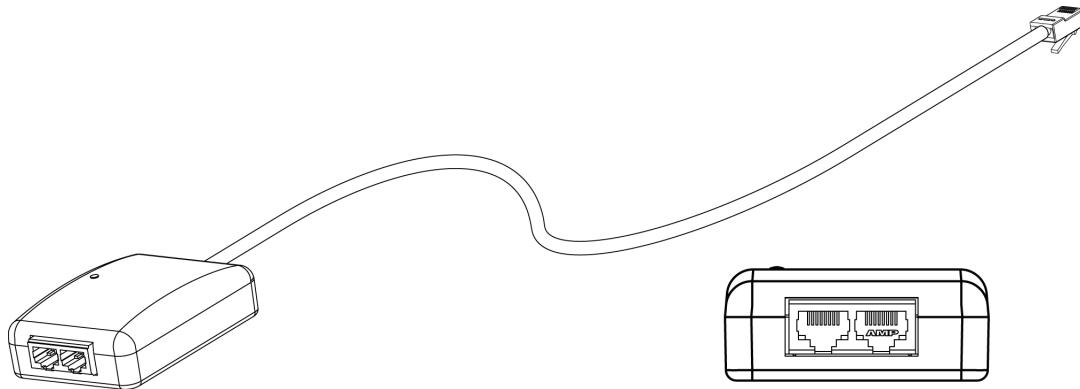




MDA - Multiple Device Adapter Installation Instructions



Documentation Notice: This document contains installation instructions for the MDA (multiple device adapter) which is an accessory component of the iCOMM™ remote monitoring system for select water heating appliances. Ensure you have the iCOMM™ Instruction Manual (part number 315983-000 or 315985-000) on hand before you begin the installation. If you do not have a copy of this manual call 888 928-3702 to obtain a copy.

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MULTIPLE APPLIANCE NETWORKS

Multiple Appliance Networks are formed by connecting network cables (Cat 5) between two or more water heating appliances and the iCOMM™ system's CM (communication module) in a "daisy chain" configuration - see page Figure 9 on page 8. Single Appliance Networks do not require MDAs and are covered in this instruction - see the iCOMM™ Instruction Manuals mentioned above for information on Single Appliance Networks.

Multiple Device Adapters - MDAs

"Tank type" water heaters in a Multiple Appliance Network require that a MDA is installed between the water heater and the network - see pages 7 & 8. MDAs have two female RJ45 sockets and a network cable with a male RJ45 plug. There is a small green LED light on the top that verifies power from the CM is present at the MDA - see Figure 1.

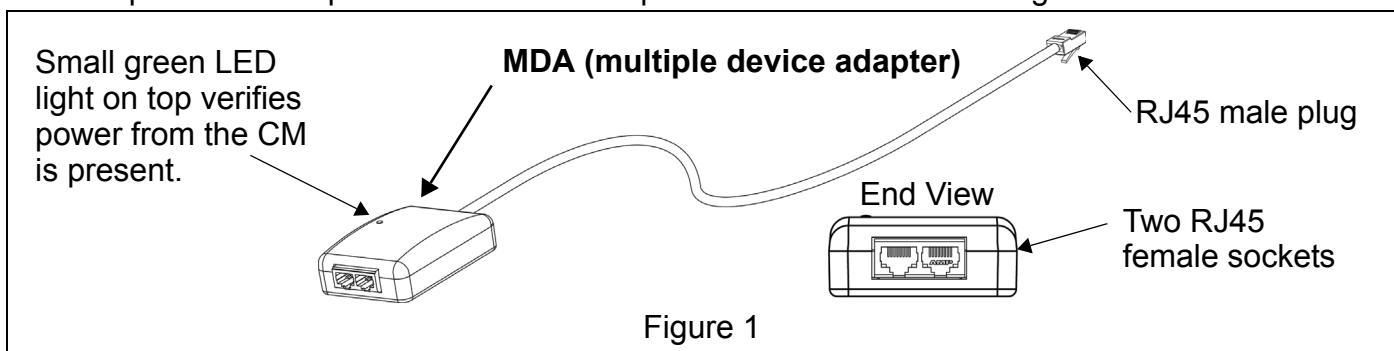


Figure 1

MDAs are sold separately as a kit. One MDA kit must be ordered for each tank type water heater on a Multiple Device Network. Each MDA kit comes with the items listed in Table 1. Ensure all these parts are present before you begin the installation.

TABLE 1

Item	Quantity	Description
1	1	MDA assembly
2	1	Splitter – T Adaptor (Category 5 cable splitter)
3	1	†Category 5 network cable (25 feet)
4	2	Adhesive Velcro strips
5	5	Wire tie mounts 3/4" (adhesive/screw mount)
6	5	Wire tie wraps
7	1	Universal Knockout Bushing (for commercial electric tank type water heaters only)

†. Longer cables can be obtained from local computer stores/home centers or fabricated if needed.

Multiple Appliance Network Guidelines

- 1 If more than one water heating appliance will be connected to the network the “MULTI PORT” socket on the CM (communication module) must be used to connect the first appliance. See Figure 2 and Figure 9 on page 8.
- 2 Each tank type water heater on a Multiple Appliance Network must have a MDA (multiple device adapter) installed. See Figure 1 on page 1, Figure 7 on page 7 and Figure 8 on page 7. MDAs are ordered separately. One MDA kit should be ordered for every tank type water heater being connected to a Multiple Appliance Network.
- 3 Multiple Appliance Networks can have a maximum of 7 tank type water heaters connected to a single CM - see Figure 9 on page 8. If more than 7 tank type water heaters are present additional CMs must be installed.

