

USB Connect

BLUETOOTH ADAPTOR

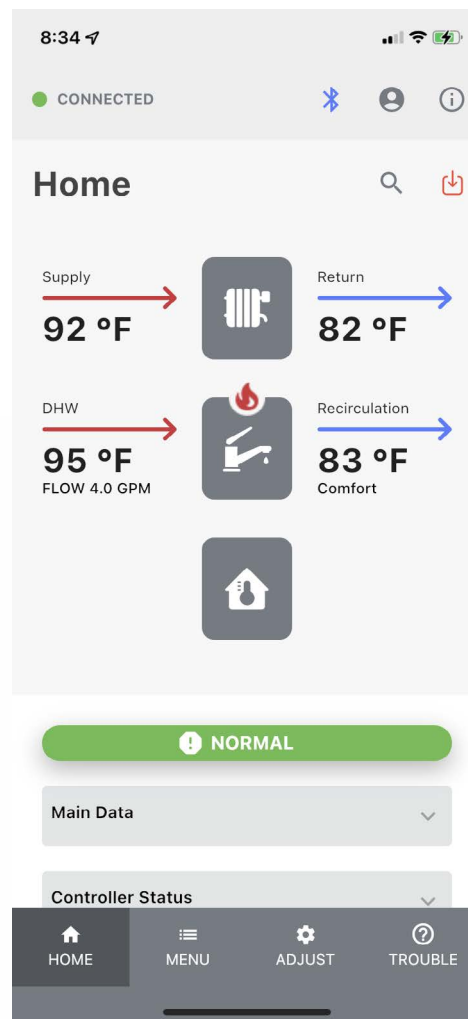
Instruction Manual

<u>Manual Contents</u>	<u>Page</u>
• Introduction.....	2
Getting Started.....	4
• App Download.....	4
• Connecting Bluetooth Adaptor.....	5
• App Connection.....	7
Monitoring.....	9
• On Site.....	9
• Remote Support.....	10
Commissioning/Setup.....	11
• Startup Wizard.....	11
• Adjust Menus.....	12
Troubleshooting.....	13
• Troubleshooting Wizard.....	13
• Alarm Menus.....	14
Service.....	15
• Service Wizard.....	15
Resources.....	16
• Manuals.....	16
Bluetooth Adaptor Update.....	17
Alta Control Updates.....	18
Appendix.....	19
• Specifications.....	19
• Repair Parts.....	22
• Troubleshooting Tips.....	23

DANGER

Before making any setting changes, installing or servicing this boiler, follow all instructions including DANGER, WARNING, CAUTION, and NOTICE hazard notifications found in boiler Installation, Operating and Service Instructions provided with boiler and available through USB Connect app.

NOTICE: Only use the Bluetooth Adaptor while on site. Never leave the Bluetooth Adaptor on site and connected to boiler.



Need help or have a question?
Contact Customer Support at (717) 397-4705

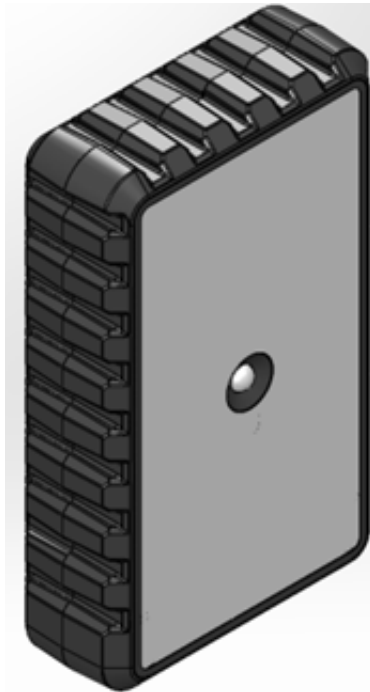
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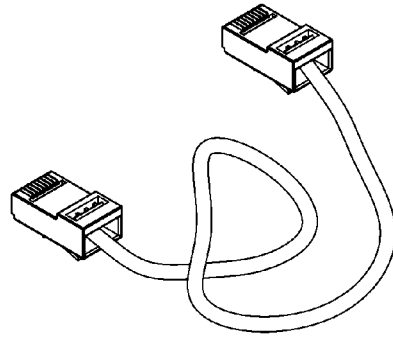
Introduction

USB-Connect is a commissioning, diagnostic and service tool consisting of a Bluetooth Adaptor and mobile device app. The app communicates with any U.S. Boiler condensing boiler. USB-Connect is a local service tool with portal data collection and live streaming to enable remote support.

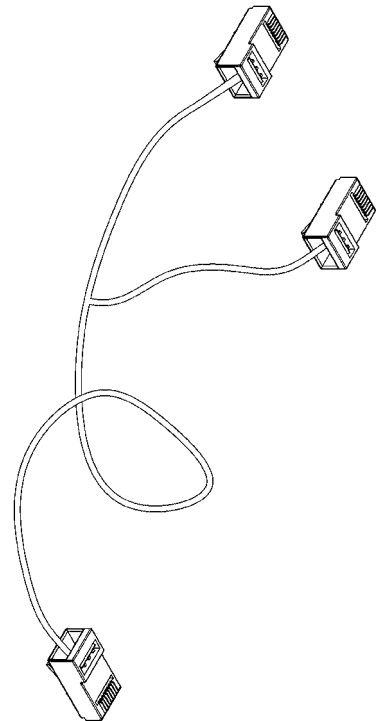
Included with the Bluetooth Adaptor:



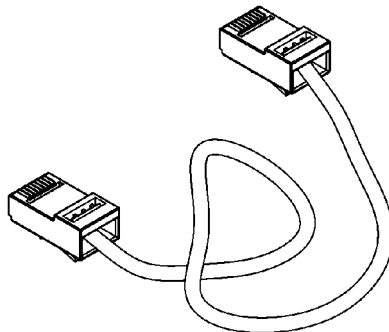
USB-Connect Bluetooth Adaptor



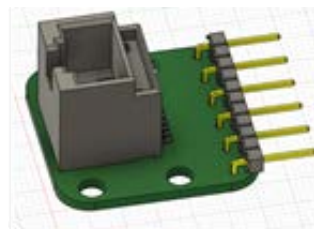
Cable 1,
RJ12 Straight Cable,
36-inch, Silver
For Alta Boiler



Cable 2,
RJ45 Split Cable,
24-inch, Black
For Sage Controller
Equipped Boiler



Cable 3,
RJ45 Straight Cable,
36-inch, Blue
For Direct Connection
to Sage Controller



111640-01,
Sage J3 Terminals to
RJ45 Interface Board,
For Direct Connection
to Sage Controller

Compatible Devices:

Apple device, an iPhone or iPad, running iOS version 13 or newer.

Android device, mobile phone or tablet, running Android version 10 or newer.

Compatible Boilers:

Alpine, Alta, AltaC, Aspen, AspenC, K2WT, K2WTC, K2FT, XC.

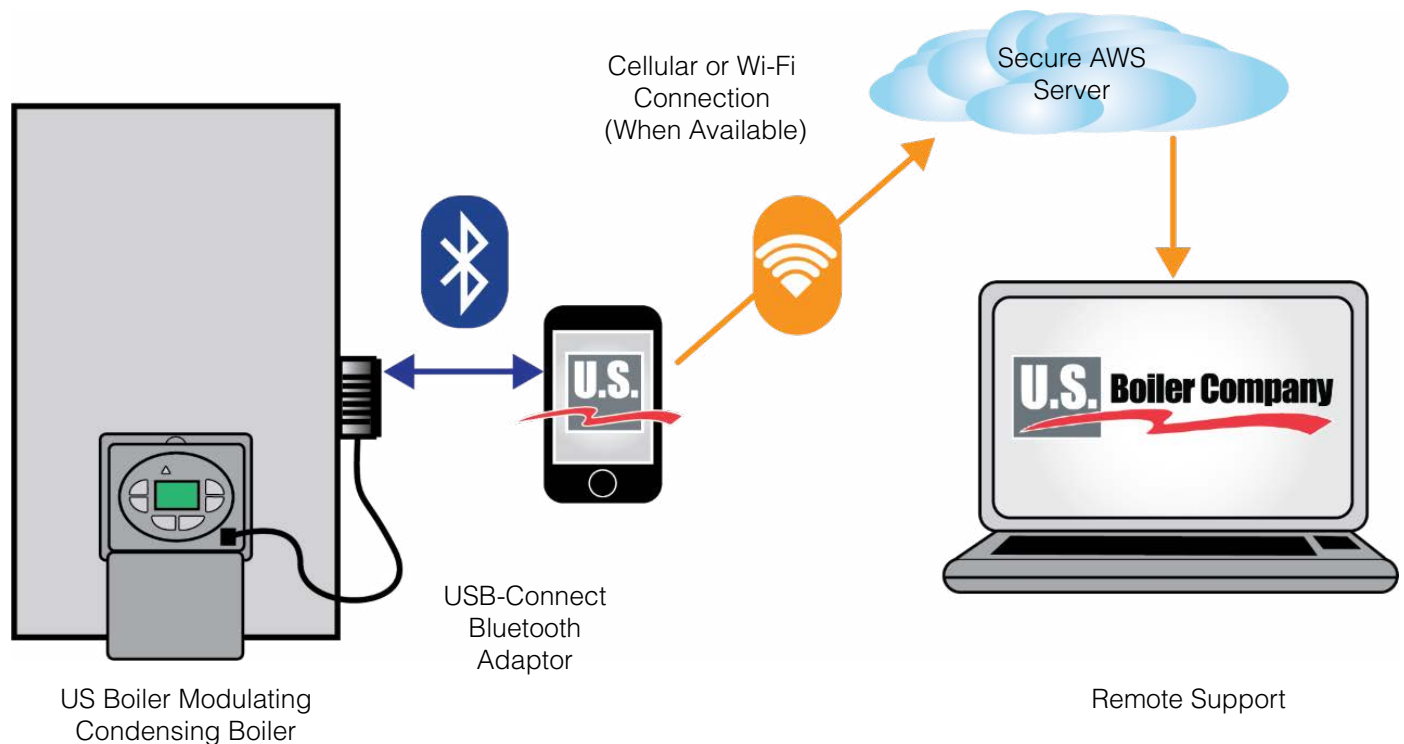
Introduction (continued)

