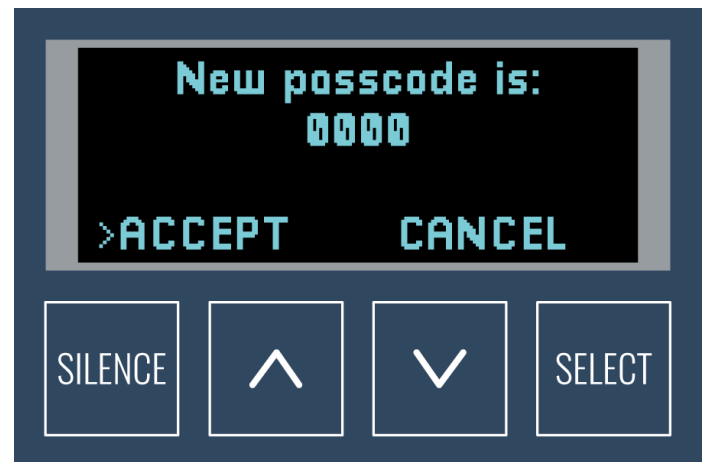
Passcode Change

If you chose 'Change,' you can enter a new passcode.
• To enter each digit, use the up and down arrows, then confirm with 'Select' for that digit.
• Once you have entered all four, hit 'Select' again to finalize your passcode.
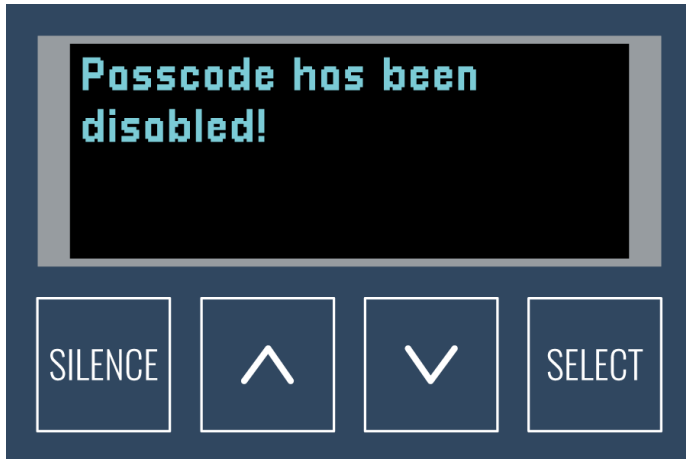
Passcode Change Confirmation

Once you have entered the new passcode, you will be asked to confirm your new passcode.
• Use the up and down arrows to choose your answer and press 'Select' to confirm your choice.
• Accept will make your new passcode the set passcode.
• Cancel will delete your new passcode and revert to the previously set passcode option.

Passcode Disable

If you chose 'Disable,' you will be taken to this screen and the passcode will be disabled.

Troubleshoot

Caution: Before checking electrical connections within the control or attempting to replace any components, turn off all branch circuits supplying power to the main control panel.

Floats

Check floats for entanglement, full range of motion. Replace damaged floats.

Level Transducer

Ensure device is grounded. Ensure transducer is wired to proper terminal block per provided panel schematic.

Warranty

See Water® Inc. warrants that products of its manufacture are free from defects in material and workmanship for a period of 5 years from the date of purchase. This date shall be determined by the date on the invoice and the serial number on the product.

Replacement of the product is at the discretion of See Water Inc. This warranty is valid when the product is installed in compliance with the manufacturer's installation instructions. The manufacturer's obligation under this warranty shall be limited to the repair or replacement of any parts found by the manufacturer to be defective, provided that the product is returned to See Water's factory, postage prepaid with proof of original purchase included.

The manufacturer of this warranty shall not be liable under this warranty if the product has not been properly installed; any alterations/additions/changes to the product will result in a void warranty. Failure to properly install and test this product can result in personal injury or equipment malfunction.

See Water, Inc. shall not be liable for any loss, damage or expenses from installation or use of its products.