

Portable Diagnostic Display, 105917-01

Instruction Sheet

APPLICATION

The Portable Diagnostic Display is an easy to use touch screen type display that allows a technician to monitor and adjust the IQ Control components and connected IQ Option Cards. The Portable Diagnostic Display includes a carrying case and wiring harness to allow simple attachment and “plug-in” style electrical connection.

This intuitive display reduces boiler setup and troubleshooting time by providing the user alarm history, “help” and “information” screens for the entire IQ Control system.

This product may be applied to any gas or oil fired hot water boilers equipped with the IQ Control System or Intelligent Hydronic Control Systems and Honeywell Oil Primary Controls. This product is compatible with the IQ Option Cards and the Wireless Outdoor Air Reset Adaptor (P/N 105121-01) and IQ Zone Control Circulator Panel (P/N 104590-01).

GENERAL

The Portable Diagnostic Display communicates to connected IQ Control system components such as IQ Boiler Controls, IQ Option Cards, IQ Zone Panels and Honeywell EnviraCOM enabled thermostats and primary controls. The Portable Diagnostic Display presents data in an intuitive format and provides historical alarm data that is not available from the controls on board displays.

SPECIFICATIONS

Display Type: STN LCD, 3 color LED, Touch Screen

Resolution: 240 x 96 (Pixels) H x W

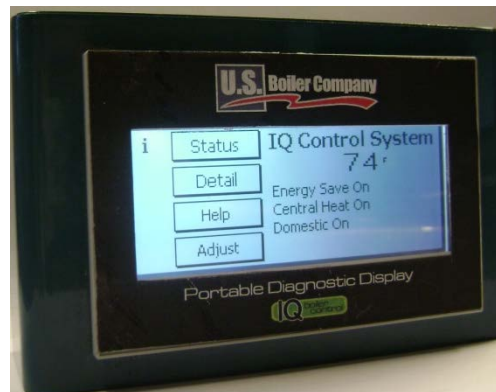
Display Area: 3.8 inch diagonal

Number of screens: 250

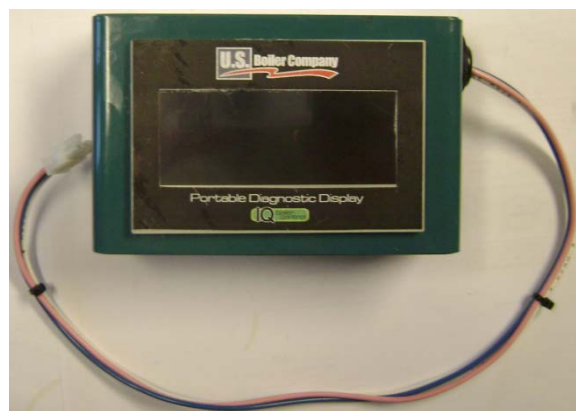
Operating Temperature: 32°F to 140°F (0°C to 60°C)

Input Power: 24 VAC supplied by boiler wiring harness

LCD Display: US and Canada UL Listed



Portable Diagnostic Display



Portable Diagnostic Display
(showing installation cable)

INSTALLATION

When Installing this Product...

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition. Save instructions for future use.
2. Installer must be a trained, experienced service technician.
3. After installation is complete, check out product operation as provided in these instructions.

Caution

Electrical Hazard

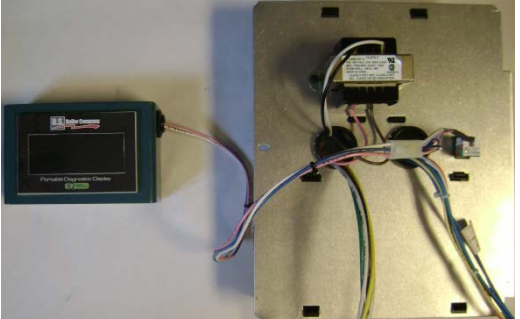


Disconnect power before beginning installation and wiring. Failure to do so may cause electrical shock or equipment damage. Wiring must comply with applicable codes, ordinances and regulations.

