SNS Analog Clocks User Manual
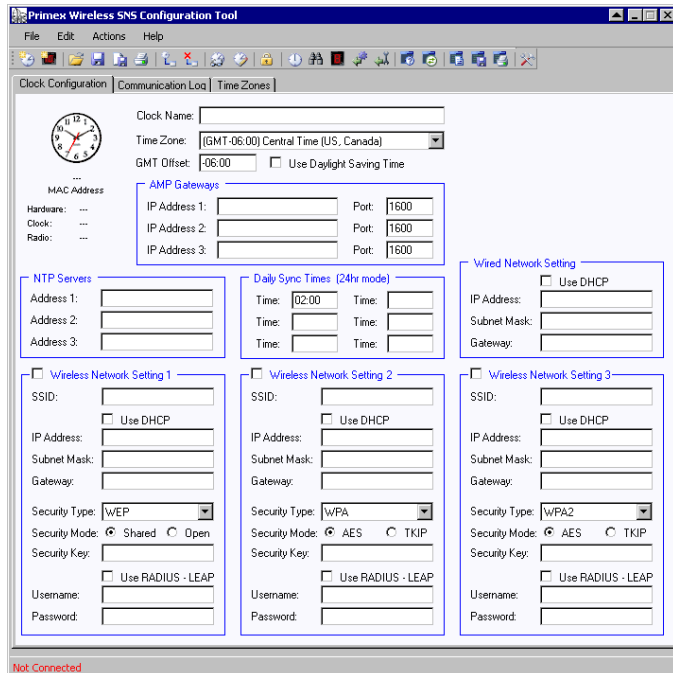
Notices

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Introduction

Primex Wireless's SNS analog clocks are equipped with both an 802.11 b/g and Ethernet port interface. The clocks are able to connect in an existing wireless LAN (WLAN), supporting a wide variety of security protocols. Once the SNS clocks are configured using the Primex Wireless Configuration Tool, settings can be altered using Primex's Applications Management Platform (AMP). SNS analog clocks will connect to the WLAN or Ethernet only at the times configured with AMP or the Configuration Tool. Any changes in configuration of an SNS analog clock via AMP are transmitted to the SNS analog clock the next time it connects to the WLAN or Ethernet. For detailed instructions on the use of AMP, please see the Primex AMP User Manual.

SNS analog clocks can be installed anywhere indoors within range of an 802.11 b/g access point. The initial setup procedure can be performed in a convenient central location such as a maintenance area or at the final location of the system clock. AMP has features to determine the signal strength of the SNS analog clock's reception.

Precautions and regulatory compliance statements

Equipment precautions

- To avoid possible electric shock and damage to an SNS analog clock, make sure that it is unplugged when working on it.
- SNS analog clocks are cleanable with a cloth moistened with water or a common disinfectant.

Caution   Be sure to test any cleaning solutions on a small area of the clock before using it on the entire clock.

Safety precautions

SNS analog clocks are designed for indoor use only and are not weather protected. Operating the clock outdoors, or in wet areas is an electrical hazard and may damage the clock while nullifying the warranty.

FCC compliance

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

FCC radio frequency interference

This equipment has been tested and found to comply with the limits for a Class B analog device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC radiation exposure limits

To comply with FCC RF exposure requirements in section 1.1307, a minimum separation distance of 20 cm is required between the antenna and all persons.

Power specifications for AC-powered devices

The socket-outlet shall be installed near the equipment and shall be easily accessible

Clock model	Input power	Current draw
SNS7A306	100 - 240V~, 47-63Hz	67mA@120V~, 47mA@240V~
SNS7A330	100 - 240V~, 47-63Hz	134mA@120V~, 94mA@240V~

SNS analog clocks

Primex Wireless's SNS analog clocks are equipped with both an 802.11 b/g and Ethernet port interface. The clocks are able to connect in an existing wireless LAN (WLAN), supporting a wide variety of security protocols. Once the SNS clocks are configured using the Primex Configuration Tool, settings can be altered using Primex's Applications Management Platform (AMP). SNS analog clocks connect to the WLAN only at the times configured with the Primex AMP or Configuration Tool. Any changes in configuration of an SNS analog clock via the Primex AMP will be transmitted to the clock the next time it connects to the WLAN. For detailed instructions on the use of the Primex AMP, please see the Primex AMP User Manual.

Primex Wireless SNS analog clocks can be installed anywhere indoors within range of an 802.11 b/g Access Point. The initial setup procedure detailed below can be performed in a convenient central location such as a maintenance area or at the final location of the system clock. Primex's Applications Management Platform has features to determine the signal strength of the clock's reception.

Primex Wireless SNS analog clocks are available in a variety of sizes and finishes to complement the décor of your facility. All SNS analog clocks feature:

- The battery life of SNS analog clocks is up to seven years with Primex Wireless #SNS887 lithium DD-cell batteries (up to four years with high-quality alkaline D-cell batteries). AC-powered models are also available

- Operating range: 32° - 158°F (0° - 70°C)

- A school mascot. A company logo. A city's colors. Now, you can show your pride with custom logo clocks. Available on all Primex Wireless clocks for an additional fee.

Model number	Description	Color	Power source	Weight	Mounting
SNS4Z155	12.5" Traditional series	Black	Batteries	1.7lb	Clock Lock (2)
SNS4Z157	12.5" Traditional series	Toupe	Batteries	1.7lb	Clock Lock (2)
SNS4Z159	12.5" Traditional series	White	Batteries	1.7lb	Clock Lock (2)
SNS7A306	12.5" AC	Black	100-240v~	2.0lb	Clock Lock (2)
SNS4Z164	12.5" Dual sided wall	Black	Batteries	6.0lb	Twist Lock
SNS7A330	12.5" Dual sided AC wall	Black	100-240v~	6.6lb	Twist Lock
SNS4Z163	16" Traditional series	Black	Batteries	2.4lb	Clock Lock (2)
SNS4Z176	16" Wood	Oak	Batteries	3.4lb	Clock Lock (1)
SNS4Z177	16" Wood	Cherry	Batteries	4.9lb	Clock Lock (1)
SNS4Z512	13.75" Platinum series	Silver	Batteries	1.6lb	Clock Lock (2)
SNS4Z180	12.5" Brushed aluminum	Aluminum	Batteries	2.4lb	Clock Lock (2)
SNS4Z227	15" Dual brushed aluminum	Aluminum	Batteries	5.2lb	Fixed mount

Traditional series

With simple dials and durable polycarbonate frames and lenses, these clocks are designed for easy viewing. The patent-pending **Clock Lock™** feature prevents employees from removing clocks from walls, and high-impact polycarbonate frame and shatterproof lens provide added safety. Dual-sided clocks are well-suited for hallway use. A variety of styles, colors and sizes lets you coordinate with your facility's décor.
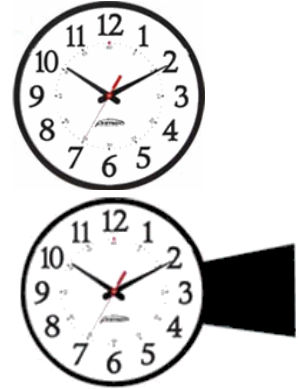
Metal series

Contemporary brushed aluminum frames offer an upscale, executive look to our high-performance clocks, a smart choice for offices and reception areas. These high-tech, synchronized clocks are easy to install, immediately keeping time with the rest of the Primex Wireless Clock System.

