

# FREEDOM/FREEDOM LTE-A

## Quick Start Guide



### Accessories



25ft CAT 5e Cable



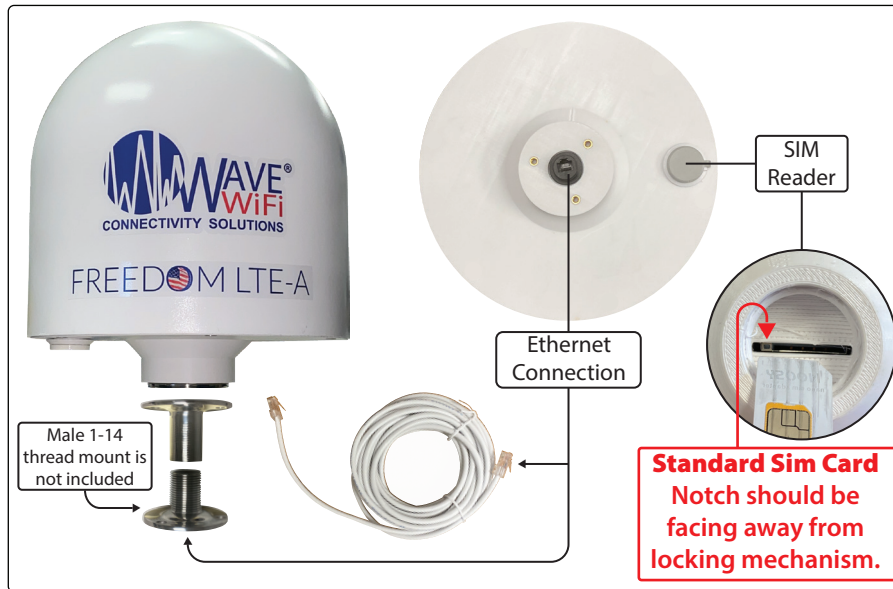
PoE Injector



12VDC - 1A Regulated Power Adapter



Right-angle PH2 Philips head Screwdriver



### Quick Tips

1. Initial setup should be done with a Laptop.
2. Wave WiFi suggests not using Internet Explorer as a browser to manage Wave systems.
3. (FREEDOM LTE-A) - Type in the APN of your cellular provider BEFORE inserting the SIM.
4. (FREEDOM LTE-A) - When changing SIM cards, reset the cellular module by pressing Reset Interface.
5. Lowering the good neighbor setting on the settings page can sometimes improve connection in a crowded marina.

### How to Install FREEDOM

1. Screw the female 1-14 thread mount onto a male 1-14 thread deck mount. (Be sure the female mount is on top)
2. Run the Cat 5e ethernet cable up through the connected mounts.
3. Connect the Cat 5e ethernet cable to the FREEDOM.
4. Place the FREEDOM onto the female 1-14 thread mount then fasten using the Right-angle PH2 Philips head Screwdriver.

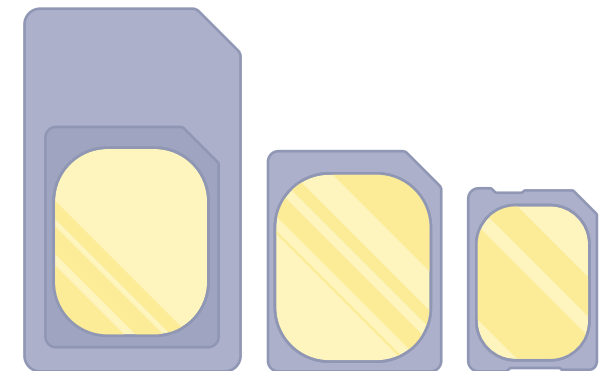
### How to Configure/Operate

1. Plug one end of the ethernet cable provided into the ethernet port of the unit.
2. Plug the other end of the ethernet cable into the PoE (Power Over Ethernet) injector.
3. Plug the power supply into the PoE injector (Both lights on the PoE should show solid green).
4. Plug the PoE injector into the ethernet port of a laptop, computer or router.