USB-Connect Features:

- Bluetooth Adaptor connects boiler to USB-Connect App.
- English and Spanish Language.
- Start-up, Troubleshoot and Service Wizards.
- Data logs, Service & status reports sent to cloud.
- Alta Boiler Control firmware updates.

Portal Features:

- Stores reports, data logs, site photos and alarm history.
- Real-time remote support when signal available.



Getting Started

Step 1: Install App

IOS

Go to App store

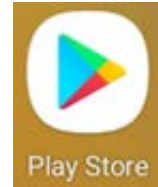


Download USB-Connect



Android

Go to Play store

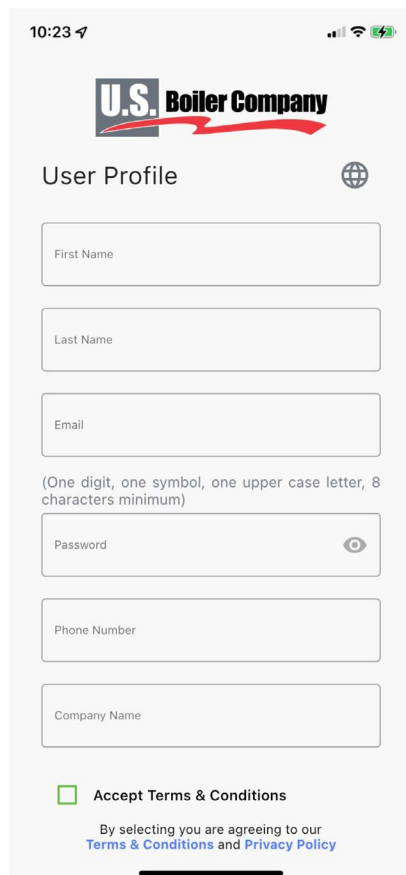


Download USB-Connect

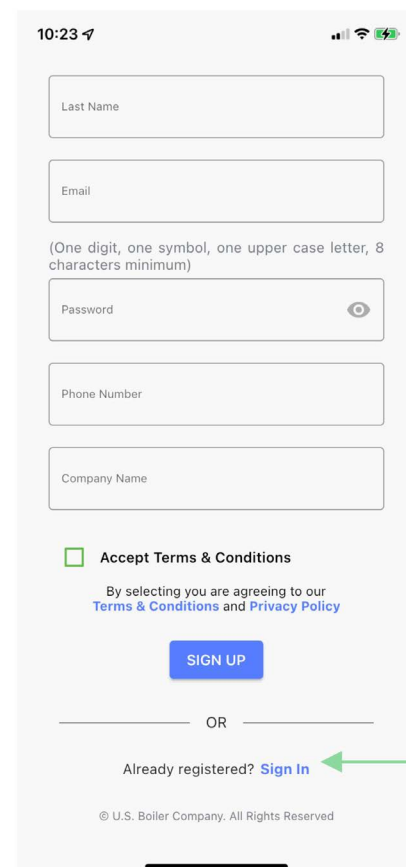


Step 2: Create User Account

Fill out profile and review and accept Terms and Conditions, Privacy Policy:

A screenshot of the U.S. Boiler Company mobile app's 'User Profile' creation screen. At the top is the company logo. Below it, the title 'User Profile' is followed by a globe icon. The form contains input fields for 'First Name', 'Last Name', 'Email', 'Password' (with a strength indicator: '(One digit, one symbol, one upper case letter, 8 characters minimum)'), 'Phone Number', and 'Company Name'. At the bottom, there is a checkbox labeled 'Accept Terms & Conditions' with a note: 'By selecting you are agreeing to our Terms & Conditions and Privacy Policy'.

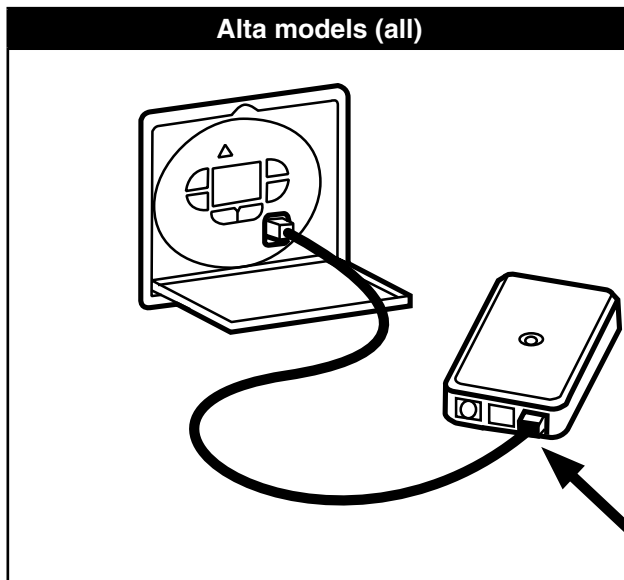
Existing User select Sign In:

A screenshot of the U.S. Boiler Company mobile app's login screen. It features input fields for 'Last Name', 'Email', 'Password' (with a strength indicator: '(One digit, one symbol, one upper case letter, 8 characters minimum)'), 'Phone Number', and 'Company Name'. Below these is a checkbox for 'Accept Terms & Conditions' with the same agreement note. A blue 'SIGN UP' button is present. Below the button is an 'OR' separator, followed by the text 'Already registered? Sign In' with a blue link. A green arrow points from the text 'Select Here If Already A User' to the 'Sign In' link. At the bottom, it says '© U.S. Boiler Company. All Rights Reserved'.

Select Here
If Already
A User

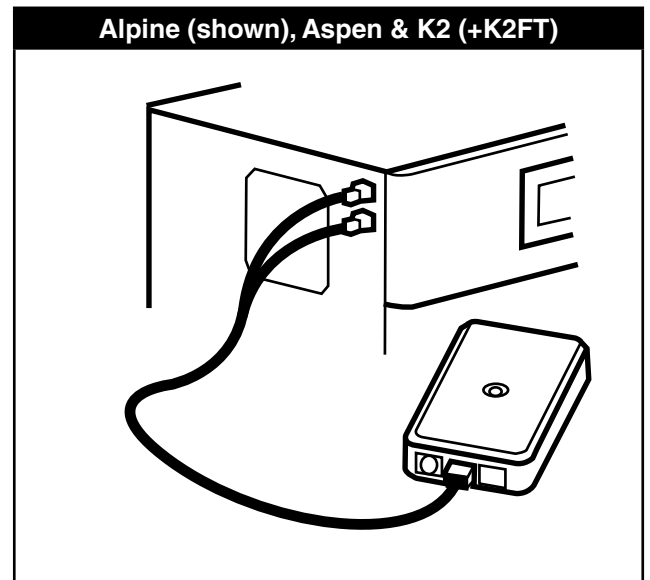
Getting Started (continued)