Platinum series

The Platinum Series is the first and only analog clock series available with a high impact frame with chemical resistant coating and Xylex lens to protect against commonly used cleaners and dust collection. The smart design provides a clean look that can easily be incorporated into a variety of settings ranging from the science lab, to food preparation areas, or even individual classrooms.

Wood series

Solid 16" hardwood frames of cherry or oak with glass crystal lens are handsome timekeepers for school offices, libraries and entryways.

Configure an SNS analog clock

Follow these steps to configure an SNS analog clock.

1. In order to configure an SNS analog clock, you must connect directly the SNS clock to the computer with a network cable. If you're using a laptop computer or a desktop computer with a wireless network card, you must disable the wireless network card in order to facilitate communication with the SNS analog clock. Follow these steps to prepare your computer to communicate with SNS analog clocks.

    A. Choose **Start ▸ Settings ▸ Control Panel ▸ Network Connections**. Windows displays a **Network Connections** window containing **LAN or High-Speed Internet** information similar to that shown here.
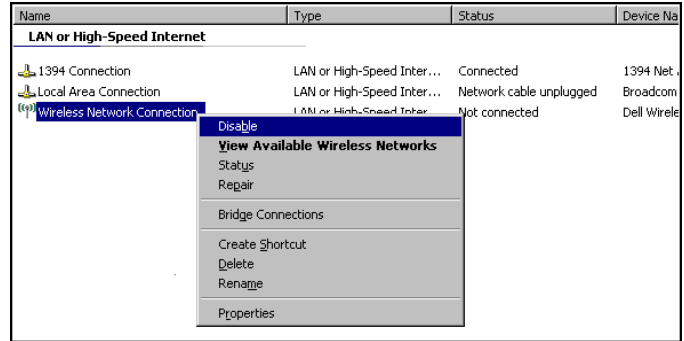
    B. If your computer has a wireless network card, right-click the **Wireless Network Connection** item and choose **Disable** on the context menu displayed.

    C. Right-click the **Local Area Connection** item and choose **Properties** on the context menu displayed. Windows displays a **Local Area Connection Properties** dialog box similar to the one shown below.
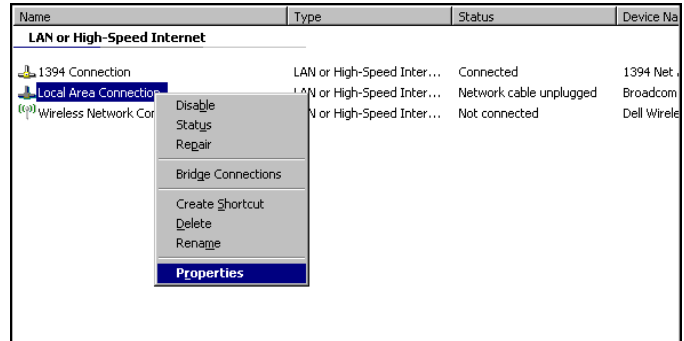
    D. On the **General** tab, select the **Internet Protocol (TCP/IP)** item in the **This connection uses the following items** list then click the **Properties** button. Windows displays an **Internet Protocol (TCP/IP) Properties** dialog box similar to the one shown below.
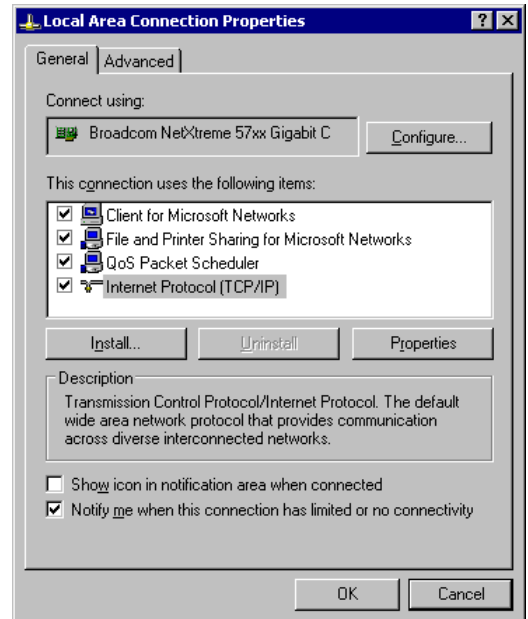
E. Choose the **Use the following IP address** option button.

F. Enter **192.168.1.100** in the **IP address** field.

G. Enter **255.255.255.0** in the **Subnet Mask** field.

H. Click the **OK** button to accept the changes you've made, close the **Internet Protocol (TCP/IP) Properties** dialog box and return to the **Local Area Connection Properties** dialog box.

I. Click the **OK** button to accept the changes you've made, close the **Local Area Connection Properties** dialog box and return to the **Network Connections** window.

**J.** Close the **Network Connections** window.
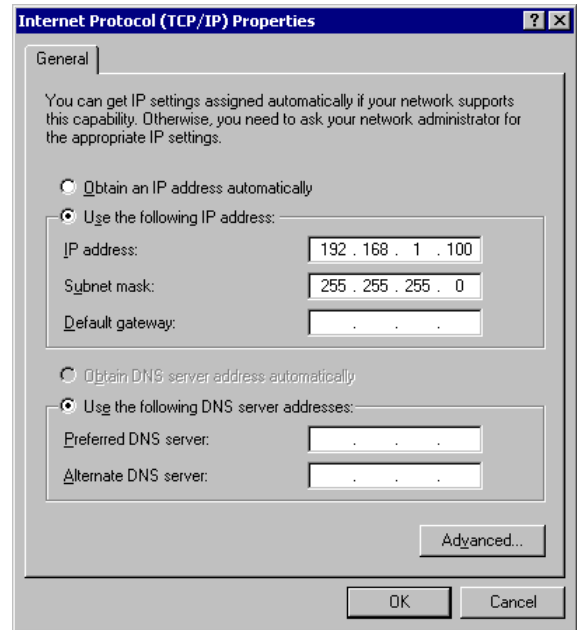
2. If the clock is mounted on a wall, dismount the clock from the wall so that you can access the back of the clock.

3. Physically connect the SNS analog clock directly to the PC or laptop using a standard network cable. The SNS analog clock has an RJ-45 network cable jack on its back.
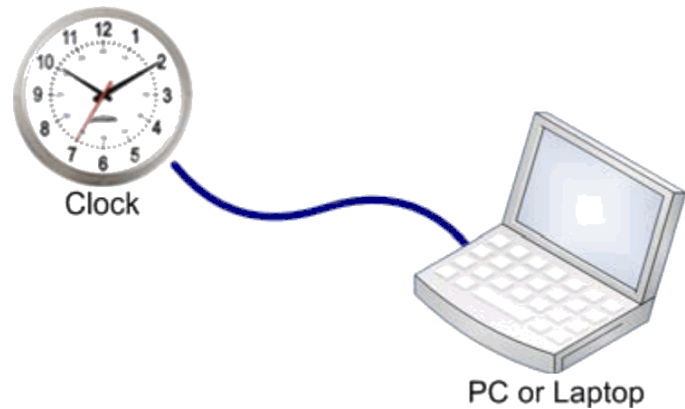
4. If the clock you're configuring is battery powered, remove the batteries. If the clock you're configuring is AC-powered, unplug the clock.

