

Rinnai

Control-R™

Connect for smarter hot water.

Control-R™ Wi-Fi Module Installation Manual



FOR YOUR RECORDS

If you have support questions, please call Customer Care and have your Control-R™ Wi-Fi module's AYL A ID and Water Heater Serial Number available.

AYLA ID: _____
(Located on back of Control-R™ Wi-Fi Module)

Water Heater Serial Number: _____
(Located on side of water heater)

Thank You For Your Purchase

Thank you for purchasing the Rinnai® Control-R™ Wi-Fi Module (referred to as “module” throughout this manual). Before installing and operating the module, be sure to read these instructions to familiarize yourself with the module’s features and functionality.

Please Read and Save This Manual

Please read this manual and save for future reference.

If You Need Service

Please call Rinnai Customer Care at 1-800-621-9419 Monday to Friday between 8 AM to 8 PM EST. Please have the following information available:

- AYLID (Located on back of Control-R™ Wi-Fi Module)
- Water Heater Serial Number (Located on side of water heater)

FCC Part 15

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

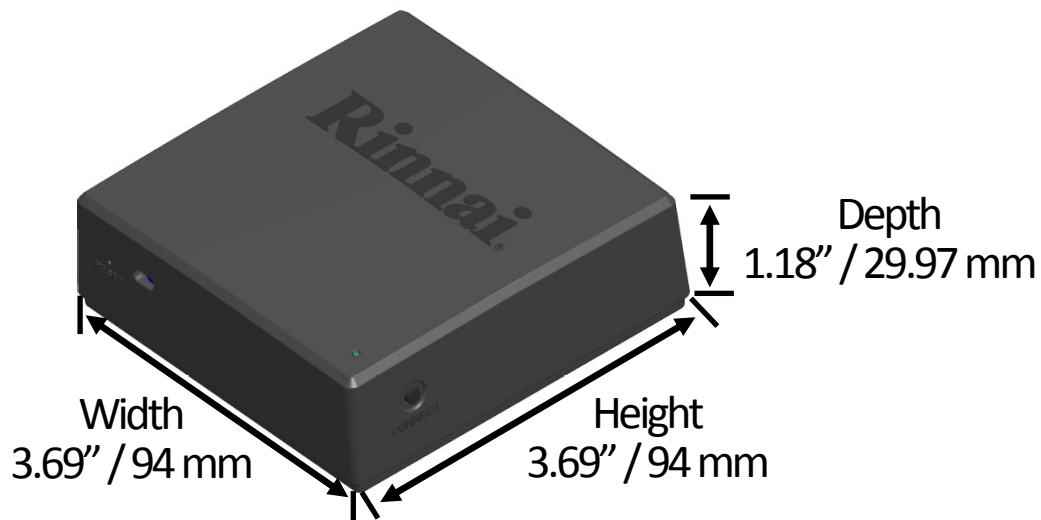
- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

Product Specifications

- Part Number: RWM101
- Works with all Rinnai Tankless Water Heater models manufactured 2006 and later (except the RH180 Hybrid Tank-Tankless Water Heater).
Note: The Lime Condition (LC) notification will not appear in the Rinnai App when the module is paired with the following series of Rinnai tankless water heaters: VA, VB, KA and V53e.
- Attaches to the side of the water heater via the magnetic enclosure (indoor models only) or mounts to an indoor wall with supplied mounting hardware.
- The module must be mounted indoors.
- Pairs to only one Rinnai Tankless Water Heater.
- Compatible with the following Wireless Demand Recirculation Accessories: Push Button, Motion Sensor and Temperature Sensor.

Dimensions (w, h, d):

- Module: 3.69" x 3.69" x 1.18" (94 mm x 94 mm x 29.97 mm)
- Shipping Carton: 6.125" x 2.88" x 6" (155.6 mm x 73 mm x 152.4 mm)



Weight:

Module: 4.8 oz (0.14 kg) Shipping Carton: 6 oz (0.17 kg)

Supported Devices:

- Apple® devices (iPhone, iPad, etc.) running operating system 8.0 or higher.
- Android® devices (phones, tablets, etc.) running operating system 4.4 or higher.
- BlackBerry® devices are NOT supported.

