Basic Series Network Thermostat Configuration Guide

(NT10e and NT20e)

Release 3.0

Inside ...

- Configuring the thermostat using the TDI
- Configuring the thermostat using the TMI
- Troubleshooting

PROLIPHIX

Part No. 600-01000-201, Rev. 1
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FCC

Model: NT10e/NT20e, NT100e/h, NT120e/h, NT150e/h, TM220e/h, and TM250e/h
Made in the USA

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.

CSA

Power: 24VAC 45mA 60Hz
48VDC 22mA 60Hz
Switched power each contact: 24VAC 2A 60Hz

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Preface

The *Basic Series Network Thermostat Configuration Guide* describes how to control and configure Proliphix devices (for example, thermostats) through either the Thermostat Device Interface (TDI) or more specifically through the browser-based Thermostat Management Interface (TMI).

Audience

This guide is intended for managers and/or facilities managers or those responsible for managing multiple devices remotely in small or medium size buildings, multiple buildings, or corporate environments.

As a reader of this guide, you should be familiar with the use of an Internet browser (for example Internet Explorer or Mozilla) and have a working knowledge of general data networking principles. You should have prior experience with establishing a local area network (LAN) in either a home or office. You should understand the basic principles of connecting patch panels and switches as well as configuring features on a firewall router.

Be sure to read the *Software Release Notes* (SRN) on our web site for this product. The SRN contains the most current product information and requirements.

Documentation Reading Path

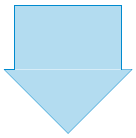
The following is the recommended documentation reading path for installing and configuring Proliphix devices. For a detailed description of each guide, see Proliphix Documentation Library (page xiii).

1

Installing the Thermostat

Proliphix Thermostat Installation Guide

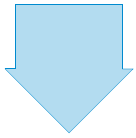
Proliphix Ethernet Power Adapter Installation Guide



2

Connecting to the Local Network

Basic Series Network Thermostat Configuration Guide



3

Accessing the Thermostat Remotely Using the Proliphix Remote Management Server

Proliphix Remote Management Setup Guide

Proliphix Documentation Library

The following documentation is available for Proliphix products. *Software Release Notes* ship with each product. For ordering information, see page xv.

Proliphix Product	Title	Audience
NT10e, NT20e, NT100e/h, NT120e/h, and NT150e/h	*Proliphix Thermostat Installation Guide*	For customers who want to install the Basic and Professional series thermostat.
EPA 20 and EPA 60	*Proliphix Ethernet Power Adapter Installation Guide*	For customers who want to install the EPA-20 or EPA-60 Ethernet Power Adapter.
NT100e/h and NT120e/h	*Proliphix Remote Management Setup Guide*	For customers who want to manage the thermostat using the Proliphix Remote Management Server.
NT10e, NT20e, NT100e/h, NT120e/h, and NT150e/h	*Proliphix Remote Management User Guide*	For customers who own either the Basic series or Professional series thermostat and want to remotely manage their thermostats through secure authentication at the Proliphix web site.
TM220e/h and TM250e/h	*Thermal Managment Series Network Thermostat Configuration Guide (TM220e/h and TM250e/h)*	For customer who want to access and control their Proliphix Thermal Management series thermostat through either the Thermostat Device Interface or more specifically through the browser-based Thermostat Management Interface (TMI).
NT100e/h, NT120e/h, and NT150e/h	*Professional Series Network Thermostat Configuration Guide (NT100e/h, NT120e/h, and NT150e/h)*	For customer who want to access and control their Proliphix Professional series thermostat through either the Thermostat Device Interface or more specifically through the browser-based Thermostat Management Interface (TMI).
NT10e and NT20e	*Basic Series Network Thermostat Configuration Guide (NT10e and NT20e)*	For customer who want to access and control their Proliphix Basic series thermostat through either the Thermostat Device Interface or more specifically through the browser-based Thermostat Management Interface (TMI).
NT10e, NT20e, NT100e/h, NT120e/h, NT150e/h, TM220e/h, and TM250e/h	*Proliphix Device Management Software User's Guide*	For customer who want to manage their Proliphix devices (for example, thermostats) remotely using the PDMS.

Conventions

This guide uses the following conventions, when applicable:

Description	Convention and Example
Commands or keywords, file or path names	**Boldface** font
Variable parameters for which you supply values	<*courier italics*>
Options and arguments for which you supply values	[ ]
Information that the user must enter	**`Courier Bold`** font
Screen messages or system output	`Courier Regular` font
Selecting a menu item	**Menu => Option**
Book titles, new terms, and emphasized text	*Italics*

Note *Additional information that may apply to the subject text.*

Caution *Proceed carefully to avoid possible equipment damage or data loss.*

Warning *Proceed carefully to avoid possible personal injury.*

Tip *Provide helpful suggestions.*

Technical Publications

Customers can obtain product documentation on our web site at http://www.proliphix.com/Documenation.aspx.

Note

Documentation is available for currently supported product releases. Documentation is available in Adobe PDF format. You can view PDFs online using the Adobe Reader ® 6.0 or later. To download the latest version of the Adobe Reader software from the Adobe web site, click http://www.adobe.com/products/acrobat/readstep2.html.

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- Location and number of wires attached to the Proliphix thermostat

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Chapter 1

Overview

The Proliphix Basic Series Network Thermostats are powered by a Proliphix Ethernet Power Adapter (EPA).

The end-user of the Basic Series Thermostats should consult the *Proliphix Remote Management Setup Guide* for a complete explanation of remotely managing your Network Thermostat.

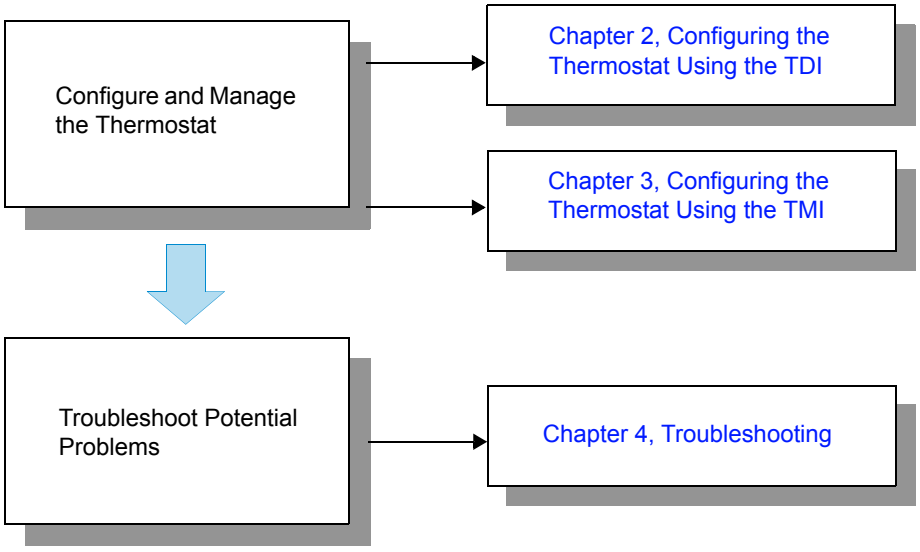
You can configure and manage your thermostat using either the Proliphix Thermostat Management Interface (TMI) or the Thermostat Device Interface (TDI).

Thermostat Management Interface — The Proliphix TMI enables you to manage and control your Proliphix thermostats through your web browser.

Thermostat Device Interface — The buttons on the front of the thermostat enable you to modify the temperature, enable basic HVAC functions, and to view the thermostat's network configuration and status.

Use the instructions in this guide to configure and manage your thermostat as shown in Figure 1-1.

Figure 1-1 Thermostat Configuration Process Flow



Before You Begin

Before you access and control your Proliphix Network Thermostat through either the TDI or more comprehensively through the browser-based TMI, you must know the IP address and port number of the local thermostat and enable the real time clock. The following sections describe these pre-requisite tasks.

IP Address and Port Number

Your Proliphix Network Thermostat ships from the factory capable to support the DHCP mode for assigning an IP address to your thermostat. See the DHCP Assigned IP Addresses (page 3-2) for more information. You must know the IP address and port number for your thermostat and enter this information in your web browser.

Logging In to the Thermostat

To retrieve the IP address and port number using the Thermostat Device Interface (buttons and control on the front of the thermostat):

1. From the Status & Control Screen (page 2-9), select the Network Status Screen (page 2-14) and record the IP address and port number.
2. Enter this IP address and port number (address:port_number) as the URL in your web browser.
3. Log in to the thermostat as follows:

   Username: **admin**

   Password: **admin** (default)
4. Access the Network Settings Page (page 3-27) in the Thermostat Management Interface.
5. Disable the **DHCP function** by selecting **Static** for the IP address method.
6. Enter a unique IP address, Subnet Mask, Gateway, and HTTP port number.
7. Click **Submit**.

Real Time Clock

Your Proliphix Network Thermostat ships from the factory with the real time clock **disabled** to ensure longer battery life. You **must** enable the real time clock to provide years of accurate timekeeping on your thermostat.

To enable the real time clock:

1. On the General Settings Page (page 3-13), check the **Set Thermostat Time** check box in the **Set Date and Time** field.
2. Click **Submit**.

What's Next?

Continue with Chapter 2, Configuring the Thermostat Using the TDI or Chapter 3, Configuring the Thermostat Using the TMI to manage your thermostat.

Chapter 2

Configuring the Thermostat Using the TDI

This chapter describes how to manually modify certain parameters directly at the thermostat using the Thermostat Device Interface (TDI) (buttons and screen options on the thermostat). The thermostat's front panel includes up and down arrows and several buttons located at the bottom of the LCD to select the desired configuration settings.

Thermostat Buttons and LCD Screen Options

This section describes the thermostat's buttons and LCD screen options. Figure 2-1 shows the basic layout of all thermostat buttons and a typical LCD screen.

Figure 2-1 Thermostat Buttons and LCD Options

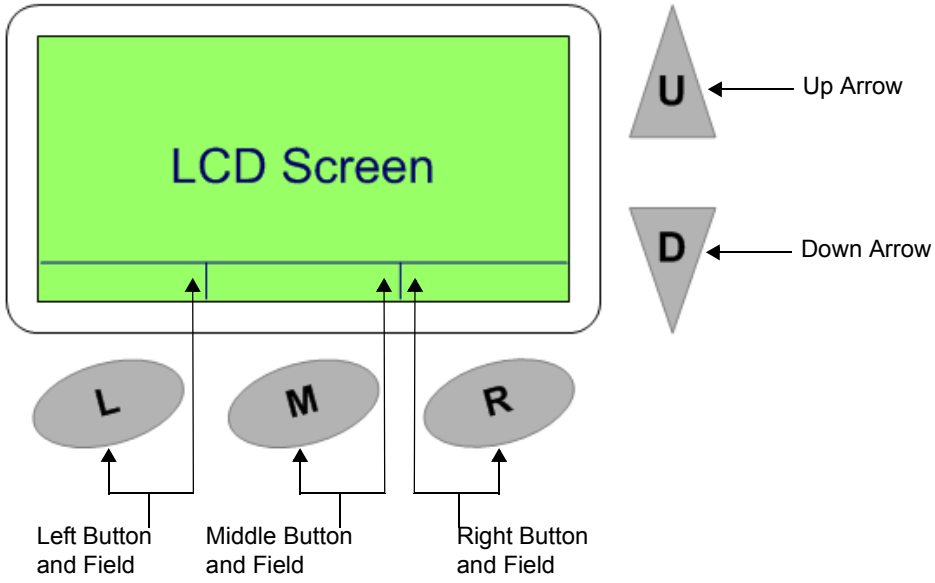


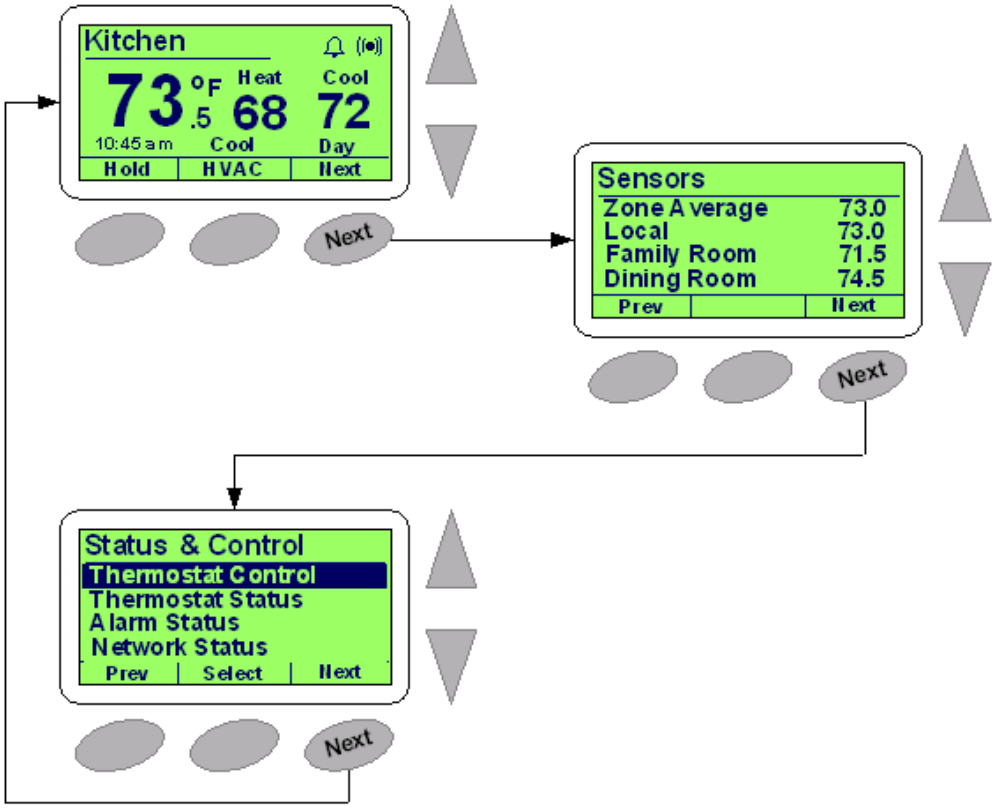
Table 2-1 describes the thermostat buttons and LCD options.

Table 2-1 Thermostat Buttons and LCD Options

Button or LCD Option	Description
Up arrow (multiple uses, screen sensitive)	Increases the setpoint temperature settings. Scrolls up one field in multi-field screens.
Down arrow (multiple uses, screen sensitive)	Decreases the setpoint temperature settings. Scrolls down one field in multi-field screens.
Left button (multiple uses, screen sensitive)	Selects the function displayed on the LCD.
Middle button (multiple uses, screen sensitive)	Selects the function displayed on the LCD.
Right button (multiple uses, screen sensitive)	Selects the function displayed on the LCD.
Left button field	Displays the function to be controlled by the left button. In many screens, this field is labeled **Prev** and enables you to access the previous screen.
Middle button field	Displays the function to be controlled by the middle button. In many secondary screens, this field is labeled **Select** and enables you to select the highlighted field on the screen.
Right button field	Displays the function to be controlled by the right button. In many screens, this field is labeled **Next** and enables you to access the next screen.

Each thermostat displays content on the LCD screen. The LCD screen is organized into primary and secondary (or sub) screens. This section describes the primary and secondary screens shown in Figure 2-2.

