TRILITHIC

Cleaning the Display Screen

The LCD display of the 802 AWE requires special care when cleaning. This display is sensitive and can be easily scratched or damaged while cleaning. To clean the display screen of the 802 AWE, use an ultrasoft, clean, lint free, microfiber cloth.

To clean fingerprints and greasy smudges off the display screen, use a bottle of screen cleaning solution designed for LCD displays. Put a small amount of screen cleaning solution on a cleaning cloth and then wipe the screen gently.

For correct cleaning of the display, follow these four simple steps:

1. Turn off the 802 AWE before you begin. If the screen is dark, it will be easier to see any areas that aren't clean.

2. Very gently, wipe the display with an ultrasoft, clean, lint free, dry cloth. If this does not completely clean the display, DO NOT press harder on the screen in an attempt to clean the screen as this may cause permanent damage.

3. If Step 2 does not work, spray screen cleaning solution onto the cloth. Never spray the screen cleaning solution directly onto the display screen.

4. Let the screen dry completely before turning on the 802 AWE.

> ⚠️ **WARNING**
>
> *Damage caused by improper cleaning of the display screen will void the warranty of the 802 AWE.*

Battery Charging

Before you can use your instrument, you will need to charge its batteries. Your instrument's Li-Ion batteries (two internal) provide approximately 6 hours of power during continuous operation.

The instrument comes with a AC to DC Power Adapter & Battery Charger which can be used to charge the batteries in approximately 6 hours or to trickle charge the batteries while the instrument is in use.

Plug the power adapter & battery charger into the DC charge port of the 802 AWE on the bottom of the instrument under a protective cover.

Your instrument is equipped with a "smart" battery charging circuit so that the charging method (fast or trickle) is an auto function. Fast Charge is used to charge the battery quickly. Trickle Charge is used to keep the battery fully charged.

Every time your instrument is plugged into the charging cube, it starts charging automatically via the Trickle Charge method. If the unit determines Fast Charge is necessary, it defaults to the Fast Charge method.

Charging Status

The Title Bar at the top of the 802 AWE screen displays the battery voltage and the following charging status icons:

Charging – This icon is displayed when the 802 AWE battery is charging. When charging, the battery voltage will be shown between 3 and 4 VDC (dependent on charging source).

100% Charge – This icon is displayed when the 802 AWE battery is at a minimum of 4.0 VDC or approximately 100% of battery capacity.

75% Charge – This icon is displayed when the 802 AWE battery is at a minimum of 3.75 VDC or approximately 75% of battery capacity.

50% Charge – This icon is displayed when the 802 AWE battery is at a minimum of 3.50 VDC or approximately 50% of battery capacity.

25% Charge – This icon is displayed when the 802 AWE battery is at a minimum of 3.40 VDC or approximately 25% of battery capacity. When the battery charge drops to this level, it is recommended that the battery is charged soon.

0% Charge – This icon is displayed when the 802 AWE battery is less than 3.40 VDC or approximately 0% of battery capacity. When the battery charge drops to this level, it is recommended that the battery is charged immediately.

Basic Navigation & Control

Startup

Once the instrument's battery is charged, you may startup the 802 AWE by pressing the **Power** button at the bottom left of the keypad.

Upon startup one of the following will occur:

- If multiple user profiles are activated, the instrument will display the **Welcome to** the **802 AWE** screen as shown in the image above. Use the keypad to select the user profile that you wish to use. The **Troubleshoot** menu will be displayed as shown in the image to the right.

- If multiple user profiles are deactivated, the 802 AWE will automatically display the **Troubleshoot** menu as shown in the image to the right.

Welcome to the 802 AWE

user1 (12345) Company

Unused User (0000) Company

Unused User (0000) Company

Unused User (0000) Company

Unused User (0000) Company

Select your user profile or create a new one

Replace   Delete

Survey   3.9 V   8-Jan-2016 21:43:13

Wi-Fi   Wi-Fi Clients   Zigbee

Bluetooth

Wi-Fi Access Point Survey Menu   10.0.0.120

Survey   Troubleshoot   Setup

NOTE   *For more information about configuring multiple user profiles, see Section II: Setup, Chapter 3: Meter Configuration, Global Settings.*

NOTE   *For more information on how to log off the current user or to switch to another user, see Section I: The Basics, Chapter 4: Function Menu, Log Off User.*

Sleep Mode

The sleep mode is used to conserve power by putting the 802 AWE to sleep when not in use. This also allows the 802 AWE to be turned back on quickly when moving from one test location to another throughout the work day

Automatic Sleep Mode

The 802 AWE will automatically enable the sleep mode to conserve power after the 802 AWE has been idle for a specified period of time.

The default setting for the sleep mode delay is **5 Minutes**. The sleep mode delay can be set from a minimum of one (1) minute up to a maximum of 60 minutes.

> **NOTE**
>
> *For more information about setting the Sleep Mode Delay, see Section II: Setup, Chapter 3: Meter Configuration, Interface Settings.*

> **NOTE**
>
> *Whenever the 802 AWE is being powered by the AC to DC power adapter & battery charger, the sleep mode delay will be deactivated automatically.*

Manual Sleep Mode

To manually enter the sleep mode, quickly press the **Power** button.

Wake from Sleep Mode

Quickly Press the **Power** button to wake the 802 AWE from sleep mode. The sleep mode delay timer will automatically restart.

Shutdown

Shutdown allows the 802 AWE to be turned off at the end of the work day to conserve power.

Automatic Shutdown

The 802 AWE will automatically enable the automatic shutdown mode to conserve power after the 802 AWE has been idle for a specified period of time.

The default setting for the turn off delay is **1 Hour**. The turn off delay can be set from a minimum of one (1) hour up to a maximum of 24 hours.

> **NOTE**
>
> *For more information about setting the Turn Off Delay, see Section II: Setup, Chapter 3: Meter Configuration, Interface Settings.*

> **NOTE**
>
> *Whenever the 802 AWE is being powered by the AC to DC power adapter & battery charger, the turn off delay will be deactivated automatically.*

Manual Shutdown

Press and hold the **Power** button to shutdown the 802 AWE. A notification window will be displayed. Select the **OK** button to shutdown or select the **Cancel** button to exit without shutting down the device.

802 AWE
Advanced Wireless Test Set
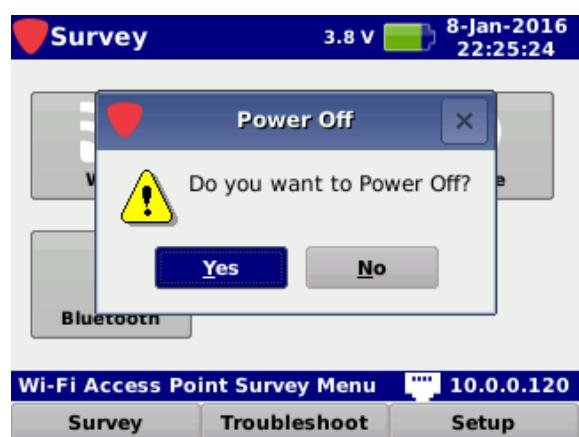
Display Screen

The instrument has been designed with simple, intuitive navigational tools. For your convenience, the display has a large, easy to read, menu style navigation. In some menus you will also notice on-screen cursors which enhance functions.