Compatibility:

- 802.11N Wi-Fi Network up to 2.4 GHz
- NOT COMPATIBLE with the MC-195T-US or MC-100V controllers

Unpack System Contents

Carefully unpack your system contents. If any part of the system appears damaged, do not attempt to use it. Contact Rinnai Customer Care (1-800-621-9419) or your authorized Rinnai Service Provider.

WARNING: To avoid danger of suffocation, keep plastic bags out of the reach of children.

Check to be sure your system includes the following parts:

- Rinnai Control-R™ Module (including 5 feet/1.5 meters of wire for water heater connection)
- Wall mounting hardware (2 anchors/2 screws)
- Rinnai Control-R™ Wi-Fi Module Installation Manual (this document)



Required Devices, Tools and Information (Customer-Supplied)*

- Mobile device connected to home/business network
- Router with Wi-Fi
- Wireless network name and Wi-Fi password
- 2.4GHZ Wi-Fi network with WPA 2 security protocols
- Water Heater Serial Number or QR Code (located on water heater side panel on cardboard packaging)
- Tools (Below are example images of required tools and are used for illustrative purposes only. Your tools may differ from the images shown below.)

* **Note:** The above items, with the exception of the tools, are not required if operating only the Wireless Demand Recirculation accessories (Push Button, Motion Sensor and Temperature Sensor).



Phillips Screwdriver



Flat Blade Screwdriver



Wire Stripper/Crimping Tool



Drill and Bit Set

Note: Wire Stripper/Crimping Tool required only if extending the length of the wires that connect the module to the water heater.

Select a Location for Your Module

Use the following guidelines to select a location for the module.

- Choose a central location inside the home or business where the Wi-Fi signal is strong.

Note: If the water heater is located where the Wi-Fi signal is weak (such as basements or a mechanical room), the module is designed so that wiring can run up to 300 feet (91 meters) away from the tankless water heater to ensure a strong Wi-Fi signal (18-22 gauge wire is required).

- Ensure that adequate space surrounds the module for service and support needs.
- For outdoor water heaters, the module must be installed indoors.
- The module is magnetic and can be placed on the side of the Rinnai tankless water heater (indoor models only) or mounted to a wall. See the next section for installation instructions.

Install the Module

Two options are available for installing the module:

Option 1: Magnetic Mount

The module contains a strong magnetic backing and can easily be placed on the side of the water heater (*indoor models only*).

Option 2: Wall Mount

The module can be mounted to a wall with the supplied mounting hardware. Refer to the next section for steps on mounting the module to a wall.

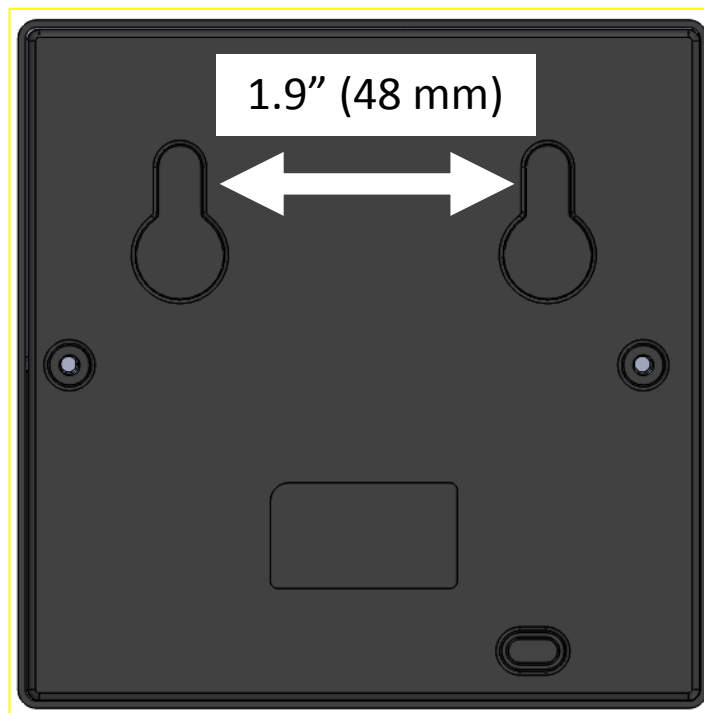
Mount the Module to a Wall

You Will Need:

- Two (2) anchors and two (2) screws (supplied with system)
- Tools shown in the “Unpack System Contents” section

Instructions:

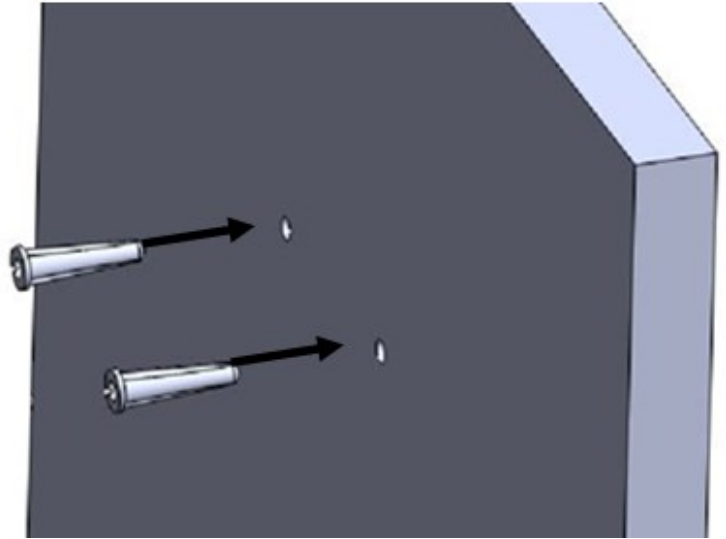
1. The module's back panel contains two keyhole slots that support the module. Mark the location of each slot on the wall with a pencil. The distance between the two slots is 1.9" (48 mm). Use a level to ensure the slots are even.



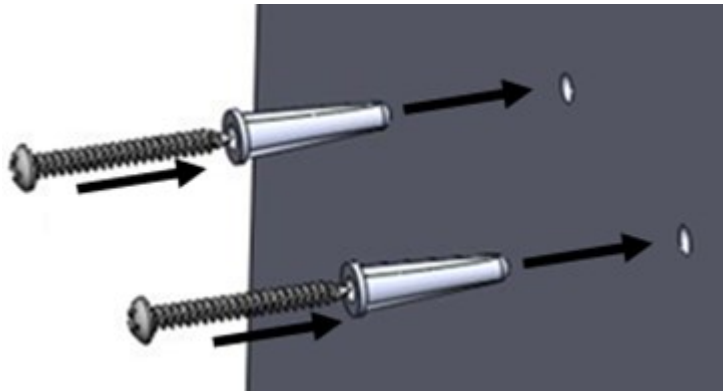
2. Use a power drill to drill pilot holes for the module screws and anchors.

Mount the Module to a Wall (Continued)

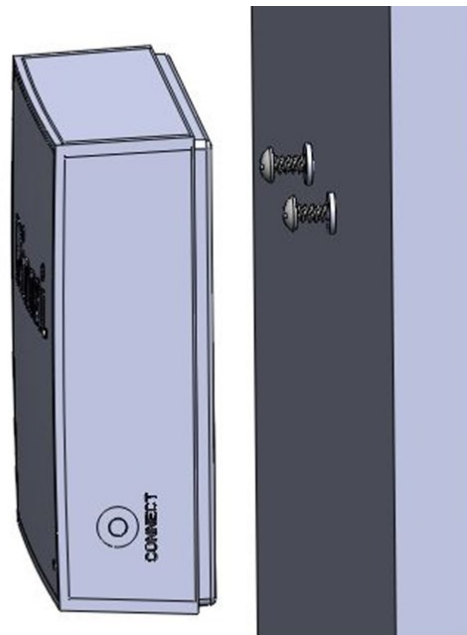
3. Insert the supplied two wall anchors into each hole until they sit flush against the wall.



4. Insert the supplied screws into the anchors and fasten to the wall leaving 1/4" exposed.



5. Mount the module by placing the keyhole slots (on back of module) onto the screws.



Connect Module to Water Heater

⚠ WARNING To protect yourself from harm, follow the steps below before wiring the module:

- Turn off the electrical power supply by unplugging the power cord or by turning off the electricity at the circuit breaker. The temperature controller does not control the electrical power.
- Turn off the gas at the manual gas valve, usually located immediately below the water heater.
- Turn off the incoming water supply. This can be done at the isolation valve immediately below the water heater or by turning off the water supply to the building.