5. If the clock you're configuring is battery powered, insert the batteries in the clock while holding down the button on the back of the clock. Release the button after completing battery installation. After approximately two seconds, the clock beeps once to indicate that it's ready to configure.
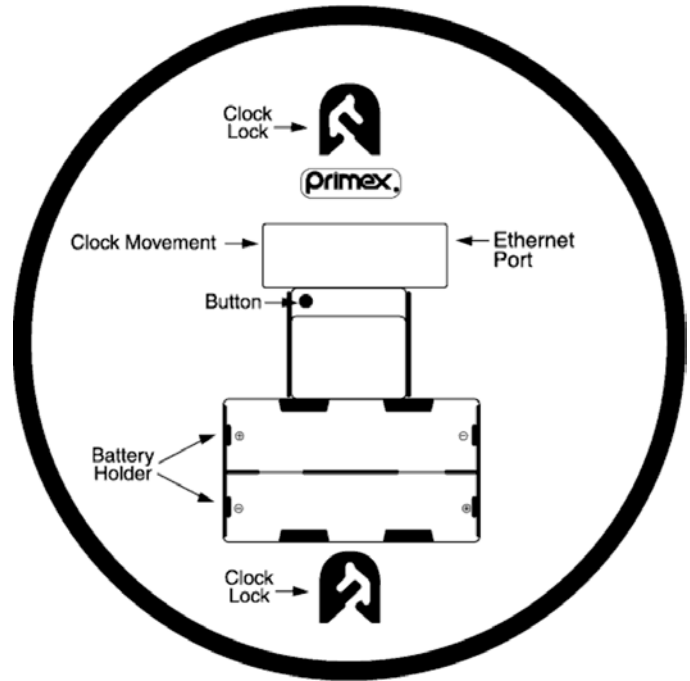
6. If the clock you're configuring is AC-powered, plug the clock into the AC power outlet while holding down the button on the back of the clock. Release the button after plugging the clock in. After approximately two seconds, the clock beeps once to indicate that it's ready to configure.
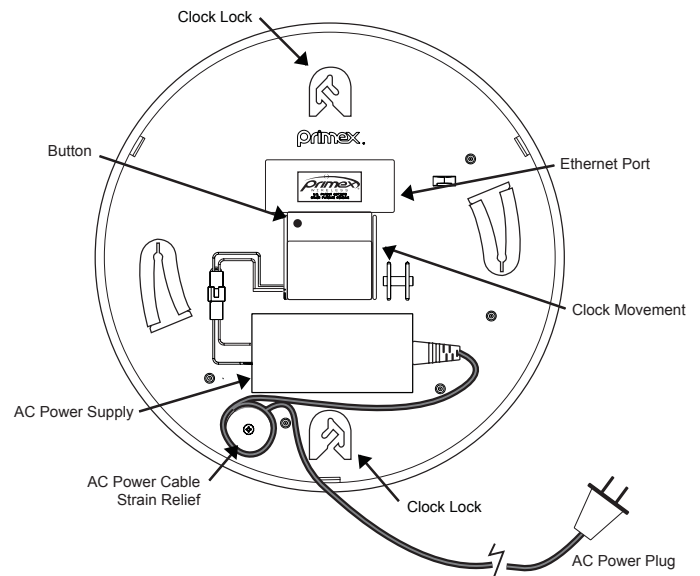
7. Choose **Start ▸ Programs ▸ Primex Wireless ▸ Primex Wireless Configuration tool** or double-click the **Primex Wireless Configuration Tool** icon on your computer's desktop.

8. Windows displays a **Primex Wireless Configuration Tool** window similar to the one shown here.

9. Click the **Connect** button on the toolbar or choose the **Actions ▶ Connect** menu item to establish a connection to the clock. The clock should report its Media Access Control (MAC) Address and hardware/clock/radio version numbers and those settings will be displayed in the upper left corner of the **Configuration** tab. The status bar at the bottom of the window displays either a **Connected!** or **Connection Failed!** message depending on whether a connection to the clock succeeded or failed.

Note   Once a connection with the clock has been established, the other **Action** menu commands and toolbar buttons are enabled and no longer grayed out.

10. Click the **Read Configuration from Clock** toolbar button or choose the **Actions ▸ Read Configuration** menu item. The status bar at the bottom of the window displays a **Configuration read from device!** message and the fields on the **Configuration** tab are updated with the configuration values read from the clock.

Note SNS analog clocks have a password that prevents their configuration settings from being read unless the clock is first logged into. If the clock is configured with a different password than the password currently stored in the Configuration Tool the login will fail and you will receive the alert message and the status bar displays the message **Read Failed!** The password is stored in the Configuration Tool's **Preferences** settings and can be changed by using the **Edit Preferences** command.

11. Fill in the fields with the desired configuration settings. The following fields are available for you to fill in to configure the clock:

Note Invalid values are indicated with red text in the field. When you exit a field in which an invalid value has been entered, you may also hear a beep from the system if your laptop or PC supports it.

Setting name	Required	Valid values
Clock Name	Y	1 to 40 characters. A recommended practice is to name a clock to reflect where the clock is (or will be) physically located.
Time Zone	N	Select from the list of available time zones. If a selection is made, the GMT Offset field will be set based on the time zone selected. This selection also determines the DST Transition Dates downloaded to the clock if the clock is configured to use DST.
GMT Offset	Y	-14:00 to +14:00, the offset from Greenwich Mean Time (GMT) that the clock should display. The format is hh:mm and the field text will turn red if it contains an invalid value.
Use Daylight Saving Time	Y	Yes/No checkbox set to indicate whether the clock should adjust its time for Daylight Saving Time.
MAC Address	N/A	The read-only **MAC Address** field is populated with the MAC address of the clock currently connected to the configuration tool.
Hardware	N/A	The read-only **Hardware** field is populated with the hardware version of the clock currently connected to the configuration tool.
Clock	N/A	The read-only **Clock** field is populated with the clock firmware version of the clock currently connected to the configuration tool.
Radio	N/A	The read-only **Radio** field is populated with the radio firmware version of the clock currently connected to the configuration tool.
AMP Gateway		You may enter the IP address and port for up to three AMP Gateways. The clock will attempt to connect to them in the order listed when trying to report its current condition at each time synchronization. You must enter settings for at least one AMP Gateway.
IP address (1-3)	Y, for each AMP Gateway	The IP address must be a valid IPv4 address. The value will be converted to standard notation if an abbreviated form is entered. The field text will turn red if it contains an invalid value.
Port (1-3)	Y, for each AMP Gateway	The port to connect to on the AMP Gateway must be a valid port number from 0 to 65535. The field text will turn red if it contains an invalid value. The default port is usually 1600.