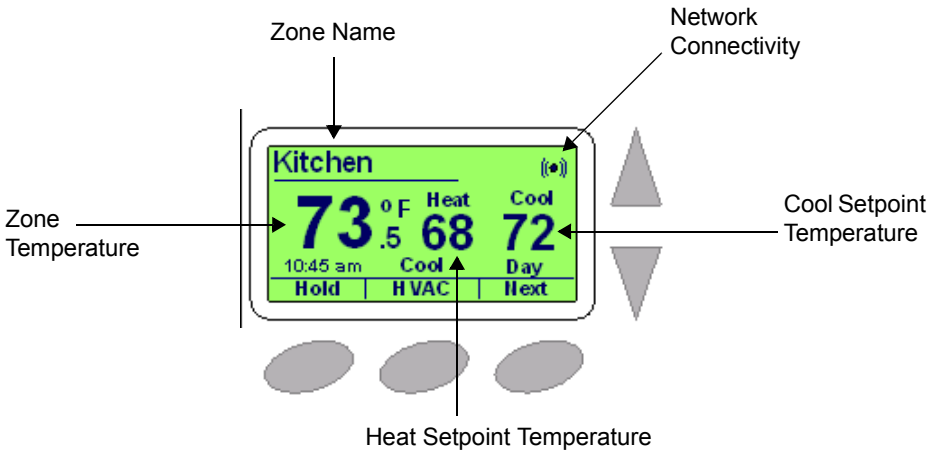
Figure 2-2 Primary Screen Cycle



Thermostat Screen

Figure 2-3 shows the default **Thermostat** screen. The thermostat constantly displays this screen with a minimal ambient backlight. The backlight intensifies after you click any button.

Figure 2-3 Thermostat (Default) Screen



Note *The thermostat display reverts back to the default LCD screen after 16 seconds of keypad inactivity.*

Table 2-2 lists the thermostat LCD screen options.

Table 2-2 Thermostat Screen Options

Field	Description
Zone Name (network host name)	Initially, the Zone Name is set to the last six digits of the network MAC address (e.g. 00-00-6A).
Network Connectivity	When visible, indicates that the thermostat is connected to an Ethernet network. When blinking, indicates an active Ethernet network (network activity).
Zone Temperature	Indicates the current zone temperature in degrees Fahrenheit or Celsius. If remote sensors are installed, enabled, and configured to average with the local thermostat sensor, this field indicates the average temperature of the aggregate sensors.
Heat Setpoint Temperature	Indicates the current heat setpoint temperature (°F or °C) as defined by the thermostat schedule. *Note: This field is disabled if only Cool is selected in HVAC mode. This field is not be visible if the thermostat is configured as a cool-only thermostat.*

Table 2-2 Thermostat Screen Options (Continued)

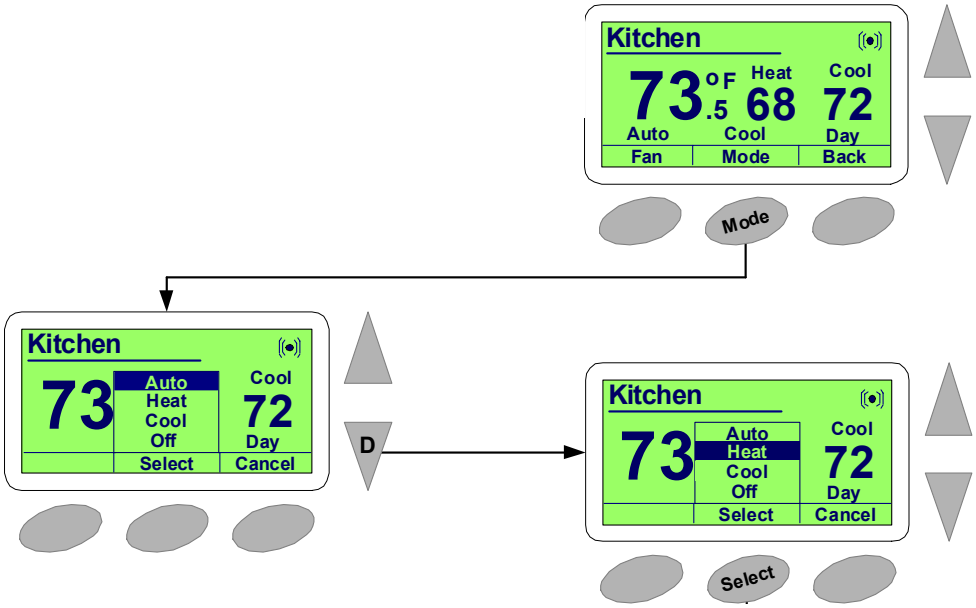
Field	Description
Cool Setpoint Temperature	Indicates the current cool setpoint temperature (^{o}F or ^{o}C) as defined by the thermostat schedule. *Note: This field is disabled if only Heat is selected in HVAC mode. This field is not be visible if the thermostat is configured as a heat-only thermostat.*
Time	Time of day displayed in Daylight Savings Time if chosen.
Temperature Hold	Holds current temperature either permanently or for 1, 3, 8, 12, or 24 hours or until after you manually remove the Hold, after which the temperature settings "Return" to that set in the schedule. The Hold button toggles between Hold and Return. (See Advanced Settings Page on page 3-30)
HVAC Activity	Displays the current state of the HVAC system. For either Fuel Burner or Heat Pump, the LCD displays the following: ■ **Delay** – Compressor delay is active (Heat Pump and Fuel Burner A/C) ■ **Heat** – Heating is active. ■ **Aux Ht** – Auxiliary heat is active (Heat Pump only). ■ **Cool** – Cooling is active.
HVAC Mode Control	Enables the **HVAC** screen whereby HVAC and Fan settings can be modified (see Figure 2-4).
Next	Enables display of the next thermostat screen.
Period State	Displays the current scheduled Period. The four schedule Periods are *Morn, Day, Eve*(ning) and *Night*.

HVAC Screen

The **HVAC** screen is a sub-screen of the default Thermostat (Default) Screen (page 2-4). Most of the content on the **HVAC** screen is identical to the **Thermostat** screen with the exception of the HVAC mode and fan setting controls.

Figure 2-4 shows an example of the HVAC Mode setting control screens.

Figure 2-4 HVAC Screen Example



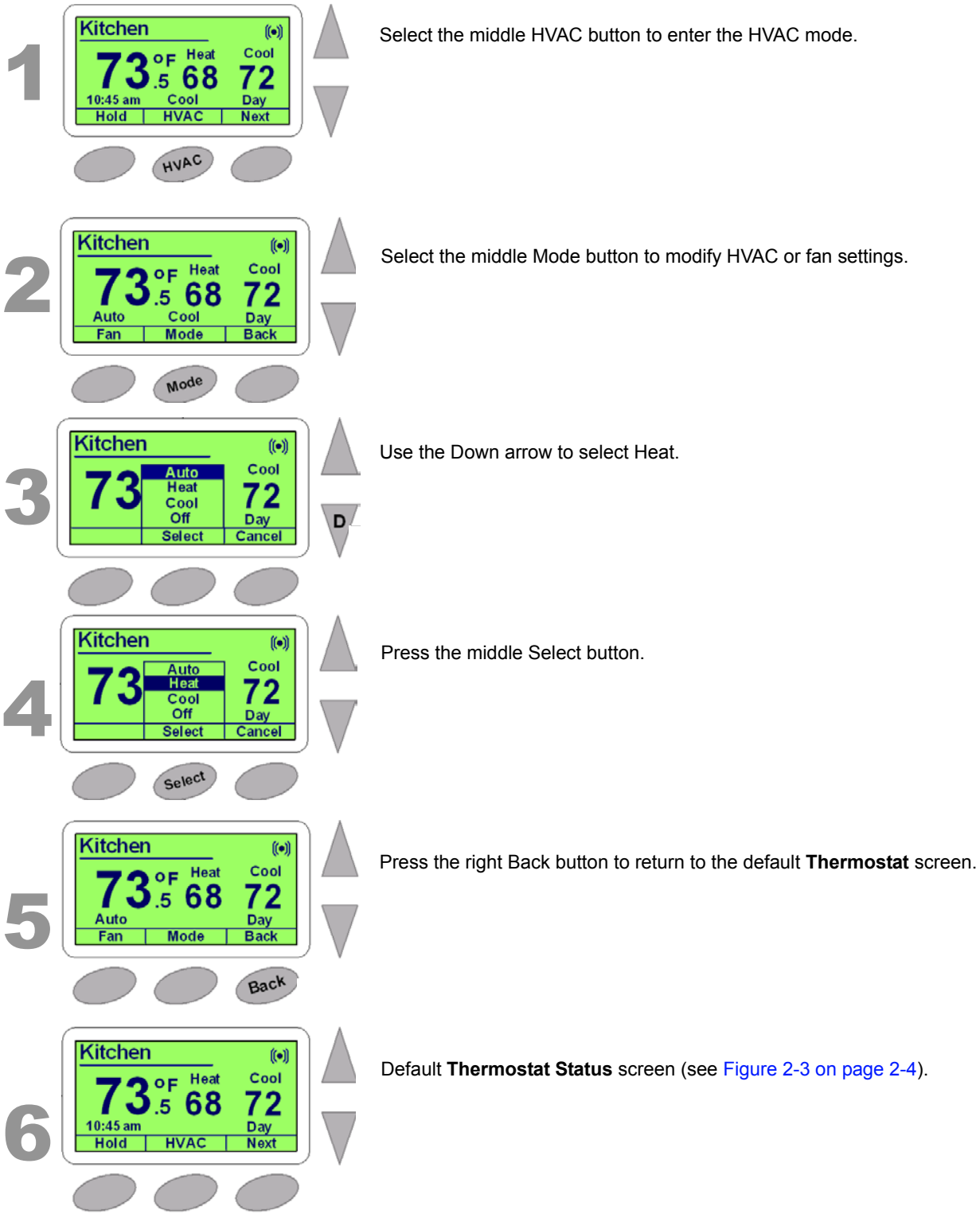
Use Table 2-3 to configure the HVAC options.

Table 2-3 HVAC Screen Options

Field	Description
Fan State	Displays the current state of the fan. Options include: ■ **Auto** – The fan is controlled by either the heat or AC systems (or both). ■ **On** – Forces the fan to the on state independent of the heat or AC systems.
Fan Control	Displays the options for changing the state of the fan. See Fan State.
HVAC Mode	Displays the options for changing the state of the HVAC System. ■ **Auto** – Automatic changeover between the heat or A/C systems. ■ **Heat** – Enables the heating system only. The A/C system is disabled. ■ **Cool** – Enables the A/C system only. The heating system is disabled. ■ **Off** – Disables the heating and A/C systems.
Back	Returns to the default **Thermostat** screen.
Cancel	Clears the current active menu.

Figure 2-5 shows an example of the process of changing HVAC settings at the thermostat.

Figure 2-5 Changing the HVAC Setting



Sensor Status Screen

The **Sensor Status** screen is a secondary screen on the Basic series models (if remote sensors are installed and enabled) and the second primary screen if remote sensors are disabled.

Note *The NT10e does not support external thermal sensors, therefore this screen is not available on the NT10e Network Thermostat.*

Figure 2-6 Sensor Status Screen

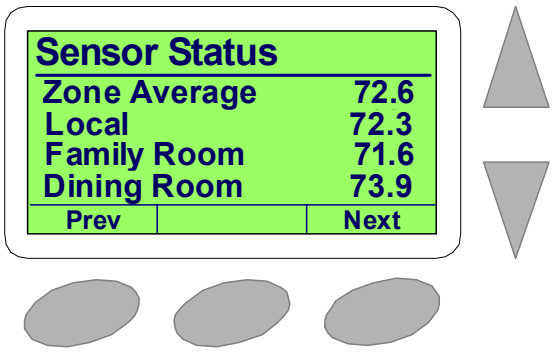


Table 2-4 lists the sensor status screen display options.

Table 2-4 Sensor Status Screen Options

Field	Displays
Zone Average	Average temperature of any combination of Local, Remote Sensor #1 (e.g. East Entry), and Remote Sensor #2 (e.g. West Entry).
Local	Current temperature of the sensor within the thermostat.
East Entry (e.g. RS #1)	Current temperature of Remote Sensor #1.
West Entry (e.g. RS #2)	Current temperature of Remote Sensor #2.

Status & Control Screen

The **Status & Control** screen is the third primary screen. (This is the second primary screen if remote sensors are disabled.) You can highlight each status field by pressing the Up or Down arrows on the thermostat. Press **Select** to choose the desired status field.

You can access the following four secondary screens from the **Status & Control** screen:

- Thermostat Control Screen (page 2-10)
- Thermostat Status Screen (page 2-12)
- Alarm Status Screen (page 2-13)
- Network Status Screen (page 2-14)

Figure 2-7 Status & Control Screen

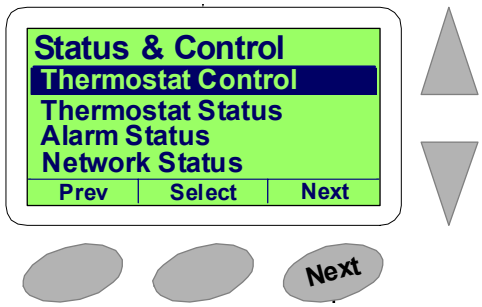


Table 2-5 lists the **Status & Control** screen options.

Table 2-5 Status & Control Screen Options

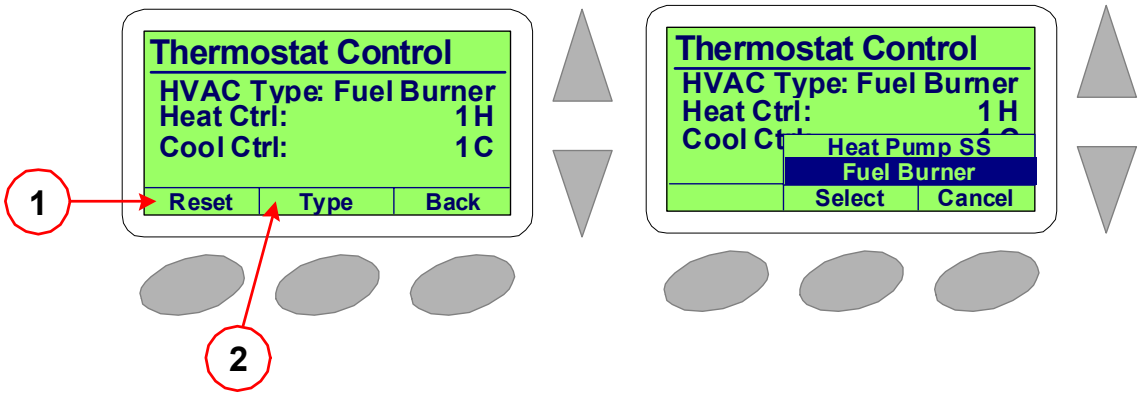
Option	Description
Thermostat Control	When highlighted and selected, opens the Thermostat Control Screen (page 2-10).
Thermostat Status	When highlighted and selected, opens the Thermostat Status Screen (page 2-12).
Alarm Status	When highlighted and selected, opens the Alarm Status Screen (page 2-13).
Network Status	When highlighted and selected, opens the Network Status Screen (page 2-14).

Thermostat Control Screen

The **Thermostat Control** screen is a sub-screen of the Status & Control Screen (page 2-9). You can select the HVAC system type on this screen. This screen also displays the status of the selected type along with the default settings.

To change specific parameters for each type, go to the Advanced Settings Page (page 3-30). To initiate a software reset, press the left button and see Resetting the Thermostat (page 4-1).

Figure 2-8 Thermostat Control Screen



Use Table 2-6 to configure the **Thermostat Status** screen options.

Table 2-6 Thermostat Status Screen Options

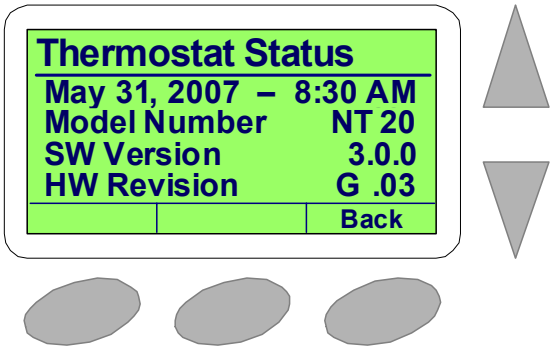
Field	Description
Reset	Press and hold the Reset button for three (3) seconds to perform a software reboot.
Type	Select either **Fuel Burner** (default) or **Heat Pump**. When selecting between either **Fuel Burner** or **Heat Pump** or between **Heat Pump** and **Fuel Burner**, the **HVAC Mode** must be set to **OFF** prior to selecting the opposite setting. (See Changing the HVAC Setting (page 2-7) or Status & Control Page (page 3-9). ■ **Fuel Burner** – Fossil fuel systems which includes oil or gas-fired boilers or furnaces. ■ **Heat Pump** – Electric heat pump HVAC system type.
See the Advanced Settings Page (page 3-30) further explanation of the following parameters.	
HVAC Type	Displays the selected HVAC system type; Fuel Burner or Heat Pump. **Fuel Burner**: *Heat Ctrl:* ■ **Disable** – No heating system is present. ■ **Enable** – Heating is enabled. *Cool Ctrl:* ■ **Disable** – No cooling system is present. ■ **Enable** – Cooling is enabled. **Heat Pump**: *Heat Ctrl:* ■ **Disable** – No heating system is present (i.e. air conditioning only) ■ **Enabled** - Heating is enabled. ■ **Aux Heat** – Auxiliary heat is enabled to augment the heat pump. *Cool Ctrl:* ■ **Disable** – No cooling system is present (i.e. heat only) ■ **Enabled** – Heating is enabled.

