

# Connect a CTA-2045 Module to a Water Heater

For Ariston and American Standard Water Heaters

Follow this step-by-step guide to connect your Ariston or American Standard water heater to WatterSaver. If you have questions or need additional support, please contact [support@watter-saver.com](mailto:support@watter-saver.com).

## How to set up the CTA-2045/EcoPort™ Universal Communication Module (UCM) for WatterSaver participation

### Step One: Gather Required Equipment

The UCM set up requires:

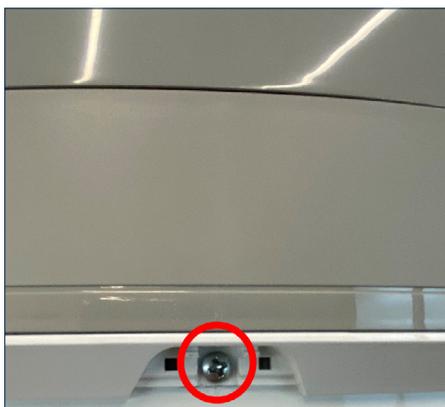
1. Compatible Ariston or American Standard water heater
2. CTA-2045 port/EcoPort™
3. e-Radio UCM — provided
4. Screwdrivers (Phillips and flathead)

### Step Two: Turn Off Power to Your Water Heater

**WARNING:** Before continuing with UCM connection, turn off power to your water heater at the circuit breaker or fuse box by flipping the breaker supplying power to your water heater to the OFF position or by removing the fuse.

**WARNING!** WORKING ON AN ENERGIZED CIRCUIT CAN RESULT IN SEVERE INJURY OR DEATH FROM ELECTRICAL SHOCK. TURN POWER OFF BEFORE PERFORMING THIS INSTALLATION. CHECK WIRE WITH A NON-CONTACT CIRCUIT TESTER TO MAKE SURE POWER IS OFF.

### Step Three: Expose the Faceplate and Remove the CTA-2045/EcoPort™ Port Cover



1. Use a flat-head screwdriver to remove the plastic cover on the bottom edge of the faceplate.
2. Use a Phillips head screwdriver to remove the faceplate screw.



**3.** Lift up and out to remove the faceplate.



**4.** The EcoPort cover is now exposed. Remove the 4 screws using a Phillips head screwdriver in the corners of the plate to remove the plate.



**5.** Remove the plate to expose the EcoPort. The EcoPort will be exposed and have several prongs in two columns on the left, two screw holes in the middle, and a square shaped indent on the right.



**6.** Put the faceplate back on, install the screw, and install the small plastic cover.

## Step Four: Install the UCM

**1.** Plug the UCM into the CTA-2045/EcoPort™ port receiver socket by aligning the UCM connectors with the connectors of the CTA-2045/EcoPort™. Gently push in the UCM until the bottom face of the UCM touches the flat face of the receiver.

**2.** In most cases, the screw sockets on the UCM will align with the screw sockets on the CTA-2045/EcoPort™. If this is the case, use the screws to secure the UCM to the receiver.

**3.** Attach the black LTE antenna to the small metal threaded connector on the side of the UCM by twisting it on until just finger tight. Make sure it is straight.

**4.** Point the LTE antenna up and away from the water heater. Based on your water heater configuration you may need to bend the antenna up or rotate it away from the water heater. Be careful when doing so.



e-Radio without antenna



e-Radio with antenna

\*The black plastic antenna is an LTE cellular antenna and will be used for communications between WatterSaver and your water heater. The small black wire is an FM antenna. This is not necessary to participate in WatterSaver, so you can leave the black wire curled up.

## Step Five: Turn the Power Back On and Confirm UCM Operation

Turn on the power to your water heater at the circuit breaker or fuse box by flipping the breaker supplying power to your water heater to the ON position or by replacing the fuse. After plugging in the UCM, it should be automatically enabled.

After installation, the UCM LED indicator light should turn on and be green when the power is turned on. After about 20 seconds, it will start flashing blue while connecting to the cellular network. After about 30 seconds, the LED should stop flashing and remain blue. The UCM is now successfully connected to the cellular network and transmitting and receiving data. If the UCM LED is not solid blue, try the troubleshooting steps below.

### Troubleshooting UCM Error Codes

1. Blue flashing means there is a cellular connection issue.
  - a. Two blue flashes, then a five second delay: cellular network is congested. This should resolve automatically within 1-2 minutes.
  - b. More than 1 minute: Verify that the CTA-2045 UCM is firmly pushed in to the port. Try uninstalling and re-installing the UCM (Step Five) to confirm this. Shut off power to the water heater before proceeding with Step Four.
  - c. Four blue flashes, then a five second delay: internal SIM card not detected. Contact WatterSaver to exchange the UCM.
  - d. Five blue flashes, then a five second delay: connected to cellular network but not getting responses. This should resolve automatically within 1-2 minutes.
  - e. Six blue flashes, then a five second delay: module has been rejected from cellular network. At the circuit breaker or fuse box, shut off the power to your water heater for about five minutes, then turn the power back on. This should solve the issue.
2. Red flashing means there is a communication issue with the water heater.
  - a. Less than 1 minute: temporary communication error.
  - b. More than 1 minute: Verify that the CTA-2045 UCM is firmly pushed in to the port. Try uninstalling and re-installing the UCM (Step Four) to confirm this. Shut off power to the water heater before proceeding with Step Four.

## Step Six: Activate the Demand Response (DR) Program Feature on the Water Heater



1. Once the water heater is on and displaying the main screen, hold the "MENU" button until P222 shows on the display.

2. Using the "+" button, navigate to P234 and click the "SET" button on the control screen to enter the installer menu.



3. Using the "+" button, navigate to P37 "DR SET" and click the "SET" button on the control screen.

4. Use the "+" button on the control screen to navigate to DR SET "ON" and press "SET" on the control screen a second time.



5. Use the "MODE" button to return to the home screen and a new "DR" icon should illuminate in the lower right corner.

## Step Seven (optional): Enabling Advanced Load Up (ALU)

Follow this step only if a Thermostatic Mixing Valve is present on your installation.

1. Follow Steps 1-2 as described in Step Six "Activate the Demand Response (DR) Program Feature on the Water Heater" to navigate to P234 and click the "SET" button.
2. Using the "+" button, navigate to P38 "MXVALVE" and click the "SET" button on the control screen
3. Use the "+" buttons on the control screen to navigate to MXVALVE "ON" and press "SET" on the control screen a second time.
4. Use the "MODE" button to return to the home screen and ensure the "DR" icon is illuminated in the corner, as shown in Step 5 of the previous section.

## Step Eight: Connect Your Water Heater to WatterSaver

1. Please email [support@watter-saver.com](mailto:support@watter-saver.com) to let the support team know that your UCM is installed and that you are ready to participate in WatterSaver.