Step 3: Connect Bluetooth Adaptor



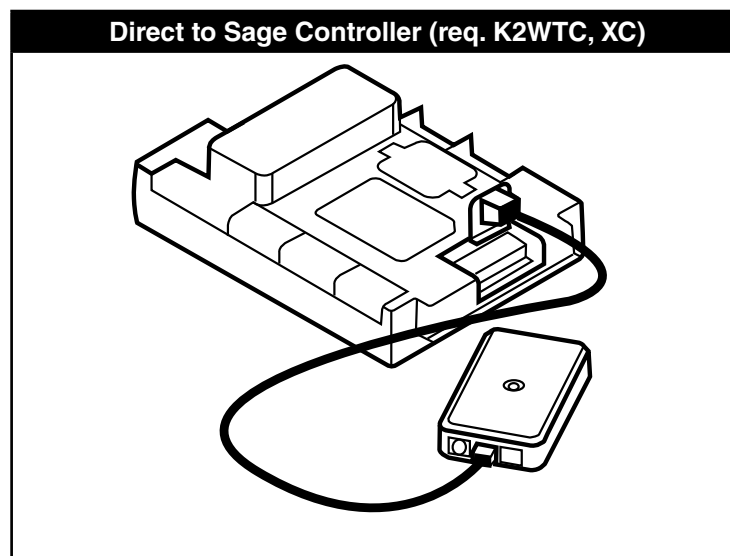
CABLE 1

RJ12 Straight Cable,
36-inch, Silver
For Alta Boiler



CABLE 2

RJ45 Split Cable, 111662-01
24-inch, Black
For Sage Controller Equipped Boiler



CABLE 3

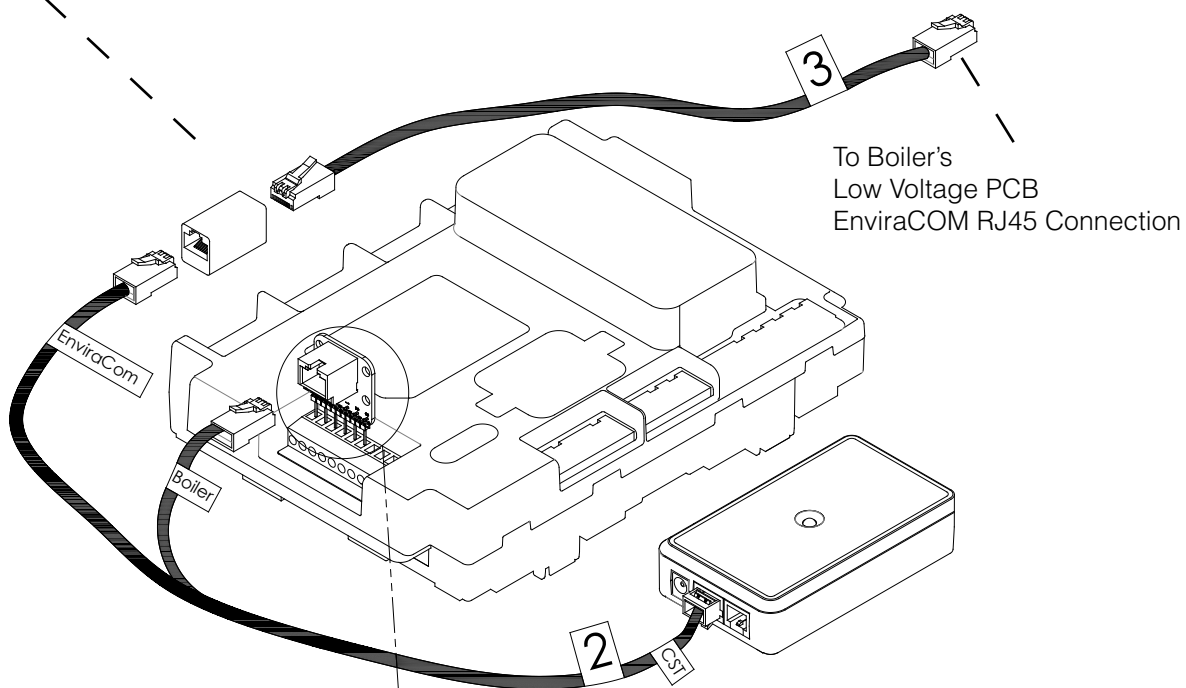
RJ45 Straight Cable,
36-inch, Blue, plus Sage J3
Terminals to RJ45 Interface Board 111640-01,
For Direct Connection to Sage Controller

Getting Started (continued)

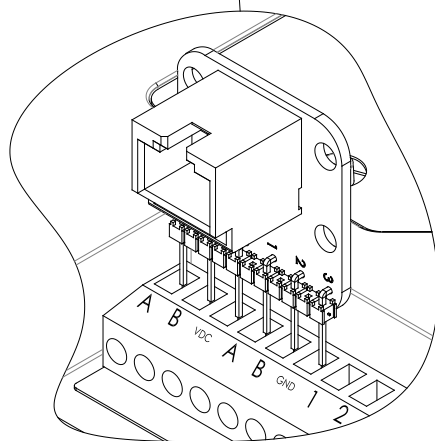
Step 3: Connect Bluetooth Adapter (continued)

Sage Controller Equipped Boiler with Sequence Master Enabled

Ethernet Cable Extender F/F Inline
RJ45 Coupler Connector
(Supplied by others)



NOTICE: To use Bluetooth Adaptor while SAGE Control Sequencer Master is enabled, disconnect Panasonic display (by disconnecting green terminal at back of display) prior to connecting Bluetooth Adaptor.



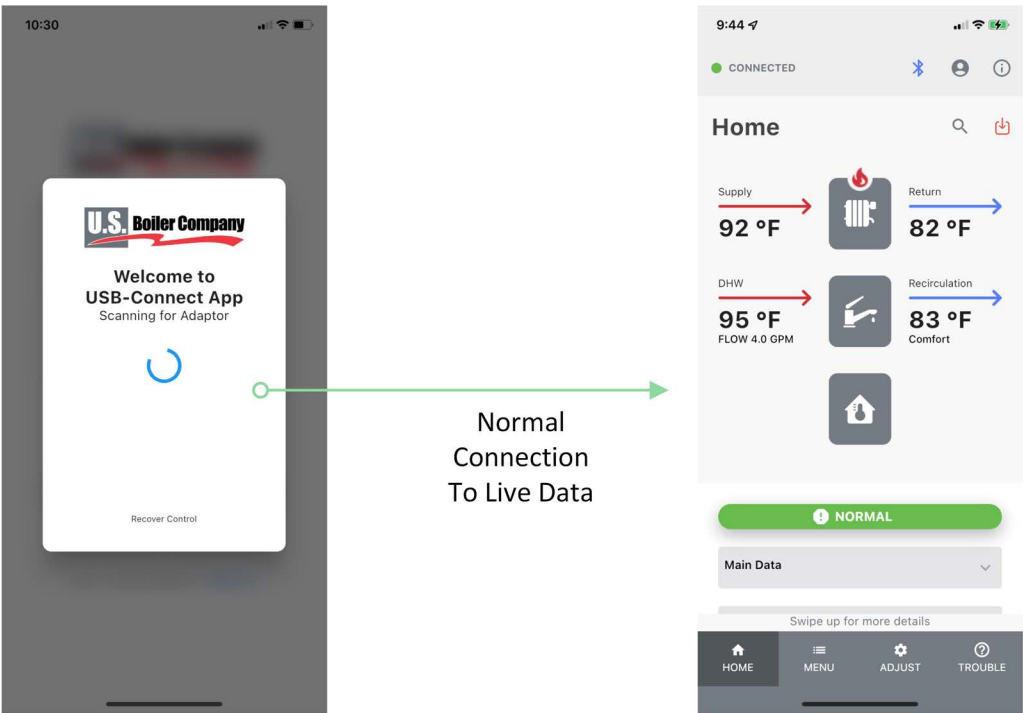
CABLE 2, CABLE 3, RJ45 Interface Board 111640-01 and
"Ethernet Cable Extender F/F Inline
RJ45 coupler Connector"
(Supplied by others)

Getting Started (continued)

