

Section 2.6

Primary Pump

The Network System supports one primary pump per installation. The Uponor Configuration Tool (UCT) software (A9090000) allows a user to configure and manage the primary loop including temperature sensors and trends, minimum and maximum settings and an optional pressure sensor.

This section covers the following topics:

- Setting primary loop temperature limits
- Setting up a pressure sensor
- Primary System screen definitions

Before proceeding, make sure the following steps are complete.

- All UCT components are properly installed (**Section 1.5**).
- The computer is correctly connected to the Network System (**Section 1.6**).
- The installer is familiar with using UCT elements (**Section 1.7**).

Note: Remember to save all changes to the primary loop configuration to flash memory. Changes not saved to flash will be lost if the Primary Equipment Control (PEC) (A9012000) loses power. See **Section 5.1: Save to and Load from Flash**.

Primary Loop Temperature Limits

It may be necessary to set a minimum and maximum for primary loop temperatures. Setting a minimum temperature for non-condensing boilers prevents the return temperature from dropping to a point where flue gases might condense. Setting a maximum will prevent an excessively high supply water temperature (SWT).

Note: If the system includes condensing boilers with internal controls, ensure the internal controls do not interfere with the limits set through the UCT software. Either adjust the limits on the internal controls outside the limits set in the UCT or adjust the boiler setup to ignore the internal limits. See **Section 2.5: Boilers**.

Refer to the following steps to set the minimum and maximum primary loop temperatures.

1. From the **Main Menu**, click the **Primary System** button shown in **Figure 2.6-1**. This will display the Primary System screen, shown in **Figure 2.6-2**.
2. Enter values for the Maximum Primary Supply Temperature and Minimum Primary Return Temperature shown in **Figure 2.6-2**. Note that the text is pink while entering a change and it will change to black when accepted by the PEC.

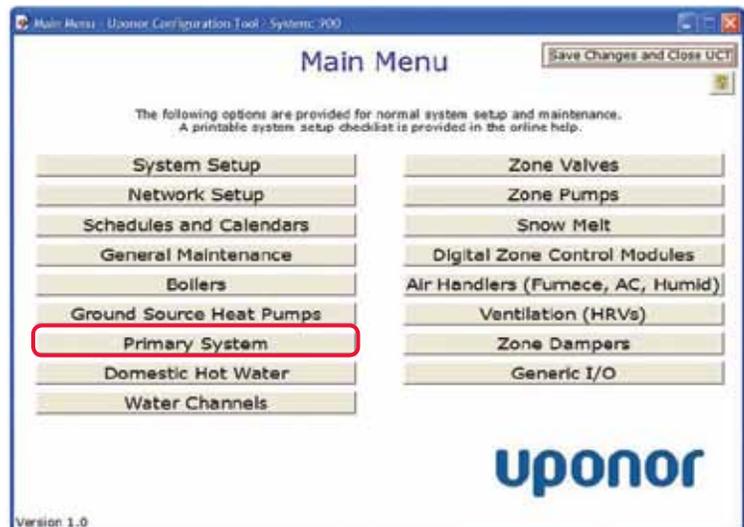


Figure 2.6-1: Main Menu Screen

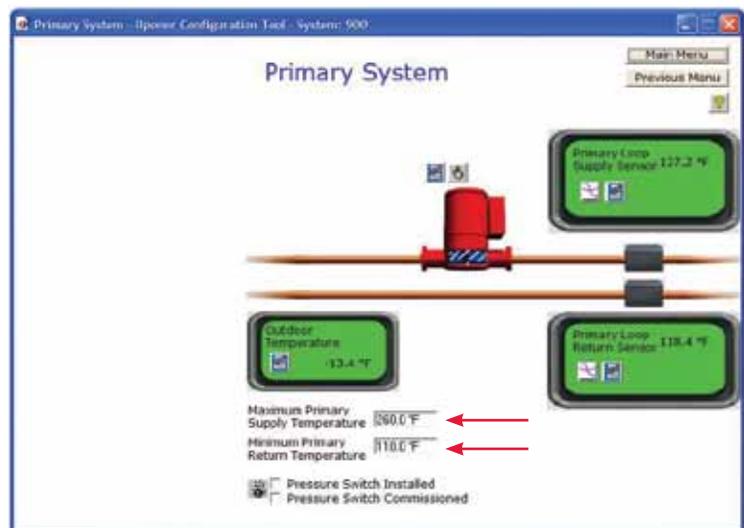


Figure 2.6-2: Primary System Screen

Pressure Sensor Setup

The Network System allows the addition of a single, optional System Pressure Sensor, On-Off (A9012004). The sensor is adjustable from 3 to 15 psi; the default setting is 7 psi. Refer to the sensor's installation instructions for adjusting the pressure setting.