Thermostat Status Screen

The **Thermostat Status** screen is a sub-screen of the Status & Control Screen (page 2-9). This screen displays the following information for each thermostat:

- Current date
- Product model number
- Software version
- Hardware revision

Figure 2-9 Thermostat Status Screen



Alarm Status Screen

The **Alarm Status** screen is a sub-screen of the Status & Control Screen (page 2-9). This screen displays the status of both the Low and High Temperature Limits alarm and the Filter Reminder alert.

Figure 2-10 Alarm Status Screen

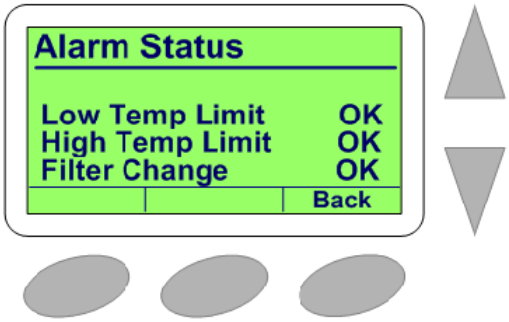


Table 2-7 lists the **Alarm Status** screen display options.

Table 2-7 Alarm Status Screen Options

Field	Displays
Low Temp Limit	Temperature below which an alarm indication is set by the thermostat. ■ **OK** – Temperature of thermostat has not dropped below that set as Low Temperature Limit. ■ **Not OK** – Temperature of thermostat has dropped below that set as Low Temperature Limit.
High Temp Limit	Temperature above which an alarm indication is set by the thermostat. ■ **OK** – Temperature of thermostat has not risen above that set as the High Temperature Limit. ■ **Not OK** – Temperature of thermostat has risen above that set as the High Temperature Limit.
Filter Change Alert	Indicates that the HVAC system requires service or the air handler filter needs cleaning or replacement. ■ **OK** – Maintenance is not required. ■ **Now** – Maintenance is required.

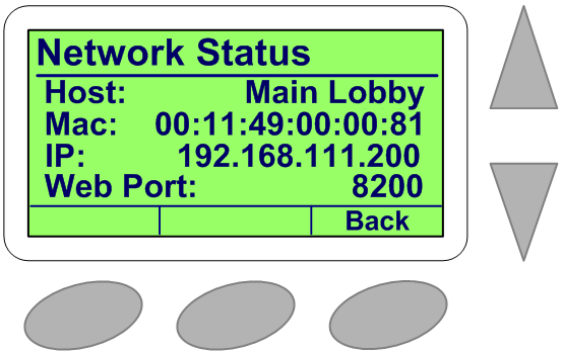
Network Status Screen

The **Network Status** is a sub-screen of the Status & Control Screen (page 2-9). This screen displays the following information:

- Thermostat host name
- Unique Ethernet Media Access Control (MAC) address
- Internet Protocol (IP) address
- Web port number

See Network Settings Page (page 3-27) for more information on setting these parameters.

Figure 2-11 Network Status Screen



Chapter 3

Configuring the Thermostat Using the TMI

This chapter describes how to connect the thermostat to your local network and configure and monitor the thermostat through the web browser using the Thermostat Management Interface (TMI).

Thermostat Management Interface (TMI) Authentication

The TMI for all Basic Series thermostats requires password authentication prior to accessing the HTML pages that enable you to control or manage the thermostats. The username and password for the Administrator account is as follows:

Username: **admin**

Password: **admin** (default)


Tip

You can change each of this password within the Admin account after the initial authentication. For more information, see *Password Settings Page (page 3-44)*.

DHCP Assigned IP Addresses

The NT10e and NT20e Network Thermostats ship directly from the factory enabled to perform as a Dynamic Host Configuration Protocol (DHCP) client. DHCP is an established standard used to assign IP addresses automatically after each network device is inserted into the network or when the device experiences a power cycle. DHCP allows devices on your local network to receive their Internet Protocol (IP) addresses automatically from an attached DHCP server typically located within a local router. Devices located on the same network as the router may include DHCP client software. This software works in conjunction with the router's DHCP Server to request and receive both an IP address and Gateway Address.

If your file server or router supports DHCP, then your Proliphix thermostat automatically retrieves an IP Address, Gateway Address, and Subnet Mask from the DHCP server on your network.

Note

Proliphix strongly recommends that a DHCP server be installed and operational in your network prior to installing the thermostat.
If a DHCP server is unavailable on your network, your thermostat will default to the 169.254.111.111 IP address within 60 seconds once you press the "abort" key on the Network Status screen on the TDI. Note that this address is not unique to your network if more than one thermostat is installed on a network without a DHCP server. That is, there will be multiple thermostats on the network with the same IP address (i.e. 169.254.111.111). Addressing conflicts will exist and most of the thermostats will be inaccessible.

Before you Begin

Before you access the TMI to control and manage your thermostat, complete the following prerequisite tasks described in this section:

- Connect the thermostat to the network.
- Obtain the device name, default host name, IP address, and Web Port identifier.
- Establish the thermostat's identity for remote management.

Connecting the Thermostat to the Local Network

This section describes how to connect your NT10e or NT20e Network Thermostat to your local data network. This connection enables you to conveniently and efficiently configure your thermostat using a browser on your laptop or desktop personal computer. If a broadband connection is available on your local network, you can also remotely manage and configure your thermostat via the Internet.

To connect the thermostat to your local network:

1. Using a standard patch cable, complete the connection of your thermostat(s) to the local switch or router. Your thermostat(s) should automatically communicate with the local DHCP server and be assigned a unique IP address.
2. Go to the physical location of each thermostat and record the following information using the worksheet below. Use a separate piece of paper if necessary.

Information	Thermostat 1	Thermostat 2	Thermostat 3
Device Name (Zone Name) of the thermostat Located in the upper-left corner of the Thermostat (Default) Screen (page 2-4).			
Default host name of the thermostat The last six digits of the Proliphix-assigned device MAC address in the format "AB:CD:EF". See Network Status Screen (page 2-14).			
IP Address and Web Port identifier Select the Network Status Screen (page 2-14) under the Status & Control Screen (page 2-9).			

Tip

You will refer to this information later in this guide when you configure your thermostat(s) for Remote Management. Keep this information as a reference in case you need to change your thermostat(s) network settings.

Remote Management

You can manage the NT10e or NT20e Network Thermostat using a web browser on a local area network (LAN) or remotely though the Internet after proper authentication at the Proliphix Web Site (www.proliphix.com).


Note

If you use a VPN to access your thermostats remotely, the thermostats appear to reside on the "local" network. In this case, you do not need to control the thermostats through the Proliphix Remote Management Service via the Proliphix Web Site. If the Proliphix Remote Management Service is not used however, email notification due to alarm conditions is ***not*** *available.*

Logging In to the Thermostat

To establish the identity of the thermostat for Remote Management capability: (See the *Proliphix Installer Remote Management Guide* and the *Proliphix Remote Management User Guide* for detailed information.)

1. Log in to the TMI as follows:

   Username: **admin**

   Password: **admin** (default)

2. Access the General Settings Page (page 3-13) through the TMI.
3. Enter a **Device Name** and **Site Name** (for example, the name or location of the property).
4. Click **Submit**.
5. Access the Network Settings Page (page 3-27).
6. Set the **IP Address Method** to **Static** and select a unique **IP address, Subnet Mask, Gateway**, and **HTTP port number**.
7. Click **Submit**.
8. Access the Remote Access Page (page 3-38).
9. Click **Submit**.

Thermostat Management Interface (TMI)

The Proliphix Thermostat Management Interface (TMI) provides network management capability to control your Proliphix thermostats. This section describes the browser-based configuration using the TMI. Review the instructions in this section prior to configuring your thermostat.

HTML Interface

To access the initial HTML page of the thermostat, enter the unique IP address initially assigned via DHCP (see page 3-2) and the Web HTTP port number in your browser window. For example:

```
http://192.168.111.100:80
```

Where 192.168.111.100 is a unique IP address initially assigned via DHCP and 80 is the default (Proliphix assigned) Web HTTP port number. (If you are upgrading your device from a previous version of Proliphix firmware, this port number may be something other than 80. The old port number is carried forward after the firmware upgrade.) After you enter these two fields into the browser, the system displays the first TMI page.


Tip

Proliphix recommends that these parameters be fixed "statically" so that this address can be bookmarked in your browser. Proliphix recommends that you choose a unique static IP address assigned from outside the DHCP server pool of addresses. See the Network Settings Page (page 3-27) for more information on static IP address assignment.

Most of the HTML thermostat pages conform to a standard format which is maintained for both local and remote thermostat access. (See Figure on page 3-7.) A yellow banner at the top of each page contains the following information for each thermostat:

- Model number
- Page title
- Host name of the thermostat

Each thermostat page also includes browser buttons which enable direct access to all other HTML pages on the thermostat. The TMI displays each page in a table format. Each feature table is organized by rows of functions, in a left to right direction as follows:

- Field name
- Function status (in light blue)
- Function control (text boxes and drop-down selections)

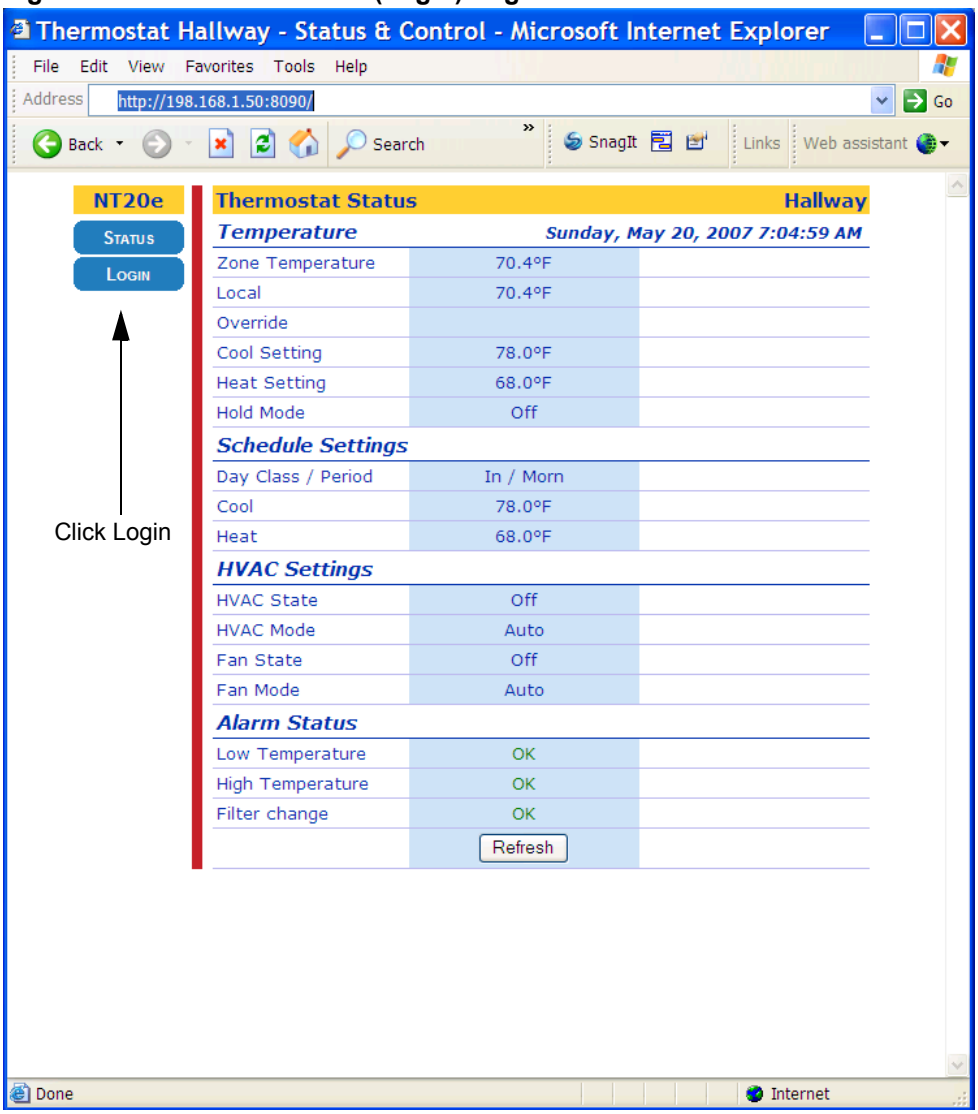
Logging In to the Thermostat

When you access the thermostat for the first time, the default **Status & Control (Login)** page appears. Proliphix recommends that you log in to the thermostat from this page. The thermostat's status is visible to you without logging in, but you must log in to control some of the parameters on this page.

Note

*In each TMI page, you must click **Submit** to apply all changes made in the Control column. Click **Refresh** to update the status.*

Figure 3-1 Status & Control (Login) Page

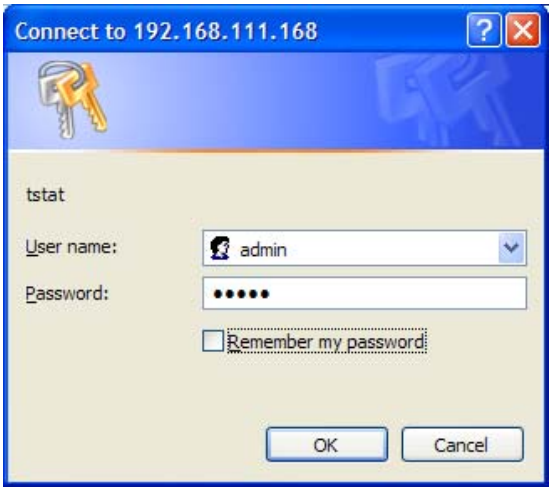


To log in and access TMI pages:

1 Click **Login**.

The login window appears. (See Figure 3-2.) Proper authentication is required before you can access any other thermostat TMI pages.

Figure 3-2 Administrator Authentication Window



2 Enter the following and click **OK**:

User name: **admin**

Password: **admin** (default)

Note

You can change the password using the Password Settings Page (page 3-44).

3 Continue with the Status & Control Page.

Status & Control Page

The TMI displays the default **Status & Control** page after authentication. The **Status & Control** page displays a "snapshot" of most of the pertinent information accessible on the thermostat.

Figure 3-3 Status and Control Page

Use Table 3-1 to configure the **Temperature** status, **Schedule Settings**, **HVAC Settings**, and **Alarm Status** fields.