The display screen contains several tools which you should become familiar with before using the instrument. Take a moment to locate the basic features of the display screen.
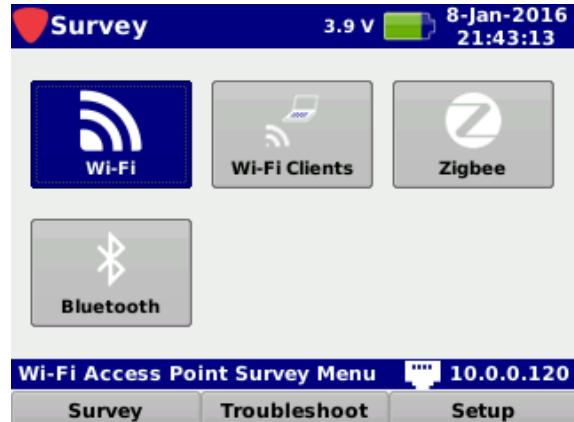
Title Bar

The title bar is located at the top of the display screen, an example is shown in the image below. The left side of the title bar displays the name of the currently selected screen, such as the **Survey**, **Troubleshoot**, and **Setup** menus, the right side of the Title Bar displays the battery voltage, charging status, date, and time.

Message Bar

The message bar is located below the main display area, an example is shown in the image below. This area displays single line text entries to help you navigate the 802 AWE menus and show information when the instrument is performing tests. On the **Survey**, **Troubleshoot**, and **Setup** menus, the right side of the message bar displays network connection icons to indicate which types of network connections are currently active.

802 AWE
Advanced Wireless Test Set

Main Display Area

The main display area, located below the Title Bar, displays text and graphic information such as function icons, measurement, graphs, and interactive pop-up boxes which vary depending on which screen has been accessed.

If multiple user profiles are enabled, the **Welcome to the 802 AWE** screen will always be displayed upon startup as shown in the image to the right.

After selecting a user profile, the **Survey** Menu will automatically be displayed by default with the **Wi-Fi** icon highlighted.
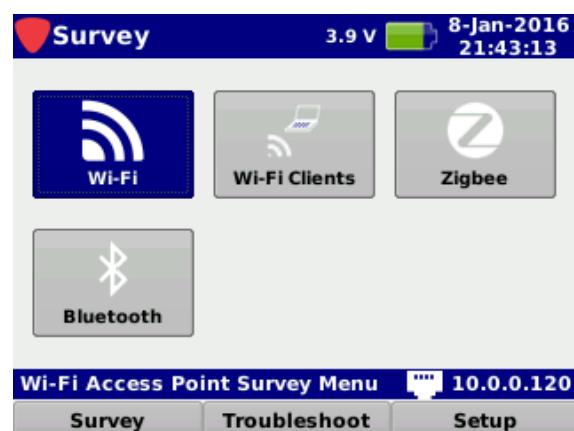
After selecting a function icon from any navigation menu, the measurements and data will be displayed in this area. For example, the image shown to the right represents the type of information that would be displayed in a measurement mode.

Softkey Labels

Below the message bar, are three softkeys which correspond to and identify the actions assigned to the three yellow buttons on the keypad.

Most screens utilize from one to three of the softkeys which are used to toggle between different menus and access various measurement functions.

Navigation Menus

All navigation menus will show the same softkeys. For example, the following image shows a navigation menu with the **Survey**, **Troubleshoot**, and **Setup** softkeys.

Other Screens

On measurement screens the softkeys are used to access additional measurement functions such as:

SETUP FUNCTIONS

- **Device Information** – Display Unit ID & Enter Option Codes

- **Device Setup** – Select Default & Delete Saved Access Points

- **File Management** – Backup and Restore the Device Database, Import, Export, Delete and Display Files or Sort Displayed Files by Name, Type, Date/Time and Size

- **Firmware Update** – Accept Software Terms, Choose from Web or USB Firmware and Download/Install Firmware Packages

SURVEY FUNCTIONS

- **Wi-Fi Survey** – Select from List or Graph Displays, Find Wireless Devices and Sort Displayed Networks by Level, Security Type, Frequency, Channel, and SSIS

- **Clients** – Clear Client List and Find Wireless Devices

- *Zigbee* – *Coming Soon*

- *Bluetooth* – *Coming Soon*

TROUBLESHOOTING FUNCTIONS

- **Channel Usage** – Select from 2.4 or 5 GHz Measurement Modes, Toggle Between Bar or Waterfall Graph Views, and Toggle Between 5 GHz Measurement Bands

- **Device Finder** – Choose the Access Point or Client Device to Find and Mute the Speaker

- **Net Tests** – Select from Ping, Throughput or Traceroute Measurement Modes, Select a Favorite Network Test Endpoint, and Start Network Tests

- **Cable Diagnostics** – Select from Time Domain Reflectometer (TDR) or Active Link Cable Diagnostics (ALCD) Tests, and Start or Stop the Cable Diagnostics Tests

Selecting On-Screen Items

To select items on the display screen, use the arrow buttons on the keyboard to highlight the desired item and then press the **Enter** button.

In the example images shown to the right, notice how the currently selected item is highlighted blue and the other items remain gray.

Once you select an item, you will either enter a new function or a window will appear.
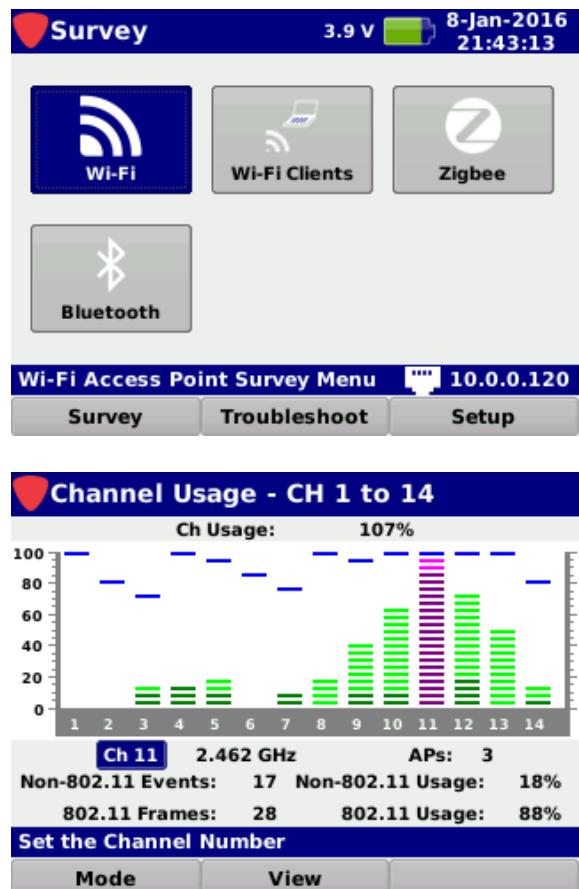
Main Keypad

The main keypad is the set of buttons that are shown in the image to the right.

Enter Button

The **Enter** button is used to select the highlighted items in order to:

- Select icons from the navigation menus
- Select custom setting fields to open the **Virtual Keyboard** and enter custom values
- Select functions from the **Function** menu
- Select menu options from pop-up menus
- Select channel plans and limit sets from file lists
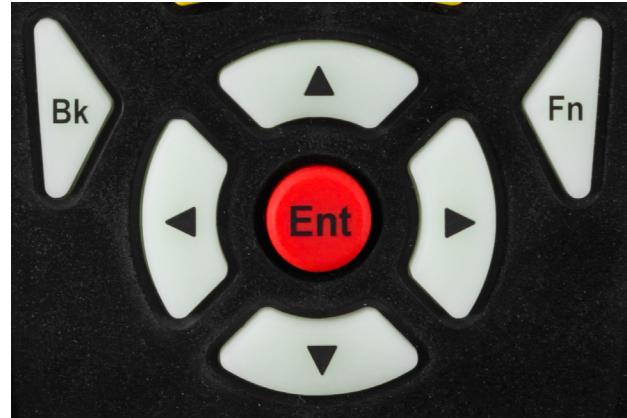
Arrow Buttons

The arrow buttons are used to navigate, highlight items, scroll lists, or change values on the display screen.