Setting name	Required	Valid values
NTP Servers		You may enter the IP Address for up to three NTP servers. The clock attempts to connect to all configured NTP servers when synchronizing time and uses the first NTP server to respond. **Note** If no NTP Server IP addresses are entered, the clock will not be able to synchronize time.
IP address (1-3)	Y, for each NTP Server	The IP Address field may accept a valid IPv4 address or may DNS Names for NTP servers. Some examples are: • time.microsoft.com • time.nist.gov • 0.us.pool.ntp.org
Daily Sync Times		You are required to specify at least one and up to six times during the day that the clock should attempt to synchronize with the configured NTP Servers.
Daily Sync Times (1-6)	At least 1	The time of day that the clock should synchronize must be entered in 24 hour mode, using a format of hh:mm. The field text will turn red if it contains an invalid value. If the same value is entered more than once, the repeated entry is ignored. You do not have to enter the colon (:) character, and/or may use a decimal (.) character to separate the hour and minute values.
Wired Network Setting		You have the option to enter information for a wired network configurations.
Use DHCP	Y	Yes/No checkbox set to indicate whether the clock should request a dynamically assigned IP Address network each time it connects to the wired network.
IP Address	Y	The static IP address for the clock to use when connecting to the network. The IP address must be a valid IPv4 address. The field text will turn red if it contains an invalid value.
Subnet Mask	Y	The subnet mask must be a valid IPv4 address mask. The field text will turn red if it contains an invalid value.
Gateway	Y	The network gateway IP address must be a valid IPv4 address. The field text will turn red if it contains an invalid value.

Setting name	Required	Valid values
Wireless Network Settings		You have the option to enter information for up to three wireless network settings. The clock attempts to connect to all configured network settings when synchronizing time and uses the first network setting to respond. **Note** If no network settings are entered, the clock will not be able to connect to the network to synchronize time or report its condition.
SSID	Y, for each wireless network setting	Service Set Identifier (SSID) 0 to 40 characters. The SSID for the wireless network.
Use DHCP	Y, for each wireless network. setting	Yes/No checkbox set to indicate whether the clock should request a dynamically assigned IP address network each time it connects to the wireless network.
IP Address	Y, for each wireless network setting	The static IP address for the clock to use when connecting to the network. The IP address must be a valid IPv4 address. The field text will turn red if it contains an invalid value.
Subnet Mask	Y, for each wireless network setting	The subnet mask must be a valid IPv4 address mask. The field text will turn red if it contains an invalid value.
Gateway	Y, for each wireless network setting	The network gateway IP address must be a valid IPv4 address. The field text will turn red if it contains an invalid value.
Security Type	Y, for each wireless network setting	Select from the available security types; you may choose from: • None • WEP • WPA • WPA2
Security Mode	Y, for each wireless network setting	Not required if **Security Type** is set to **None**. If **Security Type** is set to **WEP**, select from the available security modes; you may choose from: • Shared • Open If **Security Type** is set to **WPA** or **WPA2**, select from the available security modes; you may choose from: • AES • TKIP
Security Key	N if security mode is set to None	0 to 64 alphanumeric characters.
Use RADIUS – LEAP	N	Enable (check) the **Use RADIUS – LEAP** checkbox if your network administrator requires the RADIUS – LEAP authentication protocol on your network.
Username		Required if the **Use RADIUS – LEAP** checkbox is checked; 0 to 10 alphanumeric characters.
Password		Required if the **Use RADIUS – LEAP** checkbox is checked; 0 to 64 alphanumeric characters.

12. Click the **Write Configuration to Clock** toolbar button or choose the **Actions ▶ Write Configuration** menu item.

Install an SNS analog clock

The backs of most SNS analog clocks feature two specially designed **Clock-Lock** hangers spaced at precise distances, one on the top, and the other on the bottom. The **Clock-Lock** feature prevents accidental removal if the clock is bumped and it may reduce theft by requiring a particular combination of moves to remove the clock. All SNS analog clocks come with two #6 x 1-1/4" mounting screws and wall anchors. When hanging the clock, be sure that if two screws are being used to secure the clock to the wall, that the distance between the screws be precisely the same as that in the table below.

Note   To avoid the **Clock-Lock** feature, use finishing nails with no heads angled at 45 degrees into the wall in place of headed screws or nails. The clock may then be mounted and removed like a standard clock.

Model number	Description	Hole spacing	Weight	Mounting type
SNS4Z155	12.5" Traditional series	9"	1.7lb	Clock Lock (2)
SNS4Z157	12.5" Traditional series	9"	1.7lb	Clock Lock (2)
SNS4Z159	12.5" Traditional series	9"	1.7lb	Clock Lock (2)
SNS7A306	12.5" AC-powered	9"	2.0lb	Clock Lock (2)
SNS4Z164	12.5" Dual-sided	See instructions	6.0lb	Twist Lock
SNS7A330	12.5" Dual-sided AC-powered	See instructions	6.6lb	Twist Lock
SNS4Z163	16" Traditional series	9"	2.4lb	Clock Lock (2)
SNS4Z176	16" Wood	9"	3.4lb	Clock Lock (1)
SNS4Z177	16" Wood	9"	4.9lb	Clock Lock (1)
SNS4Z512	13.75" Platinum series	9"	1.6lb	Clock Lock (2)
SNS4Z180	12.5" Brushed aluminum	9"	2.4lb	Clock Lock (2)
SNS4Z227	15" Dual-sided brushed aluminum	See instructions	5.2lb	Fixed mount

Install a single-sided analog clock

Follow these steps to install a single-sided clock:

1. Drill holes for the screw anchors at the spacing listed in the table above.

2. Use a screwdriver to insert and tighten the screw, leaving the top of the screw head 3/8" out from the wall.

3. Hold the clock with the face down and align the Clock Lock hanger with the bottom screw.

Precisely 9.0 inches — Screw spacing — Clock Lock — Align hanger with screw — Slide clock down over screws

4. Tilt the clock face to vertical and position the clock with the screw heads in the opening of the Clock Lock hanger.

5. Slide the clock down over the screw heads to latch it into place.
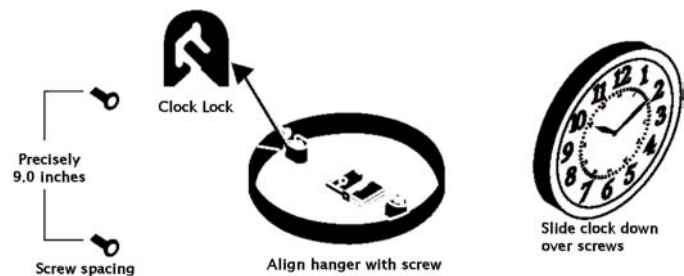
Install a SNS4Z164 or SNS7A330 dual-sided clock

Follow these steps to install a SNS4Z164 or SNS7A330 dual-sided clock:

Notes SNS4Z164 or SNS7A330 dual-sided clocks come with self-tapping screw anchors (for drywall installation) and mounting screws.

Complete the **Configure an SNS analog clock** and **Install batteries in an SNS analog** clock procedures before mounting an SNS4Z164 or SNS7A330 dual-sided clock.

1. If you're installing the clock on a drywall surface, install the screw anchors at the spacing shown here.

2. Install the mounting plate with the screws provided.

3. Slide the bracket attached to the assembled dual sided clock over the mounting tabs onto the mounting plate as shown here. A gentle tap with a rubber mallet may be needed for this step, as it is a tight fit.