Routing Network Cable To CM

- 1 Starting at the first water heater on the network route the included Cat 5 network cable (see Table 1 on page 1) back to the CM (communication module - see Figure 10 on page 9). Ensure the cable end at the water heater has approximately 24 inches of slack at the top of the water heater for internal connections. If the included network cable is not long enough to reach between the CM and the first water heater on the network longer Cat 5 cables are available at local home centers or can be fabricated in the field.
- 2 Secure the network cable to walls or other suitable structures to ensure proper strain relief using the included wire tie wraps and 3/4" square adhesive wire tie mounts - see Table 1 on page 6. Use wall anchors and screws (not supplied) to further secure the wire tie mounts to the surface of walls. Additional wall anchors, wire ties and mounts are available at local home centers if needed.
- 3 Plug the network cable from the first water heater on the network into the “Multi Port” on the front edge of the CM - see Figure 10 on page 9 and Figure 2 below.
- 4 Coil excess network cable by the CM using a wire tie wrap and mount.
- 5 Proceed to Gas Water Heater Connections on page 3 to connect gas fired water heaters to the network.
- 6 Proceed to Electric Water Heater Connections on page 4 to connect electric water heaters to the network.

CM (communication module)

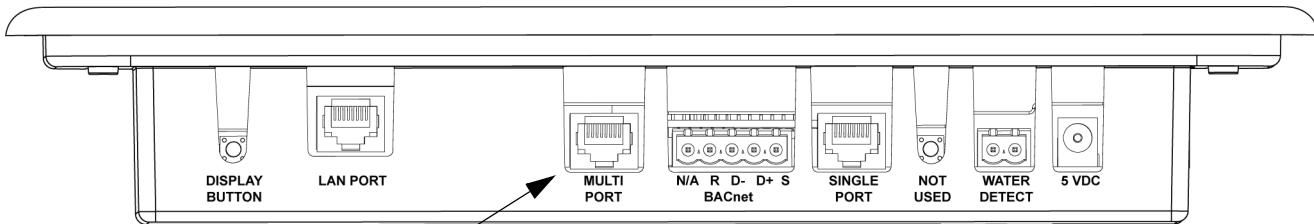
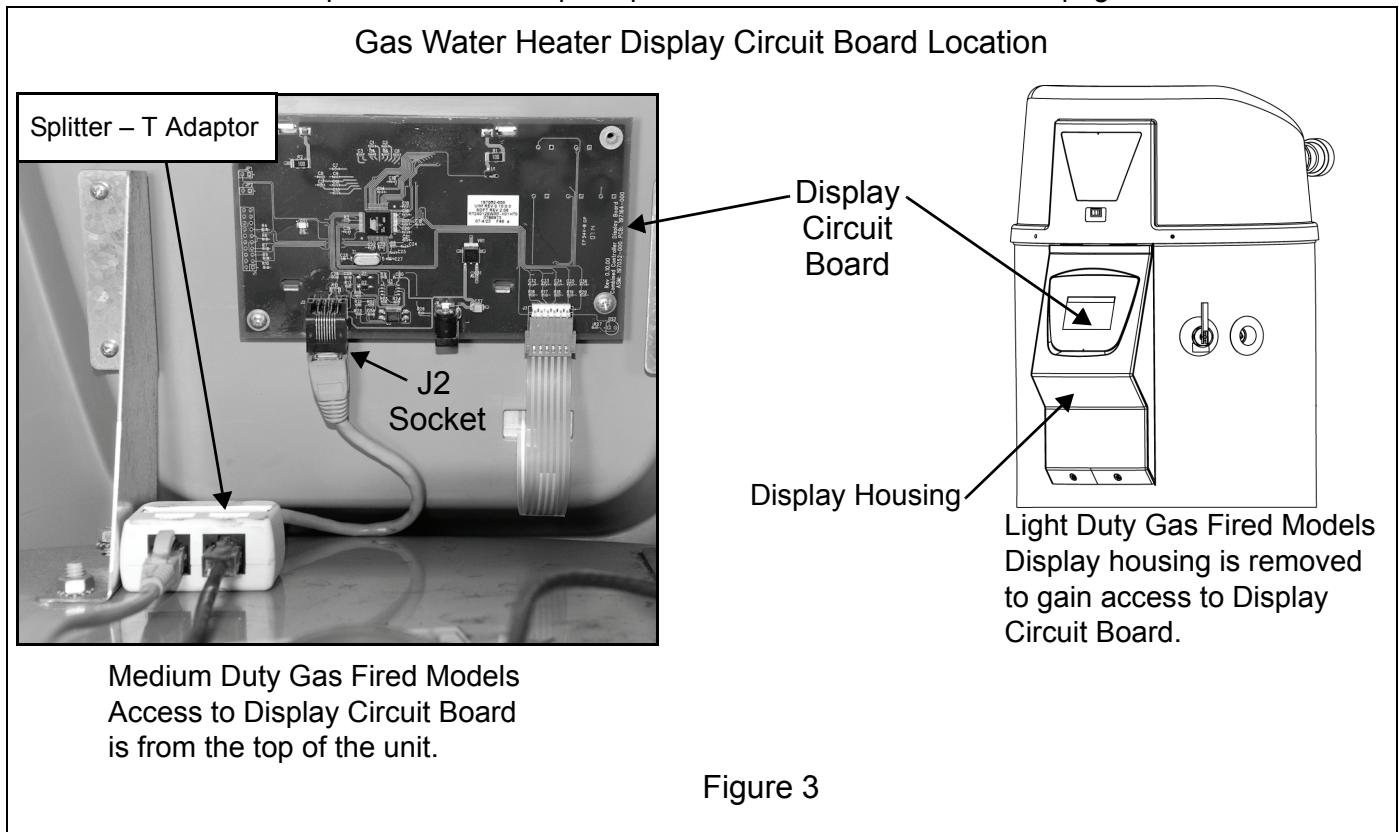


