

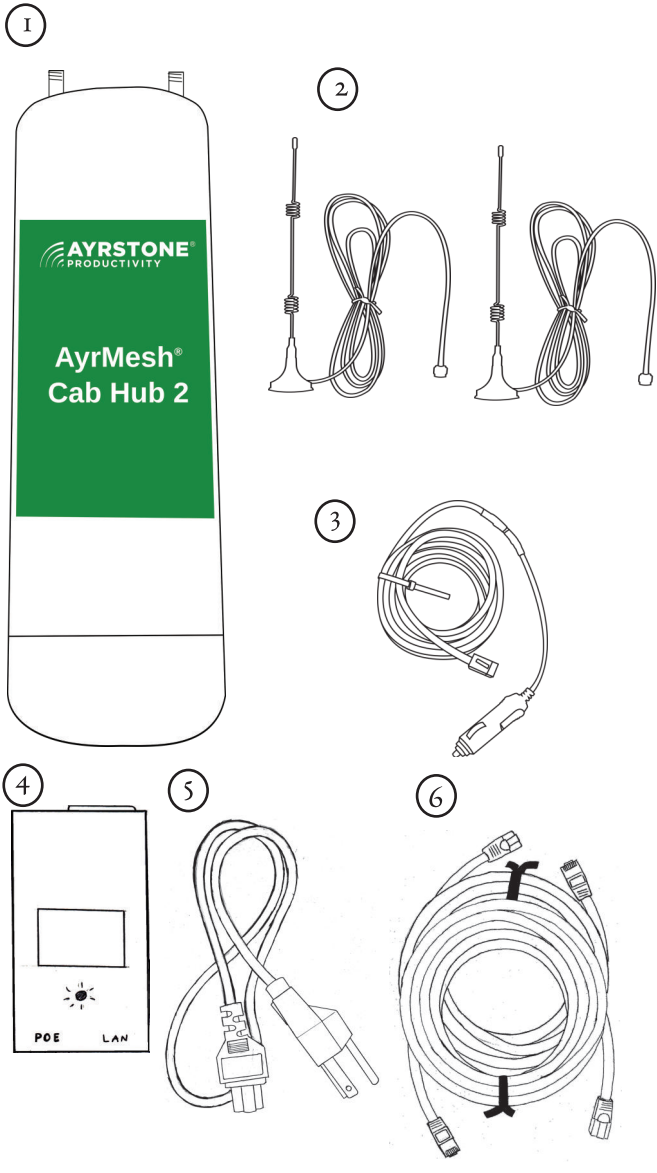
1 Start Here



Quickstart Guide - AyrMesh® Cab Hub 2

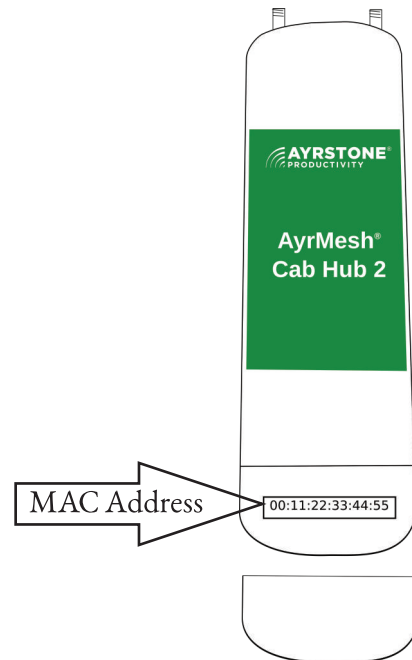
Check Contents of the box:

1. Cab Hub 2
2. Antennae (2)
3. Vehicle power cable
4. Power Supply
5. Wall Power Cord
6. (2) Ethernet Cables
7. (2) Zip Ties (not shown)