1. Unplug the water heater.

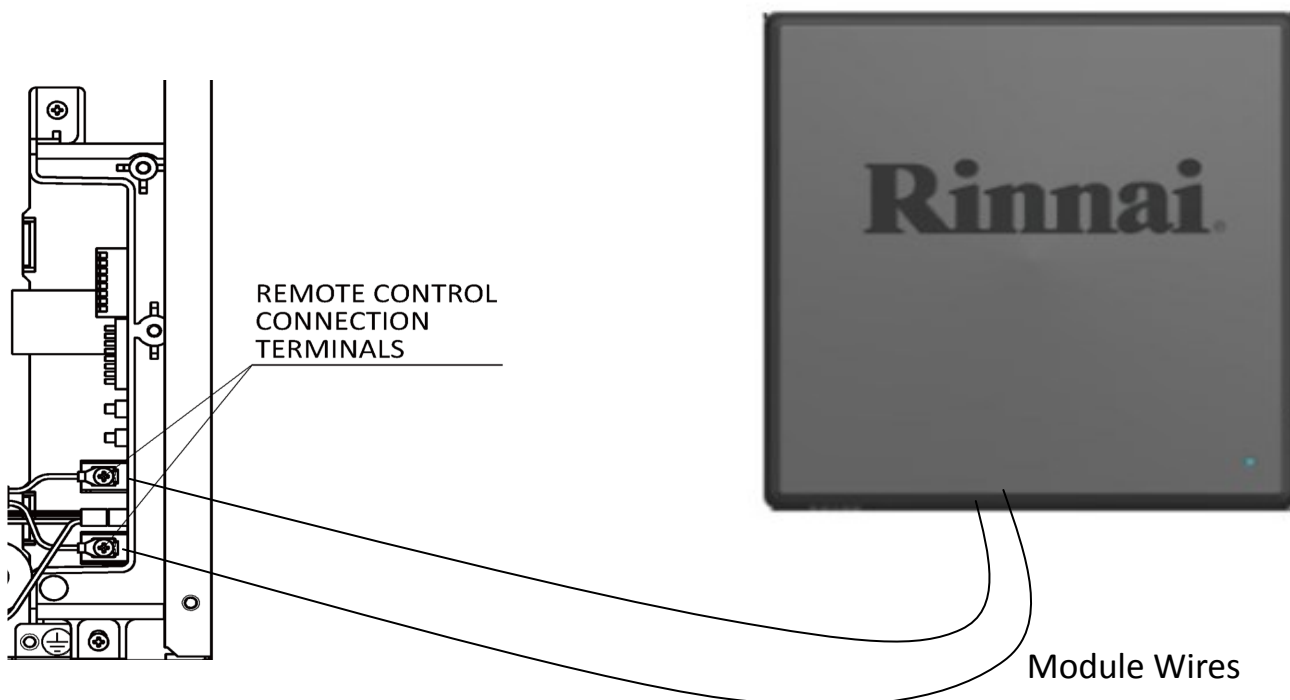
Note: Pressing the ON/OFF button on the controller does not completely power off the water heater.

2. Remove the four (4) screws located on the water heater cover.

3. Two (2) wires are attached to the bottom of the module. Place these wires through the bottom opening of the water heater.

4. Attach each module wire to the terminals for control.

5. Replace and tighten the four (4) screws on the water heater cover.

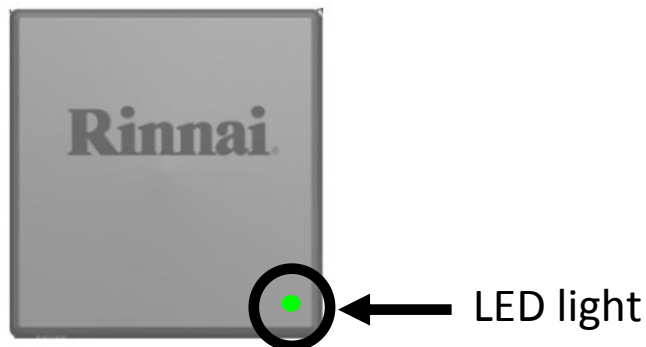


Wi-Fi Setup Instructions (For Owner)

This Section Must be Performed By the Water Heater Owner (Homeowner/Business Owner)

Owner Instructions:

1. Power on the water heater. The LED light on the module will blink yellow until boot-up is complete and will then turn solid red.