Back Button

The **Back** button is used to take you back to a previous screen or to close a menu. It can also be used to exit a pop-up entry window without accepting entry information. If you hold down the **Back** button, this will cause the instrument to go back multiple screens.

Function Button

The **Function** button can be selected at any time to display a pop-up menu with additional functions. These functions vary from capturing screens for future reference to saving configuration files.

802AWE
Advanced Wireless Test Set

Using the Virtual Keyboard

The instrument makes use of a **Virtual Keyboard** similar to that of a smart device for entering both numbers and letters.

The following **Virtual Keyboards** can be accessed by toggling the **abc/ABC/123/123+** combined softkey:

- Select the **abc** softkey to display a keyboard with lower case letters

- Select the **ABC** softkey to display a keyboard with upper case letters

- Select the **123** softkey to display a keyboard with numbers and symbols

- Select the **123+** softkey to display a keyboard with additional symbols
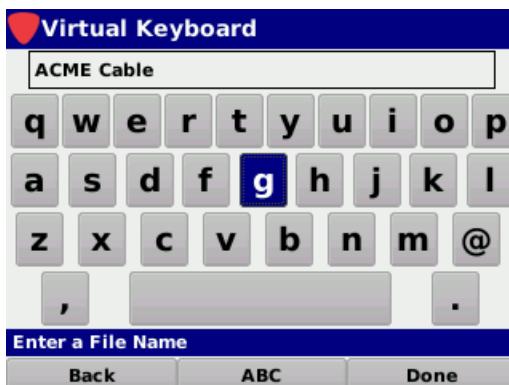
abc softkey selected
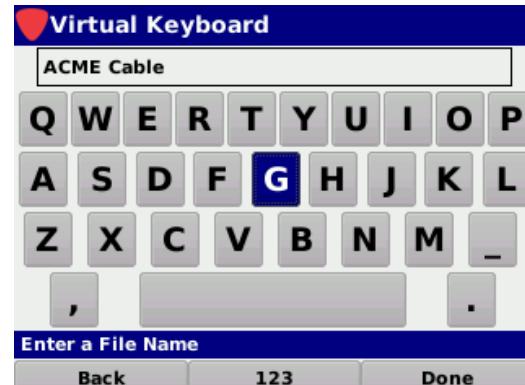
ABC softkey selected
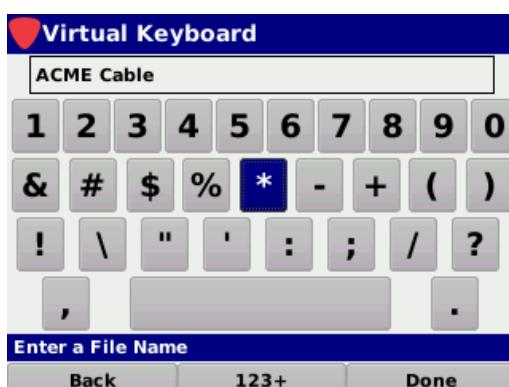
123 softkey selected
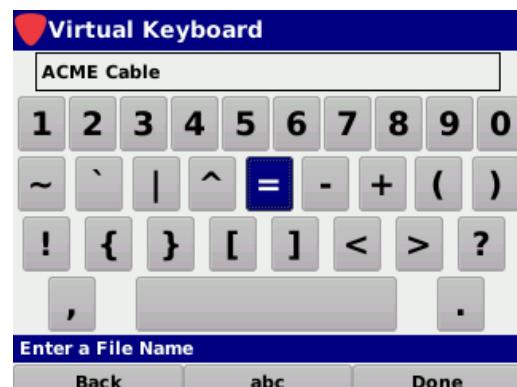
123+ softkey selected

To delete existing text, use the **Back** softkey. Once you have finished making changes, select the **Done** softkey to save your changes and exit, or select the **Back** button on the keyboard to exit without saving your changes.

802AWE
Advanced Wireless Test Set

Introduction

While in any of the navigation menus or from within many of the instrument functions, Press the **Function** button to display the **Function** menu as shown in the image to the right.

This chapter will provide you with an understanding of the most common **Function** menu options as follows:

- Pause Meter
- Screen Capture
- Network Manager
- Log Off User
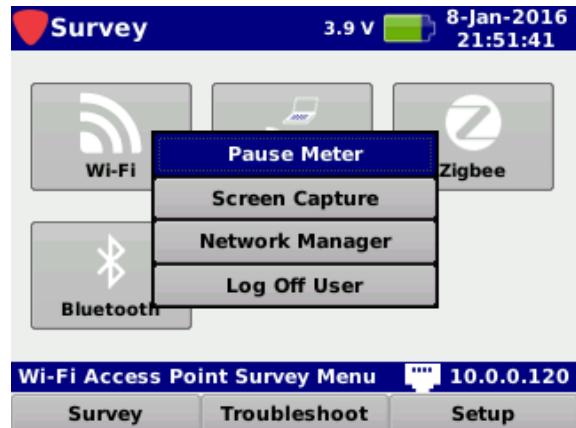
Pause Meter

This function is used to pause the meter during measurements. To pause meter measurements, select the **Pause Meter** button from the **Function** menu as shown in the image to the right.

The **Title Bar** will be highlighted in red and display **Paused** until the pause meter function is disabled.

To exit the pause meter function, Press the **Back** button.
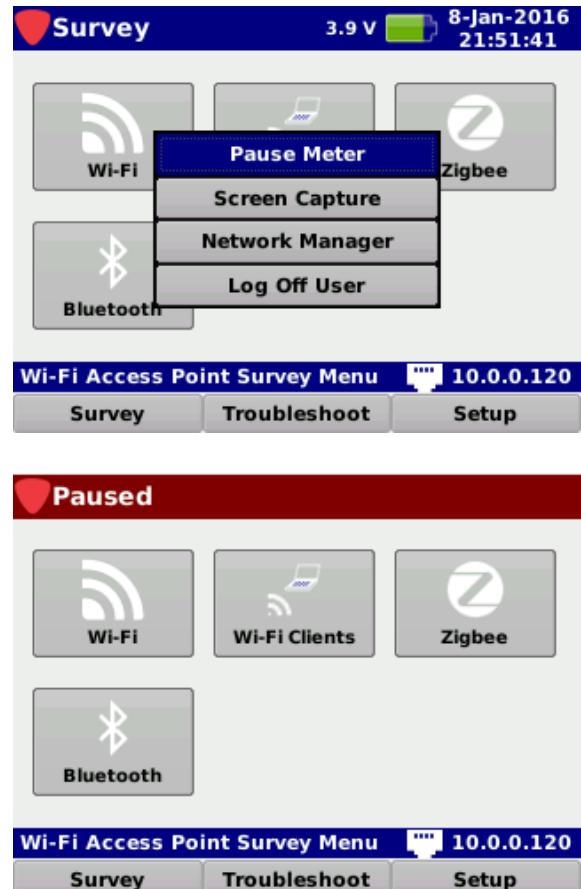
Screen Capture

This function is used to take a screen capture of the currently displayed screen. To take a screen capture, select the **Screen Capture** function from the **Function** menu as shown in the image to the right.

