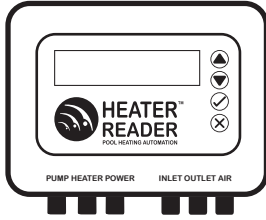# HEATER READER™

QUICK INSTALLATION GUIDE

INCLUDED IN PACKAGE:
1. HEATER READER Control Device (1)
2. Pump Control Relay (Single Speed Pump) (1)
3. Power Supply (Input 100-240v Output 24 V/DC) (1)
4. Pump Signal Wire (1 x 10ft)
5. Heater Signal Wire (1 x 10ft)
6. Temperature Sensors (3 x 10ft)
7. 2 Inch Stainless Steel Clamps (2)
8. Pipe Mounts (2)
9. Zip Ties (6)
NOTE: 3/8" drill bit required. Not supplied.

CONTENTS:

Installation Overview:

1. Install all hardware provided as per instructions.
2. Record the Device ID from the menu in the Reader for future use.
3. Download the App from iTunes or Google Play and follow instructions to register the Reader.
4. Follow the steps to connect the Reader to your home WiFi network.
5. Open the App.
6. Set preferences and schedules.
7. Control your equipment!

1. IMPORTANT WARNING AND SAFTEY INSTRUCTIONS

ATTENTION USER/INSTALLER: This guide contains important information about the installation, operation and safe use of this product. This information should be given to the owner and/or operator of this equipment. When installing and using this electrical equipment, basic safety precautions should always be followed.

DANGER! RISK OF ELECTRIC SHOCK, WHICH CAN RESULT IN SERIOUS INJURY OR DEATH. Before attempting installation or service, ensure that all power to the circuit supplying power to the system is disconnected/turned off at the circuit breaker. The HEATER READER Pump Relay Assembly should be installed by a QUALIFIED PROFESSIONAL.

1. The pump connection should be performed by a licensed electrician, and must conform to all national, state, and local codes.
2. The electrical supply for this product must include a suitably rated switch or circuit breaker to comply with National Electrical Code (NEC), NFPA 70 or the Canadian Electrical Code (CEC), CSA C22.1. The disconnecting means must be readily accessible and installed at least 10 ft. (3.05 m) from the inside wall of the pool.

WARNING: Water temperature in excess of 100 degrees Fahrenheit may be hazardous to your health. Prolonged immersion in hot water may induce Hyperthermia. Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above normal body temperature of 98.6° F (37° C). The symptoms of Hyperthermia include drowsiness, lethargy, dizziness, fainting, and an increase in the internal temperature of the body.

WARNING: Control System is intended to control heaters with built in OEM Safeties. Failure to do so may cause property damage or personal injury.
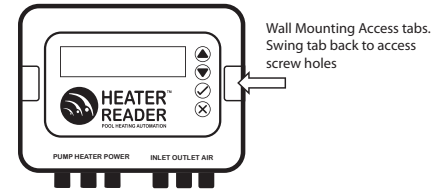
2. Mounting the HEATER READER Control Device (2 Options)

The Heater Reader has a waterproof and UV resistant enclosure. Mount indoors or out.

• **DO NOT** mount device to any hot surface such as the pool heater.
• **DO NOT** mount underwater or where it will be constantly exposed to wet conditions. (All equipment, must be located at least 10 feet or more if local codes require from the water's edge)
• **DO NOT** mount on or near ground level if mounting outdoors. device must sit at least 3 feet above ground level to avoid possible damage from snow or flooding.
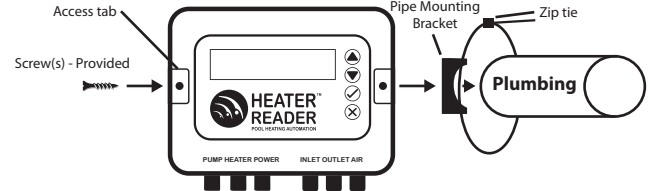
Option 1 - Wall Mounting:

1. Ensure the **HEATER READER** is not plugged into a power supply.
2. Before mounting the **HEATER READER** check to see if all sensors and wires will reach the connection points on the control device.
3. Swing out wall mounting access tabs to reveal screw holes. (see diagram below)
4. Insert screws into wall and close tabs.
(2.a.)