Figure 2

Gas Water Heater Connections

The MDA cable connection on gas fired tank type water heaters will be made using a Splitter – T Adaptor - see Table 1 on page 1.

- 1 Secure power to the water heater at the on/off switch on the appliance.
- 2 Disconnect the internal network cable at the J2 socket on the back of the display circuit board. This cable comes from the water heater's CCB (central control board) located inside the gray plastic enclosure on top of the water heater - see Figure 6 on page 6. Access to the display circuit board on Medium Duty models is from the top of the water heater. On Light Duty models the display housing is removed to access the display circuit board - see Figure 3.
- 3 Plug the cable end of the Splitter – T Adaptor into the J2 socket on the display circuit board.
- 4 Plug the internal cable removed from the display circuit board (Step 2 above) into one of the two female sockets on the Splitter – T Adaptor. This will leave one socket on the Splitter - T Adapter open for the MDA connection - see Figure 7 on page 7.
- 5 Mount the Splitter – T Adaptor away from hot surfaces and potential water leak points with included Velcro strips or wire ties - see Table 1 on page 1. On Light Duty models mount the splitter inside the Display Housing.
- 6 When the Steps above are complete proceed to MDA Connections on page 6.



Electric Water Heater Connections

The MDA cable connection on electric tank type water heaters will be made directly to the J9 socket on the water heater's CCB (central control board) - see Figure 4.

- 1 Secure power to the water heater at the main disconnect switch or breaker.
- 2 Open the control cabinet and locate the CCB (central control board). On custom electric models the CCB is mounted on the hinged cabinet door. On standard electric models the CCB is mounted on the upper left portion of the control panel - see Figure 5 on page 5.
- 3 On custom electric models remove one of the 1/2" knockout plugs on the left side of the control cabinet that is at approximately the same height as the CCB. Install a Knockout Bushing (Table 1 on page 1) in the knockout hole - see Figure 5 on page 5.
- 4 On standard electric models that have a factory provided 1/2" knockout (left side of the top plate of the control cabinet) remove the knockout plug. Install a Knockout Bushing (Table 1 on page 1) in the knockout hole - see Figure 5 on page 5.
- 5 On standard electric models that do not have a factory provided 1/2" knockout use a portable drill and a 1/2" electrical knockout punch/die to add a knockout hole on the top plate of the control cabinet. Locate the knockout hole as shown in Figure 5 on page 5. Take steps to ensure metal shavings do not fall into any electrical components such as the CCB, contactors or fuse blocks when cutting the knockout hole. After the knockout hole has been added to the top plate of the control cabinet install a Knockout Bushing (Table 1 on page 1) in the knockout hole.
- 6 When the Steps above are complete proceed to MDA Connections on page 6.

Commercial Electric CCB (central control board)

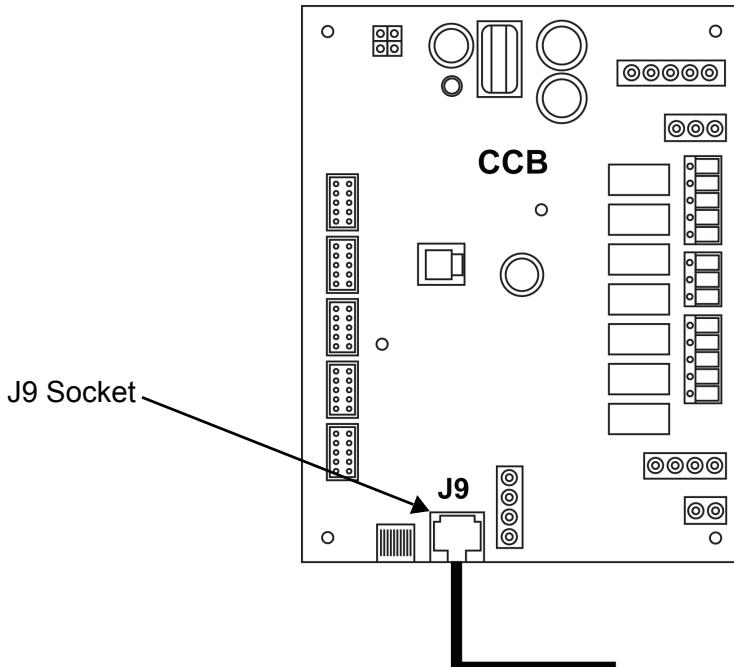
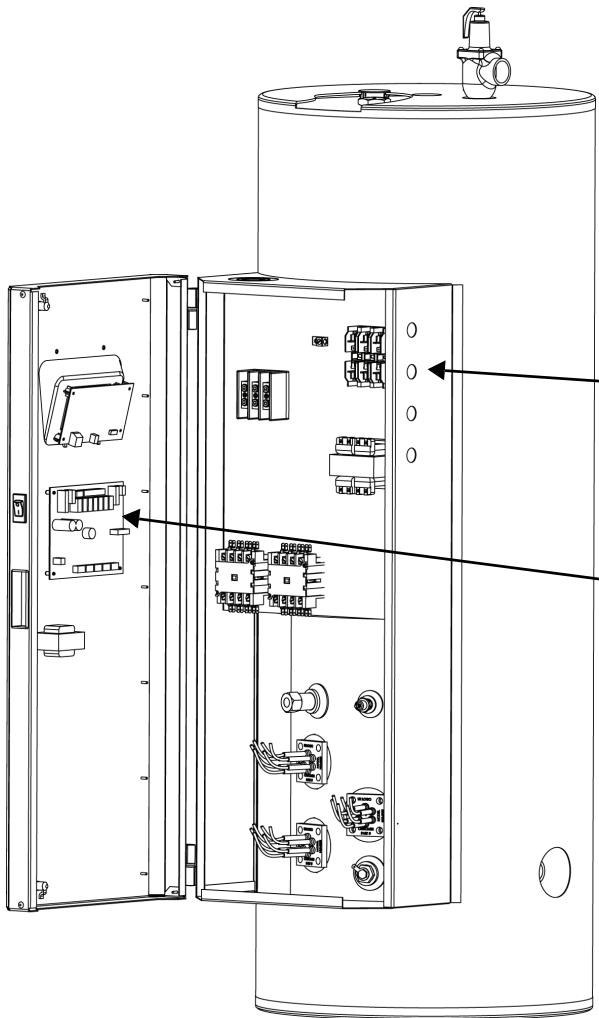