You will be prompted to enter a file name using the **Virtual Keyboard**. It will then be saved to the internal memory of the 802 AWE.

NOTE

*To view the files saved to the internal memory of the 802 AWE, see Section II: Setup, Chapter 4: File Management.*

802 AWE
Advanced Wireless Test Set

Network Manager

> **NOTE**
>
> **Before proceeding through this section, you should first setup the default network configuration as shown in Section II: Setup, Chapter 3: Meter Configuration.**

This function is used to enable or disable network connections. To open the network manager, select the **Network Manager** button from the **Function** menu as shown in the image to the right.

The **Network Manager** window provides controls for the following type of network connection:

- **Ethernet** – This enables the built-in 10/100 Mbit/s Ethernet Port.

- **Wi-Fi** – This enables the built-in 802.11 (a/b/ g/n/ac*) Wi-Fi Adapter.

- **Bluetooth** – This enables the built-in Bluetooth Wireless Adapter.
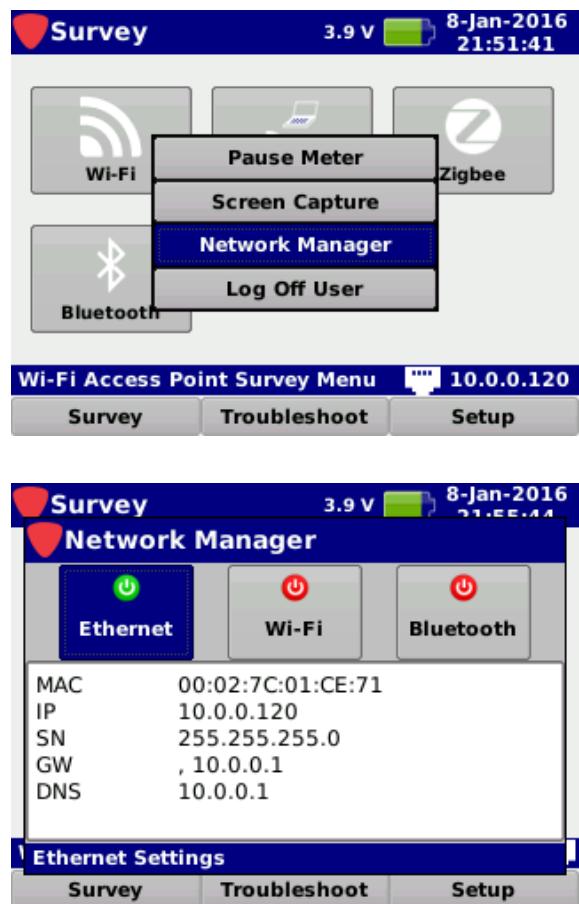
Connection Indicators

Once connected, the **Network Manager** window will automatically display the MAC, IP, Subnet, Gateway, and DNS of the active connection.

Within the **Network Manager** window, each connection button is labeled with the connection name and status as follows:

Active – This symbol indicates the connection is currently active.

**Inactive** – This symbol indicates the connection is currently inactive.

From any navigation menu, the active connection is shown in the right side of the Status Bar as follows:

Ethernet – This symbol indicates the Ethernet connection is currently active.

Wi-Fi – This symbol indicates the Wi-Fi connection is currently active.

Bluetooth – This symbol indicates the Bluetooth connection is currently active.

Disconnect a Network Connection

To disconnect an active network connection, select any connection button with an active status.

The **Continue** window will appear as shown in the image to the right. Select the **OK** button to disconnect or select the **Cancel** button to exit without disconnecting.

802AWE

Advanced Wireless Test Set
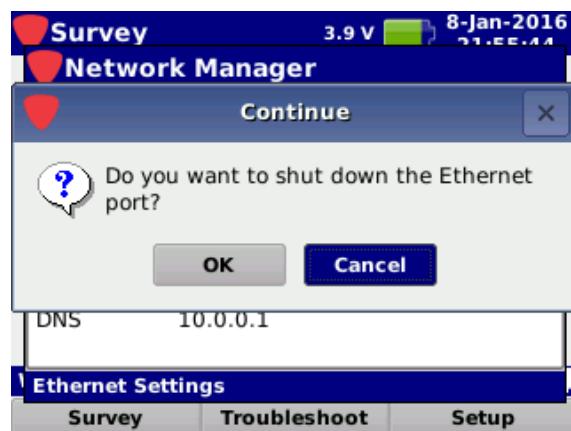
Ethernet Connection

Perform the following steps to connect using the Ethernet connection:

1. Connect an Ethernet cable to the Ethernet Port of the 802 AWE.

2. Select the **Ethernet** connection button from the **Network Manager** window as shown in the image to the right.


> **NOTE**
>
> *If the Prompt User option is set to No from within the Ethernet Settings option of the Setup Menu, the Ethernet Settings window will not appear. If so, proceed to Step 4.*

3. If the **Prompt User** option is set to **Yes** from within the **Ethernet Settings** option of the **Setup** menu, the **Ethernet Settings** window will appear as shown in the image to the right. Adjust the Ethernet settings as desired and then select the **Login** button.
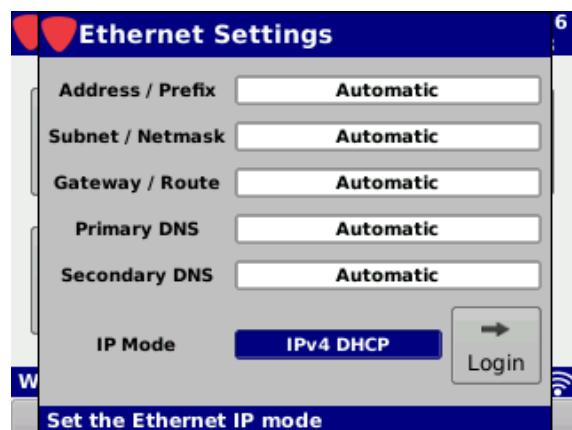
4. The **Ethernet Settings** window will display the network connection progress as shown in the image to the right.
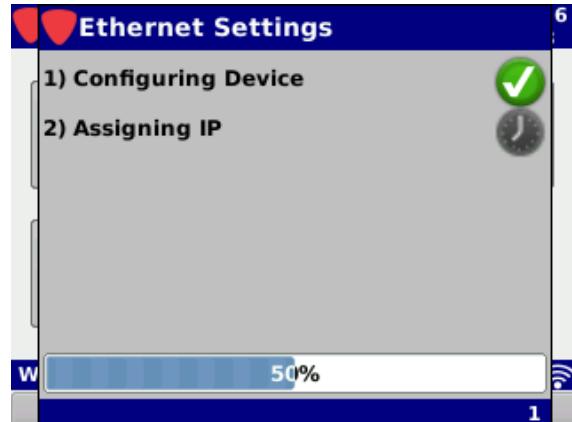
5. Once connected, the icon of the active connection and the IP address will be displayed in the **Message Bar** as shown in the image to the right.
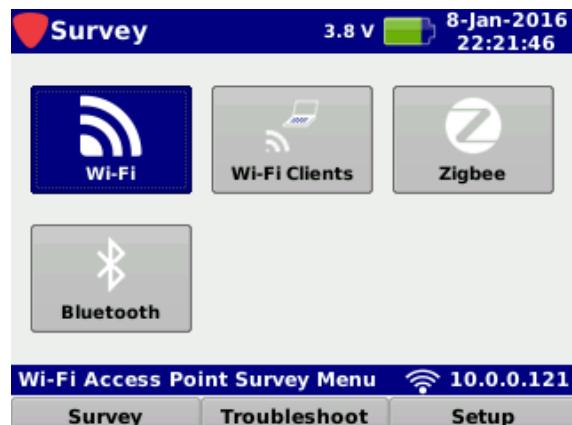
6. Return to the **Network Manager** window to view the MAC, IP, Subnet, Gateway, and DNS of the Ethernet connection as shown in the image to the right.
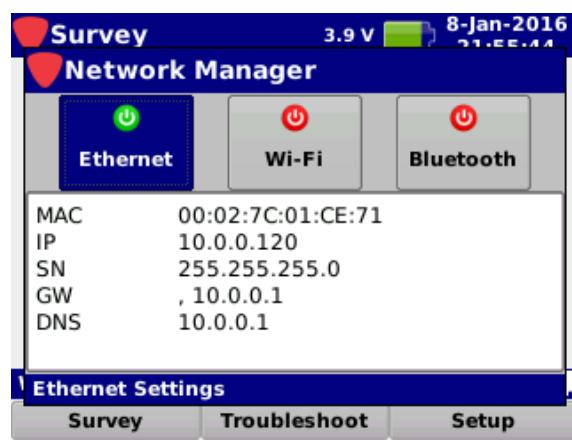
Wi-Fi Connection

