FLUKE networks

AirCheck™
Wi-Fi Tester

Getting Started Guide

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Accessing the Users Manual

This guide provides basic information to help you get started using the tester. For additional information, see the *AirCheck Users Manual* on the Product CD.

⚠Warning⚠

To prevent possible fire, electric shock, personal injury, damage to equipment, or inaccurate test results, read the safety information in the *AirCheck Users Manual* before using the tester.

Battery Charging and Life

Charge the battery for 4 hours before you use it for the first time. To charge the battery, connect the ac adapter to the battery connector.

The battery life is approximately 5.5 hours during typical operation.

Shows the battery status. When the battery charge is low, the icon blinks.

Shows that the ac adapter is connected.

Minimum Configuration for the Best Performance

To change the language and country settings

1. Select **Tools**.
2. To change the language for the screens, select **Set Language**. Highlight a language, then press F2 **Save.**
3. To change the country, select **Set Country**, then select the country where you will use the tester.

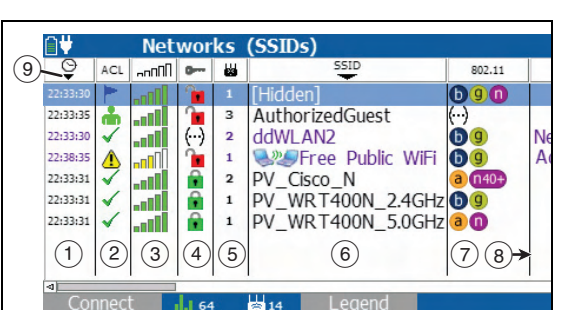
To get the most performance from your tester, use AirCheck™ Manager software to configure a profile and upload it to the tester. A profile contains data that lets the tester do these tasks:

- Connect to networks that require security credentials
- Show the correct authorization status for each access point. This lets you quickly see which access points are authorized parts of the network.
- Ping key network devices.

Discover Networks and Access Points

To discover networks or access points, select **Networks** or **Access Points** from the home screen. Figure 1 shows the **Networks** list.

To see details about a network or access point, use ▲ ▼ to highlight the network or access point, then press SELECT.



gdp03.eps

Figure 1. Networks List

① : The time when the tester first heard the networks. To see networks that come into range as you move through an area, sort the list in descending sequence for the timestamp column.

Press , then move through an area. Networks that come into range are added to the top of the list. Networks that become out of range become gray if **Gray inaudible access points** is enabled.

② **ACL**: The authorization status of the access point. The default status is **Unauthorized device**. Change the status of each access point to show how it is related to your network. To change the status, select **Access Points** from the home screen, select an access point, then press F2 **ACL**.

(...): All access points in the network do not have the same authorization status.

③ : The maximum signal strength of all the access points for a network SSID.

④ : The security status of the network:

Red open lock: The network does not have security enabled.

Yellow closed lock: One or more access points use WEP or Cisco LEAP security protocol. These are less secure than other protocols.

Green closed lock: All access points use security protocols that are more secure than WEP, for example, WPA or WPA2.

(...): All access points in the network do not use the same type of security. For example, one uses WEP and another uses WPA.

⑤ : The number of access points the tester hears at your location.

⑥ **SSID**: Service Set Identifier. The name of the wireless network.

: The network has ad hoc devices. These are devices that communicate directly with other devices, not through an access point. Ad hoc devices can give hackers access to data transmitted on the network. (Some IT policies for networks allow ad hoc devices.)

[Hidden]: The network does not broadcast its SSID.

⑦ **802.11**: The 802.11 standards that the access points in the network use:

802.11a: Uses the 5 GHz band.

802.11b: Uses the 2.4 GHz band.

802.11g: Uses the 2.4 GHz band.

802.11n: Can be used in the 2.4 GHz or 5 GHz bands.

Red bars: The tester received a country code that is different from the setting in **Tools** > **Set country**. To identify the network or access point that transmits the code, select **Networks** or **Access Points**, then look for the red bars in the **802.11** column.

: One or more access points use a bonded channel. Access points that use the 802.11n standard can bond a channel with an extension channel above () or below it ( ) to make one 40 MHz channel. This wider channel gives the network higher throughput.

(...): All access points in the network do not use the same 802.11 standard.

⑧ **Notes**: Press ▷ to scroll to the notes field. The tester adds notes automatically. Networks that have notes are purple.

(...): The network has multiple notes. To see all the notes, highlight the network, then press SELECT twice to go to the **Access Point Details** screen.