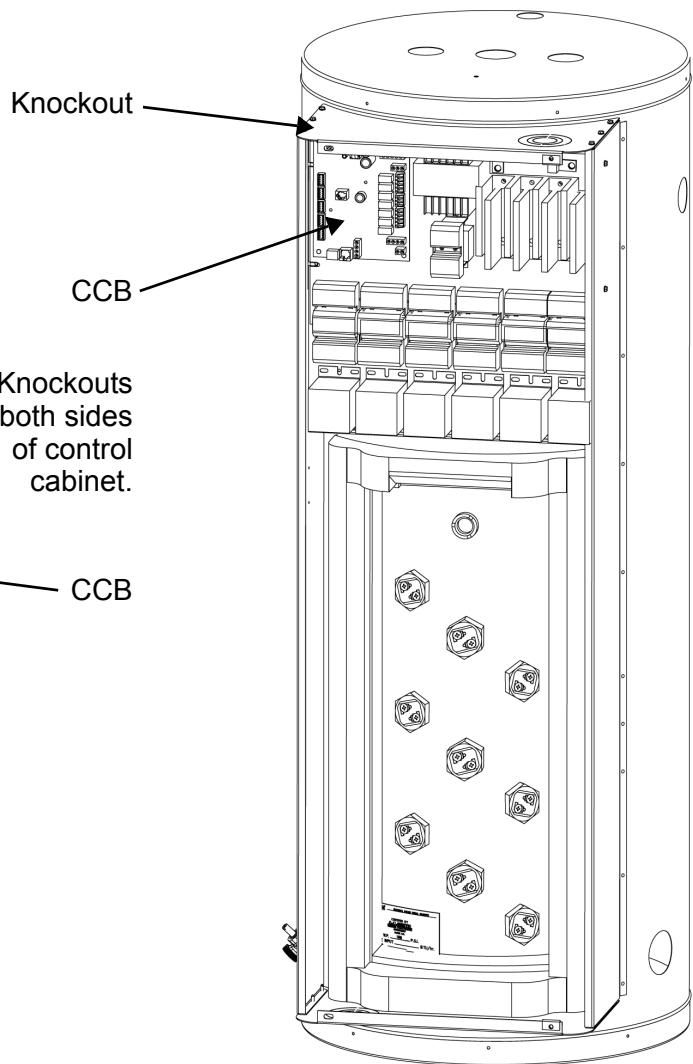
Figure 4

CCB (central control board) Location

Custom Electric Models (door open)



Standard Electric Models (door removed)



Standard Electric Models (top view)

1/2" Knockout Location
Approximately 1" to edge of hole
from front and left edge of top plate
Control Cabinet Top Plate