4. Install the provided short screw through the top center hole on the bracket. This will increase the security of the clock assembly.
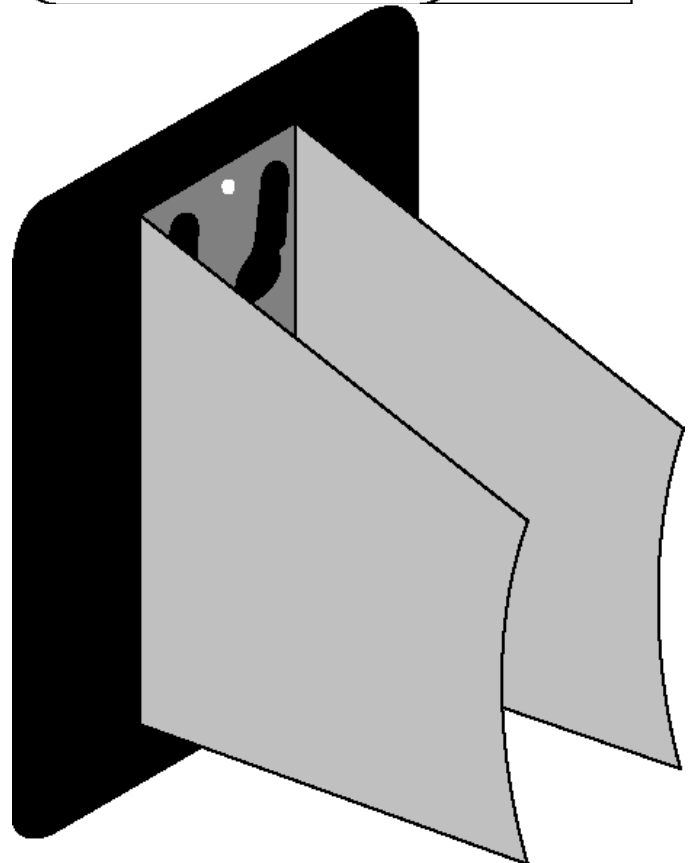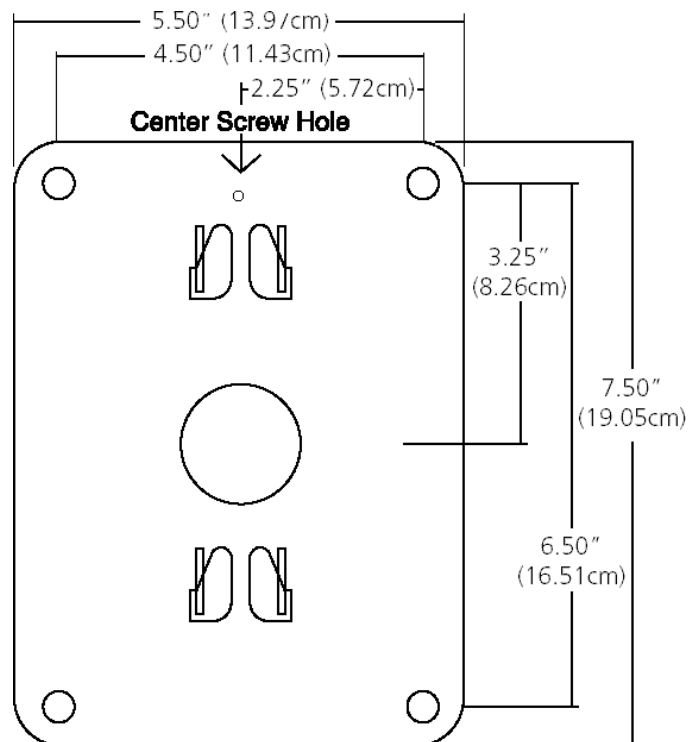
Install a SNS4Z227dual-sided clock

Follow these steps to install a SNS4Z227 dual-sided clock:

Note   SNS4Z227 dual-sided clocks come with self-tapping screw anchors (for drywall installation) and mounting screws.

1. The supplied hardware pack contains a mounting plate, four long screws, and four wall anchors. Secure the mounting plate to the wall or ceiling with the four long screws, paying attention to the "up" arrow, at the location you will be hanging the clock.

2. Remove one clock from the bracket by removing two of the four factory-installed screws. With the dual clock flat on a soft surface to protect the lens and bezel, remove the two top screws and lift the top clock off of the dual mounting bracket. (Note: It may require some force to remove the top clock because, in addition to the screws, the clocks are also held in place by magnets.)

3. Set each clock using method detailed on the setup instruction sticker on the back of each clock.

4. Once the clocks are set (with batteries inserted), orient the clock face so that the 12 is in the correct position for your mounting option. (Note: clocks are shipped in correct position for wall mounting. If ceiling mount is required, both clocks must be removed and rotated within the bracket.)

5. Align one of the posts on the back of the clock with the appropriate post in the bracket, next to a clip. Make sure that the raised portion of the clip next to the post is inside the bracket.

6. Lower clock down on bracket, keeping all clips inside ring. Press down to seat clock in bracket. Secure with the two screws removed previously, in same holes in bracket (over screws holding other clock in place).

7. Four additional screws are included in package to cosmetically plug holes in bracket, if desired.

8. Check to make sure that the 12 o'clock position is oriented to read correctly from both sides of the clock.

9. Taking the fully assembled dual clock, line up the base (stem) of the clock with the plate that is mounted on the wall. Slip the keyhole slots on the back of the base over the posts on the plate and push the clock down to secure.

Install batteries in an SNS analog clock

Note The battery life of SNS analog clocks is up to seven years with Primex Wireless #SNS887 lithium DD-cell batteries or up to four years with high-quality alkaline D-cell batteries. Therefore, it is important that fresh, superior-quality batteries, with an expiration date that exceeds five years past the installation date, be used for the clock.

The SNS analog clock notifies the user when the batteries need to be changed by moving the second hand in five-second increments instead of one second at a time. Battery condition is also reported via AMP. The clock will retain its configuration after the batteries are replaced.

- Use only new high-quality name brand alkaline batteries

- Batteries should be the same type and date code

- The use of heavy duty and zinc carbon batteries is not recommended, as they will not last as long as high-quality name brand alkaline batteries

- Do not use rechargeable NiCad batteries, as their output voltage is too low to assure proper operation

- Do not use standard lithium batteries

Follow these steps to replace the batteries in an SNS analog clock:

1. Dismount the clock from the wall so that you can access the back of the clock.

2. Remove the old batteries, wait 10 seconds.

3. Insert two new Primex Wireless #SNS887 DD-cell batteries or four new alkaline D-cell batteries.

4. When the batteries are in place, the SNS analog clock will execute the initialization process and set the hands to the correct time.
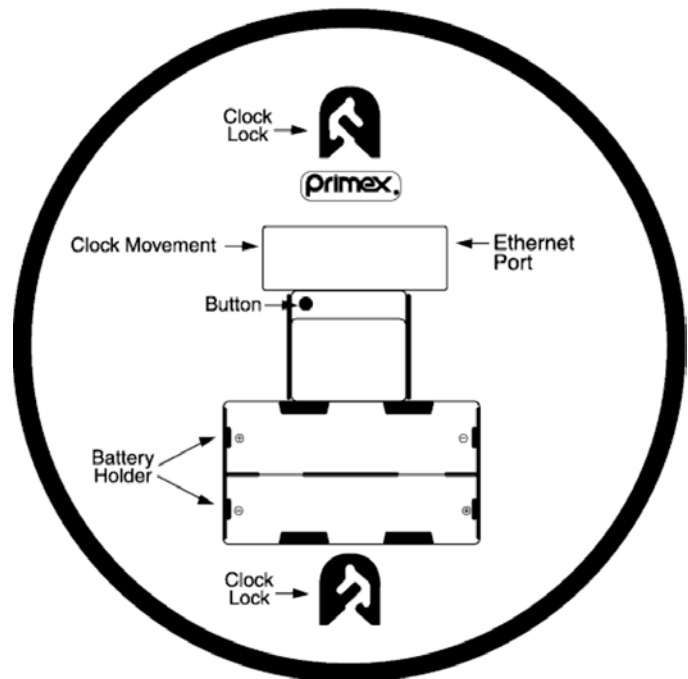
Remove an Clock Lock-mounted SNS analog clock