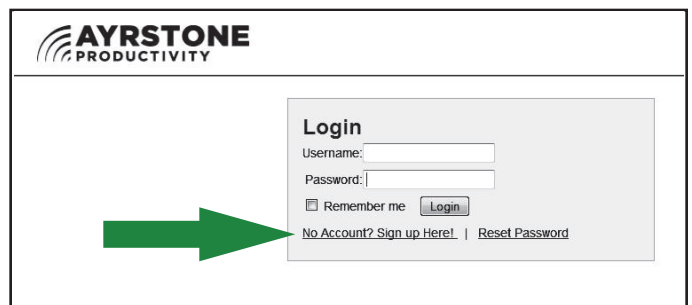


Remove the door, write down the MAC address of your Hub, write it here, and keep it with these directions in a safe place:

00:CO:



If you don't have an account on AyrMesh.com, create one now using a device connected to your network (not a cellphone unless it's connected to your router via WiFi):

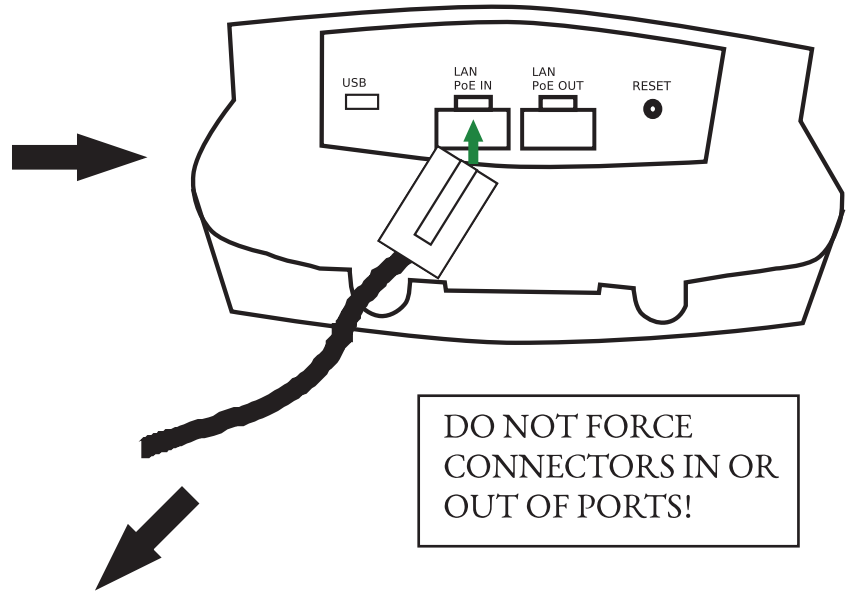


2 Assemble the Hub and connect to router

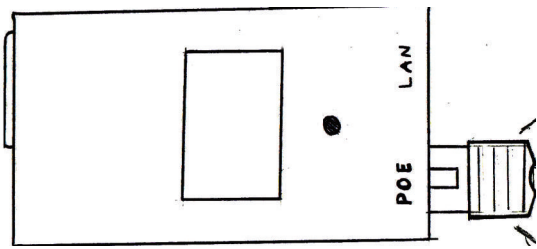
Screw the antennae gently onto the threads on the Hub - finger-tight (no tools):



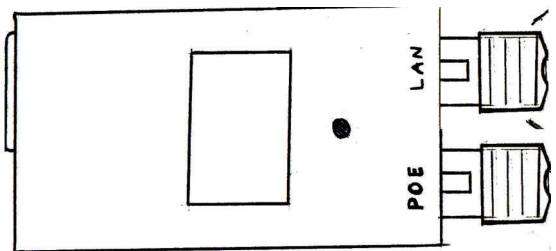
Plug an Ethernet cable into the left-hand port (marked "LAN PoE IN") on the Hub - slide in until it clicks in place:



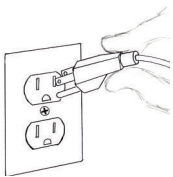
Click the other end of the Ethernet cable into the port on the power supply marked "POE":



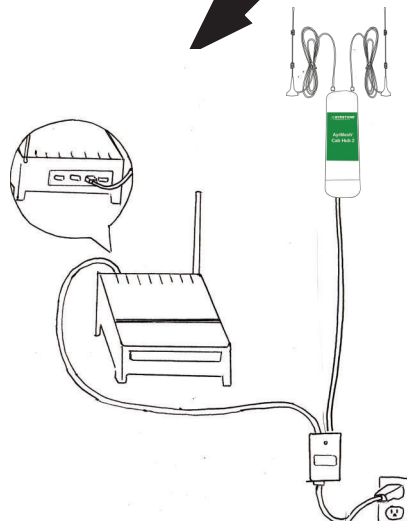
Use another Ethernet cable to connect the LAN port of the power supply to one of the LAN ports on your router.