⑨ : **Sort 1**, descending and ascending sequences

: **Sort 2**, descending and ascending sequences

To sort the list in ascending or descending sequence, use and to highlight a column heading, then press SELECT or F1 **Sort 1**. For example, to quickly find the access point that has the strongest signal, highlight at the top of the column, then press SELECT or F1 **Sort 1**. This puts the access point with the strongest signal at the top of the list.

To sort in a secondary sequence, highlight a different column heading, then press F2 **Sort 2**.

⑩ Press F1 **Connect** to connect to the highlighted network.

The connect button shows as "**Connect***" if the tester cannot connect to the highlighted network. To see the reason, press F1 **Connect***.

Note

To connect to a secure network, the tester must have a profile that includes security credentials. You cannot make or edit security credentials on the tester. You can make or edit them only with AirCheck Manager.

⑪ 48: The channel the tester currently monitors. The color of the bars shows the status of the country code for the regulatory domain.

⑫ : The number of access points the tester hears at your location. This number does not include virtual access points if **Group virtual access points** is selected.

⑬ To see descriptions of the icons on the **Networks** screen, press F2 **Legend**.

To see details about the access points in a network, use ▲ ▼ to highlight a network, then press SELECT.

What You Can Learn About Your Wireless Network

What is in the Wireless LAN?

- ❑ **What wireless LANs are available?**

  Select **Networks** to see a list of wireless LANs and the access points that connect to each network. To see all access points that are available at your location, select **Access Points**.

- ❑ **What access points are available? Are the signal strengths sufficient?**

  Select **Access Points** to see a list of access points available at your location and the signal strength of the access points. To see bar graphs of the signal strength and noise for an access point, highlight the access point, then press SELECT.

- ❑ **Is the access point configured correctly?**

  Select **Access Points**, highlight an access point, then press SELECT.

- ❑ **Are there new access points in the area? Are access points inaudible?**

  Save the test session, then use AirCheck Manager to compare the access point list to another list saved in AirCheck Manager.

Can Devices Connect to the Wireless Network?

Use the tester to verify connectivity.

- ❑ **Can a device connect as a client to the network (SSID)?**

  Select **Networks**, highlight a network, then press F1 **Connect**.

  Note

  To connect to a secure network, the tester must have a profile that includes security credentials. You cannot make or edit security credentials on the tester. You can make or edit them only with AirCheck Manager.

- ❑ **Can a device connect to an access point (BSSID)?**

  Select **Access Points**, highlight an access point, then press F1 **Connect**.

- ❑ **If a device cannot connect to a network or access point, where does the connection procedure fail?**

  Look at the connection log. Press F2 **Log** from the **Connect to Network** or **Connect to Access Point** screen.

- ❑ **Can a device ping a network device?**

  Do a ping test. Connect to a network or access point, then press F1 **Start tests**.

- ❑ **Does the network interface card in a client operate correctly?**

  Select **Tools**, then select **List Probing Clients** to see if the client transmits probe request frames and to see basic settings such as the channel and SSIDs the client uses in probes.

What Causes Slow Network Performance or Dropped Connections?

- ❑ **Is the signal strength sufficient?**

  Select **Access Points**. The **Access Points** screen shows the signal strength for each access point. Select an access point to see more details about the signal strength and congestion.

- ❑ **Is the network too busy?**

  Select **Channels** to see an overview of channel usage and the number of access points that use each channel. To see a graph, highlight a channel, then press SELECT.

- ❑ **Is there non-802.11 interference on a channel?**

  Select **Channels**. Non-802.11 interference is gray. This noise can interfere with WLAN connections or performance. Non-802.11 noise can come from microwave ovens, wireless telephones, Bluetooth® devices, motion detectors, wireless cameras and other wireless devices.

Are There Security Risks in the Network?

- ❑ **Do networks have the expected level of security?**

  Select **Networks**. Networks that have unsecured access points show a red lock ().

- ❑ **Are there any ad hoc networks in the area?**

  Select **Networks**. Networks that have ad hoc stations show the ad hoc icon () in the SSID column. Ad hoc stations can be risks to network security or can violate network policies.

- ❑ **Are there rogue access points in the area? Where are they?**

  Access points have the status " **Unauthorized device**" until you change the status. If you give all access points in the network a status, then new access points that can be rogues show the status . If you know that an access point is a rogue, you can give it the status **Flagged Device**.

  To give an authorization status, select **Access Points**, highlight an access point, then press F2 **ACL**.

  To locate an access point select it, then press F2 **Locate** on the **Access Point Details** screen.

Where is an Access Point?

Select **Access Points**, select one access point, then press F2 **Locate** on the **Access Point Details** screen. Use the optional Fluke Networks external directional antenna to help you find access points faster.

How Can I Document My Network and My Test Session?

Save the session (press 💾), then use AirCheck Manager software to download the data to a PC and make a report.

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