Table 3-1 Thermostat Status Field Descriptions

Field	Description
Temperature	
Zone Temperature	Displays the current temperature of the local sensor if temperature averaging is disabled. Average temperature of any combination of **Local, Remote Sensor #1 (RS #1)** or **Remote Sensor #2 (RS #2)** if temperature averaging is enabled. (See Advanced Settings Page (page 3-30).) **In a range of -30°F(-34°C) to 199°F(95°C)**
Override	Displays whether **Heat or Cool Settings** are different from the current scheduled settings. Changes made to either the **Heat or Cool Settings** (which force an override) remain at those settings until the next scheduled Period change. At the Period change, the settings for either/both heat or cool follow the schedule. (See Schedule Settings (page 3-10).) **Override**
Cool Setting	Displays the current temperature programmed for the cooling (A/C) system. This field is disabled if the HVAC mode is set to Heat or Off. (See HVAC Mode (page 3-11).) This field is not visible if the thermostat is configured to be a heat-only controlling device. (See Advanced Settings Page (page 3-30).) To modify this field, use the drop-down menu to select a **Cool Setting**. **40°F(4.5°C) to 99°F(37°C)**
Heat Setting	Displays the current temperature programmed for the heating system. This field is disabled if the HVAC mode is set to Cool or Off. (See HVAC Mode (page 3-11).) This field is not visible if the thermostat is configured to be a cool-only controlling device. (See Advanced Settings Page (page 3-30).) To modify this field, use the drop-down menu to select a **Heat Setting**. **40°F(4.5°C) to 99°F(37°C)**
Hold Mode	Displays the current state for both the **Heat and Cool Setting**. To "hold" the current settings indefinitely or for a prescribed period of time as set on the Advanced Settings Page (page 3-30), use the drop-down menu and choose ■ **Hold** – Hold mode is enabled. ■ **Off** (default) – Hold mode is disabled.
Schedule Settings	
Day Class / Period	Displays the current settings for both the scheduled **Day Class** and **Period**. ■ **Day Class** – Occupied, Unoccupied, and Other ■ **Period** – Morn(ing), Day, Eve(ning), Night
Cool	Displays the current Cool temperature setting as set within the current **Day Class** schedule. (See Setback Schedules Page (page 3-17).) **40°F(4.5°C) to 99°F(37°C)**

Table 3-1 Thermostat Status Field Descriptions (Continued)

Field	Description
Heat	Displays the current Heat temperature setting as set within the current **Day Class** schedule. (See Setback Schedules Page (page 3-17).) **40°F(4.5°C) to 99°F(37°C)**
HVAC Settings	
HVAC State	Displays the current state of the heating or cooling system. If a state change is made while viewing this page, click **Refresh** to update the status. ■ **Heat** – Heating system is actively heating. ■ **Aux Ht** – Heating system and auxiliary heat are actively heating. (Heat Pump only) ■ **Cool** – Cooling system is actively cooling. ■ **Off** – Neither the heating system or cooling system is active (i.e. on).
HVAC Mode	Displays and controls the current mode setting for the HVAC system. The thermostat can be configured to control the heat system only, cool system only, automatically change over between heating and cooling systems, or control neither system. ■ **Off** – The thermostat is disabled from controlling either the heating or cooling system. ■ **Heat** – Heating system only. ■ **Cool** – Cooling system only. ■ **Auto** – Automatic changeover between heating and cooling systems.
Fan Relay State	Displays the current state of the HVAC fan. ■ **Off** – The operation of the fan is off. ■ **On** – The fan is operating.
Fan Mode	Displays and controls the current state setting for the HVAC fan. ■ **Auto** – Heating or cooling system controls the operation of the fan. ■ **On** – User forces the fan to the on state independent of the operation of the HVAC system.
Alarm Status	
Low Temperature	Displays the current status of the **Low Temperature** alarm condition. The temperature has fallen below a pre-programmed limit. After this alarm occurs, you must repair the condition which caused the temperature to fall below the configured limit before resetting this alarm. (See General Settings Page (page 3-13).) ■ **OK** – No **Low Temperature** alarm exists. ■ **Alert!** – The temperature monitored within the thermostat has dropped below the pre-set low temperature threshold.

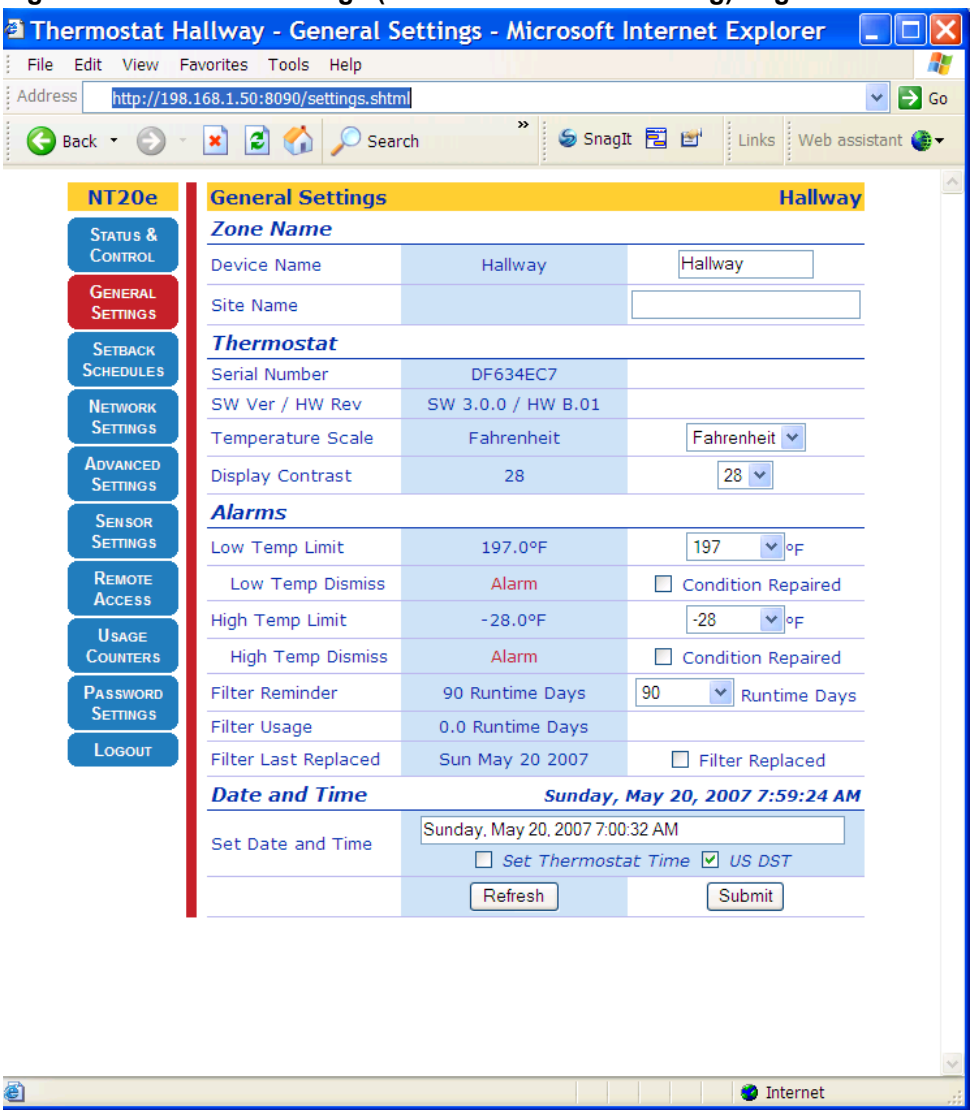
Table 3-1 Thermostat Status Field Descriptions (Continued)

Field	Description
High Temperature	Displays the current status of the **High Temperature** alarm condition. The zone temperature has risen above a pre-programmed limit. After this alarm occurs, you must repair the condition which caused the temperature to rise above the configured limit before resetting this alarm. (See General Settings Page (page 3-13).) ■ **OK** – No **High Temperature** alarm exists. ■ **Alert!** – The temperature monitored within the thermostat has risen above the pre-set high temperature threshold.
Filter Change	Displays a reminder that the time interval between HVAC filter changes has expired. The air filter(s) should be cleaned or replaced. You should change the filter and then reset this timer. (See General Settings Page (page 3-13).) ■ **OK** – No filter change is required. ■ **Required!** – The HVAC filters require changing or cleaning.

General Settings Page

The **General Settings** page contains parameters and settings that enable you to configure the thermostat name and location and set filter replacement reminders.

Figure 3-4 General Settings (Alarms and Alerts Pending) Page



Use Table 3-2 to set the **General Settings** parameters such as the thermostat name and location and enable or disable alarm settings and filter replacement reminders.

Table 3-2 General Settings Field Descriptions

Field	Description
Zone Name	
Device Name	Enter a unique 13 character identifier for the thermostat. You can use the thermostat location in this field (i.e. Main Lobby). This identifier is known as the host name within the data network.
Site Name	Enter a 25 alpha-numeric character name used to identify the thermostat if more than one thermostat intercommunicates with the Proliphix Web Server. (See the *Proliphix Remote Access Guide*.)
Thermostat	
Serial Number	Displays an eight digit alpha-numeric thermostat serial number (e.g. 8438F399).
SW Ver / HW Rev	Displays the software version / hardware revision .
Temperature Scale	Select either the Fahrenheit or Celsius temperature scales. ■ **Fahrenheit** (default) – All thermostat temperature readings and reporting are displayed in the Fahrenheit temperature scale (°F). ■ **Celsius** – All thermostat temperature readings and reporting are displayed in the Celsius temperature scale (°C).
Display Contrast	Select a value between **20** (lowest contrast between the graphics characters and the background) and **40** (highest character contrast to the background) to indicate the LCD display contrast control. **20, 22, 24, 26, 28 (default), 30, 32, 34, 36, 38, 40**
Alarms	
Low Temp(erature) Limit	Select a value or **Disable** to indicate the low temperature threshold detection status. The value set by this parameter is monitored by the thermostat and compared against the current Zone Temperature. If the current Zone Temperature falls below this value, an alarm condition is set and the status is displayed on the Status & Control Page (page 3-9). In addition, this alarm will be sent to the Proliphix web site to trigger an email notification if this function is **Enabled**. This is a major (red) alarm condition. (See Figure 3-4 on page 3-13.) ■ **Disable** (default) – No low temperature limit is set. ■ **-30°F(-34.5°C) to 200°F(93°C)**

Table 3-2 General Settings Field Descriptions (Continued)

Field	Description
Low Temp(erature) Dismiss	If a **Low Temp Limit** alarm is pending, you must clear this condition. In Figure 3-4 on page 3-13, a **Low Temp Limit** alarm is set and is noted in the **Low Temp Dismiss** field. Note that the **Condition Repaired** box must be checked and the Zone Temperature must be above the **Low Temp Limit** or the **Low Temp Limit** must be set to **Disable** for the alarm condition to be cleared upon a **Submit**. ■ **Disable (default)** – No low temperature limit is set. ■ **-30°F(-34.5°C) to 200°F(93°C)**
High Temp(erature) Limit	Select a value or **Disable** to indicate the high temperature threshold detection status. The value set by this parameter is monitored by the thermostat and compared against the current Zone Temperature. If the current Zone Temperature rises above this value, an alarm condition is set and the status is displayed on the Status & Control Page (page 3-9). In addition, this alarm is sent to the Proliphix web site to trigger an email notification if this function is **Enabled**. ■ **Disable** (default) – No high temperature limit is set. ■ **-30°F(-34.5°C) to 200°F(93°C)** This is a major (red) alarm condition. (See Figure 3-4 on page 3-13.)
High Temp(erature) Dismiss	If a **High Temp Limit** alarm is pending, you must clear this condition. In Figure 3-4 on page 3-13, a **High Temp Limit** alarm is set and is noted in the **High Temp Dismiss** field. Note that the **Condition Repaired** box must be checked and the Zone Temperature must be below the **High Temp Limit** or the **High Temp Limit** must be set to **Disable** for the alarm condition to be cleared upon a **Submit**. ■ **Disable (default)** – No low temperature limit is set. ■ **-30°F(-34.5°C) to 200°F(93°C)**
Filter (change) Reminder	Select an interval between **Disable** (default) and **365** days to remind you that the HVAC system requires maintenance. This feature allows you to set time intervals between changing and/or cleaning the HVAC filter. If enabled, an alarm condition is set after the pre-set interval has expired, and is displayed on the Status & Control Page (page 3-9). In addition, this alarm is sent to the Proliphix web site to trigger an email notification if this function is **Enabled**. This is a minor (yellow) alarm condition. ■ **Disable** (default) – Interval reminder disabled. ■ **10, 30, 60, 90, 120, 240, 365 Runtime Days** – The runtime interval after which an alarm will be set to remind the user of the need for HVAC maintenance.

Table 3-2 General Settings Field Descriptions (Continued)

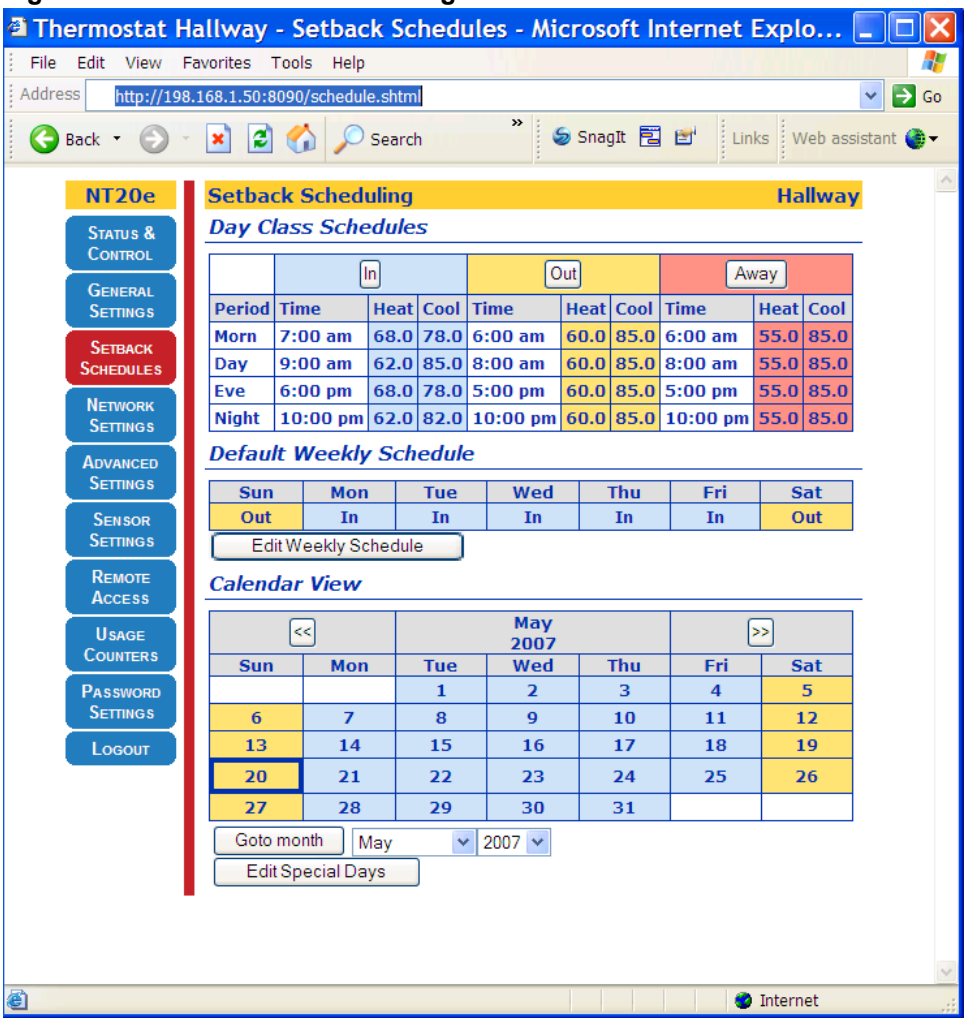
Field	Description
The TMI displays the following additional fields upon different settings and conditions of the **Filter Reminder** state.	
Filter Usage	The TMI displays this field when **Filter Reminder** in enabled. **x.x Runtime Days** – Displays a running tally of **Runtime Days** (x.x) which have elapsed since the previous **Filter Last Replaced** date. If this value is greater than the preset **Runtime Days**, it is displayed in red and an alarm is generated indicating that the **Filter Reminder** interval has expired.
Filter Last Replaced	The TMI displays this field when **Filter Reminder** is enabled. **Filter Replaced** check box – Checking this box and then clicking **Submit**, forces the current thermostat date and time into the **Date and Time** field above and restarts the interval set within the **Filter Reminder** field above. (e.g. If the filter is changed prior to the **Filter Reminder** interval expiration, checking this box and clicking **Submit** restarts the interval timer.)
Date and Time	Displays the stored thermostat date and time marking the time of the beginning of the filter change interval. This date is set after clicking **Submit** with the **Filter Replaced** check box checked. (e.g. If a 30 **Runtime Days** interval is chosen for the **Filter Reminder**, an alert is generated after 30 runtime days have elapsed from this date.)
Set Date and Time	Displays the date and time of the web browser. Unaltered, this date and time can be assigned to the thermostat by first checking the **Set Thermostat Time** check box and clicking **Submit**. If a different date and time is desired, you can change the date and time field prior to checking the **Set Thermostat Time** check box and clicking **Submit**. (You can read the date and time of the thermostat directly at the thermostat on the Status & Control Screen (page 2-9).
US DST	Check this box to indicate whether the thermostat should adhere to the Unites States Daylight Savings Time program, while maintaining the date and time. U.S. Daylight Savings Time (**US DST**) stipulates that the time shall be set ahead an hour at the end of the first Saturday of the month of April every year. In addition, the time shall be set back an hour at the end of the last Saturday of the month of October every year. Check this box and click **Submit** to observe and set **US DST**.

