

Kit Part Number	Description	Model	
PARKIT101	Display Module Replacement	All Models	

Each Kit Includes:

- Display Module
- (6) Screws

Recommended Tools:

- Flathead Screwdriver
- Phillips Head Screwdriver



Indicates a potentially hazardous situation which, if ignored, can result in serious injury or substantial property damage.

NOTICE

Indicates special instructions on installation, operation or maintenance, which are important to equipment but not related to personal injury hazards.

For your safety, turn off electrical power supply at service panel and allow unit to cool before proceeding to avoid possible electrical shock and scald hazard. Failure to do so can cause severe personal injury or death.

Failure to follow instructions below can result in severe personal injury or damage if ignored.

- Instructions are for a qualified installer/ service technician only.
- Read all instructions before proceeding.
- Follow instructions in proper order.



1. Preliminary Instructions:

- 1. Verify that the Display Module replacement kit is correct for the model of boiler. See table on page 1.
- 2. Carefully open and unpack the PARTS BOX from its shipping carton.
- 3. Carefully remove and check for any damage.

NOTICE

Do not proceed with installation and contact Triangle Tube right away if the Display Module is damaged in any way.

- 4. Turn off the electrical power supply to the boiler.
- 5. Close the manual gas shut off valve to the unit.

2. Save Settings



Prior to replacing the control module and/or display module, it is important to access and document the boiler's settings. This will ensure any settings revised from factory defaults are transferred to the new module(s). Use Table 1 to record the existing settings. Do not revise any settings when recording settings.

1. To access the parameter screen, press the round installer button as shown in Fig. 1.

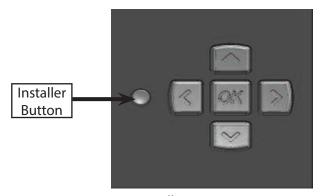


Fig. 1: Installer Button

2. Enter the installer access code "054" by using the LEFT and RIGHT buttons to select a digit and the **UP** and **DOWN** buttons to change the digit. Press the OK button to enter the access code.







3. Press the OK button while the CH & DHW Settings icon is highlighted.

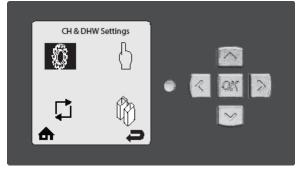


Fig. 3: CH & DHW Settings

4. Press the OK button while the CH Settings icon is highlighted.

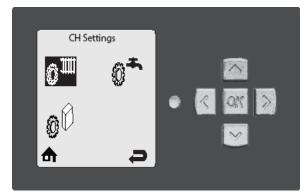


Fig. 4: CH Settings

5. Press the **UP** and **DOWN** buttons to scroll thru the various settings.



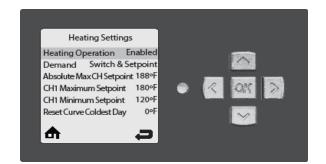


Fig. 5: Heating Settings

- 6. Record all CH Settings in Table 1. Once completed, press the **RIGHT** button to highlight the Previous Screen icon, then press the OK button.
- 7. Press the **RIGHT** button to highlight the DHW Settings icon then press the OK button.



Fig. 6: DHW Settings

 Press the UP and DOWN buttons to scroll thru the various settings and record all DHW Settings in Table 1. Once completed, press the RIGHT button to highlight the Previous Screen icon, then press the OK button.

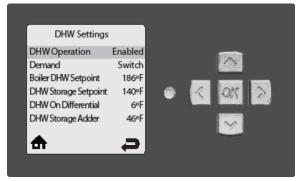


Fig. 7: DHW Settings

9. Press the **DOWN** button to highlight the Boiler Settings icon if present icon, then press the OK button.



10. Press the **UP** and **DOWN** buttons to scroll through the various settings and record all Boiler Settings in Table 1. Once completed, press the **RIGHT** button to highlight the Previous Screen icon, then press the OK button.

NOTICE

Perform the following steps if the Instinct is part of a Cascade System or the System Temperature Sensor is being used on a single Instinct.

- 11. Press the **RIGHT** then **DOWN** buttons to highlight the Previous Screen icon, then press the OK button.
- 12. Press the **RIGHT** then **DOWN** buttons to highlight the Cascade icon, then press the OK button.
- 13. Press the **RIGHT** button to highlight the Cascade Settings icon, then press the OK button.
- 14. Press the **UP** and **DOWN** buttons to scroll thru the various settings, and record all Cascade Settings in Table 1.

3. Remove Display Module

- 1. Turn the electrical power "OFF".
- 2. Remove the front jacket panel by removing the screws on the bottom of the panel. Pull the panel out and up to remove the panel. Do not discard these screws as they will be reused.
- 3. Pull the two retaining tabs on top of the display module case to remove the cover. The cover will open up.

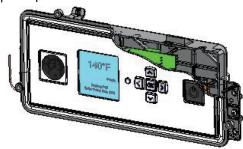


Fig. 8: Display Module

4. Remove the yellow molex connection from the back of the display module.



- 5. Remove all 6 screws hold the old display module in place.
- 6. Leave the rubber insert installed in the cover.
- 7. Remove the display module from the boiler.

4. Installation of Display Module

- 1. Place the new display module with the screen aligned in the cutout in the front cover, ensuring all of the tabs of the rubber insert fit in the appropriate cutout.
- 2. Screw all six screws to hold the display module in place.