Step 4: Using App

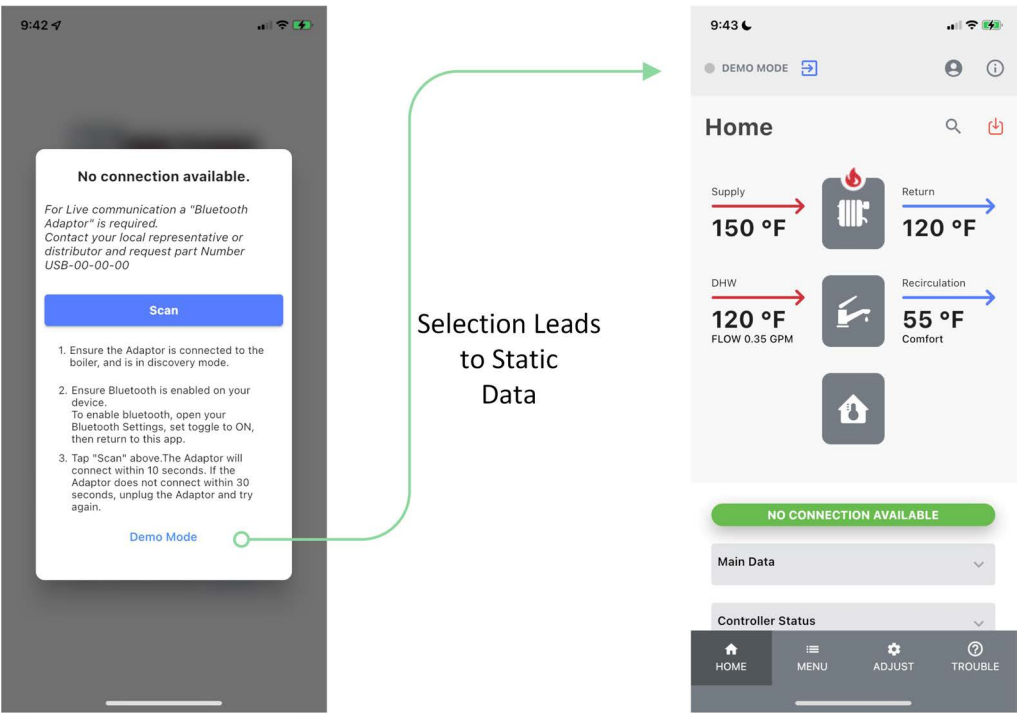
Launch App

Before opening the App, connect Bluetooth Adaptor and wait for LED light to turn solid green.



Demo Mode

When not near a boiler or Bluetooth Adaptor a user may view an Alta Boiler Demonstrator Mode to review available options, manuals, and alarm descriptions.



If having trouble connecting, see **Appendix**, Specification for Bluetooth Adaptor LED blink codes and Troubleshooting Tips.

Getting Started (continued)

Step 5: Sign into USB-Connect Web Portal

After you have completed your profile using the USB-Connect App, U.S. Boiler customer service will send you an invitation to sign into the web portal where you can view status, service reports and live data when a cell signal is available.

U.S. Boiler Company - Connect Web Portal Login

usbconnect@usboiler.net

to pcloonan1+joel

U.S. Boiler Company

U.S. Boiler Company - Connect Web Portal Login

Hello Joe,

Thank for registering to use the U.S. Boiler Company - Connect App! This app is supported by our U.S. Boiler Company - Connect Web Portal.

What is the U.S. Boiler Company - Connect Web Portal?

When you connect to one of our condensing boilers via the app, you will be able to save reports

Please note that your company's technicians, local U.S. Boiler Company sales representative, and a to stored boiler data on the web portal. This includes reviewing LIVE boiler data when you are o available. Live boiler data gives you a unique opportunity to reach out to our technical team for i

Your new U.S. Boiler Company - Connect App and U.S. Boiler Company - Connect Web Portal a

Ready to sign into your Web Portal? Simply click on the 'Sign into U.S. Boiler Company - Conne and running in no time.

Sign into U.S. Boiler Company - Connect Web Portal

If you did not initiate this request, please contact us immediately at webadmin@usboiler.net

Thank you,
U.S. Boiler Company Company

Web Portal

usbconnect.usboiler.net

U.S. Boiler Company - Connect Web Portal Login

usbconnect@usboiler.net

to pcloonan1+joel

U.S. Boiler Company

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If you did not initiate this request, please contact us immediately at webadmin@usboiler.net

Thank you,
U.S. Boiler Company Company

ALTAC-136-02-N | US Boiler - Wi

Not secure | usboiler-webportal-stg.s3-website-us-east-1.a...


U.S. Boiler Company

Patrick Cloonan

CONNECTED LOCAL

ALTAC-136-02-N

NORMAL



MODEL

SERIAL

HOME OWNER

ADDRESS

PHONE

EMAIL

BOILER ADDRESS

CONTRACTOR & TECHNICIAN

REPRESENTATIVE

ALTAC-136-02-N

65123456

Patrick Cloonan

533 Thornberry Ln, Lititz, Pennsylvania 17543

7177258724

pcloonan@usboiler.net

533 Thornberry Ln, Lititz, Pennsylvania 17543

Michael Cloonan

Michael Cloonan

Marcelo Tinelli

Supply

92°F

Return

82°F

DHW

95°F

Recirculation

83°F

FLOW 4.0 GPM

COMFORT

STATUS

ARCHIVES

MANUALS

SITE PHOTOS

ALARMS

Boiler

ALTAC-136-02-N

DHW

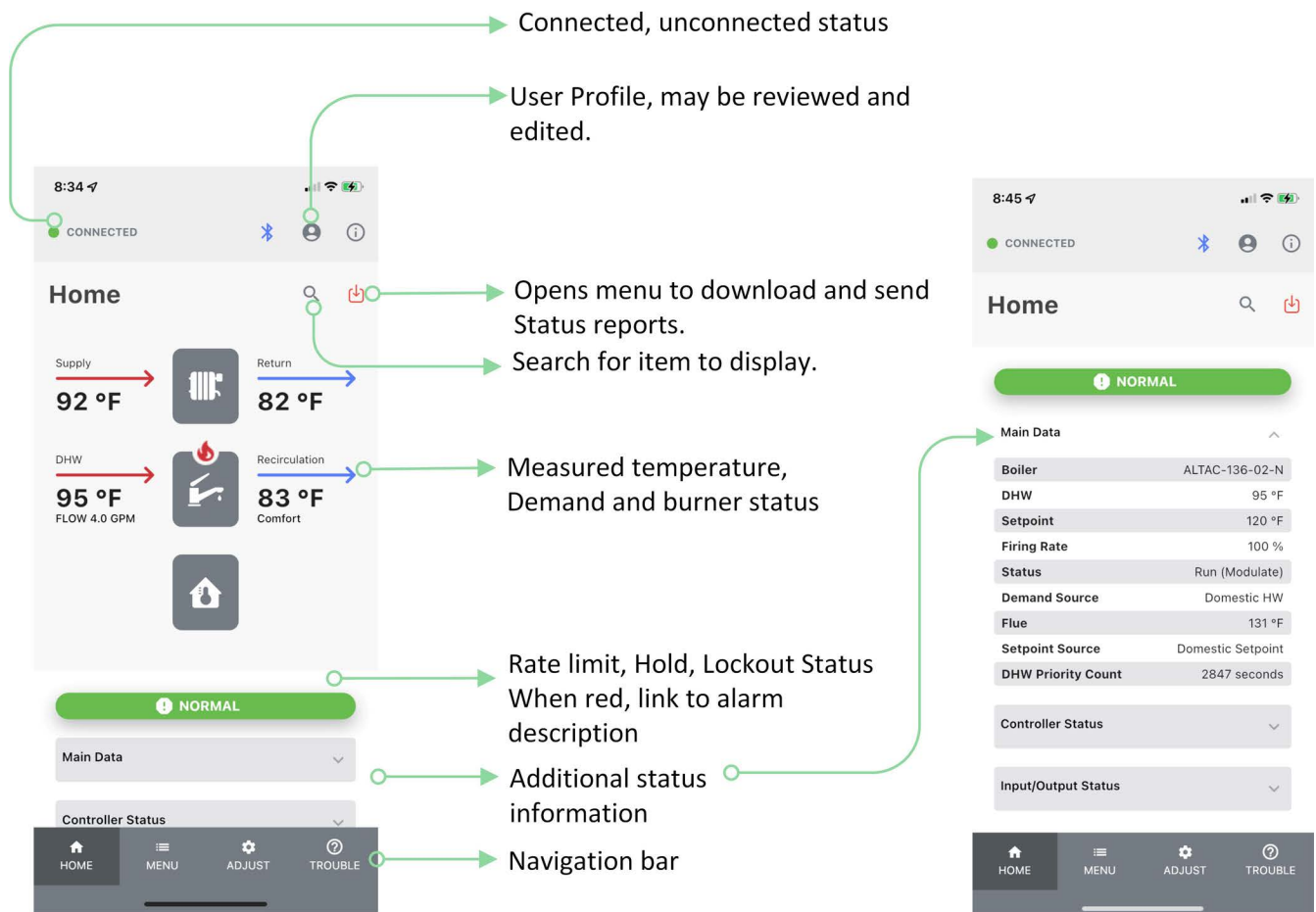
95 °F

If you do not receive an invitation email, call customer service at (717) 397-4701.