Setback Schedules Page

The Proliphix thermostat supports a set of scheduling options that you can configure through the TMI to create customized heating or cooling schedules.

Figure 3-5 shows an example of the **Setback Schedules** page.

Figure 3-5 Setback Schedules Page

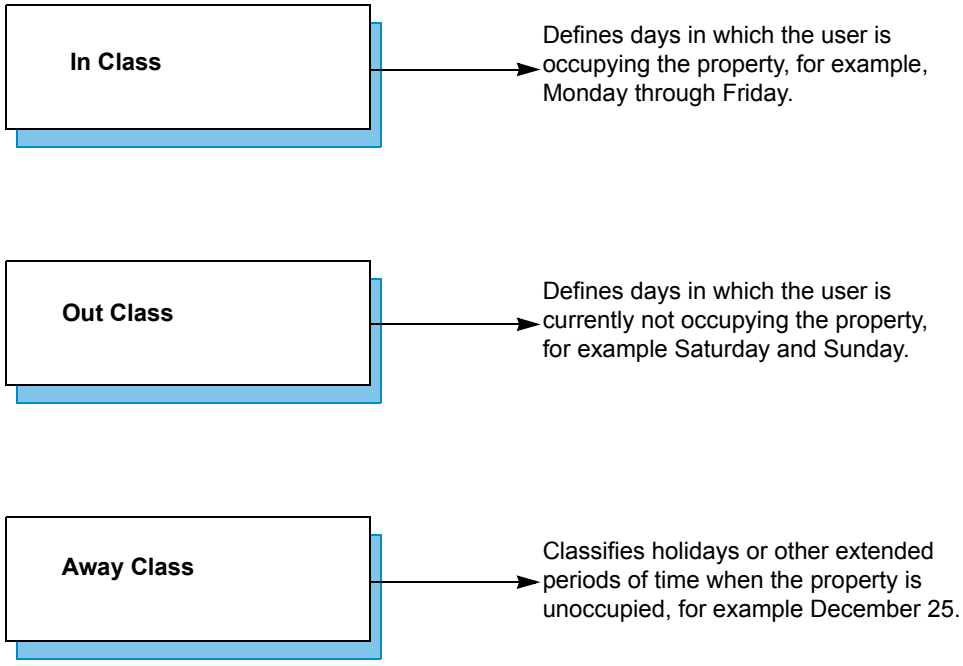


Thermostat Scheduling

The thermostat scheduling feature is organized in a hierarchy. You use **Day Classes** to classify the types of days that are used in the schedule. Each **Day Class** is divided into four Periods, each of which supports temperature settings for both heating and cooling settings to provide periodic air flow.

The TMI supports the following three **Day Classes** shown in Figure 3-6.

Figure 3-6 Day Class Scheduling



Each **Day Class** supports the following four non-overlapping periods of time in which you can independently specify heat and cool settings.

- **Morning**
- **Day**
- **Evening**
- **Night**

Day Class Schedules

Figure 3-5 on page 3-17 displays **In**, **Out**, and **Away Class Schedules** in the **Day Class Schedules** table. The TMI displays the day class periods and period start times within each row of the table. The TMI also displays the heat and cool settings for each period in each day class. Although the thermostat ships from the factory with pre-set day class period temperature settings, you can change these settings by clicking on the **Day Class** heading (i.e. **In**, **Out**, and **Away**).

Default Weekly Schedule

In Figure 3-5 on page 3-17, the **Default Weekly Schedule** table provides a template that you can use to apply the three day classes to each day of the week, for every week of the year. The TMI applies this weekly template to every week in each month that is visible in the **Calendar View** table at the bottom of the Setback Schedules Page (page 3-17).

To edit the **Default Weekly Schedule**, click **Edit Weekly Schedule** and continue with Default Weekly Schedule (page 3-22).

Calendar View

The **Calendar View** table displays the day class settings for each day of the month. You can modify any day class in the **Calendar View** table using any of the following three methods:

- Click on the **date** within the calendar and continue with Schedule Special Days on page 3-23.
- Click **Edit Special Days** and continue with Schedule Special Days on page 3-23.

Occupied, Unoccupied, Other Class Schedule Pages

From the **In**, **Out**, or **Away Class Schedule** page, you can assign both heat and cool temperature settings in each of the four schedule Periods. Figure 3-7 shows an example of the **In Class Schedule** page. The **In** and **Away Class Schedule** pages displays fields similar to those in Figure 3-7.

Figure 3-7 In (Out or Away) Class Schedule Page

Use Table 3-3 to modify the **In, Out**, or **Away Class Schedule** page fields.

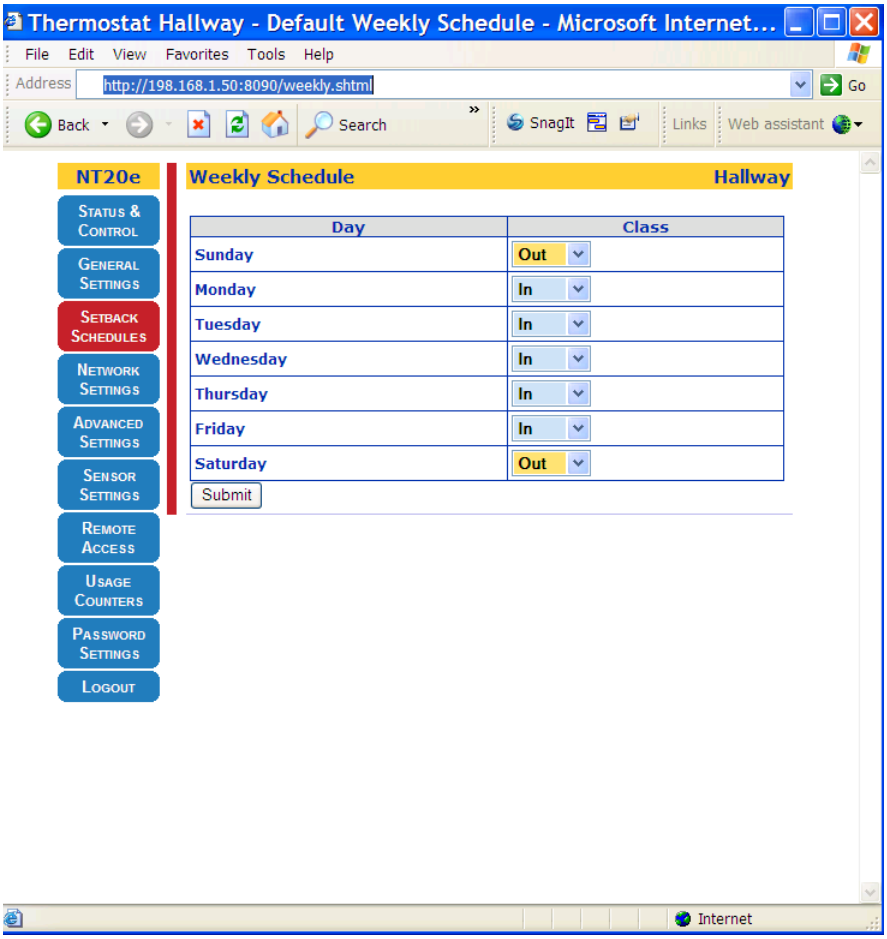
Table 3-3 In (Out or Away) Class Schedule Field Descriptions

Field	Description
Period	Displays one of four time periods of the day.
Time	Use the drop-down menu to modify the time period in 15-minute increments. Includes AM / PM indicator.
Heat (Temp)	Use the drop-down menu to select a heat temperature setback setting between **40°F(3.5°C) to 99°F(36°C)**.
Cool (Temp)	Use the drop-down menu to select a cool temperature setback setting between **40°F(3.5°C) to 99°F(36°C)**.

Default Weekly Schedule

From the **Default Weekly Schedule** page, you can assign one of three **Day Classes** (see Figure 3-6 on page 3-18) to each of the seven days of the week.

Figure 3-8 Default Weekly Schedule Page



Use Table 3-4 to assign **Day Classes** to each day of the week.

Table 3-4 Default Weekly Schedule Field Descriptions

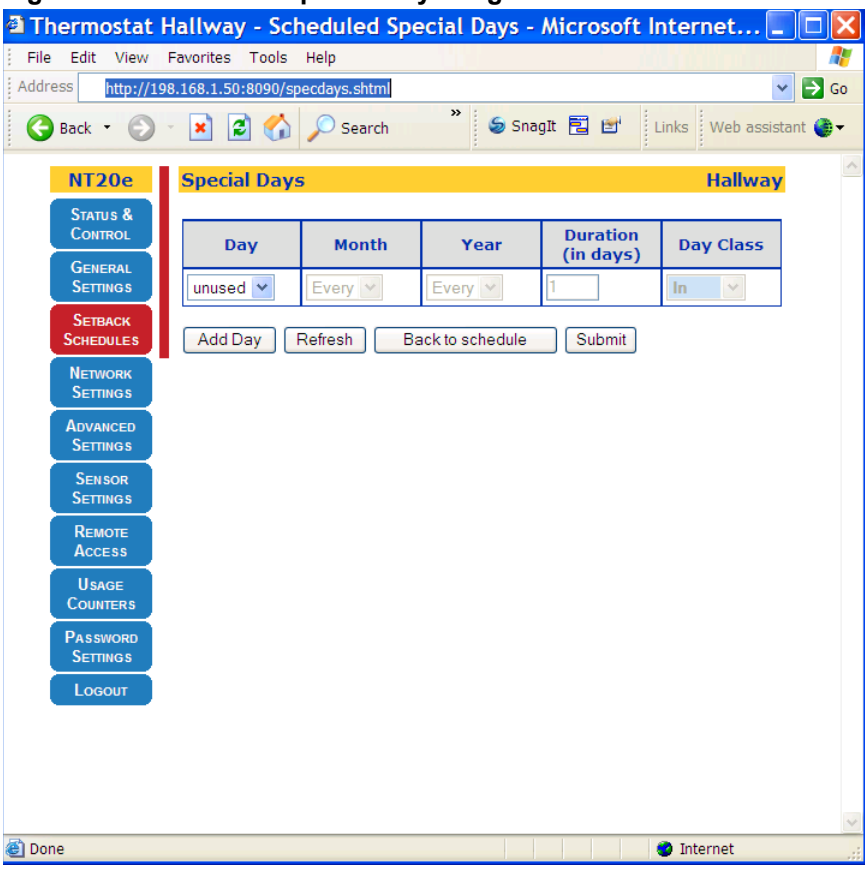
Field	Description
Day	Displays the seven days of the week.
Class	Select one of three Day Classes for each day of the week: ■ **In** – In Day Class. ■ **Out** – Out Day Class. ■ **Away** – Away Day Class. See Figure 3-6 on page 3-18 for more information.

Schedule Special Days

From the **Schedule Special Days** page, you can select any day of the current or future month and assign a day class different from what is specified in the Default Weekly Schedule (page 3-22). For example, if your **Default Weekly Schedule** is configured for every Monday through Friday as **In** and you want to schedule a national holiday or a company shutdown, go to the Schedule Special Days (page 3-23) and configure the day(s) or week(s) as **Away** schedule. This allows you to designate certain days, weeks, or months to be different from the default schedule.

Special Days entries are organized as rows in the **Special Days** table. The TMI supports 15 **Special Days** table entries, each comprised of a start date entered in the **Day, Month, Year** field. In each row, you can enter one or more days as a duration for that entry. Durations cannot exceed 60 days.

Figure 3-9 Schedule Special Days Page



Special Days Examples

This section describes some examples of **Special Days**.

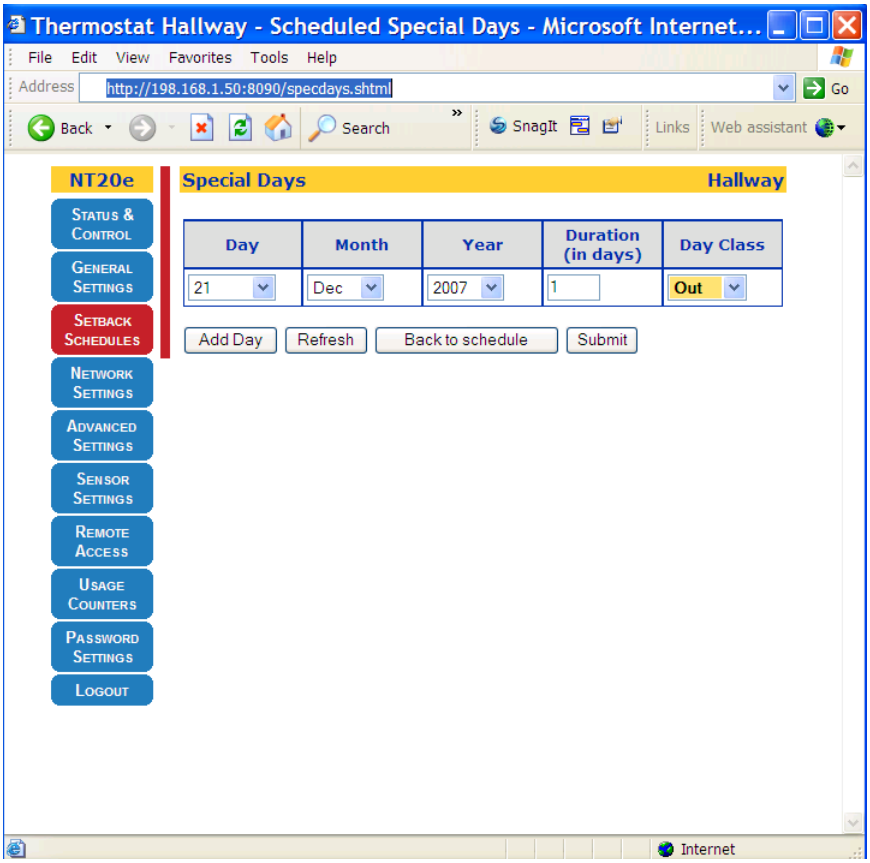
Example 1

Figure 3-10 on page 3-24 shows an example of changing the **Day Class** on December 21, 2007 from an **In Day Class** (i.e. a typical work day) to an **Out Day Class**. This represents a change to the default weekly schedule for the last week in December and requires a single **Special Days** entry in the table.

You can enter this information in the **Special Days** table using either of the following methods:

- Click directly on the **date** on the **Calendar View**. (See Figure 3-5 on page 3-17.) Figure 3-10 on page 3-24 appears and the TMI automatically populates all the fields in the row except the **Day Class** setting. **One** day is the default duration, but you can change this field to any number of days less than the 60 day maximum. The Setback Schedules Page (page 3-17) appears.
- Click **Edit Special Days**. (See Figure 3-5 on page 3-17.) Figure 3-10 on page 3-24 appears. Configure all fields in the **Special Days Table**. Click **Submit**. The Setback Schedules Page (page 3-17) appears.