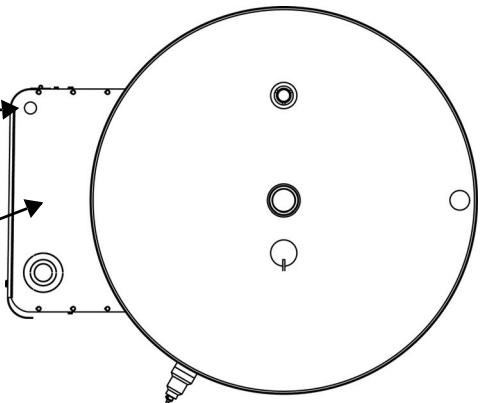


Figure 5

MDA Connections

- 1 Ensure power to all tank type water heaters is still turned off.
- 2 Locate J2 and J9 sockets for gas and electric water heaters as shown in Figure 3 on page 3 and Figure 5 on page 5.
- 3 Plan routing of network cables between water heaters before securing cables. Ensure cables are long enough. Each MDA kit contains one network cable for adding one tank type water heater to the network. Longer network cables can be obtained from local computer stores/home centers or fabricated at the job site.
- 4 On gas fired tank type water heaters route the cable end of each MDA to the Splitter - T Adapter installed earlier (page 3) and plug the MDA cable end into the remaining open socket on the Splitter - T Adapter. See Figure 3 on page 3 and Figure 7 on page 7. Secure MDAs with the supplied Velcro strips on top of the gray plastic circuit board enclosure - see Figure 6.
- 5 On electric water heaters route the cable end of each MDA through the knockout bushing installed earlier (page 4) and plug the MDA cable end into the J9 socket on the CCB - see Figure 8 on page 7. Secure MDAs with the supplied Velcro strips outside the control cabinet on the top or side of the cabinet - see Figure 5 on page 5.
- 6 Reinstall any circuit board splash shields or display housing(s) that may have been removed during installation on all water heaters.
- 7 Connect the network cable from the MULTI PORT on the CM to the remaining open slot on the MDA connected to the first water heater in the network - see Figure 9 on page 8.
- 8 Connect network cables between water heaters to the remaining open socket at each MDA to complete the network - see Figure 9 on page 8
- 9 Secure the network cables to walls or other suitable structures to ensure proper strain relief using the included wire tie wraps and 3/4" square adhesive wire tie mounts. Use field supplied wall anchors and screws to further secure the wire tie mounts to the surface of walls. Additional wall anchors, wire ties and mounts are available at local home centers if needed.
- 10 When all connections are complete proceed to the Start Up section in the iCOMM™ Instruction Manual. If you do not have a copy of this manual call 888 928-3702 to obtain a copy.