Monitoring

On Site

Home screen provides water temperatures supplied to and returning from heating elements and faucets. At a glance the user is aware of the current demands and burner status. Additional information is available from Main Data, Controller Status, Input/Output Status, as well as Zone Panel Status and Sequencer Status when used.



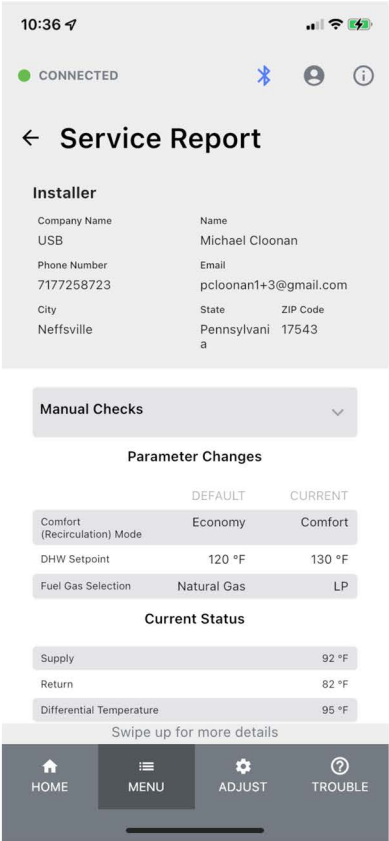
Monitoring (continued)

Remote Support

App offers reports, site photos and data logging to document boiler performance and aid remote support. Reports, site photos, and logs may be email and/or stored on devices as pdf or csv files. All files are archived at portal.

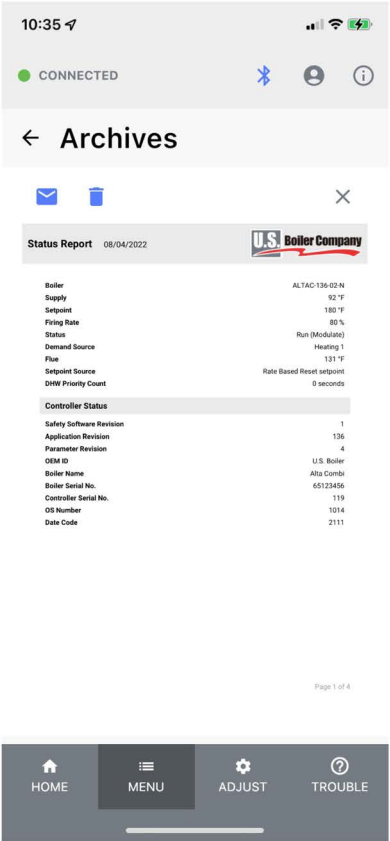
Status Report

Current boiler status, “snapshot”.



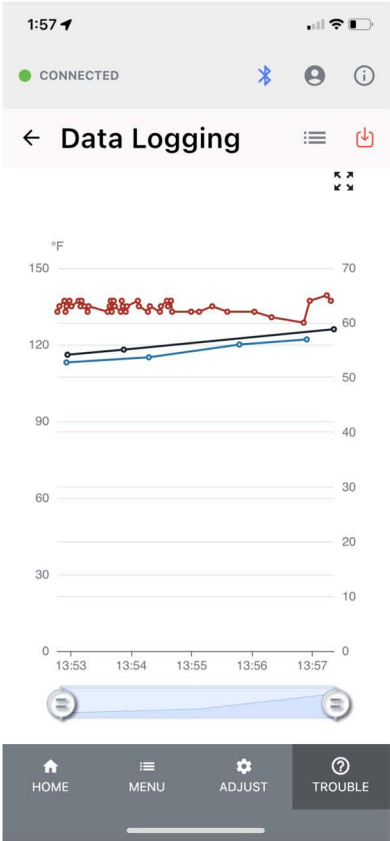
Service Report

Status, cycle & alarm history and actions taken.



Data Logging

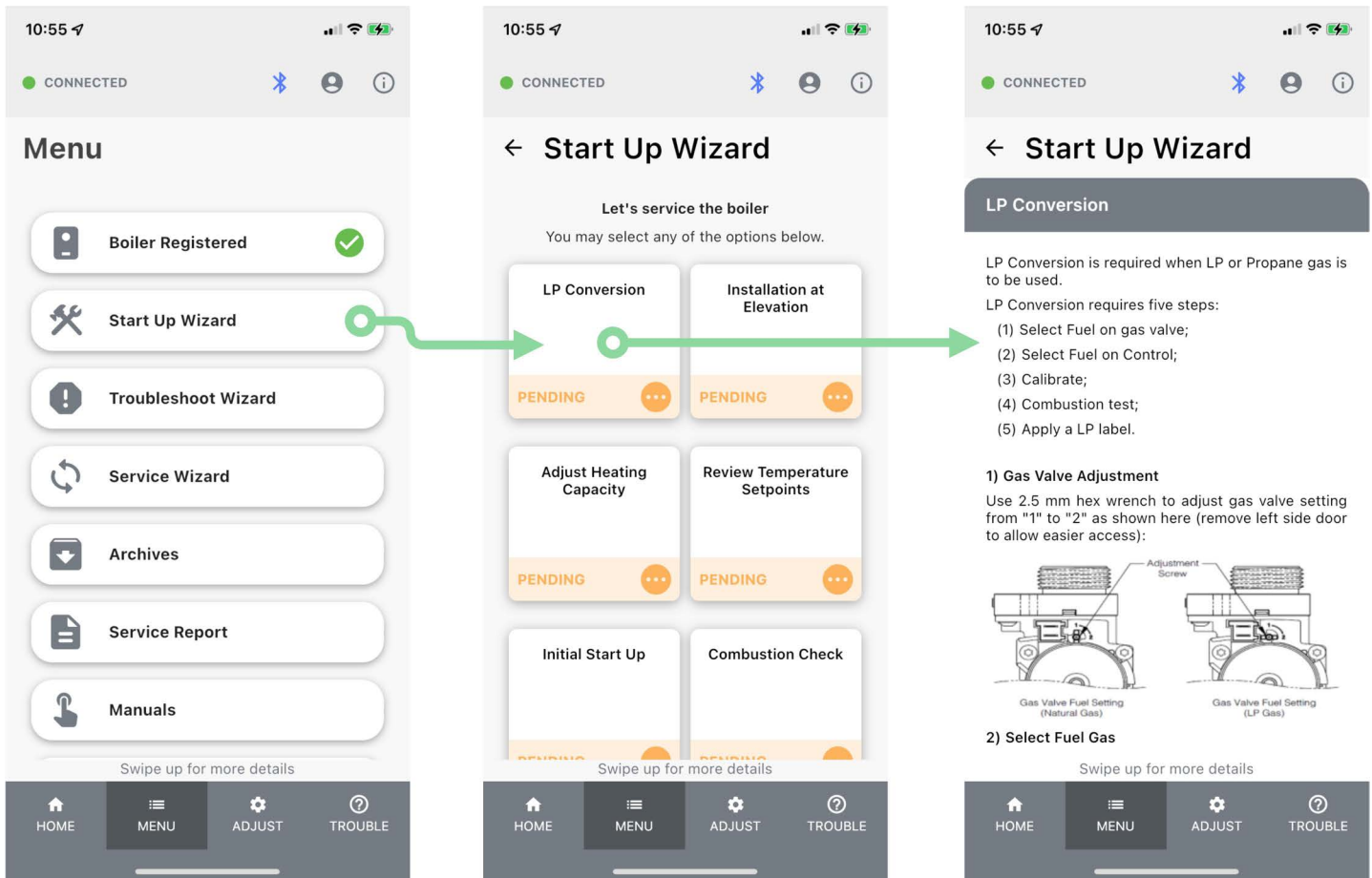
Data is sorted while Bluetooth adaptor is connected.