Wall Mounting Access tabs. Swing tab back to access screw holes

Option 2 - Pipe Mounting

1. Ensure **HEATER READER** is not plugged in to power supply.
2. Before mounting the **HEATER READER** check to see if all sensor and wire connections will reach desired location.
3. Swing out wall mounting access tabs to reveal screw holes. (see diagram below)
4. Using the pipe mounting brackets and screws provided attach brackets to the **HEATER READER** control device.
5. Once brackets are attached, push the zip ties through the slot in the bracket and place **HEATER READER** into position. Wrap the zip ties around the water pipe and join together. Pull tight to secure.
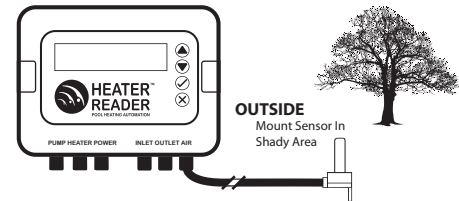(2.a.)

Access tab   Pipe Mounting Bracket   Zip tie
Screw(s) - Provided   Plumbing

3

ATTACHING ALL THE LEADS. (Sensors, Pump and Heater, and Power Supply)
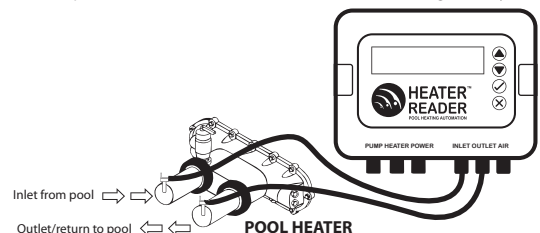TO ATTACH, PUSH FIRMLY INTO RECEIVER ON THE HEATER READER CONTROL DEVICE AND QUARTER TURN TO LOCK.

3. Air Temperature Sensor

1. Ensure the **HEATER READER** is not plugged into a power supply.
2. Find a shady location outdoors to mount or place the Air Temperature Sensor within 10ft of the **HEATER READER** control device.
3. Once in position, run lead back the the **HEATER READER** control device and attach to connection point labeled "AIR"

OUTSIDE
Mount Sensor In Shady Area

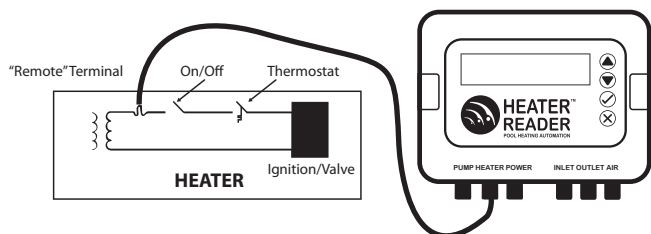## 4. Inlet/Outlet Temperature Sensors

1. Ensure the **HEATER READER** is not plugged into a power supply.
2. Turn OFF circulation pump to ensure water drains from plumbing lines.
3. Drill a hole in the Inlet water line using a 3/8" drill bit.
4. Repeat step "3" for the Outlet water pipe ensuring that it is within 24" of the heater itself.
5. Push the blue end of the Temperature Sensors provided into the newly drilled holes. Push in firmly and clamp with the stainless steel clamps provided.
6. Once sensors are secured run the leads back to the **HEATER READER** control device and attach to connection points labeled INLET and OUTLET. NOTE: For the **HEATER READER** to operate properly the INLET sensor must be connected to the INLET on the control device. Likewise for the OUTLET. Failure to connect to the correct connection point will result in the **HEATER READER** not functioning correctly.