If the pressure in the primary loop falls below the setting, it will trigger an alarm in the UCT. You can configure the Network System to forward alarms through e-mail; see **Section 2.2: Basic System Setup**.

Refer to the following steps to set up the System Pressure Sensor.

1. From the **Main Menu**, click the **Primary System** button shown in **Figure 2.6-3**. This will display the Primary System screen shown in **Figure 2-6-4**.

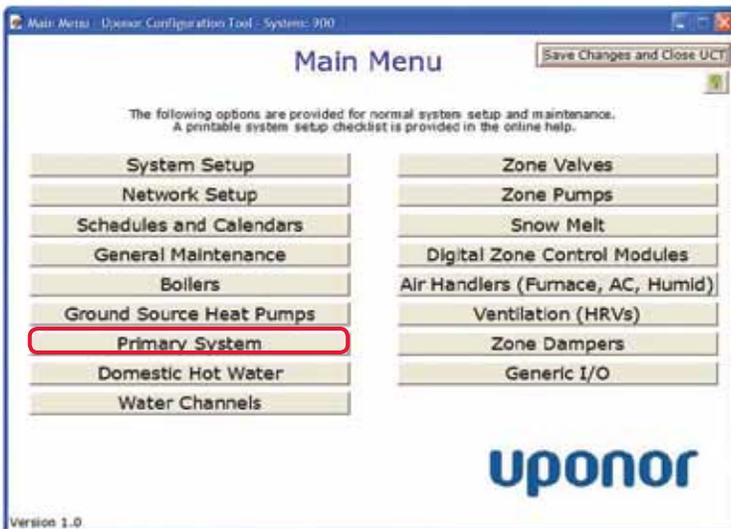


Figure 2.6-3: Main Menu Screen

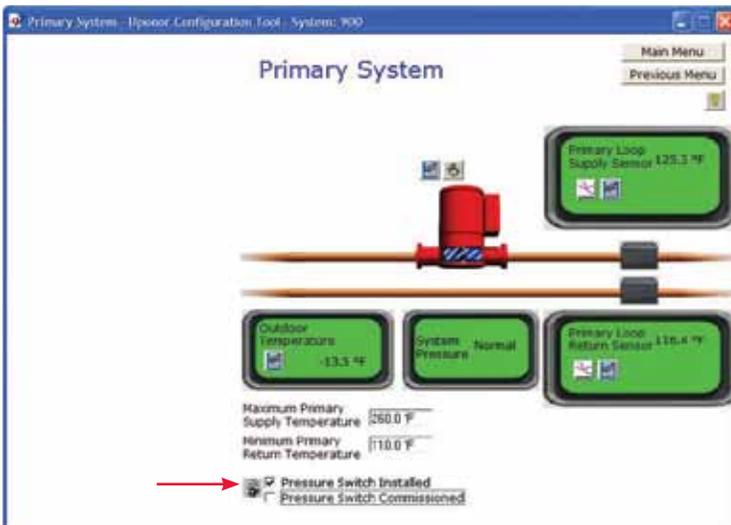


Figure 2.6-4: Primary System Screen

2. Click on the Pressure Switch Installed check box.
3. Click on the Pressure Switch Commissioned check box. When this box is checked, the padlock, indicated by the red arrow in **Figure 2.6-4**, will no longer display. This step assumes the installer previously adjusted and tested (commissioned) the sensor.

Caution: The system will NOT generate an alarm if the sensor is not commissioned.

Primary System Screen Definitions

See below for field descriptions on the Primary System screen.

- **Primary Loop Supply Sensor:** This field displays the temperature of output water from the boiler(s) to the primary loop.
- **Primary Loop Return Sensor:** This field displays the input water temperature from the primary loop to the boiler(s).
- **Outdoor Temperature:** This field displays the current outdoor temperature as read by the Outdoor Sensor (A9012005). The Network System uses this value for heating curve (water temperature) calculations.
- **System Pressure:** When the Pressure Switch Installed box is checked, it will display the System Pressure field. This field indicates whether the system pressure is in a Normal or Fault condition. A fault occurs when the system pressure falls below the System Pressure Sensor setting (default is 7 psi). Install an optional System Pressure Sensor, On-Off (A9012004) to use this feature.
- **Maximum Primary Supply Temperature:** This field displays the value set as the upper safety limit for the boiler supply temperature. Consult the boiler manual for the appropriate value.
- **Minimum Primary Return Temperature:** This field displays the value set as the lower safety limit for the boiler return temperature. For a conventional boiler, this value must be set higher than the flue-gas condensation point. Consult the boiler manual for the appropriate value.