Commissioning/Setup

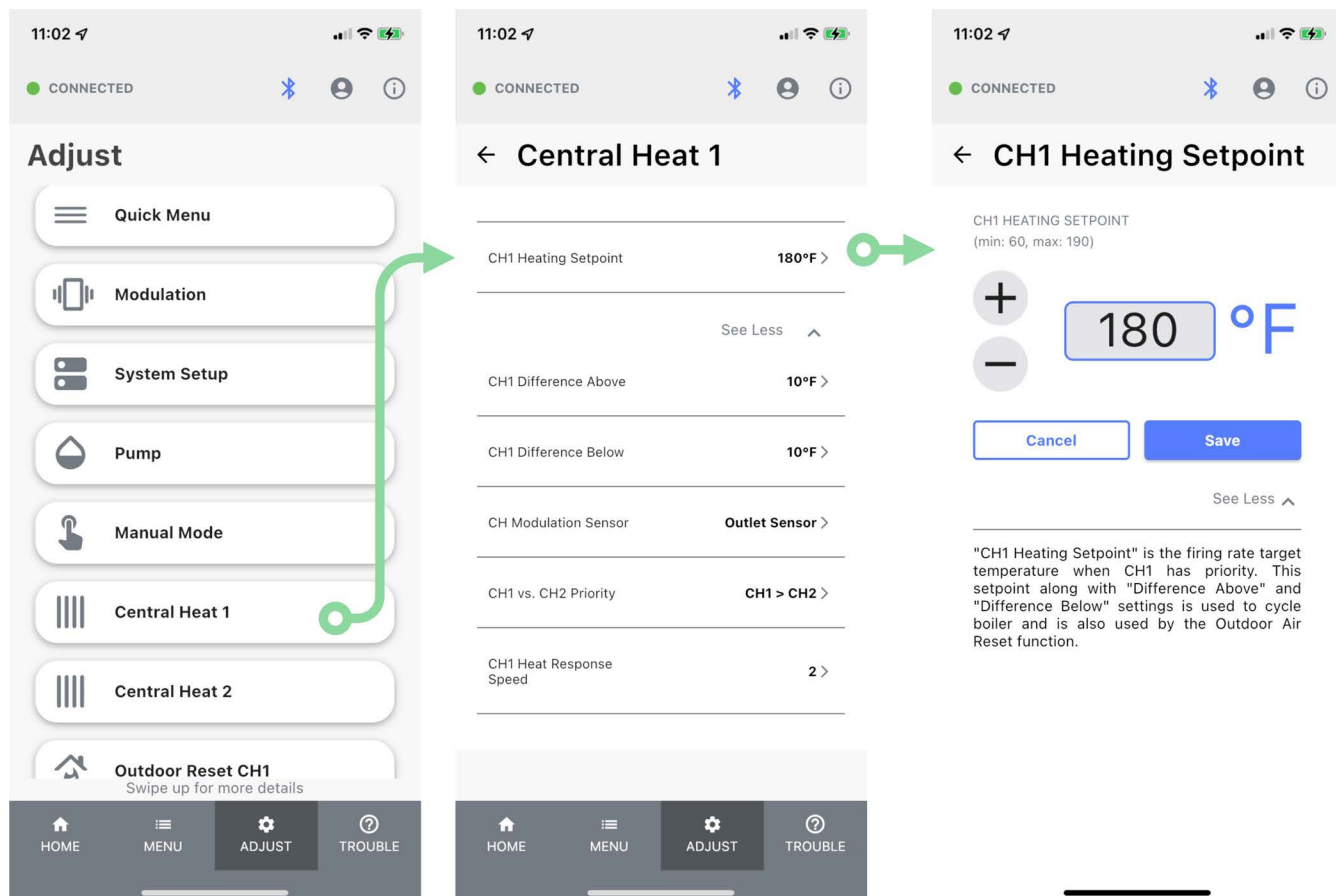
Start Up Wizard is provided to walk users through most common setup tasks.

Start-up Wizard collects instructions, status, and key parameter adjustment together to allow required actions to be as easy and successful as possible.



Commissioning/Setup (continued)

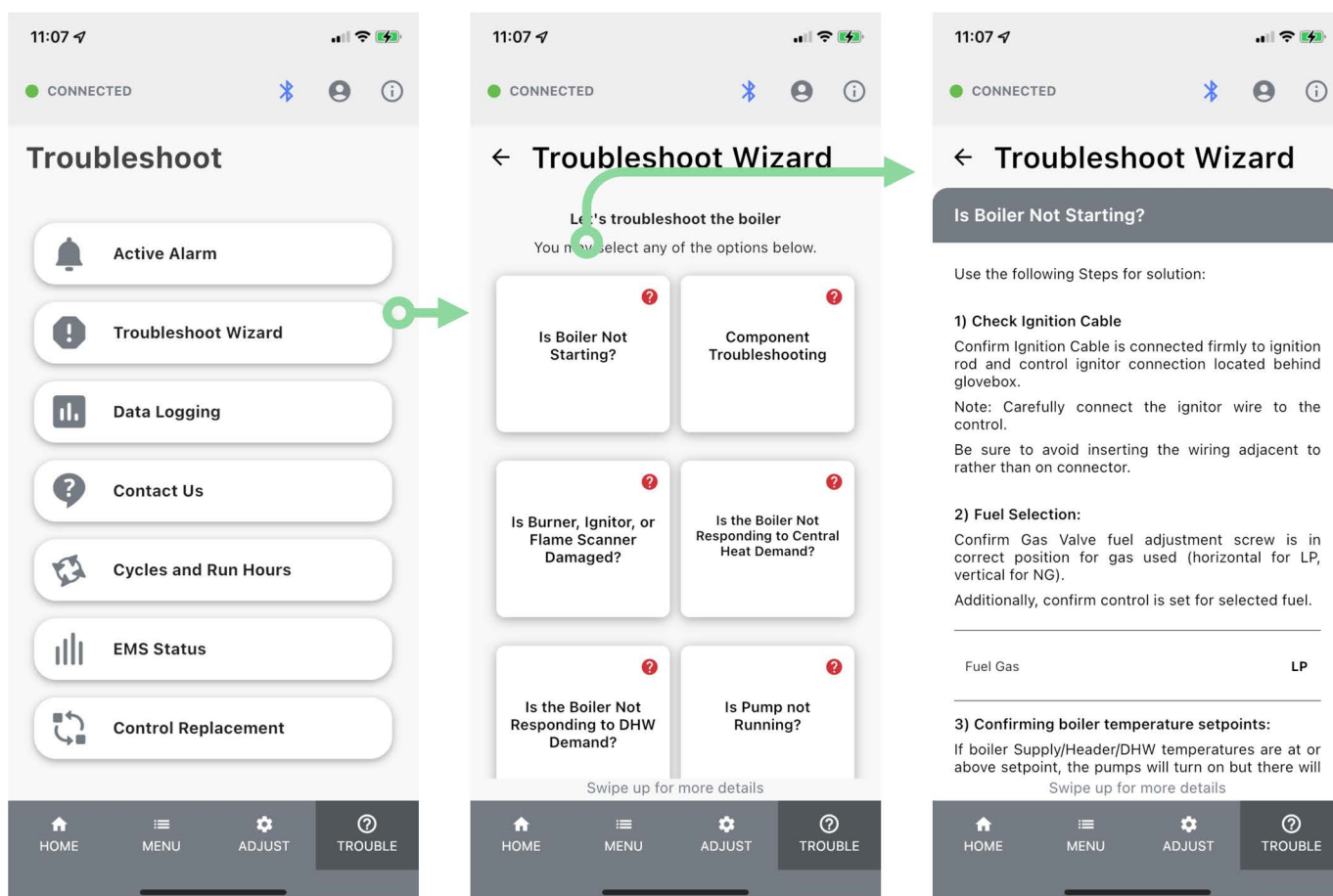
Adjust menus provide opportunity to adjust advanced settings. Each setting is provided with adjustable range and detailed explanation.



Troubleshooting

Troubleshooting Wizard is provided to walk users through solving common issues.

Troubleshooting Wizard collects instructions, status, and key parameter adjustment together to allow contractors to investigate efficiently, step by step.



Troubleshooting (continued)

Active Alarm provide detailed explanation, possible cause and solution to every alarm.

11:15

CONNECTED

Troubleshoot

Active Alarm

Troubleshoot Wizard

Data Logging

Contact Us

Cycles and Run Hours

EMS Status

Control Replacement

HOME

MENU

ADJUST

TROUBLE

11:15

CONNECTED

Active Alarm

Supply High Limit

Reset Lockout

Alarm History

Supply High Limit

Delete Error History

HOME

MENU

ADJUST

TROUBLE

11:15

CONNECTED

Lockout E04.1

Supply High Limit

Supply Temperature is higher than 210°F (99°C) or (when used) Preferred Outlet/Flow High Limit (Manual Reset Lockout Limit).

1. Possible Cause

Heating load at time of error below minimum firing rate of boiler

Solution

Test individual zones and ensure proper zone sizes.

2. Possible Cause

System pump, thermostat, zone valve or panel problem?

Solution

Check pump operation, replace if necessary.