Inlet from pool
Outlet/return to pool   **POOL HEATER**

5. Pool Heater Connection

1. TURN OFF THE POWER (IF THE HEATER IS ELECTRONIC) AT THE CIRCUIT BREAKER.
2. Ensure the **HEATER READER** is not plugged into a power supply.
3. Attach the heater signal wire to the "Remote"* terminal block as shown below.
4. Run lead back to the **HEATER READER** control device and attach to connection point labeled HEATER
5. Turn ON electrical power at the breaker.
6. Set ON/OFF switch on the heater to ON.
7. Set the thermostat(s) on the heater to the maximum (hottest) setting or desired maximum temperature.
8. Set Heater to bypass*.

* To locate the "Remote" terminal or learn how to set your Heater to "bypass", please refer to the specifics in the owners manual for the heater being connected.
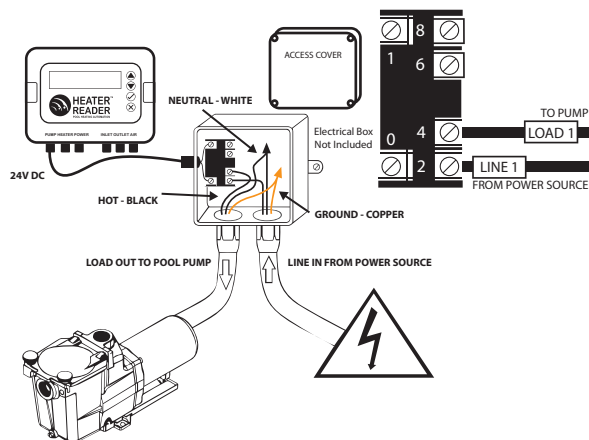

6. Pool Pump Connection

WARNING: FOLLOW IMPORTANT WARNING AND SAFETY INSTRUCTIONS AT THE BEGINNING OF THE INSTALLATION GUIDE BEFORE STARTING HIGH VOLTAGE INSTALLATION

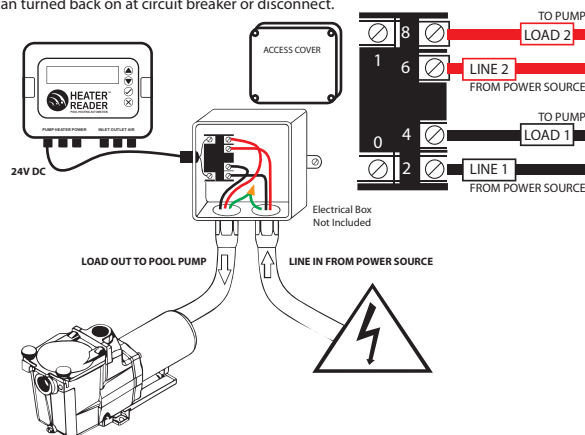**110 VAC INSTALLATION (MUST BE INSTALLED BY A QUALIFIED ELECTRICIAN)**
1. TURN OFF THE POWER TO THE PUMP AT THE CIRCUIT BREAKER OR DISCONNECT.
2. Ensure the **HEATER READER** is not plugged into a power supply.
3. Find a convenient location to mount pump relay in an approved enclosure.
4. Make all necessary high voltage electrical connections as shown in the diagram and in accordance with local electrical code.
5. Connect the pump signal wire to the connector labeled PUMP on the **HEATER READER** and run the lead to the Relay. (see diagram)
6. Attach the wires of the pump lead to the low voltage terminals 0 and 1 on the Relay.
7. Install the cover on the enclosure.
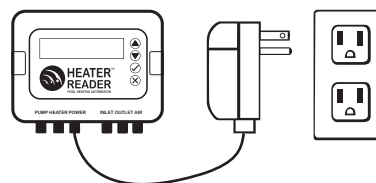8. Power can turned back on at circuit breaker or disconnect.