Perform the following steps to connect using the Wi-Fi connection:

1. Select the **Wi-Fi** connection button from the **Network Manager** window as shown in the image to the right.

NOTE *If the Prompt User option is set to No from within the Wi-Fi Settings option of the Setup Menu, the Wi-Fi Settings window will not appear. If so, proceed to Step 3.*

2. If the **Prompt User** option is set to **Yes** from within the **Wi-Fi Settings** option of the **Setup** menu, the **Wi-Fi Settings** window will appear as shown in the image to the right. Adjust the Wi-Fi settings as desired and then select the **Login** button.

3. After approximately 15 seconds the Wi-Fi adapter will show a list of the available networks will appear as shown in the image to the right. Select the desired network from the list, adjust the Wi-Fi settings as needed and then select the **Login** button.

4. The **Wi-Fi Settings** window will display the network connection progress as shown in the image to the right.
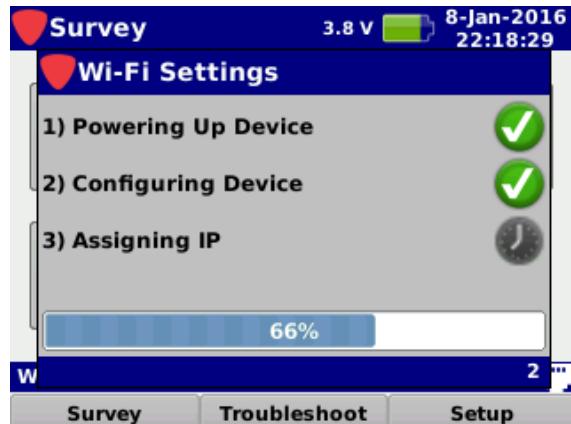
5. Once connected, the icon of the active connection and the IP address will be displayed in the **Message Bar** as shown in the image to the right.

6. Return to the **Network Manager** window to view the SSID, MAC, IP, Subnet, Gateway, and DNS of the Wi-Fi connection as shown in the image to the right.

802 AWE
Advanced Wireless Test Set
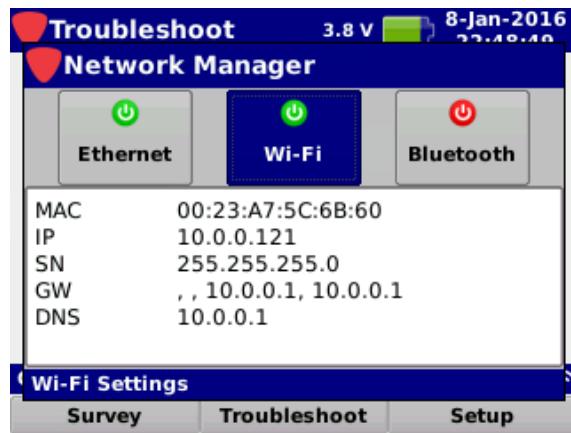
Log Off User

This function is used to log off the current user. To log off, select the **Log Off User** button from the **Function** menu as shown in the image to the right.
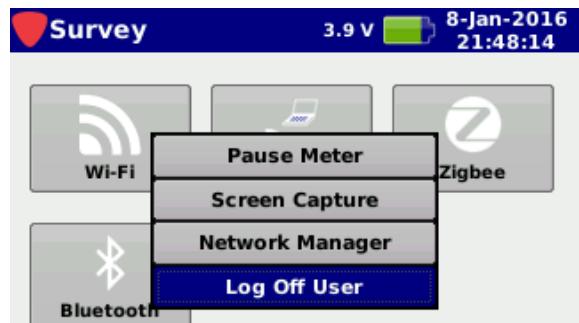
The **Continue** window will appear as shown in the image to the right. Select the **OK** button to log off or select the **Cancel** button to exit without logging off.
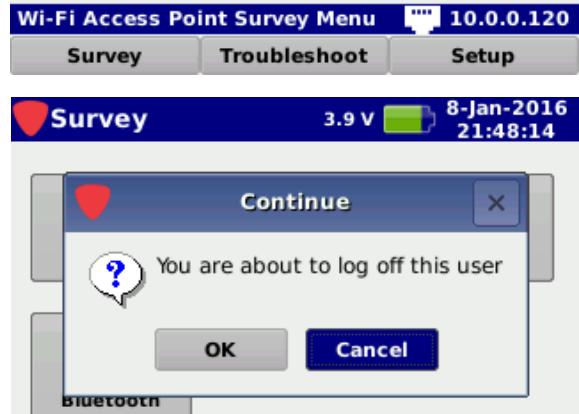
The **Welcome to** the **802 AWE** screen will be displayed, from this screen you can now log in as a different user.

NOTE

If the Multiple Users option is set to No from within the Global Settings option of the Setup Menu, the Log Off User function and welcome screen will not be displayed.

802 AWE
# Advanced Wireless Expert

Section II: Setup Menu

THIS PAGE LEFT INTENTIONALLY BLANK

802 **AWE**
Advanced Wireless Test Set

Introduction

Select the **Setup** softkey to display the **Setup** menu as shown in the image to the right. The 802 AWE enables you to select from numerous instrument setup functions. These functions allows you to view, edit, and adjust information and setup parameters for the meter.

This section will provide you with instructions on how to utilize the functions available in the Setup menu of the instrument including:

- Instrument information

- Meter configuration

- File management

- Firmware updates
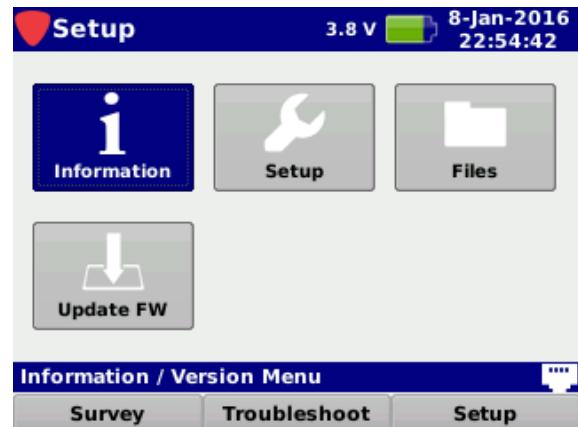
THIS PAGE LEFT INTENTIONALLY BLANK

802 AWE
Advanced Wireless Test Set

Overview

Select the **Information** icon as shown in the image to the right to view information about the 802 AWE.