PDF

Swipe up for more details

HOME

MENU

ADJUST

TROUBLE

11:15

System Pump Troubleshooting

Step	Troubleshooting Question	Actions	Conclusion
1	Is system pump demand ON?	Check Home Screen under Input/Output Status to see if the boiler pump is ON.	If OFF provide a heat demand at 2. Confirm system output indicates "ON". (External heat input is located on the low voltage terminal strip. Must have contact closure to enable pump)
2	Is system pump ON?	Check voltage and amperage at pump. Confirm prior to test that pump is not air-bound.	If voltage and/or amperage are within specs and motor does not run replace pump. If voltage is normal and amperage is high pump may be stuck or have a bad capacitor. Replace pump. If system pump output shows "ON" and no voltage is present at pump go to step 3.
3	Did pump fuse blow?	Remove power from boiler. Remove ignition cable from flame sensor and remove vent from right side of control panel. Allow door to fully open, and remove four fasteners holding rear cover to control panel. Remove TS 5A fuse (Pump fuse is located to the far right side of the fuse block) and, using a multi-meter perform a continuity test.	If BLOWN replace fuse. Proceed to step 4. If NOT BLOWN go to step 5.
4	Did fuse blow again?	Turn power back on. Did fuse blow again? Remove power from boiler. Remove TS 5A fuse and, using a multi-meter perform a continuity test.	If fuse blows a second time disconnect all pumps and then check for short to ground. Reconnect 1 pump at a time to isolate which pump is causing the issue. Identify and correct fault. If NOT BLOWN go to step 5.
	Is there 120VAC at the fuse block?	Check 120VAC at system pump	If VOLTAGE is present repair

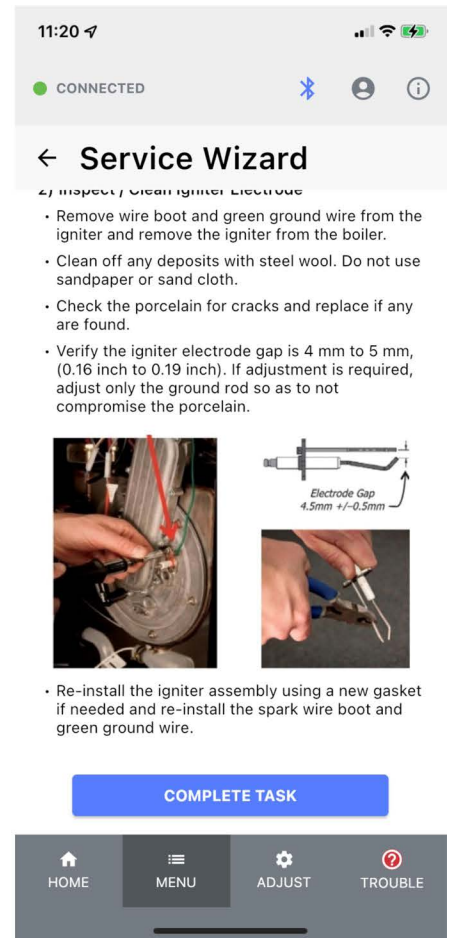
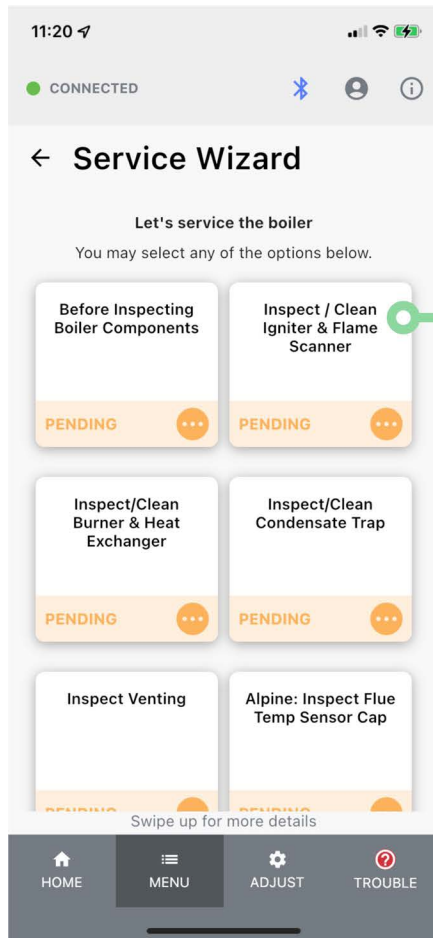
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Service

Service Wizard is provided to walk users through most common service tasks.

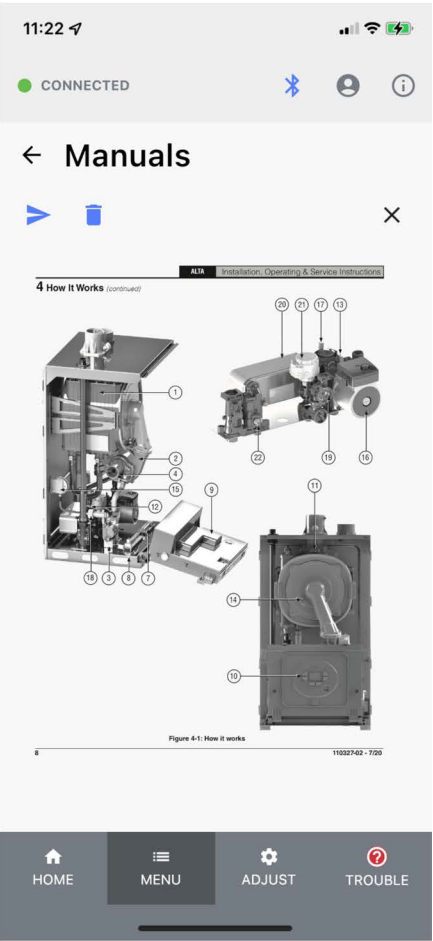
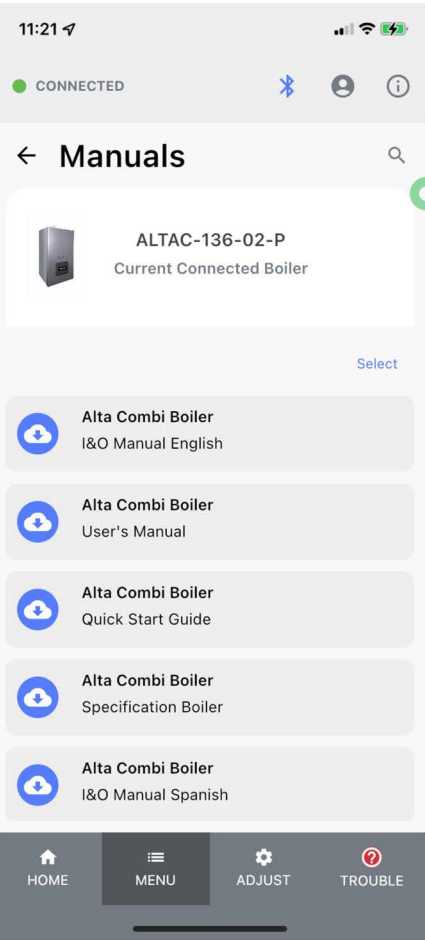
Service Wizard provides instructions to allow required actions to be as easy and successful completed.



Resources

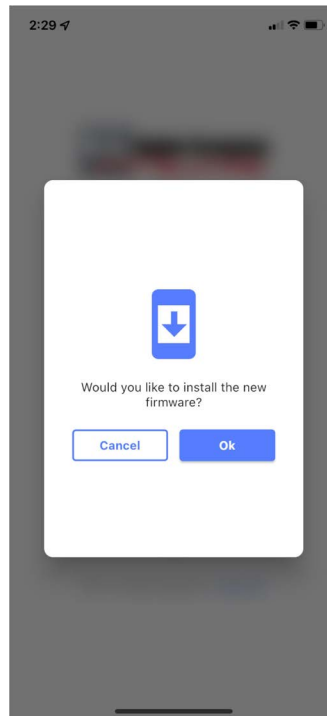
Manuals are provided to ensure the user always has complete and the latest information.

Note: Download the manual to ensure it is available when there is no cell service and to enable zooming.



Bluetooth Adaptor Update

When new Bluetooth Adaptor firmware versions are available, the user will be alerted with an option to download the new firmware. Select “Ok” and allow the firmware download to complete. After download is complete disconnect and then reconnect Bluetooth Adaptor power and close App and reopen once Bluetooth Adaptor LED is solid green.