**TIP: When plugging into a router it will be the Internet (WAN) port.**

### Connecting to Internet via physical connection

1. Open a web browser and type in 192.168.89.1 in the URL bar at the top.
2. From the network scan page, connect to a network that you are familiar with.
3. The connection should read,“(Three dots)..., Checking IP, Got Internet”.



Mini (Standard)  
2FF

Micro  
3FF

Nano  
4FF

Do not insert anything other than a Mini (Standard) Combi or Trio SIM card

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### Connecting to Internet via wireless connection

1. Connect wirelessly to the router that your FREEDOM unit is **PHYSICALLY** connected to via laptop, tablet or smartphone.
2. Open a browser and at the top URL bar type: 192.168.89.1
3. Once on the interface page, click on a network and type in a password if needed.
4. The connection should read "(Three dots)..., Checking IP, Got Internet".

### Connecting to the FREEDOM

Connect the FREEDOM ethernet cable to your computer's Ethernet port or to a router. If using a router make sure that your laptop or tablet is **WIRELESSLY** connected to the Router. If your computer is directly connected via ethernet cable to the FREEDOM, then after several seconds your computer should receive an IP address from the system. (Windows computers will generally show the message icon "Connected" at the bottom of the screen). Please be sure that the browser you are using is up to date. It may be best to use Mozilla Firefox or Google Chrome if you have the option. Next, Open your browser and type: "192.168.89.1" into the address bar and press "enter". The Network Scan page will then be displayed. (See Figure 2a.)

### Scanning for HotSpot Networks

If necessary you can refresh the network list by clicking the "Scan" tab to the left. The list of wireless networks (HotSpots) is ordered by signal strength: the strongest signals are indicated by the color **GREEN**. You will also see **ORANGE** or **RED** for weaker signals. These bars will also fluctuate as the signal changes around you. To connect to a Hotspot, click on the HotSpot name (SSID). There will be a drop down once you click on the network which you are trying to connect. In the blank space type in a password. The Unit will then attempt to negotiate a connection with the remote Hotspot. During this process the screen will show "Three dots (...), Checking IP, Got Internet". Do not click on anything until this process is completed. Afterwards click the network that you are connected, to see your current network status, which will show Connected to network: **YES**, IP obtained: **YES**, Internet Detected: **YES**. (See Figure 2b.)

### FREEDOM Settings

Clicking on the "Settings" tab displays the following page. Disabling "Firewall" removes your protection from access by other network users. However, it may be necessary to disable this feature to access some HotSpots. Clicking **Reboot** will reload the operating system. You may have to reconnect after a reboot if the hotspot is not a favorited network. You can also assign a static IP to the FREEDOM. (Please be sure that you understand IP addressing when changing this function.) (See Figure 2c.)

### Troubleshooting your FREEDOM

- The Serial# and firmware version of your unit is located to the bottom-right of the "Settings Page".
- The FREEDOM power consumption is regulated PoE 12v -- 1A.
- Try power cycling the unit by powering it off and then on again.
- Be sure that you are not overpowering or underpowering your FREEDOM and causing it to fail.

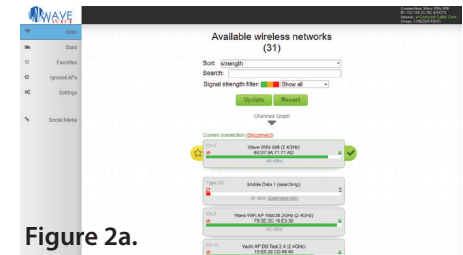


Figure 2a.

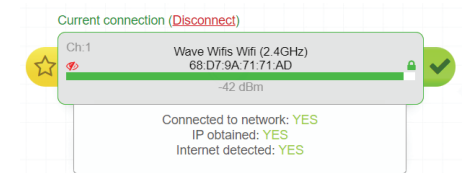


Figure 2b.

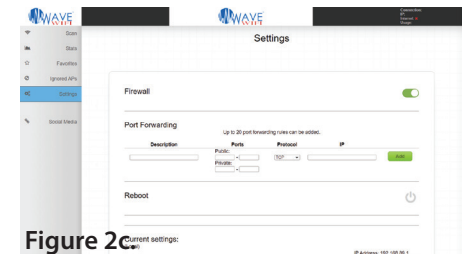


Figure 2c.