WARNING

- Installation must be performed in accordance with all national and local codes and ordinances.
- Risk of explosion. Not for use in hazardous locations. Serious injury or death could result.

Portable Diagnostic Display Installation

1. Turn off all power.
2. Place Portable Diagnostic Display on top of boiler.
3. Connect the Portable Diagnostic Display wiring harness to the boiler's wiring harness. Note an additional wiring harness is provided when attaching to Oil fired boilers other than the MPO-IQ. A matching connector can be found behind the boiler's control panel on most boilers. See connections for different boilers below.
4. Turn Power On.

Boilers	Connection Example
<p>ES2 Boiler, Series 3 Boiler ESC Boiler MPO-IQ Oil Boiler.</p>	
<p>Series 2 PVG</p>	
<p>V8H LEDV1 LE1 RSAH, RSA V1 RO/FO</p>	

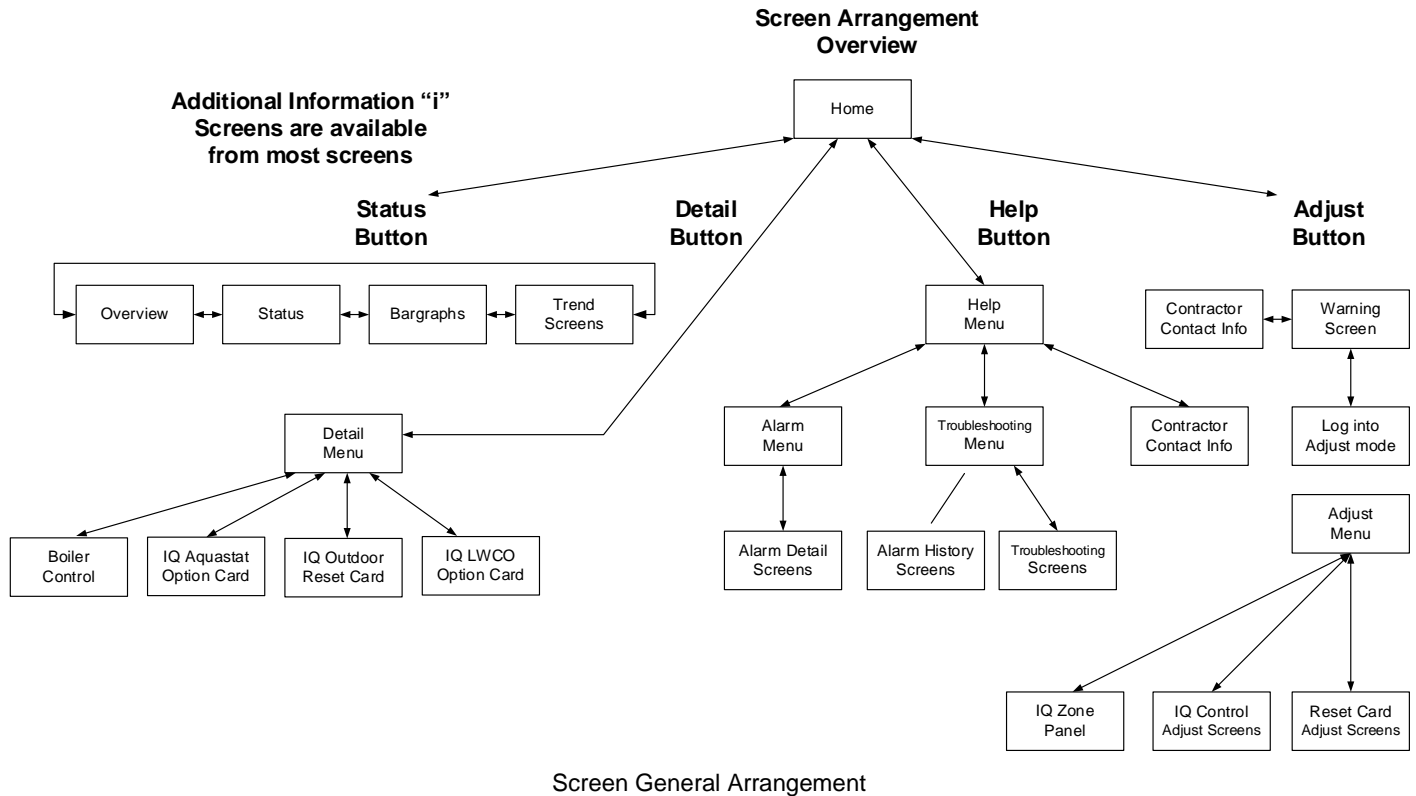
Checkout

Check to make certain that the LCD display powers up. Allow the display to initialize. After initialization, perform the following test:

1. Select the Detail button. Ensure that installed components are shown. For example; IQ LWCO; IQ Aquastat; IQ Reset Option Cards.
2. Select the Status button. Ensure that installed IQ Zone Panel status is shown.
3. If items do not appear on screen, check component installation and wiring.

USER INTERFACE

The IQ LCD Display's screens are arranged as shown below. Basic information for each screen is provided below the general arrangement diagram:



Home Screen



The Home Screen provides supply water temperature, central heat and domestic hot water (DHW) heat demand status, as well as “Energy Save” status. Energy Save On appears when the Reset Setpoint is reduced below the HL Setpoint.

The “i” symbol indicates the presence of an information screen. Press the “i” button and view helpful information related to information on this screen. The Status, Help and Adjust buttons allow the user to navigate to these functions.

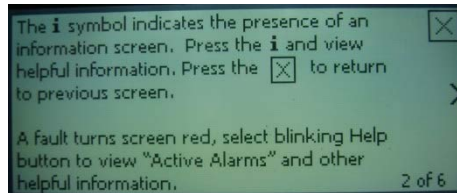
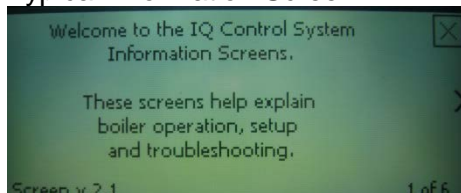
Home Screen in “alarm state”



(Screen shows faulted sensor)

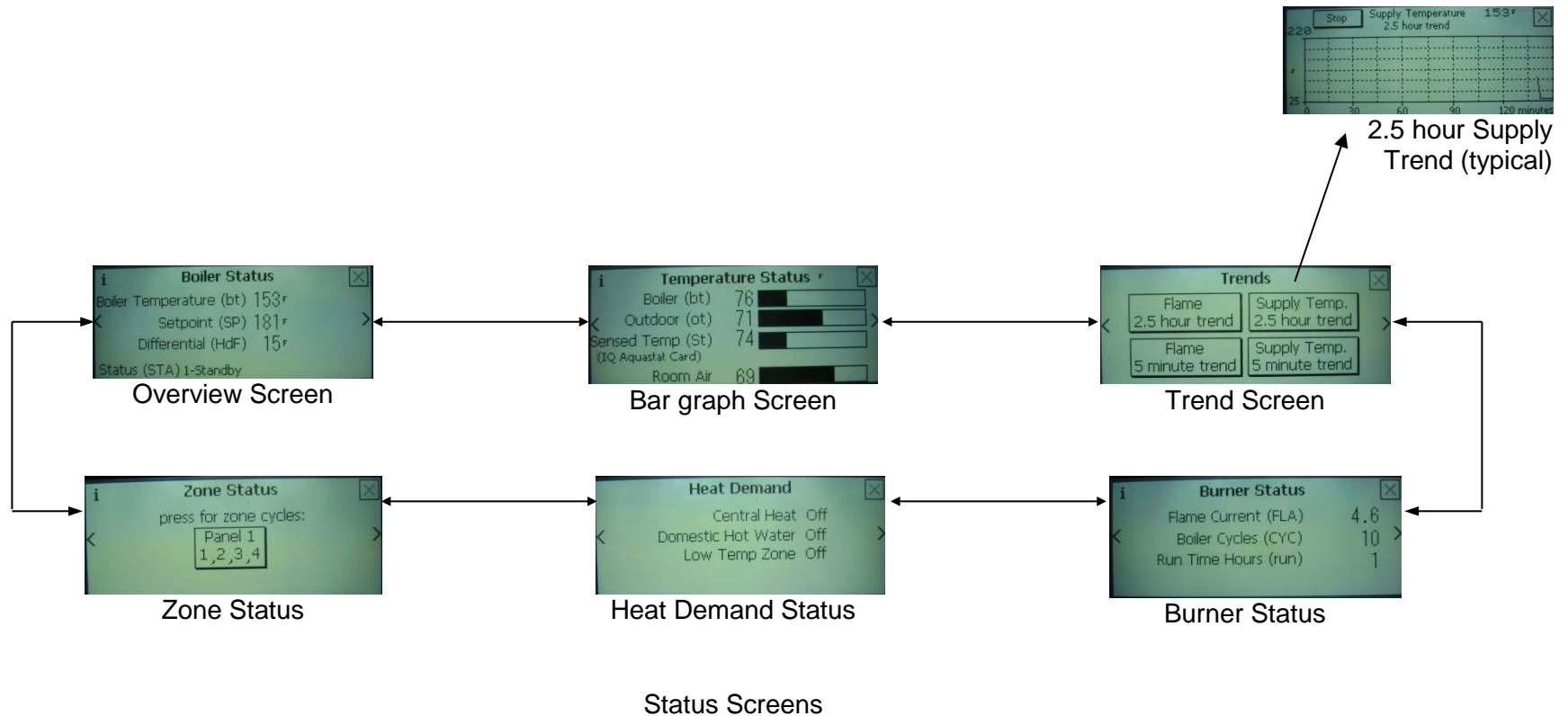
The Home Screen turns “RED” and the Help button flashes when there is an alarm or the boiler is unable to start when a demand is present.