Follow these illustrated steps to remove an SNS analog clock

Apply counter-
clockwise
turning force

While applying
the counter-
clockwise
force, lift clock
3/4" to stop

Then apply
clockwise
turning force

STEP 1

STEP 2

STEP 3

While applying
the clockwise force,
lower clock 1/4"

While still applying
the clockwise force,
lift clock off mounting screws

STEP 4

STEP 5

Configuration tool procedures

Set the password for a clock

Each clock contains a password which must be used to login to the clock before any of the configuration settings can be read from the clock. The password used by the Configuration Tool is stored in the tool's Preferences settings and can be changed by using the Edit Preferences command (see the Preferences section of this manual). To write the Primex Wireless Configuration Tool 's current password to a clock the tool has established a connection with, you can use the Set Device Password toolbar button or the Actions > Set Device Password menu command.

1. Click on either the Set Device Password toolbar button or the Actions > Set Device Password menu command, both of which should be enabled once a connection to the clock has been established.

2. The status bar at the bottom of the window should display a "Device Password Set!" message.

Disconnect an SNS analog clock

To disconnect a clock from the Primex Wireless Configuration Tool, the following steps should be performed:

1. Click on either the Disconnect toolbar button or the Actions > Disconnect menu command, both of which should be enabled once a connection to the clock has been established.

2. The status bar at the bottom of the window should display a "Disconnected" message.

3. Physically disconnect the clock from the PC or laptop by disconnecting the network cable that was used to connect the devices.

4. The clock should restart and attempt to connect to the network using any configuration settings that were written to it and perform a time synchronization.

Note   You can physically disconnect the clock from the PC or laptop, without first using the Disconnect command, however if you do so, note that the Primex Wireless Configuration Tool may not realize the clock has been disconnected until you try to issue another command to the clock.

Upgrade the firmware for an SNS analog clock

The Primex Wireless Configuration Tool can be used to download new firmware to an SNS analog clock if the proper firmware files are available. SNS Firmware files typically have a .rom extension, and you should only attempt to upgrade an SNS analog clock with an authorized Primex Wireless firmware file or you risk rendering your clock completely inoperable. Once a connection has been established from the Primex Wireless Configuration Tool to the SNS Clock (see Connecting the Clock) you can initiate a firmware upgrade of the clock by performing the following steps:

1. Click on either the Upgrade Firmware toolbar button or the Actions > Upgrade Firmware… menu command, both of which should be enabled once a connection to the clock has been established.

2. An Open dialog window will be displayed to allow you to specify the Primex Wireless Firmware file that should be used to upgrade the clock. By default, the Open dialog is set to look for files with a .rom file extension.

3. Double-click the desired Firmware file or select the file and click the Open button.

4. The status bar will display a "Waiting for device to download Firmware Upgrade file!" message while the clock begins pulling down the file.

Note   Do not disconnect or power down the clock during the download process, which may take up to six (6) minutes.

5. Once the SNS Clock has completed pulling down the Firmware Upgrade file, the status bar will display a "Firmware download complete!" message and the clock should go through a restart cycle and may be disconnected from the laptop or PC.

Configuration Templates

Save a configuration template file

A significant portion of the information you configure your SNS Clocks with will be they same for all or a significant number of your clocks since they will be accessing your same network or Virtual LAN. To facilitate this, once you have entered the information for one of your clocks in the Primex Wireless Configuration Tool you can save that information in a template file for reuse at a later time. All the information entered is stored in the file with the exception of the Clock Name, which you would typically want to be unique for each clock. To save the clock information in a template file, all the information fields must contain valid values, and then the following steps should be performed:

1. Click on either the Save File or Save File As toolbar button or the File > Save… or File > Save File As.. menu commands.

2. You will not be able to save the configuration settings to a template file if any of the fields contain invalid values (indicated with red text). Attempting to do so will generate the following error dialog: Correct the invalid value and try again.

3. If you selected the Save File command on a set of configuration settings you previously read from a file, the data will be saved back to that file. If the data was entered into a "New" form, or the Save File As command was selected, a Save As dialog window will be displayed to allow you to select where the file should be saved. By default, Primex Wireless SNS Configuration files are saved with a .pwc file extension, but you

can use whatever name and extension you prefer.

Open a configuration template file

To open a previously saved Primex Wireless SNS Configuration file the following steps should be performed:

1. Click on either the Open File toolbar button or the File > Open… menu command.

2. If you have changed any data in the current configuration setting values displayed on the configuration tab you will be prompted if you want to save those configuration values before opening the new set of configuration values. If you select Yes, and those configuration settings were previously read from a file, the data will be saved back to that file. If the data was entered into a "New" forma Save As dialog window will be displayed to allow you to select where the file should be saved.

3. An Open dialog window will be displayed to allow you to specify the Primex Wireless SNS Configuration file that should be opened.

By default, Primex Wireless SNS Configuration files are saved with a .pwc file extension, but you can change the Files of type setting in the window to display files with other extensions, if you elected to save your configuration files with a different extension.

4. You can either double-click the file once you have found it, or select the file and click the Open button. The configuration information stored in the file will be loaded into the Configuration tab.

5. If the file you selected is not a valid Primex Wireless SNS Configuration file, one of the following error messages will be displayed and the fields of the Configuration Tab will not be updated:

Ping a clock

The Primex Wireless Configuration Tool provides the ability to 'ping' the clocks it is connected to. To do so, select the Ping Device command from the toolbar or the Communications Log context menu.

Display network information

You can also display the network settings in use by your laptop or PC while connected to the clock by selecting the Show Network Info command from the toolbar or the Communications Log context menu. This can be helpful in making sure the clock is allocating your machine a valid IP Address when it is connected directly to the device.

Communication log procedures

While active, the Configuration Tool keeps a log of all the communication sent and received between itself and the devices it establishes a connection with. The log is cleared each time you exit the application and a fresh log is started each time the application is started. You can view the current log at any time by clicking the **Communication Log** tab.

If an error occurred, it is displayed in the Communications Log to help determine exactly what happened.

Clear the communication log

You can clear the Communications Log at any time by right-clicking in the display of the Communications Log and selecting the Clear Log command from the context menu.

After selecting the Clear Log command, you will be prompted if you are sure you want to clear all the data from the Communications Log before the log is actually cleared.

Copy the communication log

You can select and copy portions of the Communication Log by selecting the text and using the standard copy command. You can also easily copy the entire contents of the Communication Log to the clipboard so it can be pasted into a document or email message by selecting the Copy Entire Log command from the toolbar or the Communication Log context menu. The contents will be copied as rich text, so if you paste it into a Microsoft Word document it will retain any color coding.