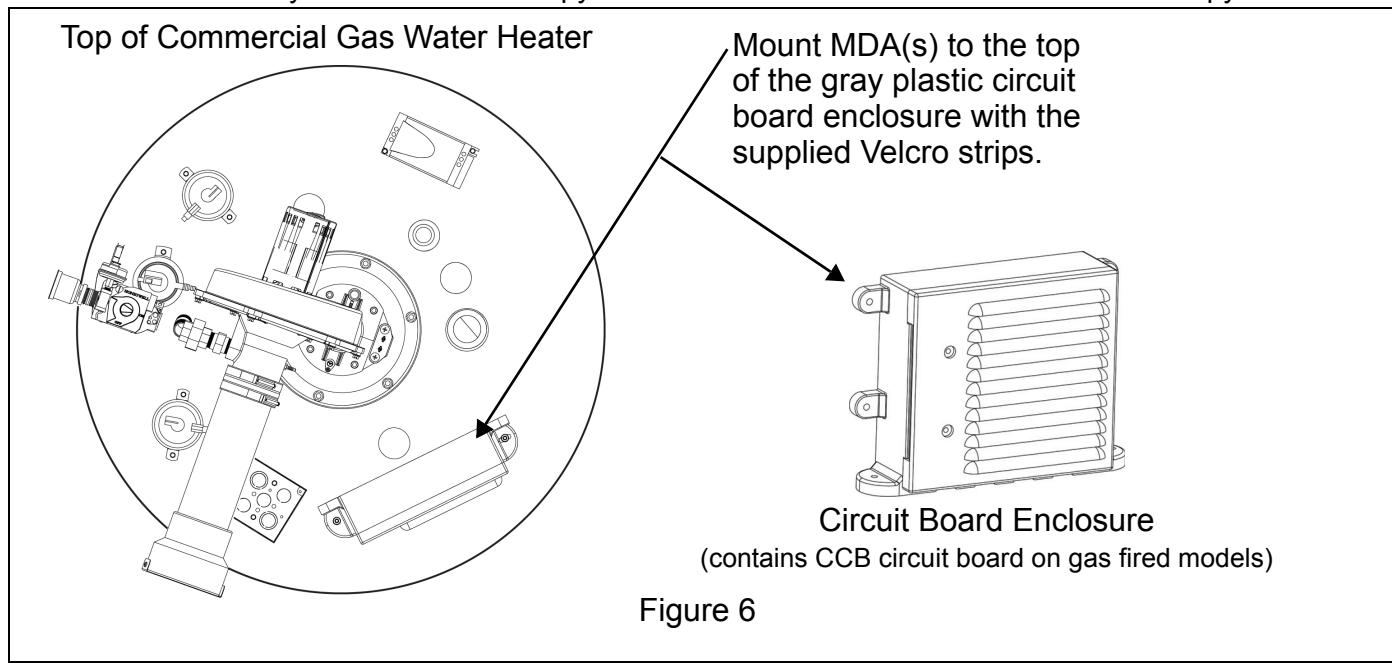
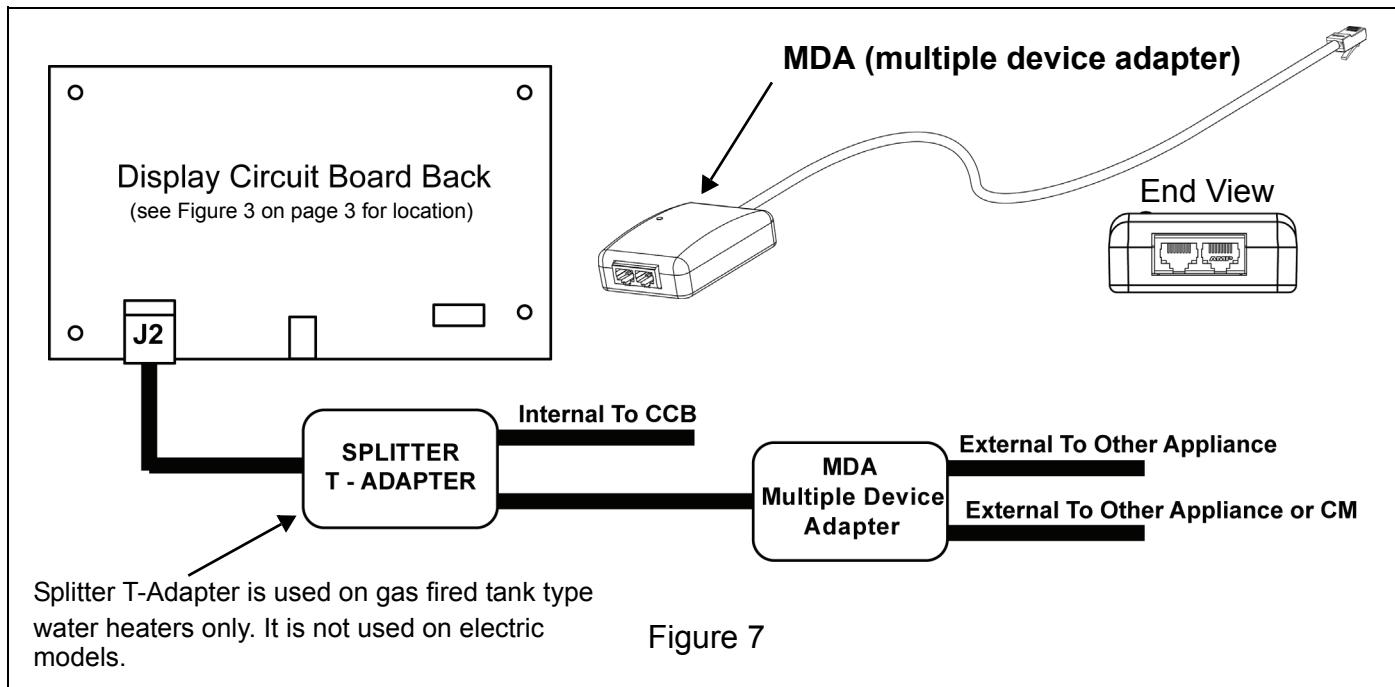
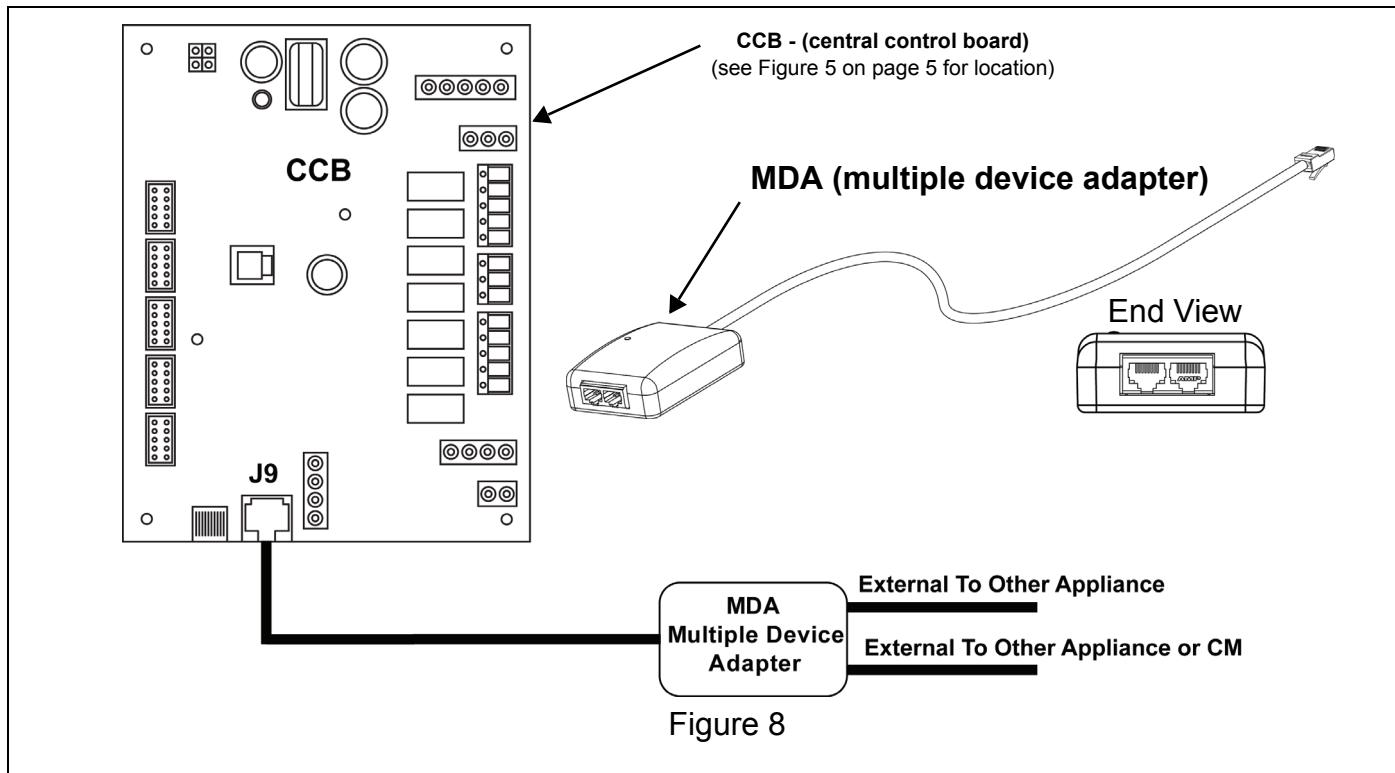