2. Download the Rinnai app from the Apple® Store or Google® Play Store.



Rinnai Heater
Rinnai America Corporation

3. Follow the steps in the Rinnai App to create an account and activate the module. Detailed instructions can be found online at www.rinnai.us/wifi. When setup is complete, the owner will have access to remotely monitor and control their Rinnai tankless water heater using their smart device.

Pairing Instructions

The module can be paired with the following Wireless Demand Recirculation Accessories: Push Button, Motion Sensor and Temperature Sensor.

For complete instructions on installing and pairing the Wireless Demand Recirculation Accessories to the module, refer to the instructions included in the accessory package.

The accessory installation instructions can be viewed online at www.rinnai.us/wifi

LED Color Codes

Color	Blink Frequency	State / Condition	Duration
YELLOW	Solid	Start of Boot-up Sequence	Until next state change
RED	Solid	Error Condition / Not Provisioned	Until next state change
RED	0.5 Hz On 1 second, Off 1 second	Wifi Provisioned, but No IP Address Yet	Until IP address obtained
GREEN	Solid	ZigBee* Pairing Mode Active	Until next state change: Timeout or successful ZigBee join
GREEN	0.5 Hz On 0.25 seconds, Off 0.25 seconds	ZigBee* Join Success	2 seconds
BLUE	2 Hz On 0.25 seconds, Off 0.25 seconds	Wi-Fi Network Successfully Joined	Until next state change: Cloud service connection
BLUE	0.5 Hz On 1 second, Off 1 second	Attempting Gateway Registration with Cloud Service	Until next state change: Successful registration with Cloud Service
BLUE	SOLID	Ready to Use / Normal Operation	Until next state change
PURPLE	0.5 Hz On 1 second, Off 1 second	Lost Connection to Wi-Fi Network	Until connection is re-established
PURPLE	SOLID	Lost Connection to Internet	Until connection is re-established
WHITE	.5 Hz On 1 second, Off 1 second	Factory Reset Mode Possible	Until button is released

* ZigBee is a wireless technology that is used for remote control and sensor applications. Zigbee is used for device-to-device communication, such as Rinnai's recirculation accessories and Control-R™ Wi-Fi Module.

Troubleshooting

Symptom	Solution
LED on Rinnai module does not turn on.	<ul style="list-style-type: none"> • Ensure the module is properly connected to the “Terminals for Control” on the PC Board. • Ensure power is supplied to the water heater.
Rinnai App cannot detect Local Area Network (LAN) Wi-Fi signal.	<ul style="list-style-type: none"> • Ensure the Local Area Network (LAN) Wi-Fi meets the requirements of the module. • Ensure Wi-Fi router is powered and properly functioning. • Ensure Local Area Network (LAN) Wi-Fi is functioning. • Ensure module is installed in a location with strong signal strength.
Local Area Network (LAN) Wi-Fi signal is detected but the Rinnai App cannot connect.	<ul style="list-style-type: none"> • Ensure correct Local Area Network (LAN) Wi-Fi password has been entered (if required). • Press “Cancel” in the Rinnai App and repeat the setup process starting from pairing the module with the Rinnai App.
Rinnai module is paired and connected (LED is blinking blue) to Local Area Network (LAN) Wi-Fi but registration is interrupted.	Return to the “Add Device” screen. Press the “Connect” button on the module and then press the “Register” button in the Rinnai App.

- For further information concerning the Wi-Fi router, please contact the router manufacturer.
- For further information regarding internet service, please contact the Internet Service Provider (ISP).
- For all other questions, contact Rinnai Customer Care at 1-800-621-9419.

A tradition of **TRUE RELIABILITY.**

For nearly 100 years, we at Rinnai have been fiercely committed to delivering nothing less than a superior experience at every touch point.

Beyond manufacturing the highest quality products, our people stand behind all that we make—before, during and long after installation. From the 24/7/365 technical support for professionals, to our national network of independent installers, to on-staff engineers who can assist with choosing the right products and sizes—we're inspiring confidence right along with the comfort our solutions provide.



Rinnai®

Learn more about Rinnai high-performance Tankless Water Heaters,
Hybrid Water Heating Systems, Boilers, Vent-Free Fan Convectors
and EnergySaver® Direct Vent Wall Furnaces at:

rinnai.us

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