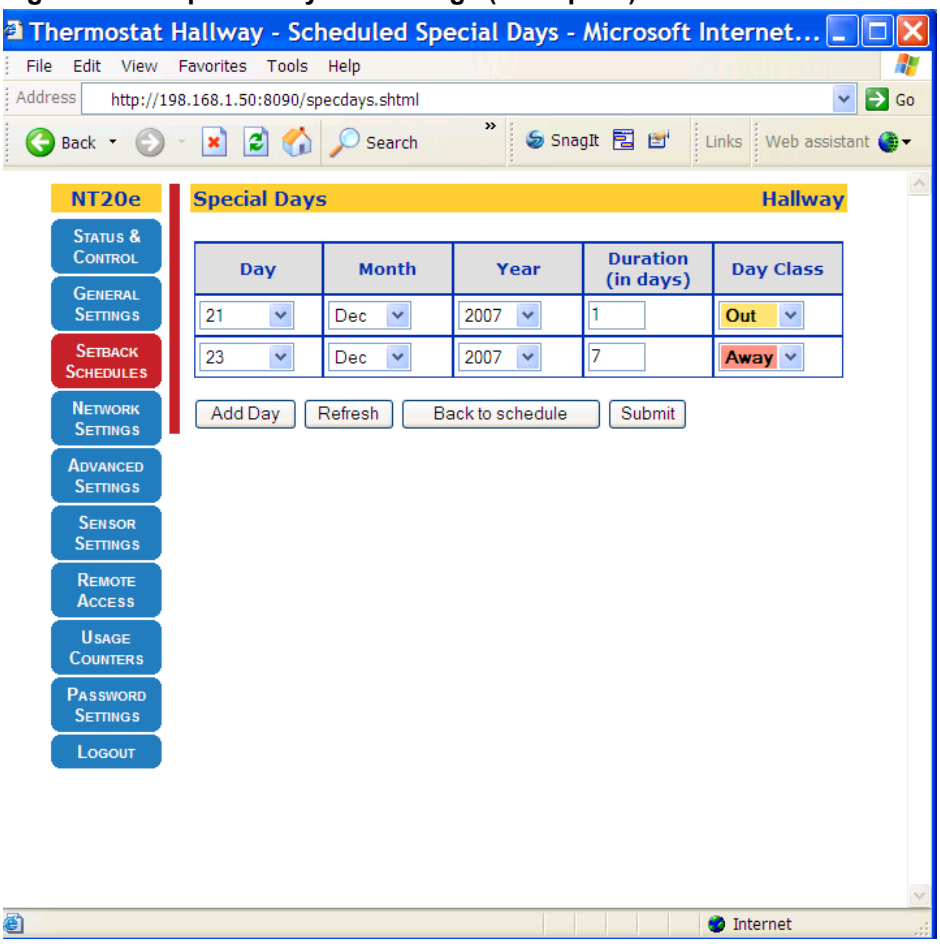
Figure 3-10 Special Days Table Page (Example 1)



Example 2

Figure 3-11 shows an example of adding a week-long period to the thermostat schedule from the December 23, 2007 through December 29, 2007.

Figure 3-11 Special Days Table Page (Example 2)



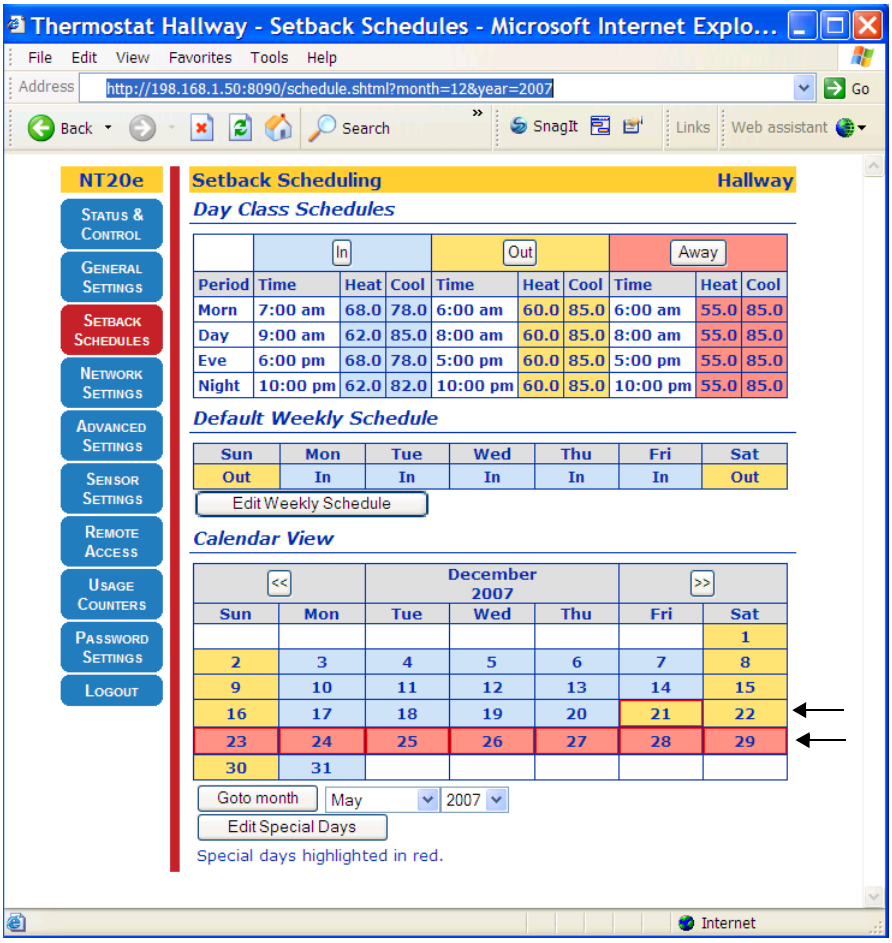
For example, to add a week-long holiday period:

1. Click **Edit Special Days** (from Figure 3-5 on page 3-17). Figure 3-11 appears.
2. Enter all fields. The **Day Class** field is updated to **Away**.
3. Click **Submit**. Figure 3-12 on page 3-26 appears.

Note *To remove any of the **Special Days**, you must change the **Day** field to **Unused** and click **Submit**.*

The Setback Schedules Page now displays the two **Special Days** entries in the **Calendar View**.

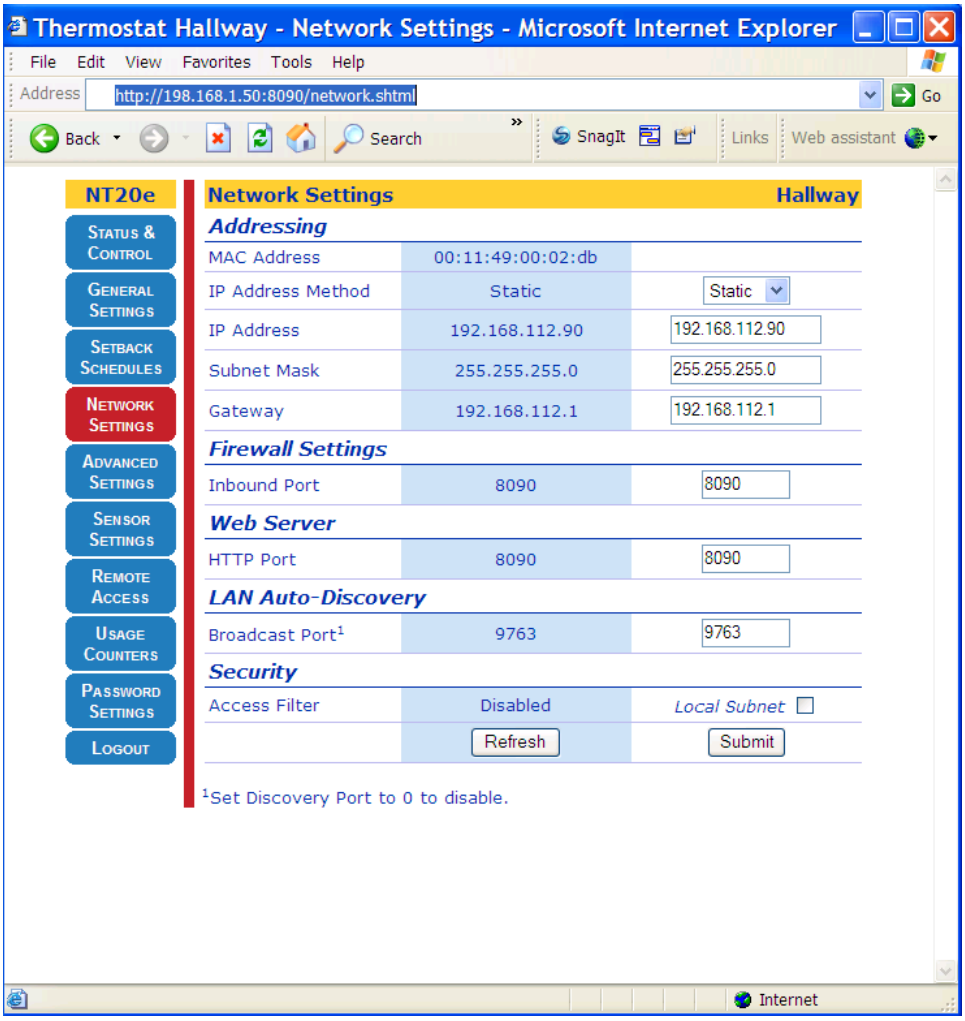
Figure 3-12 Setback Schedules Page



Network Settings Page

From the **Network Settings** page, you can configure the appropriate network parameters specific to your local network such as configuring the **Syslog** server address to receive messages and alerts.

Figure 3-13 Network Settings Page



Use Table 3-5 to configure the **Network Settings** fields.

Table 3-5 Network Settings Field Descriptions

Field	Description
Addressing	
MAC Address	Displays a factory assigned value installed in the thermostat which uniquely identifies the thermostat on the local network for transmitting and receiving network information. The system displays the MAC address in the format of 00:11:49:AB:CD:EF, where AB:CD:EF is a unique value for each thermostat.
IP Address Method	Select the method by which the thermostat receives the unique Internet Protocol address for the local network. IP addressing can be either automatically assigned via a local DHCP server or manually (**Static**) assigned by the user. (See DHCP Assigned IP Addresses (page 3-2).) ■ **DHCP** (default) – IP addressing method is DHCP assigned. ■ **Static** – IP address is manually assigned by the user. After the initial configuration of the thermostat, you should assign IP address to **Static** to ensure a permanent IP address assignment for remote access or for simplified local access.
IP Address	Displays the unique Internet Protocol address either assigned statically or by DHCP. (See IP Address Method.) (You must click **Submit** after changing this parameter to invoke a software reset to set the new value.) **A.B.C.D** – Four field standard dot notation for IP address designation.
Subnet Mask	Enter the IP subnet on which the thermostat IP address is assigned. The subnet can include 256, 65536 or 16772216 IP addresses. (You must click **Submit** after changing this parameter to invoke a software reset to set the new value.) Subnet Mask options include: ■ **X.Y.Z.C** – Class C address subnet. There can be 256 IP addresses in this subnet. ■ **X.Y.B.B** – Class B address subnet. There can be 65,536 IP addresses in this subnet. ■ **X.A.A.A** – Class A address subnet. There can be 16,772,216 IP addresses in this subnet.
Gateway (Address)	Enter the IP address of the router which acts as a gateway for the thermostats to communicate to other devices in another subnet. The thermostat uses this address when it needs to communicate with the Proliphix Web Server for remote access. (You must click **Submit** after changing this parameter to invoke a software reset to set the new value.) **A.B.C.D** – Four field standard dot notation for IP address designation.

Table 3-5 Network Settings Field Descriptions (Continued)

Field	Description
Firewall Settings	
Inbound Port	Enter the IP port number to be configured on a local firewall router to allow inbound WAN traffic access to the thermostat for remote management. This feature is used only by the Proliphix Remote Managment Server. The thermostat uses this value, along with the WAN IP address, to notify the server which port is to be used when the server wants to contact the thermostat on an internal LAN. **wxyz** – (default = 8081) Four digit (max) standard IP port number designation.
Web Server	
HTTP Port	Enter the IP port number of the HTTP server within the thermostat. This field defines the IP port number assigned to the web server internal to the thermostat for remote access. (You must click **Submit** after changing this parameter to invoke a software reset to set the new value.) **wxyz** – Four digit (max) standard IP port number designation. The default port number is **80**.
LAN Auto-Discovery	
Broadcast Port	Allows you to specify to which port the thermostat responds to queries when interrogated by the Device Locator program in the Proliphix Device Utility tool. The Device Locator Program is a utility program that allows you to auto-discover the Proliphix devices on your network.
Security	
Access Filter	Select the check box to enable **Access Filters**. The **Access Filter** restricts access to the thermostat from network devices whose IP addresses are outside the range specified in the accompanying fields. You can provision varying levels of security based on combinations of the administrator/user passwords as well as these address filter levels. **If this option level is disabled (unchecked), the thermostat is exposed to access from all network devices located anywhere in the IP address space and is only protected with user/admin password authentication.** **Local Subnet** – (default is unchecked) The thermostat can be accessed within a class C subnet. (e.g. 192.168.111.x where "x" is 0 to 254)

Advanced Settings Page

The **Advanced Settings** page enables you to customize the thermostat by selecting the HVAC type and setting heating and cooling parameters.

How you configure your thermostat depends on the type of HVAC system you have, Heat Pump or Fuel Burner.

Figure 3-14 shows the Advanced Settings page for a Heat Pump HVAC system.

