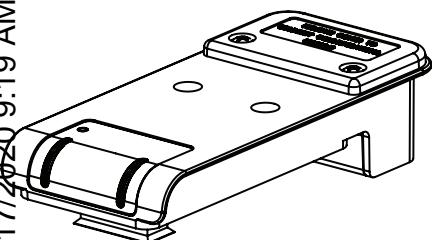


## CTA 2045 Communication Port Adapter



100265892

For select electric models

## INSTALLATION AND SETUP

### 1 GET TO KNOW YOUR COMMUNICATION PORT ADAPTER.

Your new Port Adapter acts as a translator between your water heater and your electric utility's control module. This makes it possible to participate in your utility's energy management program.

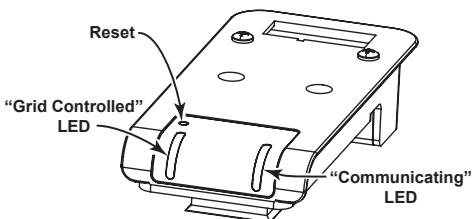


Figure 1.

- Reset:** To reset the Port Adapter, press the reset button with a paper clip and hold it down for 10 to 15 seconds.
- "Grid Controlled" LED:** Lights up when the utility sends a request and the Port Adapter accepts it.
- "Communicating" LED:** Lights up when the water heater is connected to the Grid.

### 2

### REVIEW THE REQUIREMENTS.

To get started, you will need:

- A CTA 2045 Universal Control Module (UCM) which is compatible with your electric utility company.
- One of the following water heater models: FPHT 50; PXNT 50.
- One #2 Phillips screwdriver.

Read and follow all of the instructions, cautions, and warnings in your water heater's use and care guide.

**WARNING!** Even if the water heater's temperature control is set to a relatively low temperature, hot water can scald. Install thermostatic mixing valves at each point-of-use to reduce the risk of scalding.

### 3

### INSTALL THE PORT ADAPTER AND/OR THE UNIVERSAL CONTROL MODULE (UCM).

**WARNING!** Working on an energized circuit can result in severe injury or death from electrical shock. Turn power off before performing this installation. Check wires with a non-contact circuit tester to make sure power is off.

**Step 1:** Turn power off at the source (circuit breaker or fuse box).

If the port adapter is already installed, skip steps 2-4 and go to Step 5.

#### IF YOU HAVE AN ELECTRIC MODEL:

**Step 2:**

Remove access cover.  
Discard screws.  
Longer screws provided.  
After removal, go to step 3.

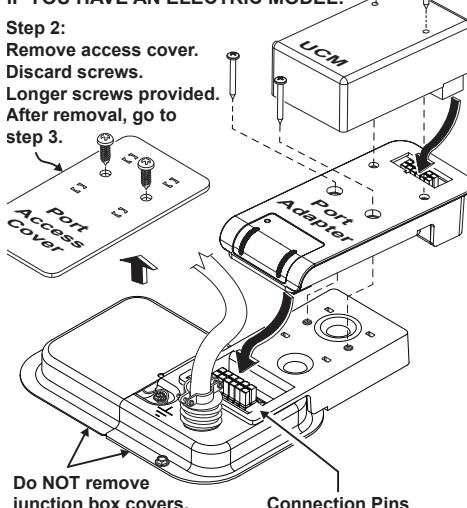


Figure 2.

**WARNING!** Do not turn power on unless screws are installed as described in steps 4 and 7. Screws must be installed to prevent equipment damage.

#### IF YOU HAVE A HEAT PUMP MODEL:

**Step 2:**

Remove access cover. Discard screws. Longer screws provided. After removal, go to Step 3.

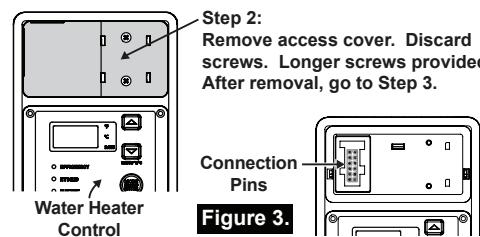


Figure 3.

**Step 3:** Plug the port adapter into the water heater at its connection pins. See Figure 2 or Figure 3.

**Step 4:** Secure the port adapter with the new screws (2). The new screws are provided. See Figure 2.

**Step 5:** While holding the port adapter firmly, remove the receptacle cover. This cover is labelled as follows: REMOVE COVER TO CONNECT COMMUNICATIONS MODULE.