NOTICE

Do not overtighten the screws as it may damage the display module.

- 3. Plug in the yellow molex connection into the back of the diaplay module.
- 4. Place the cover in place and lock both retaining tabs.
- 5. Remount the front jacket panel to the boiler.
- 6. Turn power to the unit "ON" and return the boiler to service.

5. Programming new Control Board

- 1. Follow the instructions in step 2 to gain access to the installer menu.
- 2. Go to boiler settings and click appliance setting, as seen in Fig. 9 and Fig. 10.

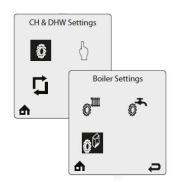


Fig. 9: Installer Menu



Boiler Settings				
Modbus Address	0=BCST			
Pump settings				
Ignition Level	3500rpm			
Mix zone high limit	114°F			
WP diff trigger	0pcsi			
Appliance setting				
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Fig. 10: Appliance setting

- 3. The required code is written on the data plate located at the side of the boiler. Use the code for the gas type, either Natural Gas or Propane.
- 4. Increase/decrease the value (from 0 to 9, then A to Z) using the UP or DOWN keys to, then change position with the LEFT or RIGHT keys.
- 5. Follow the instructions on the screen to enter the appliance code for your boiler.
- 6. The boiler will now be factory set for that particular model. Return to step 2 and enter settings recorded in Table 1 back into the controls to return the boiler to the customized settings of the old control.





Table 1: Controls Settings

HEATING SETTING	FACTORY DEFAULT	MINIMUM SETTING	MAXIMUM SETTING	EXISTING SETTING
Heating Operation	Enabled			
Demand Type	Thermostat & Outd. Curve			
Absolute Max CH Setpoint	185°F [85°C]	68°F [20°C]	188°F [87°C]	
CH1 Maximum Setpoint	180°F [82°C]	68°F [20°C]	188°F [87°C]	
CH1 Minimum Setpoint	80°F [27°C]	60°F [15°C]	188°F [87°C]	
Outdoor Curve Coldest Day	10°F [-12°C]	-30°F [-34°C]	50°F [10°C]	
Outdoor Curve Warmest Day	64°F [18°C]	60°F [15°C]	78°F [25°C]	
CH2 Circuit	Enabled			
CH2 Maximum Setpoint	140°F [60°C]	68°F [20°C]	194°F [90°C]	
CH2 Minimum Setpoint	80°F [27°C]	60°F [15°C]	190°F [88°C]	
Warm Weather Shutdown	Off	Off	78°F [25°C]	
Circulation Pump Permanent	Disabled			
CH Post Pump Time	5 Minutes	Off	20 Minutes	
Freeze Protection	Enabled			
Frost Protection Setpoint	-22°F [-30°C]	-22°F [-30°C]	50°F [10°C]	
Parallel Shift Value	0°F [0°C]	0°F [0°C]	144°F [80°C]	
CH Call Blocking	2 Minutes	0 Minutes	30 Minutes	

DOMESTIC SETTING	FACTORY DEFAULT	MINIMUM SETTING	MAXIMUM SETTING	EXISTING SETTING
DHW Operation	Enabled			
Demand Type	Thermostat			
DHW Boiler Setpoint	168°F [76°C]	96°F [35°C]	188°F [87°C]	
DHW Setpoint	140°F [60°C]	68°F [20°C]	186°F [86°C]	
DHW On Differential	6°F [3°C]	4°F [2°C]	18°F [10°C]	
DHW Storage Adder	28°F [15°C]	10°F [5°C]	54°F [30°C]	
DHW Post Pump Time	2 Minutes	Off	30 Minutes	
DHW Priority Timeout	Off	Off	120 Minutes	
DHW Priority	Enabled			
DHW Call Blocking	0 Minute	0 Minute	30 Minutes	
DHW to CH Call Blocking	1 Minute	0 Minute	30 Minutes	
Antilegionella Function	Disabled			





Table 1 Cont:				
BOILER SETTING	FACTORY DEFAULT	MINIMUM SETTING	MAXIMUM SETTING	EXISTING SETTING
Lockout Temp.	210°F [99°C]			
Modbus Address	0=BCST	0=BCST	247	
Flex. Relay 1(CH)	CH1			
Flex. Relay 2(DHW)	DHW			
Flex. Relay 3(P3)	CH1/CH2/DHW			
Flex. Relay 4(ERR)	ERROR			
Flex. Relay 5(Flame)	FLAME			
Flex. Relay 6(P4)	CH2			
Error Relay	On Lockout, Blocking and Warning			
Pump PWM Minimum	30%	1%	100%	
Ignition Level	Varies by model			
Mix Zone High Limit	114°F [45°C]	68°F [20°C]	176°F [80°C]	
Appliance Setting	Varies by model			

CASCADE SETTING	FACTORY DEFAULT	MINIMUM SETTING	MAXIMUM SETTING	EXISTING SETTING
Stage Delay	60 Seconds	0 Seconds	255 Seconds	
Minimum Firing Rate	18%	0%	100%	
Max. Firing Rate	Varies by model	0 MBH [0kW]	869 MBH [255kW]	
CH/DHW Boilers	0	0	6	
Auto. Rotation	Enabled			
CH Prop. Gain	7	1	255	
CH Integral Gain	245	1	255	
DHW Prop. Gain	7	1	255	
DHW Integral Gain	245	1	255	

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