Figure 6

MDA Connections - Gas Fired Water Heaters

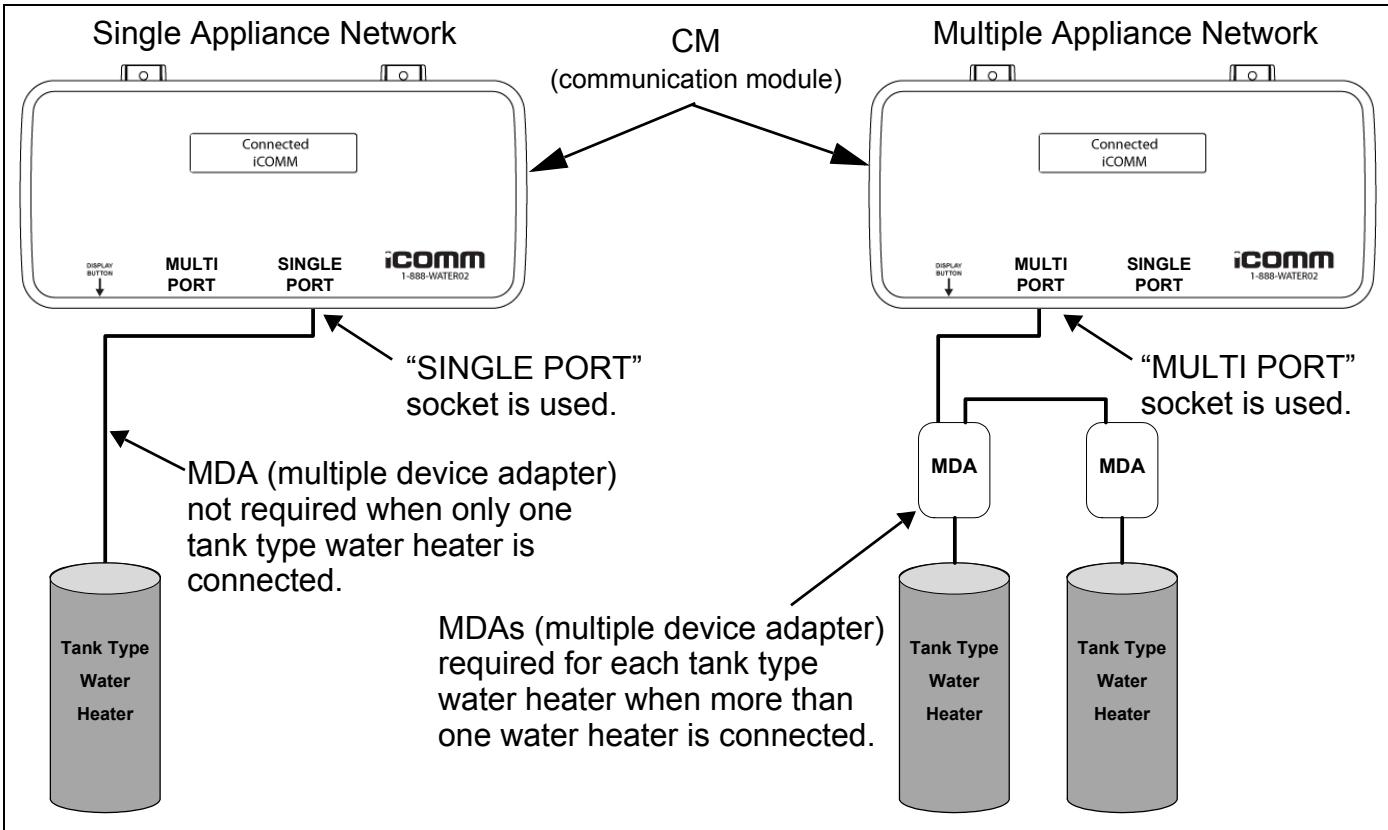


MDA Connections - Electric Water Heaters



MDA INSTALLATION INSTRUCTIONS

Water Heater Networks



7 Tank Type Water Heater Maximum on one CM

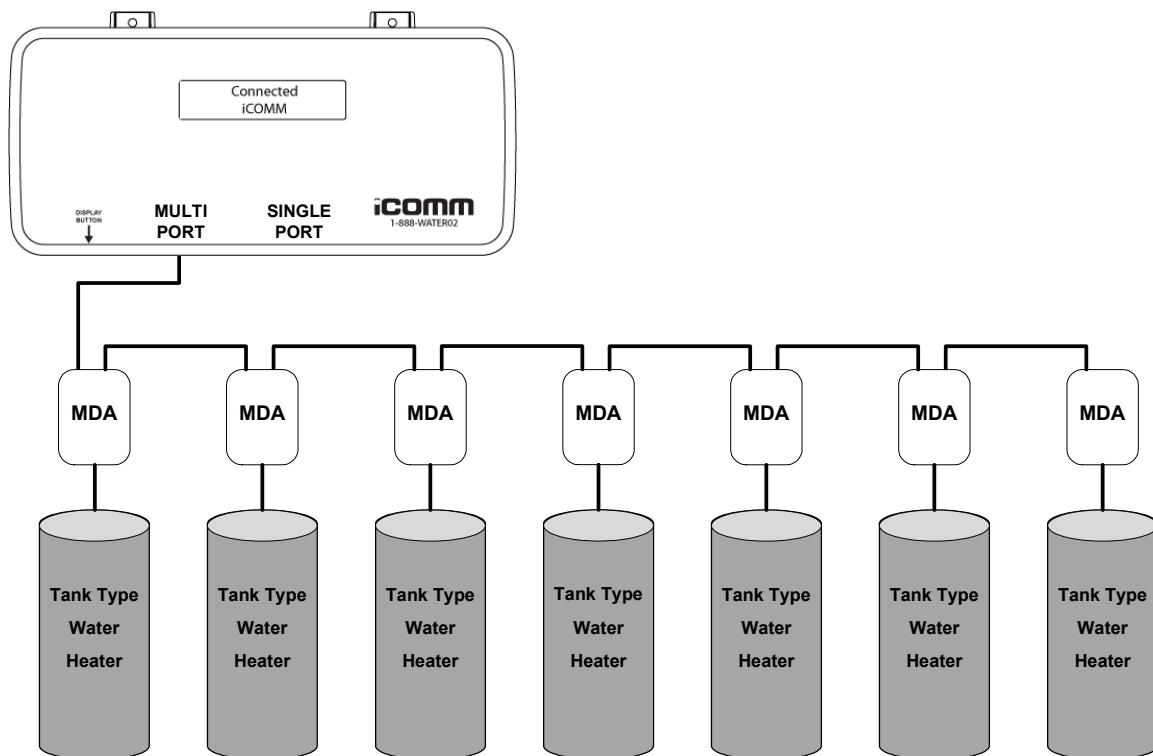


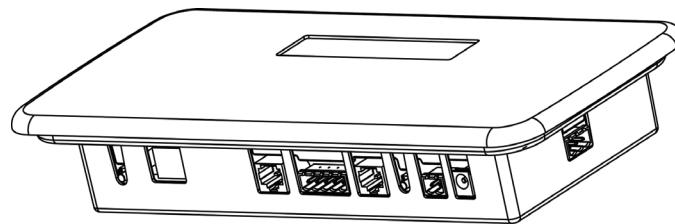