The **Information** screen will be displayed as shown in the image to the right. This screen allows you to view the following types of instrument information:

- Serial Number
- Version
- Network
- Memory
- Options
- Activate Options
- View Unit ID

NOTE ***All information displayed in the Instrument Information Mode is static and is to be used as a reference only. To edit any settings you will need to use the Instrument Setup Mode.***

The unit serial number is located on the right side of the **Message Bar**. This information is set at the Trilithic factory and cannot be changed by the user. The serial number also appears on a label on the back side of the 802 AWE. Please provide this number when requesting an RMA for troubleshooting, service, calibration, or repair.

Version Information

Select the **Version Information** button to display details on the version of software/firmware installed in the 802 AWE. This information will be helpful if you are updating your firmware or upgrading your instrument's option package.
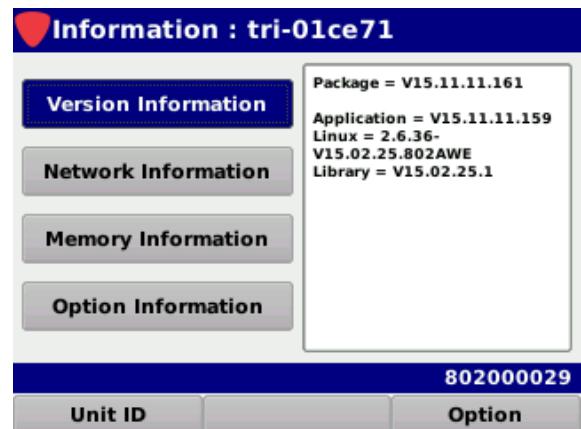
NOTE *When you perform a firmware update, this information will be automatically updated.*

Network Information

Select the **Network Information** button to displays network details such as MAC, IP, SN, GW, and DNS. This information is helpful for quick reference of your current network status.

Information : tri-01ce71

Version Information
Network Information
Memory Information
Option Information

Ethernet:
 MAC
00:02:7C:01:CE:71
 IP   10.0.0.120
 SN
255.255.255.0
 GW   , 10.0.0.1
 DNS   10.0.0.1

802000029

Unit ID   Option
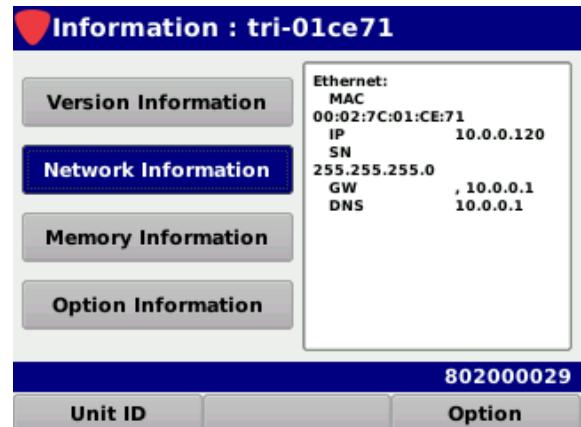
Memory Information

Select the **Memory Information** button to display details of the memory available and used on the 802 AWE. This information is automatically updated as files are saved and stored in the 802 AWE.

Information : tri-01ce71

Version Information
Network Information
Memory Information
Option Information

RAM:
  Total = 60884 KBytes
  Used = 46080 KBytes
  Free = 14804 KBytes
Root Drive: rootfsa
  Total = 94332 KBytes
  Used = 50420 KBytes
  Free = 43912 KBytes
User Drive: user
  Total = 13864 KBytes
  Used = 112 KBytes
  Free = 13752 KBytes

802000029

Unit ID   Option

802 AWE
Advanced Wireless Test Set

Option Information

Select the **Option Information** button to display which options that are available to use and those options that you can install on the 802 AWE.

Information : tri-01ce71

Version Information

Network Information

Memory Information

Option Information

Yes - 802 AWE
Yes - Network Test Suite

802000029

Unit ID | Option
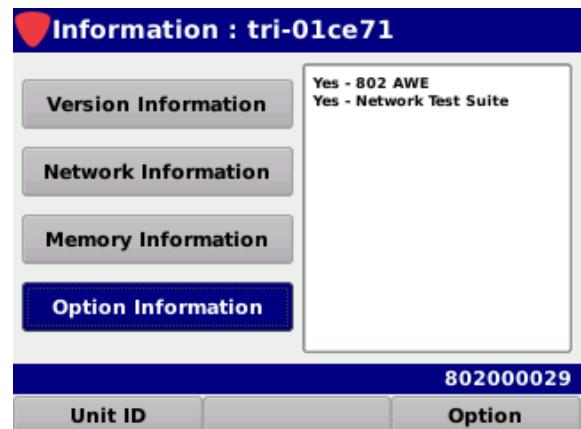
> **NOTE**
>
> *This information is automatically updated as options are added to the 802 AWE. After initial sale, most options can be simply added with the purchase of an option activation code. For more information, call your sales representative or Trilithic at 800-344-2412.*

Option Activation

Select the **Option** softkey and then enter the option activation key that you purchased from Trilithic. The dash between each four digits of the code as shown in the image to the right is not required when entering the option activation key.
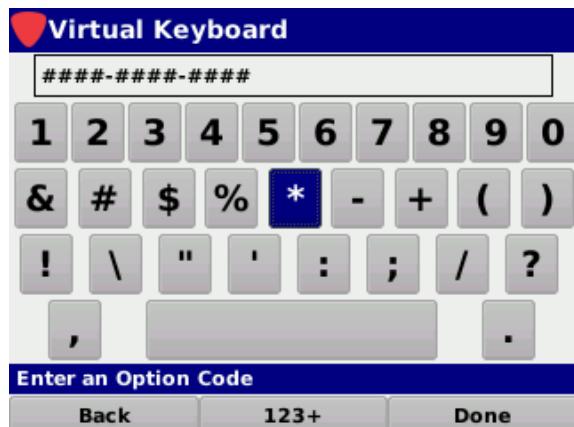
> **NOTE**
>
> *The option code is a unique activation number that is specifically generated for your instrument. You should have received this code with your order for new options. If you are missing this code, contact Trilithic at 800-344-2412.*

Unit ID

Select the **Unit ID** softkey to view the serial number associated with this meter. Select the **OK** button to exit this window.
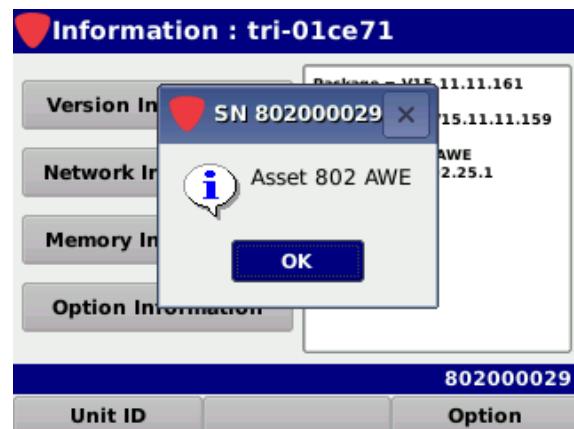
Function Menu Options

The Function menu can be accessed by pressing the **Function** button while in the Instrument Information Mode.