240 VAC INSTALLATION (MUST BE INSTALLED BY A QUALIFIED ELECTRICIAN)
1. TURN OFF THE POWER TO THE PUMP AT THE CIRCUIT BREAKER OR DISCONNECT
2. Ensure the **HEATER READER** is not plugged into a power supply.
3. Find a convenient location to mount pump relay in an approved enclosure.
4. Make all necessary high voltage electrical connections as shown in the diagram and in accordance with local electrical code.
5. Connect the pump signal wire to the connector labeled PUMP on the **HEATER READER** and run the lead to the Relay.
6. Attach the wires of the pump lead to the low voltage terminals 0 and 1 on the Relay.
7. Install the cover on the enclosure.
8. Power can turned back on at circuit breaker or disconnect.

7. Power Connection

1. The Power Supply Transformer can be attached to the **HEATER READER** control device at the connection point labeled POWER.
2. Plug the transformer into a 110v GFCI outlet.
3. If plug is outdoors then use of an "IN USE RECEPTACLE COVER" is required.

8. App & Heater Reader Set Up

a.) Record Device ID from Reader Menu (record the 16 digit ID which is required to register the App)
   • Press and hold check mark for 2 seconds. Using the arrows scroll to "Options" and press check mark to select.
   • Scroll to "Device ID" and record code for later use.
b.) Download the **HEATER READER** App from iTunes or Google Play to your phone or tablet.

c.) **Heater Reader Set Up:**

1. Push and Hold check mark.
2. Use the arrows up and down to navigate the menu.
3. Find "Network" and push the check mark to select.
4. "Connect WiFi" (scan), press check mark.
5. Use up and down arrows to locate your network name. Press check mark to select.
6. Using the up/down arrows scroll through the alphabet to enter your password. The screen will display the alphabet in lower case followed by upper case followed by numbers.
7. When the desired letter/number is visible wait 2 seconds until underscore moves one space to the right and is ready to receive the new input.
8. When the password is complete press the check mark again.
9. It will either read "Failed to Connect" or "Connected".
10. If "Connected", Open the App and log on. Continue with section "App Set Up".
11. FAILED TO CONNECT: Typically, if your network has a strong signal you will see your network name at the top, or within the first few names listed. If you are down the list of visible networks you may have some difficulty connecting. If "Failed" press the check mark to attempt again. You may want to try several times before addressing the issue. The signal may be weak only momentarily. If you continue to have problems you may need to move your router closer, you may want to consider a new style, or install a booster. If the problem persists and cannot be corrected you have the option of using a CAT 5 cable to hard wire between the Reader and the modem.
Please email support@heaterreader.com for more assistance.

d.) **App Set Up:**

You will be on the Home Screen each time you open the App. The "house" icon at the bottom of the screen will appear in red. The other menu options will be in blue. From that screen your backyard air temperature and current pool water temperature is always visible. You can toggle the system On/Off and from Manual to Schedule Mode. In Manual Mode, the temperature slide scale is visible to the left and the desired temperature is displayed in the circle. You can use the circle and slide up or down to adjust. Sliding the circle all the way to the bottom will turn the heater off. You can also tap the arrows on the bottom or the top of the slide to adjust the temperature.

The Gear icon will allow you to make the selections for email notifications. You can also input your heater specifications and billing details so the Reader can do the math for you! Your usage costs are based on the inputs on that screen and will be used in the calculations. If you adjust the cost you are charged or change the size of the heater, the calculations will be adjusted moving forward. The history will remain as with the previous inputs. PLEASE NOTE: The costs indicated are not for billing purposes.

The clock icon allows you to set up your independent schedules of both the pump and the heater. From the drop down menu select the day, slide the blue dots to adjust the times and repeat with the temperature slide. If you don't want the heater simply slide it all the way to the left and the action will be to "circulate" only. NOTE: If you have a temperature set the system will automatically make the pump coincide. CAUTION: If you only want heat on the weekends for example, be sure to set a schedule for the pump independently through the week so the filtration is maintained.

The graph icon will allow you to view heater activity and the cost. During a particular day it will show hour by hour when the heater came on and off and the associated costs as per your inputs. The weekly, monthly and yearly provides totals. NOTE: Costs indicated are not for billing purposes.