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### Favoriting Hotspots

1. Connect to the network that you want to favorite.
2. Once connected, click the yellow star to the left of the network bar to favorite the Wi-Fi network source.

**TIP: You can see a full listing of all favorited networks in the “favorites” tab to the left of the screen. You can also delete a network from your favorites list in this same location.**

### Cellular Configuration (FREEDOM LTE-A)

**Mobile Data 1 is the name of the SIM module inside of your system. It will always read Searching when a SIM is not inserted in the port. And will always be the upper most network on the list. The Mobile Data 1 SSID may take up to two minutes to become visible upon initial setup, reboot or power cycle.**

1. Before trying to connect to a cellular network, insert the SIM (you should hear a click), go to the **Settings Page**, scroll down to Mobile Data Interfaces and type in the APN. (Your cellular provider should have this information). Click **Change Settings** to apply the changes. (See Figure 3a.)
2. Save the settings. Go to the scan page and wait about 2 minutes for the **Mobile Data 1** network to come back up.
3. On the scan page, check to make sure that the **Mobile Data 1** network shows the cellular providers name in parentheses. If it shows **Searching** or **Attempting**, please wait until it reads the providers name then click **Mobile Data 1** and connect. (See Figure 3b.)
4. If it does not connect then check your APN to make sure it is spelled correctly. Otherwise, Reset the interface on the Scan Page by clicking the **Reset Interface** button .
5. To check your connection status look to the right uppermost half of the screen. You should see: (See Figure 3c.)
  - a. Your current connection.
  - b. Your current IP address given to you by the connection you are receiving your internet service from.
  - c. Whether or not you have internet on the device.
  - d. Your usage on this connection (Please Note: The data usage information is lost when the device is power cycled or rebooted).
6. To switch SIM cards first disconnect from your current connection. You can either click the internet check mark at the top right of the screen, or you can click the hyperlink right above the network name that says **Current connection (Disconnect)**. Take out your SIM card. (See Figure 3c.)
7. Follow steps 1 - 4.

### Mobile Data Interfaces

#### NOTES:

1. When inserting or replacing SIM cards, the mobile data interface should also be reset. Typically, the reset process can take up to 1 minute.
2. If the mobile data interface is providing the current active network connection and it is not being reset, the new settings will not take effect until after the connection has been disconnected and reconnected.
3. Making changes to certain settings may require the interface to be reset. When this occurs, the checkbox below will automatically be checked and cannot be unchecked.

**Mobile Data 1 Settings**

Device IMEI: 359072063231233  
SIM ICCID: 8901260970177346889  
Protocol: Modem using the QMI protocol  
APN:   
Carrier Selection: Searching for carriers   
SIM Card PIN Code:   
PAP/CHAP Username:   
PAP/CHAP Password:   
Authentication Type: None   
Allowed Network Modes: (Leave all unchecked if unsure)  
 LTE  UMTS  GSM   
 CDMA  TD-SCDMA   
Modem Ready Delay: 0 sec   
 Reset this interface after changing settings.

Figure 3a.

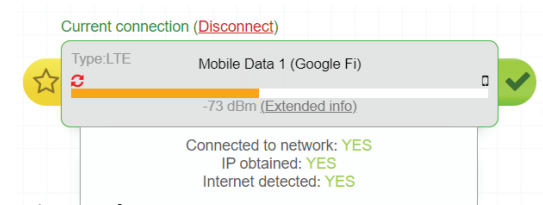


Figure 3b.

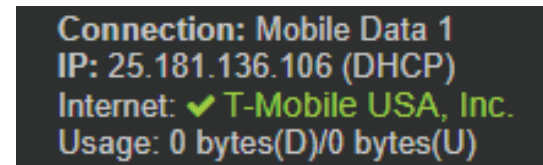


Figure 3c.

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### FCC Warning

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

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital 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 separation between the equipment and receiver.
- Connect the equipment into 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.
- Please contact a professional person to install and operate.