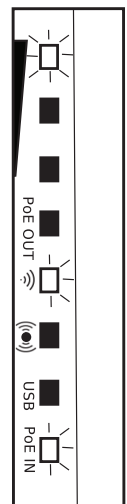
Plug the power supply into the wall:



This is how the setup should look:



The PoE IN light should be on and the WiFi light blinking. The top signal light should also start blinking:

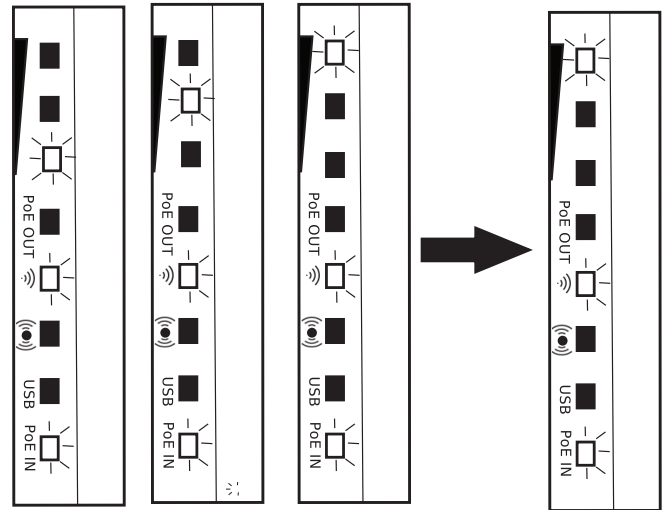
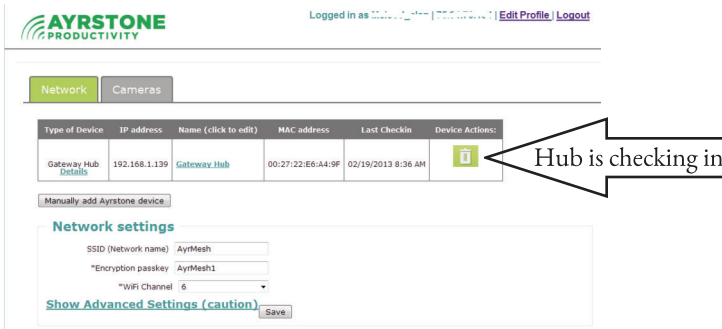


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Make Sure Hub is Working

It usually takes about 1-2 minutes for the Hub to check in and show up on AyrMesh.com, but sometimes it takes a bit longer. If it hasn't shown up after 5 minutes, try adding it manually with the MAC address:

The signal lights (3 top lights) will start out "running" from bottom to top (or left to right if it's on its side). When the Hub has checked in to AyrMesh.com, just the top signal light will be on.



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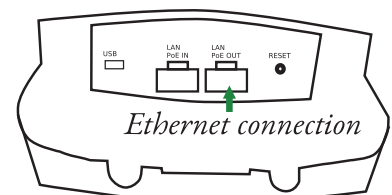
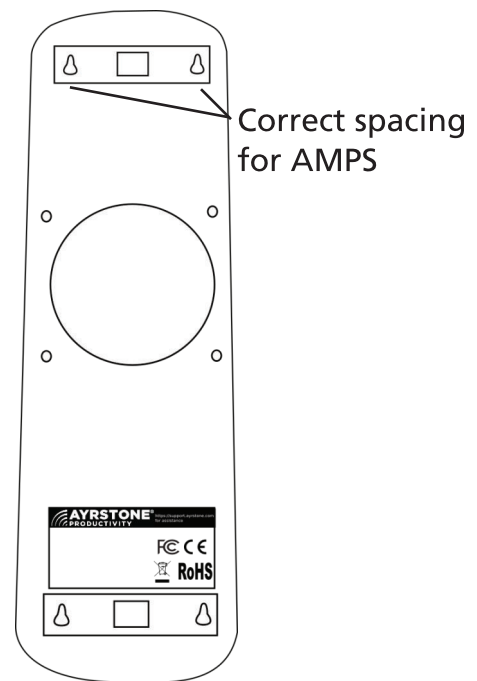
Finish the installation

The Hub should be mounted in the cab of the vehicle with the antennae outside on the highest part of the vehicle. The cables to the antennae are short to reduce signal loss and increase effectiveness, but they may necessitate mounting of the Hub relatively high in the cab.