Save the communication log

You can easily save the entire contents of the Communication Log to a file, as rich text, by selecting the Save Log command from the toolbar or the Communication Log context menu. This will open a Save As dialog window allowing you to specify where to save the file and the filename to use. By default, a filename of "PrimexWirelessConfigLog.rtf" will be used, but you can change this.

Print the communication log

You can Print the entire contents of the Communication Log by selecting the Print Log command from the toolbar or the Communication Log context menu. This will open the standard Print dialog window allowing you to select the printer and options to use. You can also use the File > Page Setup… and File > Print Preview… menu commands while displaying the Communication Log tab to configure and preview what the printout will look like before sending it to the printer.

Time zone information

Time Zone options and the Daylight Saving Time (DST) transition dates for each time zone are kept in a data file which is part of the installation of the Primex Wireless Configuration Tool. The Time Zone tab can be used view what time zones are available and what DST transition dates stored for each time zone, if any. Each Time Zone entry in the display can be expanded or contracted by clicking on the plus (+) or minus (-) character displayed before the entry.

Set preferences

The Configuration Tool allows you to adjust several
settings which affect how the application behaves
for your installation of the application. These
settings can be altered and the changes written to
disk so your preferred behavior for the application
will be remembered the next time you use the
Configuration Tool.

To view and edit the Preference Settings
for the Primex Wireless Configuration
Tool, click the **Edit Preferences** toolbar
button or choose the **Edit ▸ Preferences…** menu
item. The Configuration Tool displays a
Preference Settings dialog box similar to the
one shown here.

Preference Settings	
⊟ **Misc**	
DeviceIPAddress	192.168.1.1
DevicePassword	admin1234
DevicePort	1600
LogBackgroundColor	■ Black
LogDataColor	■ Green
LogFailColor	■ Red
LogLabelColor	■ Gray
LogPassColor	■ LimeGreen
LogRcvdColor	■ Blue
LogSentColor	■ Gold
LogTitleColor	■ Blue
LogWordWrap	True
ResponseTimeout_mSec	20000
UpgradePort	5050
WindowResizable	False

[OK] [Cancel]

Clicking on a color setting will display a drop-down which allows you to select a color value. Clicking on a
True/False setting will display a drop-down allowing you to pick either a True or False value.

Device address

By default, clocks in configuration mode act as DHCP servers to allocate IP Addresses to devices connected to
them and the devices use an IP Address of 192.168.1.1. The Primex Wireless Configuration Tool is configured to
attempt to connect to IP address 192.168.1.1 on port 1600 when attempting to connect to a clock.

Device password

The device password is used by the Primex Wireless Configuration Tool to log in to clocks in order to read their
current settings. You can change this password from the default and set it in all of your devices using the Set
Device Password command if you wish to use a custom password in all of your clocks.

Device port

Communication log settings

The Primex Wireless Configuration Tool uses color coding when displaying messages in the Communication
Log. These settings allow you to adjust those color settings to your own personal tastes.

Log background color

Log data color

Log fail color

Log label color

Log pass color

Log rcvd color

Log sent color

Log title color

Log word wrap

Response timeout mSec

Upgrade port

When performing a firmware update on a clock, the device pulls the information from the Configuration Tool. This setting specifies what port the device should attempt to connect to the Configuration Tool application on in order to pull the firmware upgrade file down. The default value of 5050 for this port should work fine in most cases, but can be changed to another port if your laptop or PC already has an application using port 5050.

Window resizable

By default, the Configuration Tool runs in a fixed size window. You can change this setting to allow the window to be resizable. This can be advantageous when viewing the Communication Log tab, but the forms displayed by the Configuration Tool will not resize and will simply be displayed in the upper left of the tab. Note that there is a fixed minimum size set to make sure the entire form remains visible when being displayed.

Troubleshoot

Problem:

You receive a **File not Found** error on startup.

Solution:

The Time Zone and Daylight Saving Time Transition Date data is kept in an XML data file which must be located in the same directory as the Configuration Tool executable. This is done at installation time, but if you copy just the '.exe' file to another folder and try to run the file from there you may get this error message. To prevent this, run the executable from the directory it was originally installed in, or make sure you copy the **TimeZones.xml** file with the **PW Config Tool.exe** file.

Appendix – Install/remove Configuration tool software

This appendix describes the minimum system requirements for the Primex Wireless Configuration Tool software and how to install it.

- **Minimum system requirements**
- **Install Configuration Tool software**

Minimum system requirements

- **Operating System**   Windows XP, Windows 2000, Windows 2003, Windows Vista
- **Supporting Software**   Microsoft .NET Framework version 2.0 or later
- **Disk Space Required**   10 MB
- **Network**   Network Interface Card with RJ-45 jack
- **Network Cable**   1 Cat 5 wired straight through with RJ- 45 connectors
- **Minimum Screen Resolution** 1024 x 768

Install Configuration Tool software

Follow these steps to install the Primex Wireless Configuration Tool software:

1. Insert the Primex Wireless Configuration Tool software CD. Windows automatically launches the setup wizard and displays a **Welcome to the Primex Wireless Configuration Tool Setup Wizard** dialog box similar to the one shown here.

Note   If Windows does not automatically launch the setup wizard, browse to your CD drive and double-click **setup.exe** to launch the setup wizard.

2. Click the **Next>** button. The wizard displays a **Select Installation Folder** dialog box similar to the one shown here. The wizard shows the default installation path (**C:\Program Files\Primex Wireless\Primex Wireless Configuration Tool**) in the **Folder** field.

3. You may determine the impact of installing the configuration tool on your computer by clicking the **Disk Cost** button. The wizard displays a **Primex Wireless Configuration Tool Disk Space** dialog box similar to the one shown here. The **Primex Wireless Configuration Tool Disk Space** dialog box shows all available drives on your computer with their disk size, free space available, amount of space required to install the configuration tool and amount of space remaining after installation of the configuration tool.
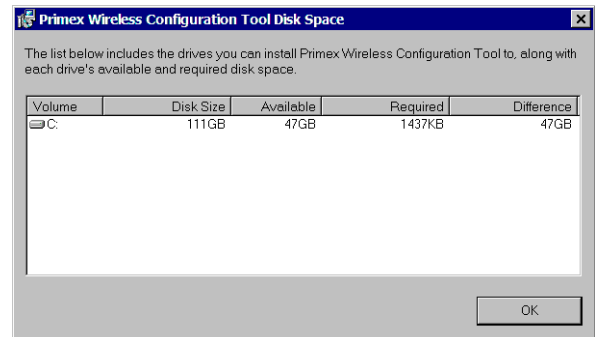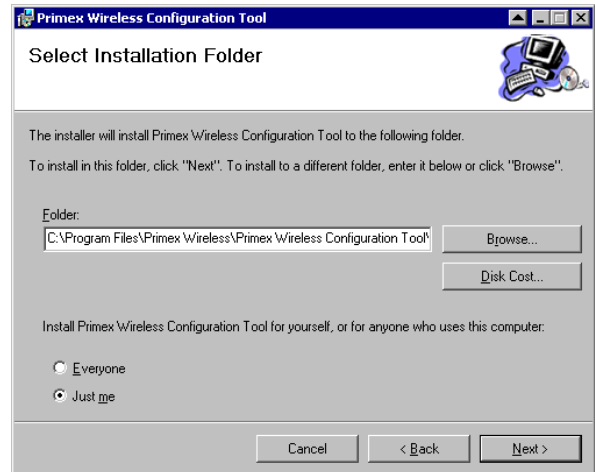
4. If you'd prefer to install the configuration tool to a different location, click the **Browse** button. The wizard displays a **Browse for Folder** dialog box similar to the one shown here. Use the **Browse for Folder** dialog box to choose a new location in which to install the configuration tool. Click the **OK** button when you've chosen your preferred location to accept your changes and return to the **Select Installation Folder** dialog box.
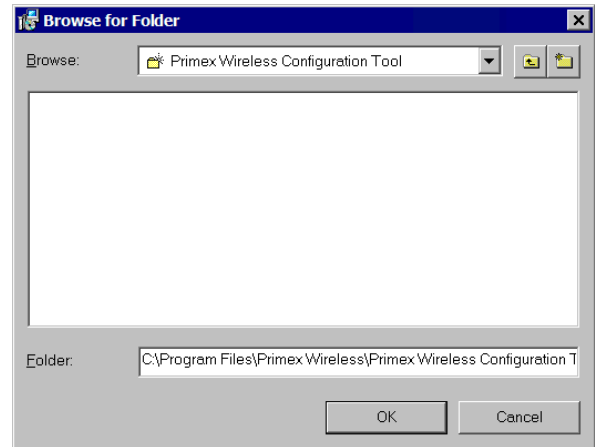
5. You may choose to make the configuration tool available to just yourself or to anyone who uses your computer. Choose the **Just me** option button to only allow the configuration tool to be used when you're signed into your computer (recommended); choose the **Everyone** option button to allow anyone signed into your computer to use the configuration tool.