Figure 3-14 Advance Settings Page - Heat Pump HVAC

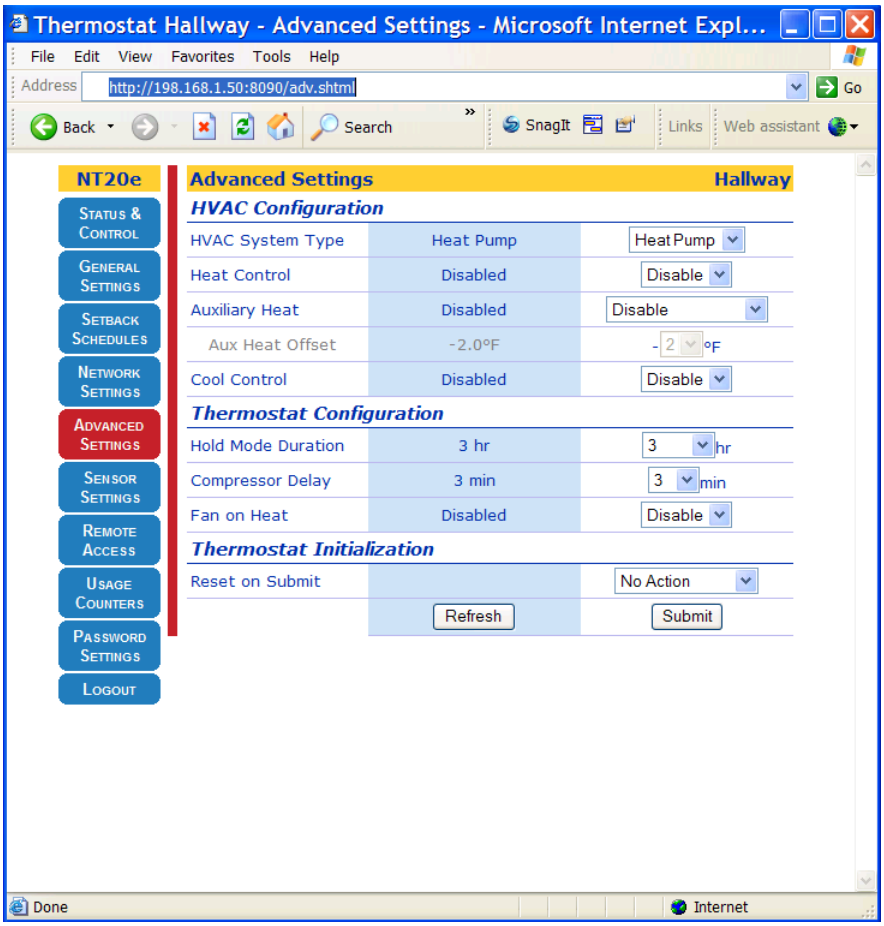
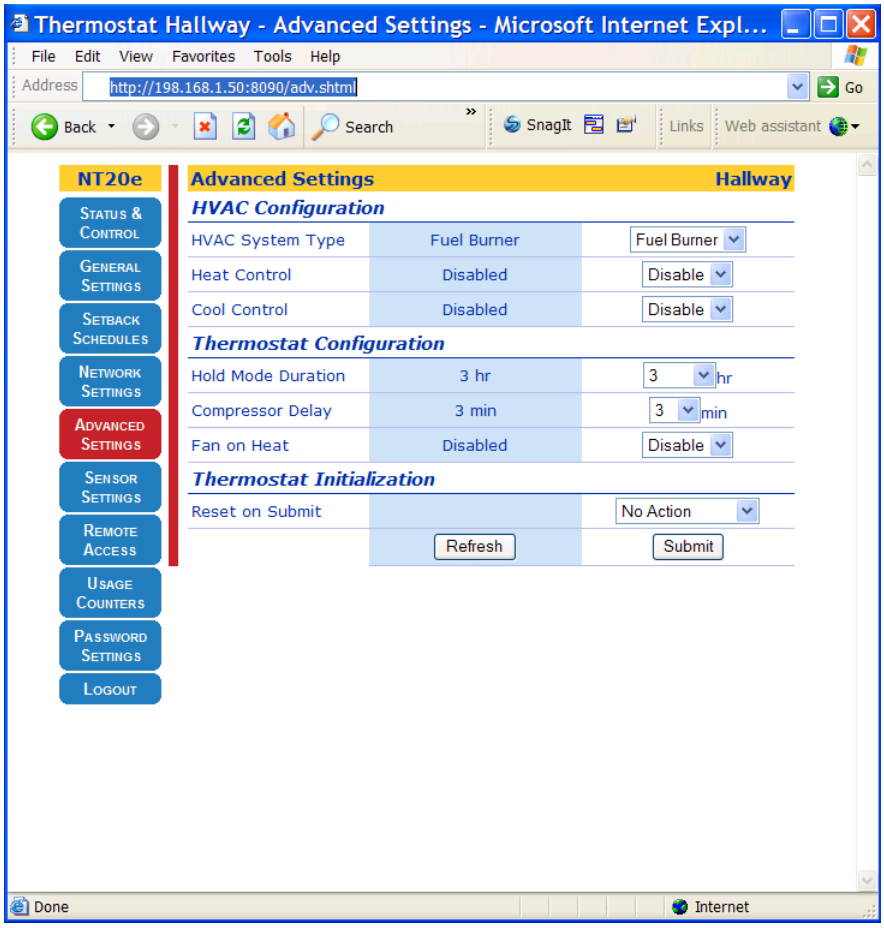


Figure 3-15 shows the Advanced Settings page for a Fuel Burner HVAC system.

Figure 3-15 Advanced Settings Page - Fuel Burner HVAC



Use Table 3-6 to configure the **Advanced Settings** for a parameters.

Table 3-6 Advanced Settings Fields - HVAC Fuel Burner Field Descriptions

Field	Description
HVAC System Type	Select the type of HVAC system, either **Fuel Burner** (default) or **Heat Pump** HVAC systems as follows: ■ **Fuel Burner** (default) – The HVAC system burns fossil fuels (e.g. gas or oil). Typically the system includes either an oil or gas fired boiler or furnace. See Figure 3-15 on page 3-31 and continue with If Your HVAC System is a Fuel Burner (page 3-32). ■ **Heat Pump** – Specifies that the HVAC system is based on an electric compressor. See Figure 3-14 on page 3-30 and continue with If Your HVAC System is a Heat Pump (page 3-32). *Note: When selecting between either **Fuel Burner** or **Heat Pump** or **between Heat Pump** and **Fuel Burner**, the HVAC Mode must be set to Off prior to selecting the opposite setting. See the Status & Control Page (page 3-9).*
If Your HVAC System is a Fuel Burner	
Heat Control	Select the HVAC control for this thermostat. This parameter describes the thermostat capability to control a fuel burner heating system. The thermostat can also be disabled from controlling a heating system and instead operate as a cool-only thermostat. (See Cool Control (page 3-32).) ■ **Disable** – No heating system exists. (A/C only thermostat.) ■ **Enable** – Enables the heating system.
Cool Control	Specify the HVAC control of this thermostat. This parameter describes the thermostat's capability to control a fuel burner cooling system. The thermostat can also be disabled from controlling a cooling system and instead operate as a heat-only thermostat. (See Heat Control (page 3-32).) ■ **Disable** – Specifies that there is no cooling system present. (heat-only thermostat) ■ **Enable** – Enables the cooling system.
If Your HVAC System is a Heat Pump	
Heat Control	Specifies the HVAC control of this thermostat. This parameter describes the thermostat's capability to control a heat pump system. The thermostat can also be disabled from controlling a heating system and instead operate as a cool-only thermostat. (See Cool Control (page 3-33).) ■ **Disable** – Specifies that there is no heating system present. (A/C only thermostat) ■ **Enable** – Enables the heating system.

Table 3-6 Advanced Settings Fields - HVAC Fuel Burner Field Descriptions

Field	Description
Auxiliary Heat	Specifies a secondary source of heat outside the heat pump system, for example, electric baseboard or a gas furnace. ■ **Disable** – Disables Auxiliary Heat. ■ **Enable w/ Comp** – Enables the compressor when Auxiliary Heat is active. ■ **Enable w/o Comp** – Disables the compressor when Auxiliary heat is active.
Aux Heat Offset	Specifies the auxiliary heat set point temperature referenced to the first stage heat set point temperature. This parameter is only enabled when **Auxiliary Heat** is enabled, otherwise it is disabled. (e.g. If the first stage temperature set point is set to 70°F, and this parameter were set to -3°F, the auxiliary heat would activate at or below 67°F). Temperatures include: **0,-2, -3, -4, -5, -6 °F (0,-1.0, -1.5, -2.0, -2.5, -3.0 °C)** – Second stage heat temperature offset from first stage heat set point temperature.
Cool Control	Specifies the HVAC control of this thermostat. This parameter describes the thermostat's capability to control a heat pump system. The thermostat can also be disabled from controlling a cooling system and instead operate as a heat-only thermostat. (See Heat Control (page 3-32).) ■ **Disable** – Specifies that there is no cooling system present. (heat-only thermostat) ■ **Enable** – Enables the cooling system.
Thermostat Configuration	
Hold Mode Duration	Specifies the time interval in which the thermostat temperature setting are held independent of schedule changes due to **Period** or **Day Class** advancements. ■ **Perm** – The Hold period is indefinite and the temperature setting are "held" until the user removes this condition. ■ **1, 3, 8, 12, 24** –The amount of time in hours in which the current temperature setting are "held" and inhibited from change. The default interval is **3 hours**.

Table 3-6 Advanced Settings Fields - HVAC Fuel Burner Field Descriptions

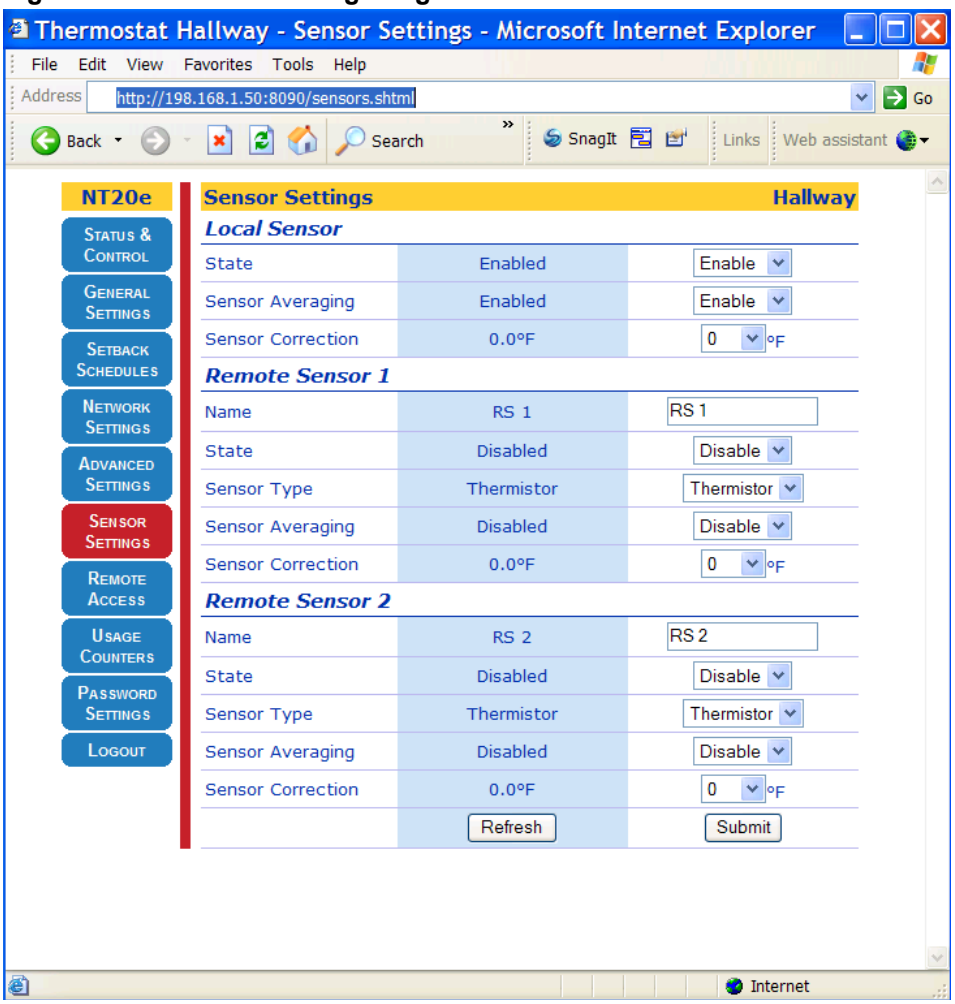
Field	Description
Compressor Delay	Specify the minimum time (in minutes) between successive heating, cooling or heat to cool and cool to heat cycles in heat pump applications. This parameter ensures a safe heat pump compressor delay or off time guaranteed between cycles. This parameter may also be used in fuel burner mode, whereby this parameter ensures a safe A/C compressor delay or off time guaranteed between A/C cycles. ■ **0** – Enables the cooling system to cycle immediately upon completion of the previous cycle. **This is a diagnostic feature and should not be left in this state or compressor short cycling and subsequent damage may occur to the compressor.** ■ **3 through 10** – Time in minutes required between the completion of a cooling cycle and the next subsequent cooling cycle. The default delay is **3 minutes**.
Fan on Heat	Controls the fan state during heating cycles. In most HVAC applications, heat activation automatically turns on the fan, but in radiant or baseboard heat applications, the fan is activated by the thermostat upon a call for heat if this feature is enabled. ■ **Enabled** – The fan is forced 'on' during heat cycles. ■ **Disabled** – The fan is ***not*** forced on during heat cycles.
Thermostat Initialization	
Reset on Submit	**Consult a Proliphix support representative prior to changing this setting**. Performs a software reset on the thermostat. All current settings are maintained after the execution of this reset. This reset is performed to return the thermostat to a known state after abnormal behavior. ■ **No Action** (default) – A software reset is NOT performed after clicking **Submit**. ■ **Software Reset** – Invokes a software reset after clicking **Submit**.

Sensor Settings Page

From the **Sensor Settings** page, you can add external thermal sensors and configure zone temperature thermal averaging of the Local or the two Remote Sensors.

Note *This page is not available on the NT10e Network Thermostat because the NT10e does not support external thermal sensors.*

Figure 3-16 Sensor Settings Page



Use Table 3-7 to complete the **Sensor Settings** page fields.

Table 3-7 Sensor Settings Field Descriptions

Field	Description
Local Sensor	
State	Select **Enable** or **Disable** to indicate the state of the internal thermostat thermal sensor. The internal thermal sensor may be disabled if only remote sensing is desired. ■ **Disable** – The internal thermal sensor is disabled. No Local Sensor value is displayed on the Status and Control Page (page 3-9). ■ **Enable** (default) – The internal thermal sensor is enabled.
Sensor Averaging	Select **Enable** or **Disable** to indicate if the thermostat internal thermal sensor should participate in the algebraic averaging of either or both of the Remote Sensors if the Local Sensor is enabled. (See Zone Temperature (page 3-10).) ■ **Disable** – The thermostat internal sensor is excluded from the thermal averaging calculations. ■ **Enable** (default) – The internal thermal sensor participates in the algebraic averaging. The Zone Temperature now reflects the average temperature of the averaged measurements.
Sensor Correction	Selects a value to adjust the sensor for calibration. **-5 °F (-2.8 °C) through +5°F (2.8°C)** The default is **0**.
Remote Sensor 1 and 2	
Name	Displays the Name (15 characters) for the external thermal sensor #1/#2. **RS 1 / RS 2** The default is **none**.
State	Select **Enable** or **Disable** to indicate if the external thermal sensor #1 is installed on the thermostat. ■ **Disable** (default) – A remote external thermal sensor is not connected to the thermostat. No **Remote Sensor #1 or #2** value is displayed on the Status and Control Page (page 3-9). ■ **Enable** – A remote external thermal sensor is connected to the thermostat.
Sensor Type	Select the remote sensor type, either thermistor or analog so that the appropriate temperature translation table is used to calculate the temperature value. **(Consult the Proliphix web site for a list of sensors available in either type.)** ■ **Thermistor** (default) – Thermistor-based thermal sensors. ■ **Analog** – Analog-based thermal sensors.

Table 3-7 Sensor Settings Field Descriptions (Continued)

Field	Description
Sensor Averaging	Select **Enable** or **Disable** to indicate if this remote thermal sensor is to participate in the algebraic averaging of either or both of the thermostat (local) sensor or the remaining Remote Sensor. This parameter is visible only if the **Remote Sensor #1/#2 State** is enabled. (See Zone Temperature (page 3-10).) ■ **Disable** (default) – Algebraic thermal averaging is disabled. ■ **Enable** – **Remote Sensor #1/#2** is included in the thermal averaging calculations. The Zone temperature now reflects the average temperature of the averaged measurements.
Sensor Correction	Select the calibration or temperature offset compensation for this remote thermal sensor. Offset adjustments are added or subtracted from the actual temperature read from this sensor and displayed as the apparent temperature. This apparent temperature is available for averaging with the other sensors if Sensor Averaging is selected. **-5 °F (-2.8 °C) through +5°F (2.8°C)** – Offset temperature in degrees Fahrenheit or Celsius increments. The default is **0**.