Typical Information Screen



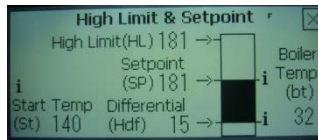
Status Screens

From the “Home Screen” select the “Status” button to view the screens shown below. Status Screens provide an overview of measured temperature and other boiler monitored status. These screens read information from all connected IQ Control System components. For example, the bar graph screen shown below shows air temperature measured by an EnviraCOM enabled Thermostat, and outside air measured by the Outdoor Reset IQ Option Card.

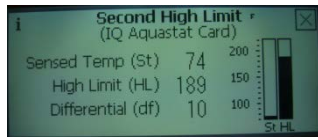


Detail Screen

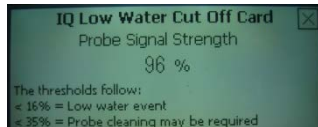
From the “Home Screen” select the “Detail” button to view the screen shown below. Detail screens provide additional information for connected control components. The below screens show some of the possible detail screens (screens show dependent on connected components).



Boiler Control Limits



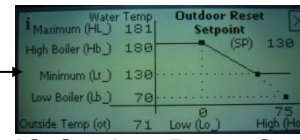
IQ Aquastat Option Card



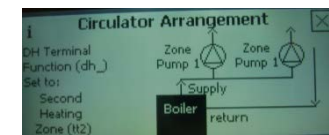
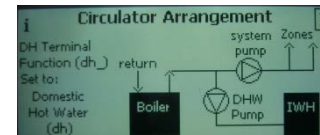
IQ LWCO Option Card



Detail Menu



IQ Outdoor Reset Card

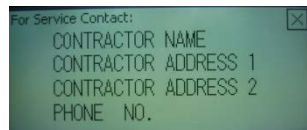
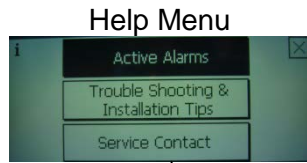


Boiler Control Circulator Status (shows actual configuration)

Detail Screens

Help Screens

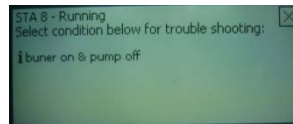
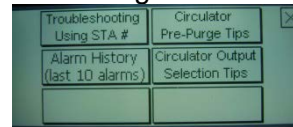
From the “Home Screen” select the “Help” button to view the screen shown below. In the event of a fault condition the user is guided by “blinking” touch buttons to “Help” screens that explain the problem cause and corrective action. The IQ LCD Display provides a combination of Information and Help screens to guide the user to proper setup and trouble shooting.