The following **Function** menu options can be accessed while in Instrument Information Mode:

- Pause Meter
- Toggle Flashlight
- Screen Capture
- Boot Parameters
- Detect Issues

The following functions are described in Section I: The Basics, Chapter 4: Function Menu:

- Pause Meter
- Toggle Flashlight
- Screen Capture
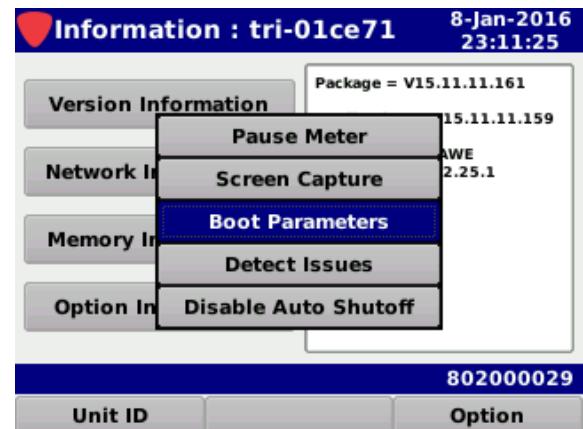
Boot Parameters

Select the **Boot Parameters** button to view the more information about the boot parameters of the 802 AWE.

The boot parameters will be displayed in the right side of the Information screen. This information is used for advanced troubleshooting by Trilithic technical support.

802 AWE
*Advanced Wireless Test Set*
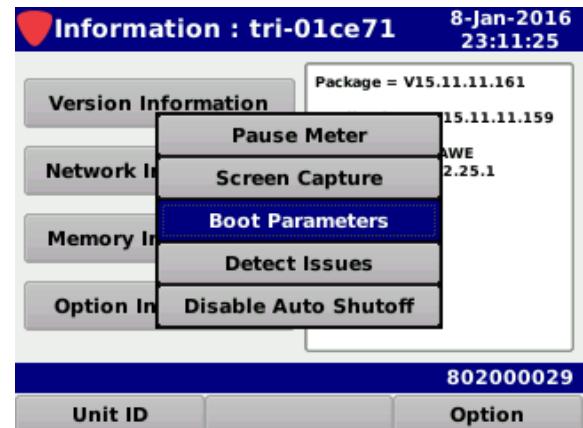
Detect Issues

Select the **Detect Issues** button to detect any file system issues of the 802 AWE.
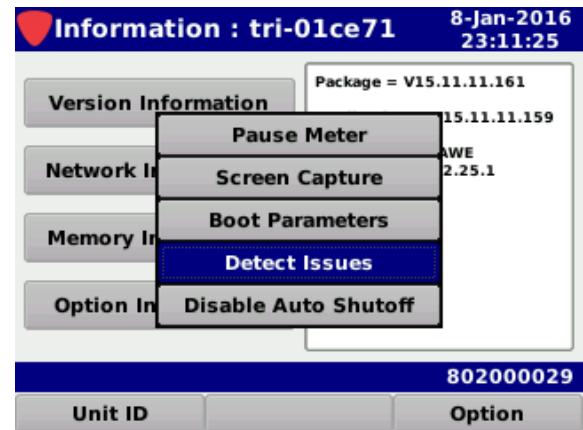
Any detected file system issues will be displayed in the right side of the Information screen. This information is used for advanced troubleshooting by Trilithic technical support.
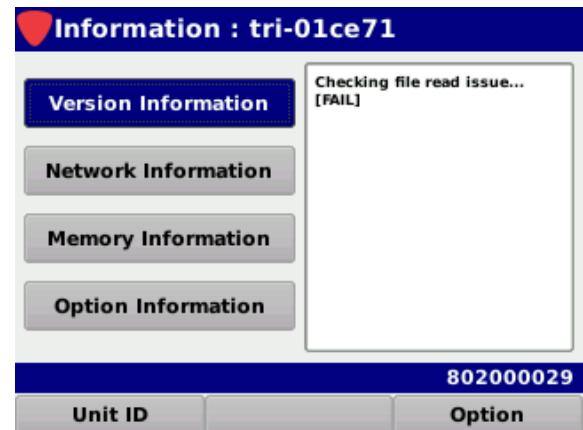
THIS PAGE LEFT INTENTIONALLY BLANK

Advanced Wireless Test Set

Overview

Select the **Setup** icon as shown in the image to the right to adjust the meter configuration of the 802 AWE.

The **Meter Configuration** screen will be displayed as shown in the image to the right. This screen allows you to modify the following types of settings:

- Global
- User
- Interface
- Ethernet
- Wi-Fi
- Bluetooth
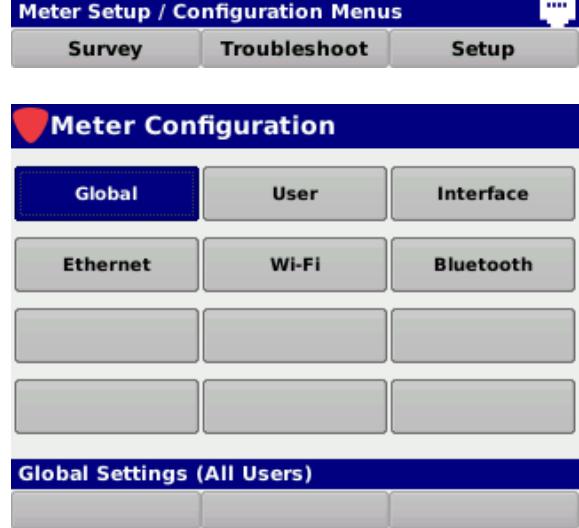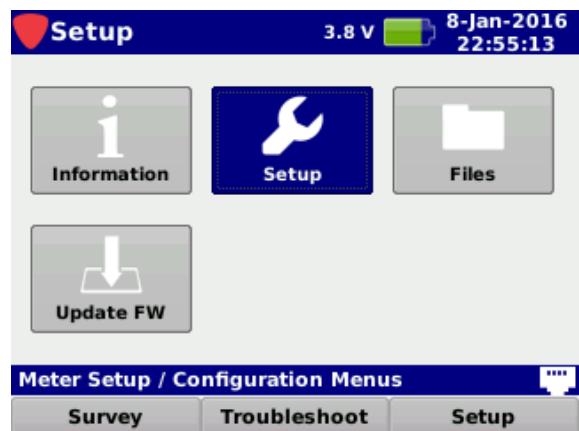
NOTE *All changes that are made in this mode are automatically saved.*

802 AWE

Advanced Wireless Test Set

Global Settings

Select the **Global** button as shown in the image to the right to adjust the global settings for all users of the 802 AWE.

Meter Configuration

| Global | User | Interface |
| Ethernet | Wi-Fi | Bluetooth |

Global Settings (All Users)

The **Global Settings** screen will be displayed as shown in the image to the right. This screen allows you to modify the global settings of the 802 AWE.

From within the **Global Settings** screen, use the left/right arrow buttons on the keypad to navigate through the list of setup items.