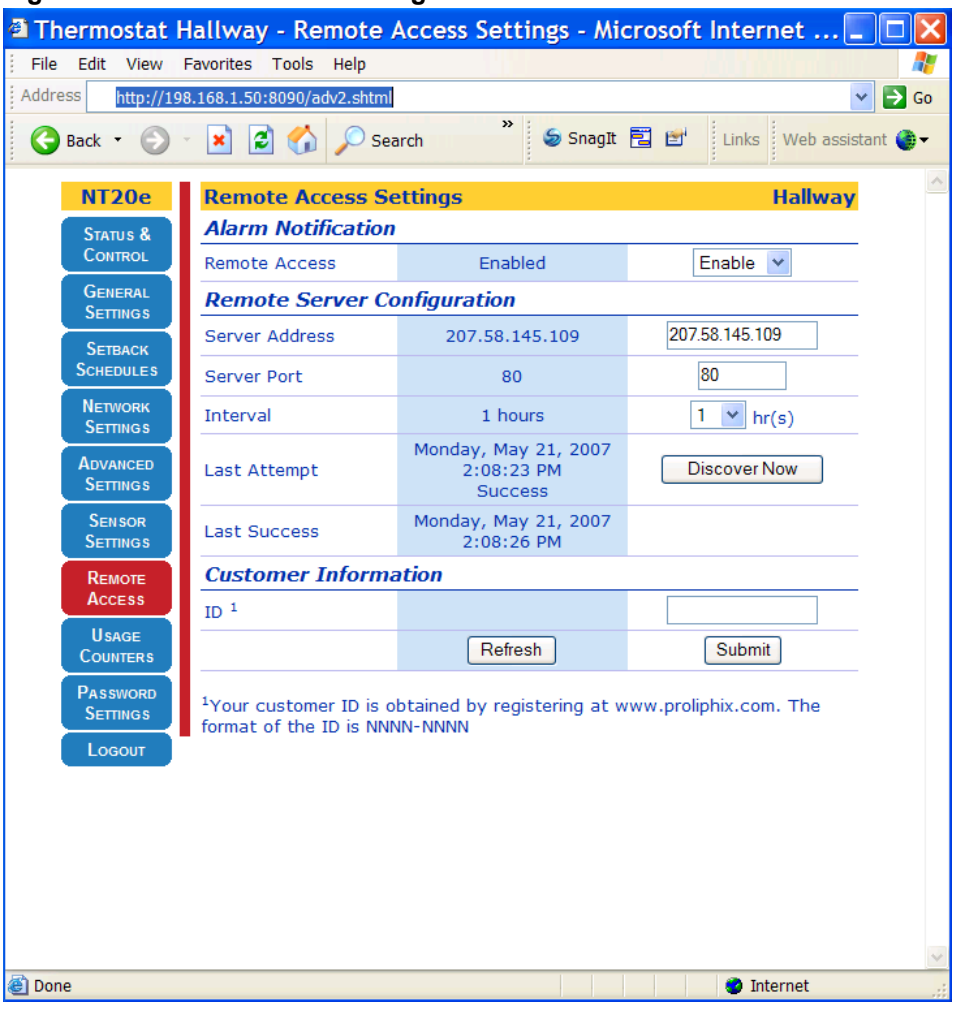
Remote Access Page

From the **Remote Access** page, you can configure parameters necessary to invoke and control the intercommunication of the thermostat with a remote server (e.g. Proliphix Web Site) for remote access. Note that when this service is enabled (i.e. Remote Access is enabled, see below) all alarm notifications are sent to the Proliphix Web Server IP address for processing and subsequent transmission as an e-mail.

Remote Server Configuration

You can access the Proliphix Network Thermostats remotely from anywhere in the world using a web browser. By default, Proliphix thermostats intercommunicate with the Proliphix Web Server to provide this capability. If the Proliphix Web Server is not used, a private server may be used but it must provide both alarm notification processing and e-mail generation to fully emulate the remote-access capability which Proliphix provides. Certain parameters must be configured in this section to facilitate the remote access feature.

Figure 3-17 Remote Access Page



Use Table 3-8 to complete the **Remote Access** page fields.

Table 3-8 Remote Access Page Field Descriptions

Field	Description
Alarm Notification	
Remote Access	Controls whether the Remote Server service is enabled. Remote access is the term used to describe the management and control of the thermostat from networks outside the local subnet on which the thermostat resides. Remote access provides the thermostat with the ability to be controlled from either across the Internet (with the Proliphix Web Server) or across multiple corporate subnets to a private enterprise server. ■ **Disable** (default) – Remote Server function is disabled. ■ **Enable** – The thermostat is enabled to participate with a Remote Server, either the Proliphix Remote Management Server (See the *Proliphix Installer Remote Management Guide*) or a private server, to provide remote access capability.
Remote Server Configuration	
Server Address	The IP address of the Remote Server, either the Proliphix Remote Management Server or a private server which supports remote access. ***This field is pre-configured at the factory with the IP address of the Proliphix Web Server.*** **207.58.145.109** – (default) Four field standard dot notation for IP address designation.
Server Port	The outgoing IP port number which is used to communicate to the remote server. ***This field is pre-configured at the factory with the IP port number of the Proliphix Web Server.*** **80** – (default) Port number of the remote server.
Interval	The time interval after which the thermostat intercommunicates with the remote server to self identify itself as an active and reachable thermostat. This interval is repeated continually as long as Remote Access is enabled. **1 - 24 hrs** – Default interval is **1** hour.

Table 3-8 Remote Access Page Field Descriptions (Continued)

Field	Description
Last Attempt	The status of the last attempted intercommunication between the thermostat and the remote server. If there is a good communication connection between the thermostat and the remote server, the server deems that the thermostat is "reachable" and accessible by a user through the Internet or across the corporate network. Clicking **Discover Now** – Forces the intercommunication between the thermostat and the remote server. ■ **mm.dd.yyyy** – Date of last attempt to access the remote server. Default status is **No Attempt**. ■ **hh.mm.ss** – Time since last attempt to access the remote server. Default status is **No Attempt**. ■ **Success/Fail** – Status of last attempt to initiate the communication to the remote server.
Last Success	The status of the last intercommunication between the thermostat and the remote server. If there is a good communication connection between the thermostat and the remote server, the server deems that the thermostat is reachable and accessible by a user through the Internet. ■ **mm.dd.yyyy** – Date of last successful communication with the remote server. Default status is **No Attempt**. ■ **hh.mm.ss** – Time since last successful communication with the remote server. Default status is **None**.
Customer Information	
ID	Enter a unique customer identifier assigned by Proliphix after you register your thermostat at www.proliphix.com. Registration is required prior to obtaining this ID to ensure that only authorized Proliphix customers may participate in remotely managing their thermostats. The field is required only if you want to use the Proliphix Web Server as the remote server for remotely accessing their thermostat. See *Proliphix Installer Remote Management Guide*. **Eight digit, alpha-numeric identifier assigned by Proliphix in the form of 78F3-AC62.**

Remote Discovery Status Page

After you click **Discover Now** (and the **Remote Discovery State** is enabled) on the Remote Access Page (page 3-38), the Remote Discovery Status Page (page 3-41) appears. This page displays a brief synopsis of the state of the thermostat and initiates the discovery process with the remote web server (e.g. Proliphix web server on the Proliphix Web Site).

Click **Back to Remote Access Settings** to return to the Remote Access Page (page 3-38) and view a completion status of the discovery process in the **Last Attempt** field.

Figure 3-18 Remote Discovery Status Page

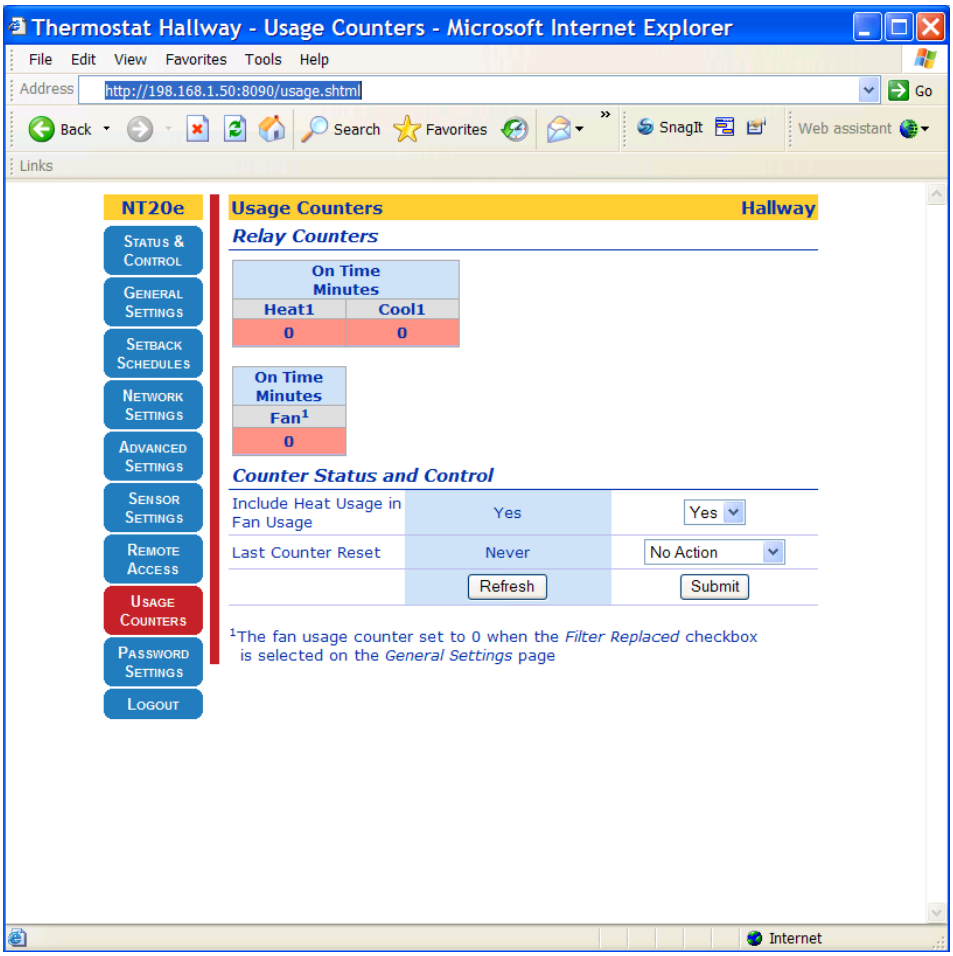
Usage Counters Page

Usage counters, for example: **Heat1, Cool 1, and Aux Heat** provide a minute-accurate duration activity for all relays.

Note *The usage counters that are displayed depend on how your thermostat is configured.*

Each counter directly accumulates the number of minutes each relay has been active. Only the Admin(istrator) account can reset the current value for each of the counters to zero. To reset the **Fan Usage** counter, click the **Filter Replaced** check box on the General Settings Page (page 3-13).

Figure 3-19 Usage Counters Page



Use Table 3-9 to complete the **Usage Counter** page fields.

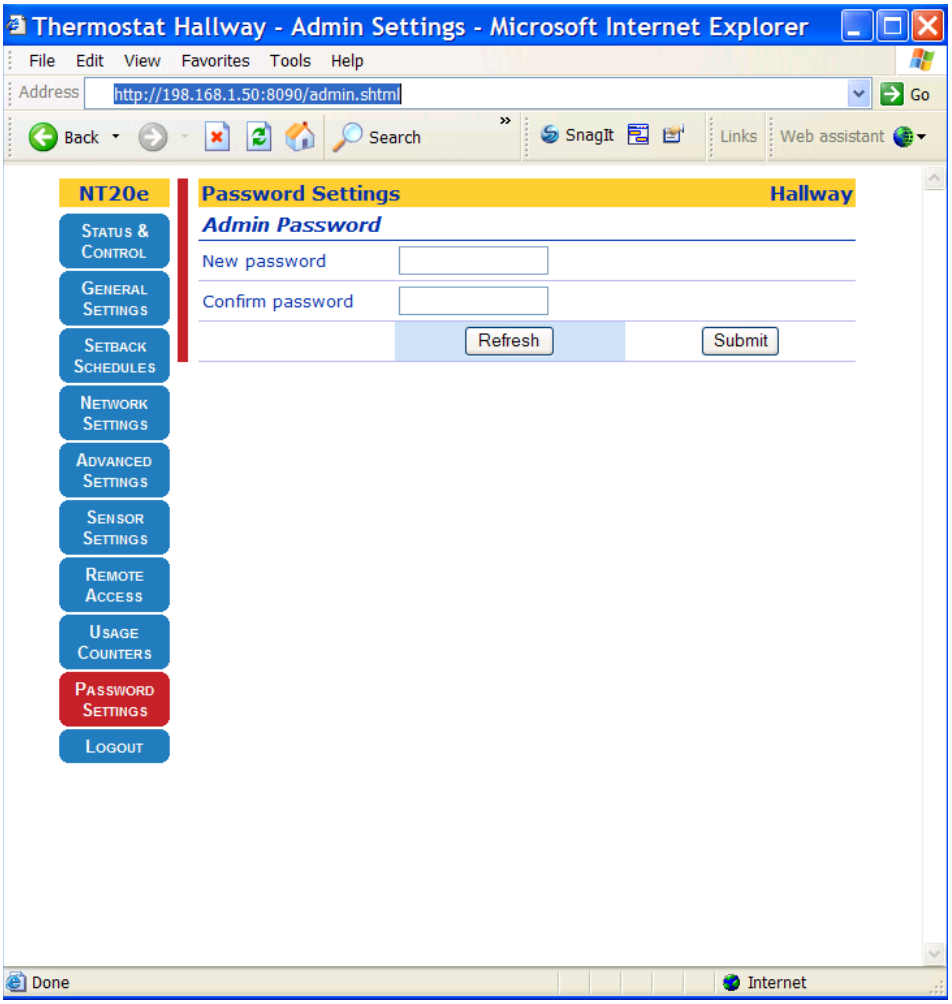
Table 3-9 Usage Counters Page Field Descriptions

Field	Description
Relay Counters	
Heat1	Displays the first stage **Heat1** relay minute activity counter. The Admin account user can reset this field by setting **Reset Counters** in the **Last Counter Reset** field.
Aux Heat	Displays the first stage **Aux Heat** relay minute activity counter. The Admin account user can reset this field by setting **Reset Counters** in the **Last Counter Reset** field. *Note: This field is available in heat pump mode only.*
Cool1	Displays the first stage **Cool1** relay minute activity counter. The Admin account user can reset this field by setting **Reset Counters** in the Last **Counter Reset** field.
Fan	Displays the **Fan** relay minute activity counter. Can be reset only by resetting the **Filter Reminder Alarm** setting on the General Settings Page (page 3-13).
Counter Status and Control	
Include Heat Usage in Fan Usage	Displays whether to include heating cycle run time in systems where the fan is used to deliver heat, for example, forced hot air systems. ■ **Yes** to include heating cycle run time. ■ **No** to not include heating cycle run time.
Last Counter Reset	Displays the date and time of the last manual reset of the **Relay Counters**. ■ **No Action** (default) ■ **Reset Counters** – When selected, returns the counters to zero value (except fan) after clicking **Submit**. – **mm.dd.yyyy** – Date of the last manual reset of the **Relay Counters**. – **hh.mm.ss** – Time since last the last manual reset of the **Relay Counters**.

Password Settings Page

As a user, you may change your password at any time.

Figure 3-20 Admin Password Settings Page



Use Table 3-10 to complete the **Admin Password Settings** page fields.

Table 3-10 Admin Password Settings Field Descriptions

Field	Description
Admin Password	
New Password	Enter an alpha-numeric password for the **Administrator** (admin) account. The password is case sensitive and limited to 15 alpha-numeric characters. The default password is **admin**.
Confirm Password	Re-enter your password (from the **New Password** field).

Chapter 4

Troubleshooting

This chapter describes how to reset the Proliphix thermostat.

Resetting the Thermostat

Although it is highly unlikely that the thermostats are unable to perform correctly against unsolicited and unwanted network activity, occasionally a reset may be necessary to bring the thermostat back into proper operation.

Do not perform a software reset or factory reset on the thermostat until instructed to do so by a qualified Proliphix customer support representative. See Technical Support on page xv.

Software Reset

A software reset reboots the network processor and retains the programming and thermostat setback schedules.

To perform a software reset at the thermostat:

1. From the Status & Control Screen (page 2-9), select Thermostat Control Screen (page 2-10).
2. Press and hold **Reset** for longer than 3 seconds (see Figure 2-8 on page 2-10).

Factory Reset

A factory reset clears the thermostat's internal memory and returns the thermostat to the factory-default state.


Caution

Performing a factory reset clears the setback scheduling and other programmed parameters. These settings can not be recovered after a reset. In addition, the IP addressing mode reverts back to DHCP, the current IP address is lost, and the thermostat becomes unreachable (until the thermostat retrieves a new address from the local DHCP server).

To perform a factory reset at the thermostat:

1. Remove the thermostat cover from the base which is attached to the wall. (See the *Proliphix Thermostat Installation Guid*e.)
2. Attach the top of the cover to the top of the base as a hinge.
3. Press and hold the middle button of thermostat while closing the cover into the base. Do not release the button until the LCD characters appear.

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