It may be necessary to mount the Hub outside the Cab; if you do so, make sure the top of the Hub (with the antenna connectors) are higher than the bottom of the Hub (where the power cable plugs in) so water does not flow in the bottom. Also, do NOT spray water on the cab if the Hub is mounted outside - take the Hub off before spraying the cab.

The Hub has holes in the back for mounting on screws, as well as brackets that can be used with zip ties or hose clamps. You can use zip-ties or hose clamps to tie the Hub to a post in the cab, or you can use the screw holes on the back of the Hub to attach it to a pillar or even to the ceiling of the cab.

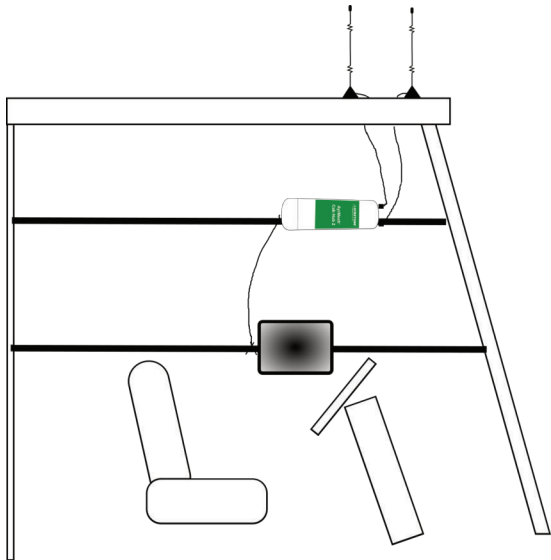
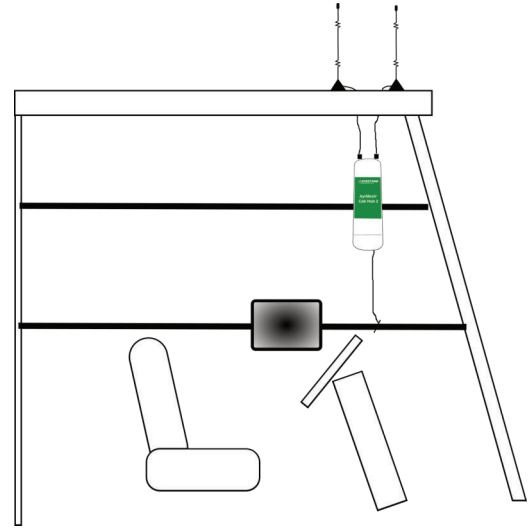
Note that an Ethernet device can be plugged into the second Ethernet port of the Hub, and that device will be on the network. If you have multiple devices, you can connect an Ethernet switch to that port.



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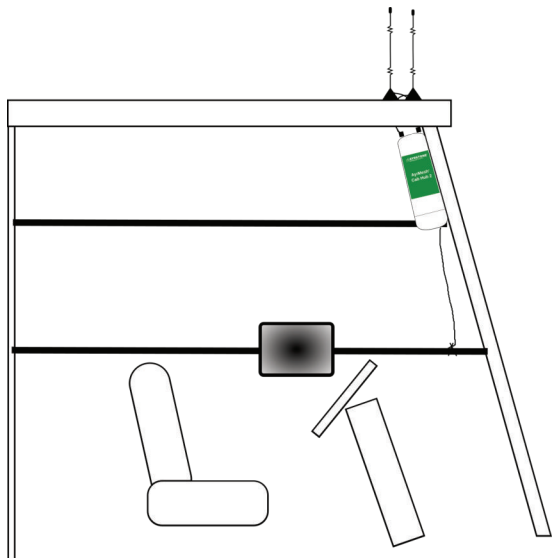
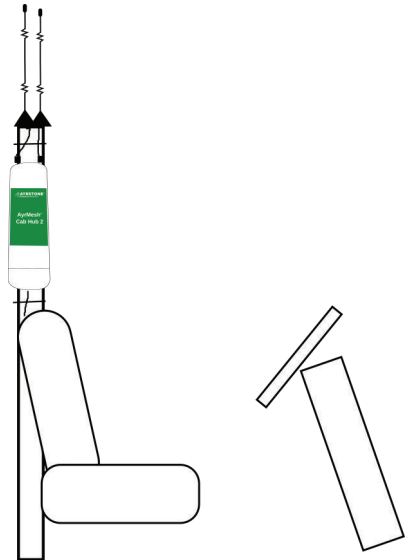
Finish the installation - continued