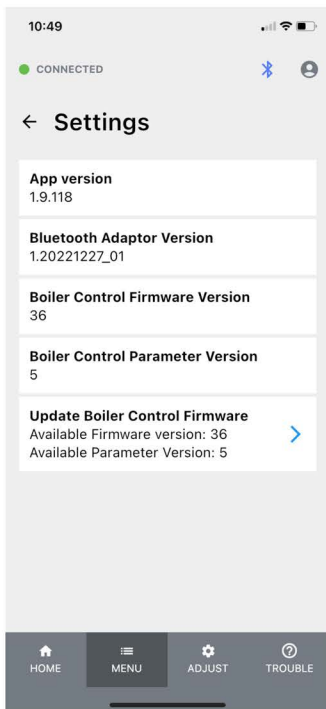


New Bluetooth Adaptor Firmware Update Indication

Alta Control Updates

The latest Alta Controller firmware and default parameters are made available to the App. When necessary Alta Controller Firmware or default parameters may be downloaded in the field.

Select Settings on the MENU tab

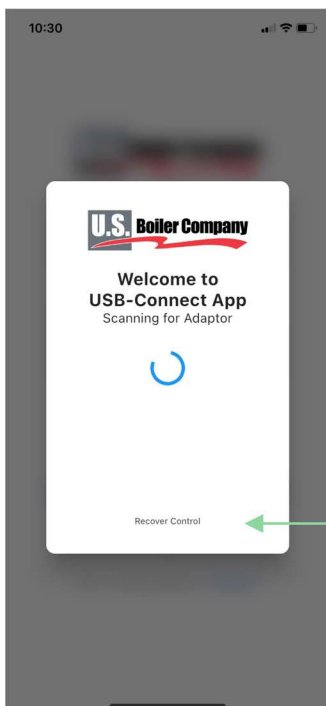
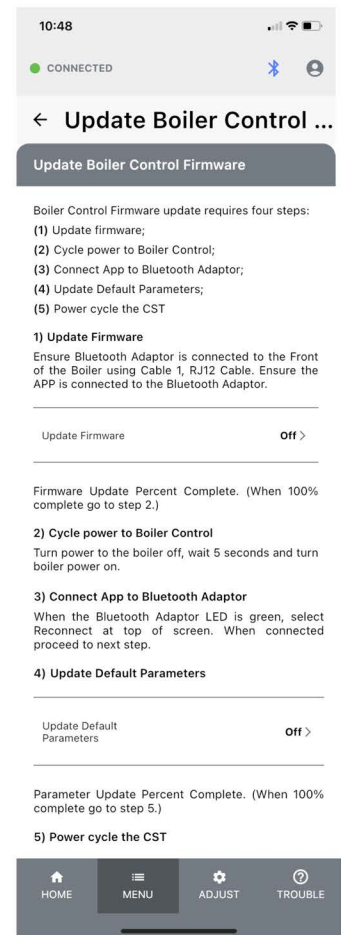


Alta firmware and default parameter update

Use MENU to navigate to the Settings menu.

Only update the Boiler Control Firmware when the Available Firmware Version is higher.

Only update the Boiler Control Parameters when the Available Parameter Version is higher.



Recover Control

In the unlikely event of a Alta Firmware download failure (local display is off and Bluetooth Adaptor LED is Red) , the User may select, "Recover Control" and navigate to the Update Boiler Control Firmware function and re-do the firmware load procedure.

Appendix

Specifications

Power

24 VDC via DC Barrel Jack:

- Power supply: AC 100-240V, 50/60Hz input, DC 24V 0.3A output

24 VDC via RJ12:

- Power supply: DC 24V 0.04A input





24 VAC via RJ45:

- Power supply: AC TBD input



Environmental and Regulatory:



- Model: USB-Connect
- Hardware Version [HVIN]: E2
- Environmental protection: IP10 (Nema 1)
- Flammability: UL94-V0
- Working humidity range: 0-95% (non-condensing)
- Working temperature range: -50°F - 104°F (10°C to 40°C)

Bluetooth Adaptor Blink Codes - Initial Power Up

	LED	Description
	Off	No power connected
	Light Blue	Initializing
	Yellow	Device Firmware Upgrade (DFU) Mode is active (waiting for update file)
	Purple	DFU Mode is active (receiving update file)

Bluetooth Adaptor Blink Codes - Running Mode

	LED	Description (Shown in 1st 1/2 second)
Modbus Connection between Boiler to Adaptor Status		
	Green	Boiler to Adaptor Communication Detected
	Red	Boiler to Adaptor Communication NOT Detected

	LED	Description (Shown in 2nd 1/2 second)
Bluetooth Connection between Adaptor to Smart Device Status		
	Blue	Bluetooth Connection between Adaptor to Smart Device
	Off	No Bluetooth Connection between Adaptor to Smart Device

For example: "Green-Blue" Modbus and Bluetooth communicating.

Appendix (continued)

FCC Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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 harmful 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 instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful 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 for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

Appendix (continued)

IC Statement

This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique

Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.

Appendix (continued)

Repair Parts

1. USB-Connect Bluetooth Adaptor Kit-----US Boiler P/N: 111667-01
US-Connect Bluetooth Adaptor (Portable Tool, Connects USB-Connect App and Portal to: Alpine, Alta, AltaC, Aspen, AspenC, K2WT, K2WTC, K2FT, XC.); Carry case, information card; CST Sage Controller J3 Terminals to RJ45 Interface Board (111640-01); Cable 1, RJ12 Straight Cable; Cable 2, RJ45 Split Cable; Cable 3, RJ45 Straight Cable.
2. Connected Service Tool Sage J3 Terminals to RJ45 Interface Board-----US Boiler P/N: 111640-01
Connected Service Tool Interface Board, used to connect Sage Controller J3 screw terminals to Bluetooth Adaptor or Remote Support System using an ethernet cable.
3. Cable 1, RJ12 Straight Cable-----Show Me Cables P/N: 15-302-003S
Standard RJ12 Line Cord, 24AWG, stranded copper conductors, 6 conductors, straight through, PVC jacket, Silver, Standard Boot, 36-inch length.
4. Cable 2, RJ45 Split Cable-----US Boiler P/N: 111662-01
Custom cable has two RJ45 connections on one end and single RJ45 on opposite end. Used to connect Bluetooth Adaptor to Sage equipped boiler's Boiler to Boiler and Enviracom RJ45 connections, Black, Standard Boots, 24-inch length.
5. Cable 3, RJ45 Straight Cable-----Show Me Cables P/N: 530-03 BL
Standard Cat5e Ethernet Patch Cable, 24AWG, stranded copper conductors, 8 conductors, straight through, PVC jacket, Blue, Standard Boot, 36-inch length.

Appendix (continued)

Troubleshooting Tips

Indication	Possible Cause	Corrective Action
App Will Not Accept New User Account	Cell signal not available.	App requires a cell signal to accept a new user profile. User can log in without cell signal after initial acceptance.
Bluetooth Adaptor LED is OFF	Cables not connected properly.	Sage Controller: Cable 2, connections to boiler are reverse. Switch RJ45 connections, see page 5. Alta Controller: Cable 1 is not connected. Cable 1 is connected to the Bluetooth Adaptor center connection, should be to the right side connection, see page 5.
	Wrong Cable.	Cable 1, 2 and 3 must be "straight through" cables.
	Boiler is not powered.	Power up boiler.
Bluetooth Adaptor LED is flashing Red	Sage Control Fail to Connect.	Sage Slave Address is not set to 1, Panasonic Status screen should show "Boiler 1". If not, go to Panasonic display/Adjust Menu/Sequencer Slave and adjust Boiler Address to 1. Cycle power to Bluetooth adaptor.
		Wiring to Boiler RJ45 boiler connection are disconnected. To fix this use: "CST Sage J3 Terminals to RJ45 Interface Board", PN: 111640-01, see page 5.
	Failed Cable or connection.	Check cables and cable connections. Replace cables if necessary.
Erratic number updates or bad data	Bad connection.	Reboot Bluetooth Adaptor and open App after Bluetooth Adaptor LED has turned green.
App will not connect	Bad connection.	Reboot Bluetooth Adaptor and open App after Bluetooth Adaptor LED has turned green.
	More than one (1) Bluetooth Adaptor is powered.	App can only connect to one Bluetooth Adaptor. When more than one (1) are available the App will connect to neither.
	Failed to close & reopen App after connection to different Bluetooth Adaptor.	When two Bluetooth Adaptors are on site, close App and reopen when connecting to next Bluetooth Adaptor.
App will not connect to Sage Controller	Sage Controller greater than 10 years old.	Sage controllers older than 2012 (revision 1967, 3212 and 3220) are not compatible with the App.
	Sage Controller with multiple boilers in a peer-to-peer network.	When connecting boilers arranged in Sage Controller equipped Boiler peer-to-peer network the Sequencer Master must be disabled. To keep the Sequence Master enabled, connect the CST directly to the Sage Controller using "CST Sage J3 Terminals to RJ45 Interface Board", PN: 111640-01, (see page 5) and MB1 terminals. Alta Controller does not have this issue.