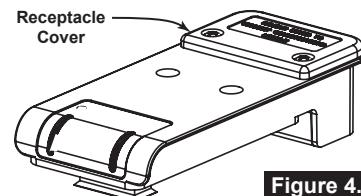


Figure 4.

**Step 6:** Plug the UCM into the port adapter. See Figure 2. Also, refer to your UCM user manual for any additional instructions.

*NOTE: The size and shape of your UCM may vary from what is shown in Figure 2.*

**Step 7:** Secure the UCM to the port adapter with screws (2). Screws are provided with the UCM. See Figure 2.

**Step 8:** Turn the water heater's power back on according to its use and care guide.

**Step 9:** Watch the water heater's display screen for the Grid icon to appear (Figure 5). This may take a minute or so after power has been turned on.

**Step 10:** Activate the screen by touching any button, then releasing it.

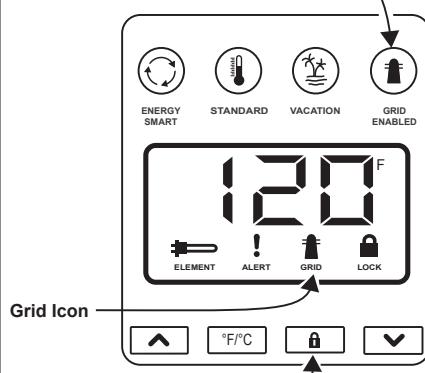
**Step 11:** If the screen is locked, touch and hold the Lock button for at least 5 seconds. The Lock icon will disappear from the screen. This indicates that the control buttons have been unlocked. See Figure 5.

**Step 12:** Touch the Grid Enabled button. See Figure 5. The Grid Enabled button must be lit before you can participate in your utility's energy management program.

Figure 5.

Water Heater User Interface  
(located on the front of your electric water heater)

Grid Enabled Button  
(Activates or deactivates your utility company's grid commands)



*NOTE: The appearance of the screen and icons may vary.*

## PARTICIPATION IN YOUR ELECTRIC UTILITY'S ENERGY MANAGEMENT PROGRAM

The CTA 2045 port adapter and UCM enable your water heater to be informed of power grid conditions and to respond intelligently. If these modules are installed and your water heater's Grid Enabled feature is turned on, your water heater is ready to help support the power grid.

Your utility's energy management program may collectively optimize power use for consumers during peak demand. The result is a more efficient and reliable system. This also helps maintain lower electricity rates.

- To participate in the energy management program, ensure that the Grid Enabled button is lit.

To temporarily disconnect your water heater from the energy management program, ensure that the Grid Enabled button is not lit.

Follow these steps to enable or disable participation in the energy management program:

Step 1: Activate the screen by touching any button, then releasing it.

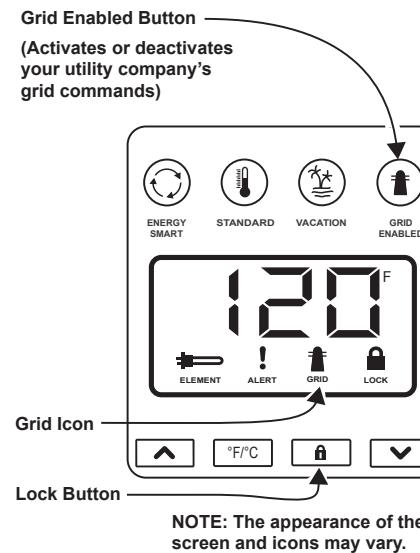
Step 2: If the screen is locked, touch and hold the Lock button for at least 5 seconds. The Lock icon will disappear from the screen. This indicates that the control buttons have been unlocked. See Figure 5.

Step 3: Touch the Grid Enabled button (top right). See Figure 5. Each time you touch the button, it will light up or turn off.

- If the Grid Enabled button is lit, your water heater will accept and execute commands from your electric utility.
- If the Grid Enabled button is not lit, your water heater will not accept commands from your electric utility. In other words, participation in the energy management program has been disabled temporarily.

**NOTE:** If you turn off the Grid Enabled button (so that it is not lit), it will re-enable automatically in 24 hours.

**Figure 5.**



## REGULATORY NOTICES

### FCC (United States)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, (2) This device must accept any interference received including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician.

**CAUTION:** Changes or modifications to this equipment not expressly approved by the party responsible for compliance (A.O. Smith Corporation) could void the user's authority to operate the equipment.

### ICES-003 (Canada)

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.