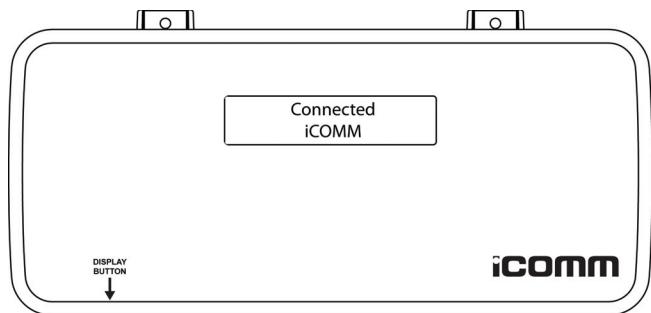
Figure 9

MDA INSTALLATION INSTRUCTIONS

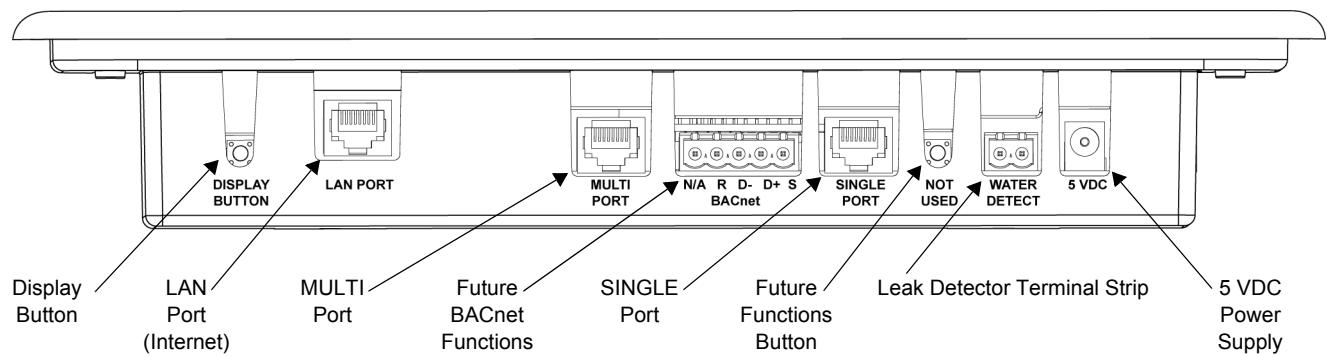
CM - Communication Module

iCOMM™ System CM (communication module)

Front View



Front Edge



Right Edge

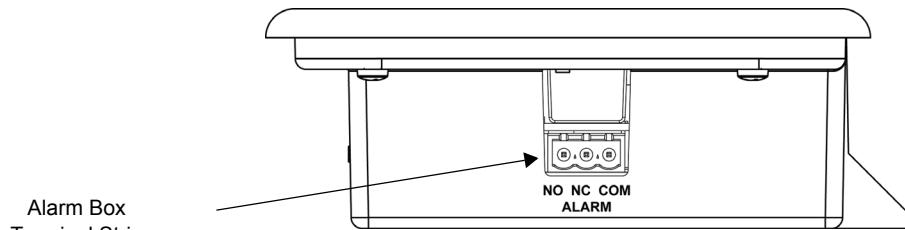


Figure 10

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