6. When you've completed selecting your preferences with the **Select Installation Folder** dialog box, click the **Next>** button. The wizard displays a **Confirm Installation** dialog box similar to the one shown here. This is the final step before installation begins. Click the **Next>** button to proceed with installation; click the **Back** button to return to the **Select Installation Folder** dialog box or click the **Cancel** button to end the installation process without making any changes to your computer.
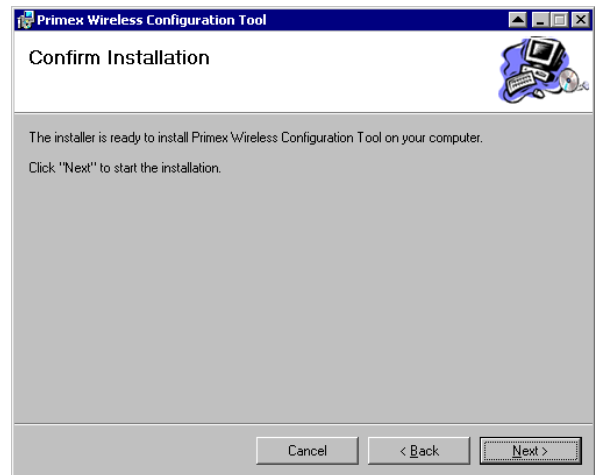
7. When you click the he wizard displays **Next>** button, the wizard displays a progress meter that shows the installer's progress and when installation is complete, the wizard displays an **Installation Complete** dialog box similar to the one shown here. At this point, the configuration tool has been installed on your computer; click the **Close** button to close the wizard.
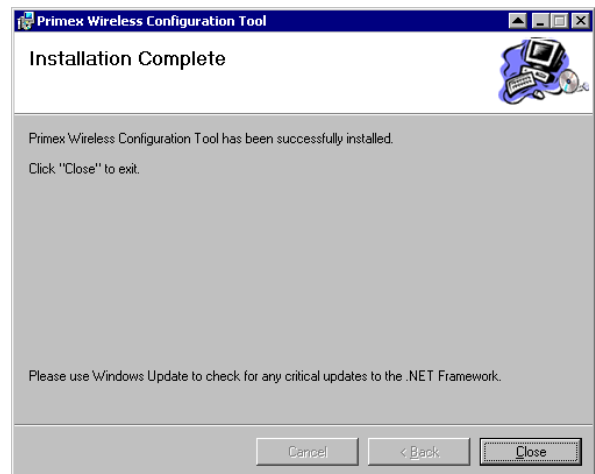
Uninstall Configuration Tool software

Follow these steps to uninstall the Configuration Tool software:

8. Choose **Start ▶ Settings ▶ Control Panel ▶ Add or Remove Programs**. Windows displays an **Add or Remove Programs** dialog box similar to the one shown here. Scroll down the **Currently installed programs list** and select **Primex Wireless Configuration Tool**. Click the **Remove** button.

9. Windows displays an **Add or Remove Programs** confirmation message box similar to the one shown here. Click the **Yes** button to confirm that you want to remove the Configuration Tool software from your computer.
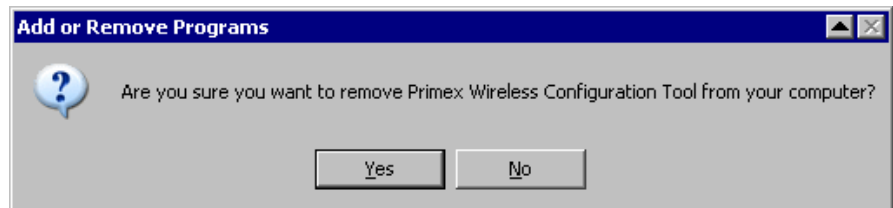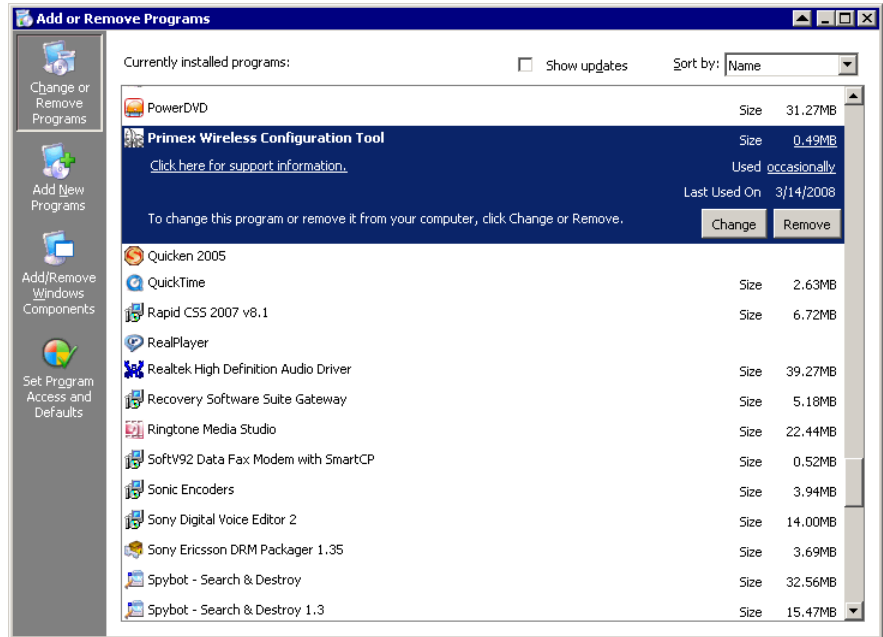
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