Global

Operating Level	Normal
Multiple Users	Yes
Direct to Tethered	No
Auto Start Network	Ethernet
Language	English
Current Date/Time	8-Jan-2016 10:22:11
Timezone	(UTC-05:00) Eastern DST

Set the Operating Level

802AWE
Advanced Wireless Test Set
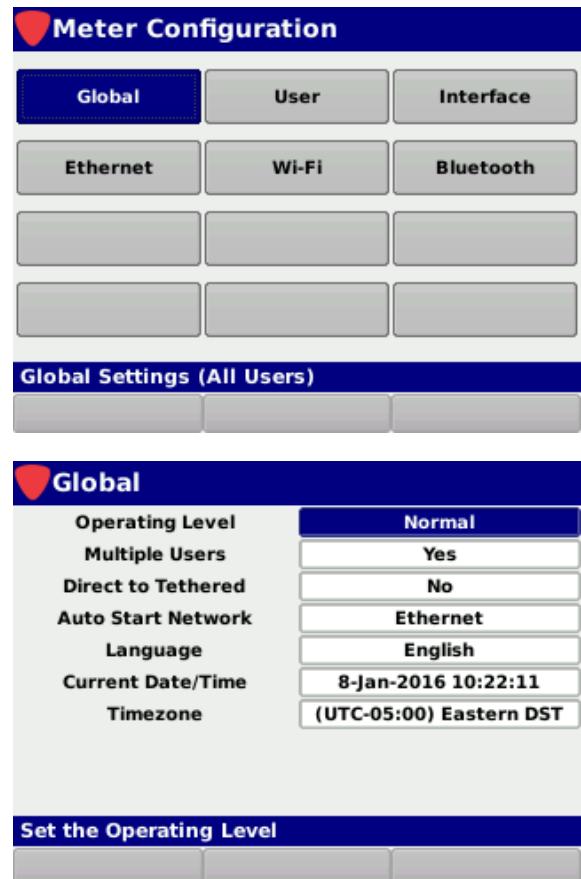
Operating Level

The **Operator Level** setting is used to control whether the 802 AWE is operating in its normal mode or in an advanced logging mode. The logging mode is used for advanced troubleshooting by Trilithic technical support.

The default setting for **Operator Level** is **Normal**, use the up/down arrow buttons to select from the following preset values:

- Select **Normal** for the normal mode of operation.

- Select **Logging** for troubleshooting with Trilithic technical support.

- Select **Calibrate** to enter the calibration mode.

Multiple User Control

The **Multiple Users** setting is used to control whether multiple user profiles are displayed when the 802 AWE is powered on.

The default setting for **Multiple Users** is **Yes**, use the up/down arrow buttons to select from the following preset values:

- Select **Yes** to allow multiple user profiles.

- Select **No** to use only one user profile.

802 AWE
Advanced Wireless Test Set
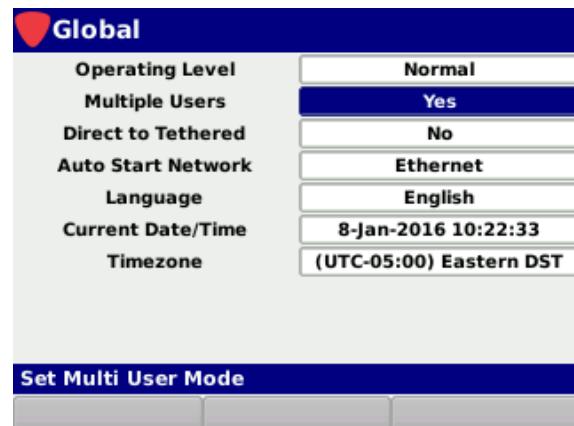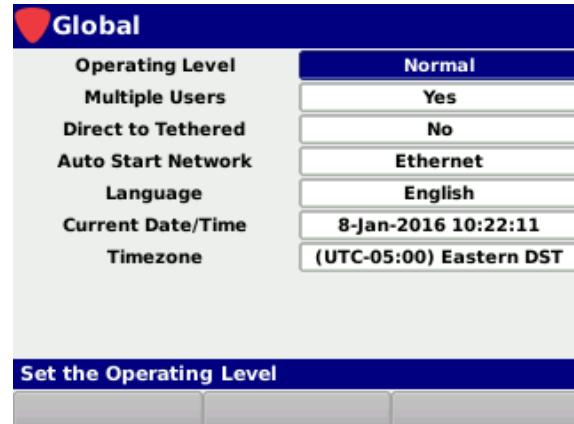
Tethering Control

The **Direct to Tethered** setting is used to control whether the 802 AWE automatically enters its tethered mode upon startup/login.

The default setting for **Direct to Tethered** is **No**, use the up/down arrow buttons to select from the following preset values:

- Select **Yes** to allow automatic tethering upon startup/login.

- Select **No** to disable automatic tethering upon startup/login.

Global

Operating Level	Normal
Multiple Users	Yes
Direct to Tethered	No
Auto Start Network	Ethernet
Language	English
Current Date/Time	8-Jan-2016 10:22:48
Timezone	(UTC-05:00) Eastern DST

Set Direct to Tethered Mode
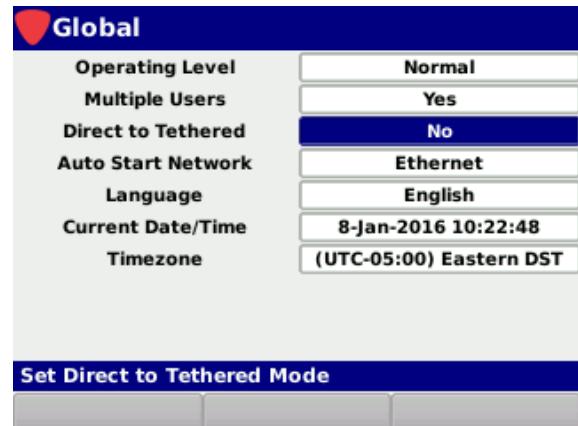
Auto-Start Network

The **Auto-Start Network** setting is used to control what network the 802 AWE automatically connects to when entering the tethered mode upon startup/login.

It is set to **Ethernet** and is fixed.

Global

Operating Level	Normal
Multiple Users	Yes
Direct to Tethered	No
Auto Start Network	Ethernet
Language	English
Current Date/Time	8-Jan-2016 10:23:03
Timezone	(UTC-05:00) Eastern DST

Set Default Network Interface
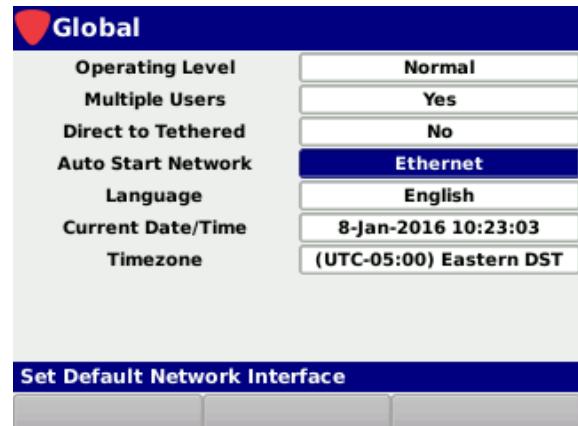
Language

The 802 AWE can be equipped to work in various languages.

The default language is **English**, use the up/down arrow buttons to select from the following languages.

- **English**
- **Spanish**
- **Portuguese**
- **Chinese**
- **Chinese (Simplified)**
- **Japanese**
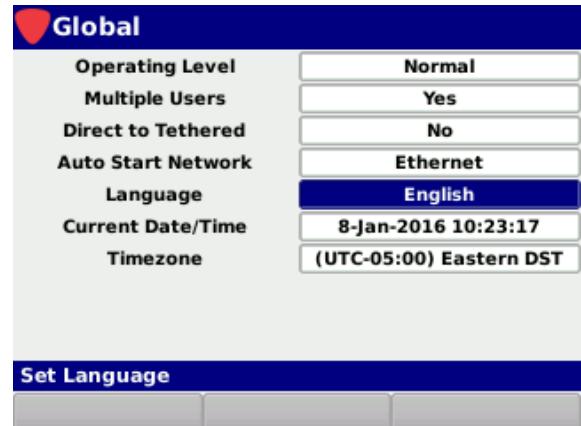
If you have other language options available on your instrument, you can change the default language. You must restart the device before language changes take affect.