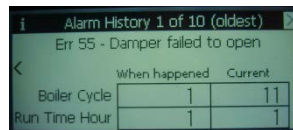
Users are directed to the service company that installed or serviced the display. Using Adjustment mode (as described below) a contractor can insert their own contact information on these screens.



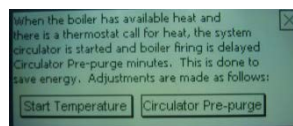
Trouble Shooting & Installation Tips



Trouble shooting using a combination of Status number (STA #) and information selections

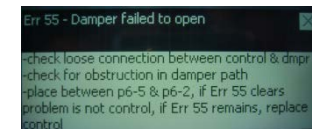


Alarm History is stored in a first-in, first-out basis. Each alarm history file is stored with the boiler cycle and run time hour.



The “TIP” screens “walk” the technician through fault resolutions and typical adjustments opportunities.

Active Alarm Screens

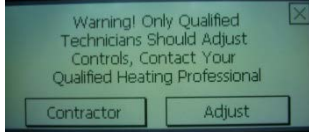


Alarm screens describe the boiler fault and provide corrective action suggestions.

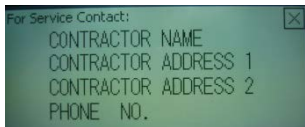
Help Screens

Adjust Screens

Adjust Menu Screen



Service Contact Screen



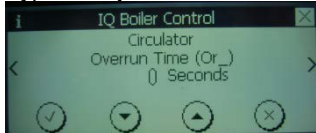
Login Into Adjustment Mode



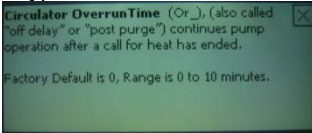
Adjust Mode Menu Screen



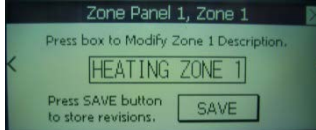
Typical Adjustment Screen



Typical Information Screen



Zone Panel Status Data Entry Screen




Service Information Data Entry Screen



IQ LCD Display adjustment is password protected to discourage unauthorized or accidental changes to settings.

The first Adjust screen warns the user that modifications to adjustments should be left to qualified heating professions. The user is given two choices; contact a qualified contractor or enter the security code. To enter the security code:

1. Press 5-digit display to open a keypad.
2. Enter the security code: 76
3. Select 
4. Select the Adjust Button

The Adjust Mode Menu screen allows the technician to choose the IQ Control System component to adjust by simply selecting the item.

The technician can simply use the “up” or “down” arrow keys to make an adjustment to the control system parameter. Both boiler control system and IQ Outdoor Air Reset Option Cards parameters are adjustable. When an adjustment is complete the technician can press the “check” button to “enter” the value or the “X” button to “undo” the change. Press the “i” button to view helpful information related to information on this parameter.

Press “Heating Zone 1” display to open a keypad. After entering zone name information, (such as “Master Bedroom”, “Living Room”), info, press the “SAVE” button to store the new content.

Press “Contractor Name” display to open a keypad. After entering contractor info, press the “SAVE” button to store the new content.

Adjust Screens

ORDERING INFORMATION

Part Number	Description
105917-01	IQ LCD Display, Boiler Exterior Mounted, STN Monochrome, White/Red backlight, 5Vdc Power Supply, RS422 (RS485) Communication, Silver Bezel with Gateway, Wire Harnesses, Portable Assembly, Carrying Case, Logo Plates and Instructions
105913-01	IQ LCD Display, Boiler Exterior Mounted, STN Monochrome, White/Red backlight, 5Vdc Power Supply, RS422 (RS485) Communication, Silver Bezel
104210-01	EnviraCOM/Modbus RS422 Gateway and 5 Vdc Power Supply for Communication Between The IQ Controls and LCD Display, 24Vac Power Supply Input

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