We have had very good luck with RAM mounts on the cab rails inside tractors, combines, and sprayers. We have used the combination of the RAM Tough-Claw Small Clamp Base with Ball, Part # RAP-B-400U (you may need a different part, like a bigger clamp base to connect to a ROPS bar), combined with one of the double-socket arms like RAM-B-201U (you may want a shorter or longer arm) and an AMPS pattern Ball Base like RAM-B-238U or RAM-B-202U - the screw holes are correctly spaced for AMPS mounts. We have tried using a suction cup mount (RAP-SB-193U), which is excellent for temporary installations but eventually comes off the glass.



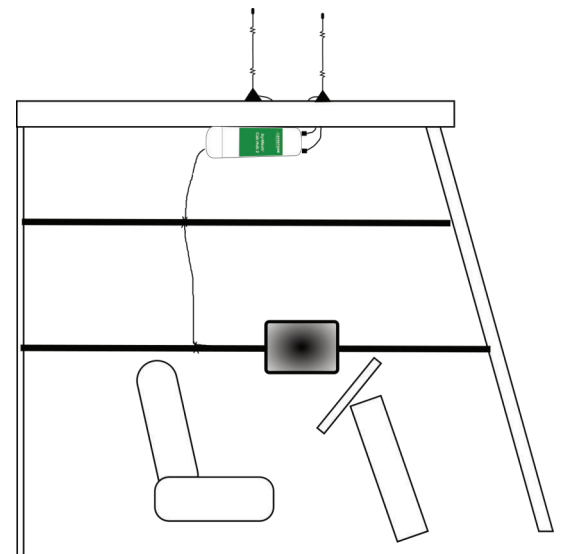
You can also just zip-tie or use hose clamps to attach the Cab Hub 2 to the cab rails, as show. Make sure it is held tight to keep the Hub from bouncing around.

For machines without cabs, the Hub is easily attached to the ROPS bar as shown.

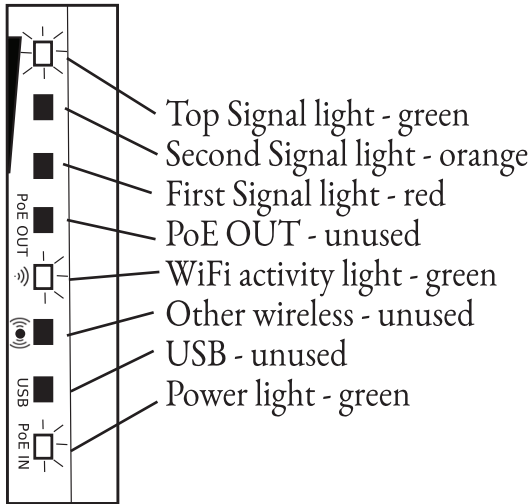


The Cab Hub 2 can also be screwed, zip-tied, or hose-clamped to the cab interior, roof, pillar, or ROPS bars. Just make sure the Hub is secure so it doesn't jostle around.

Secure all cables with zip-ties or velcro straps.



5 Signal lights on the Hub



Remote Hubs like the Cab Hub have the Power light on steady, the WiFi activity light flashing, and the signal lights on indicating the signal strength to the nearest Hub:

- Just the first (red) signal light - very low signal
- First (red) and second (yellow) signal light - good signal
- All three signal lights (green on top) - excellent signal; Hubs may be too close together

6 Using the Hub

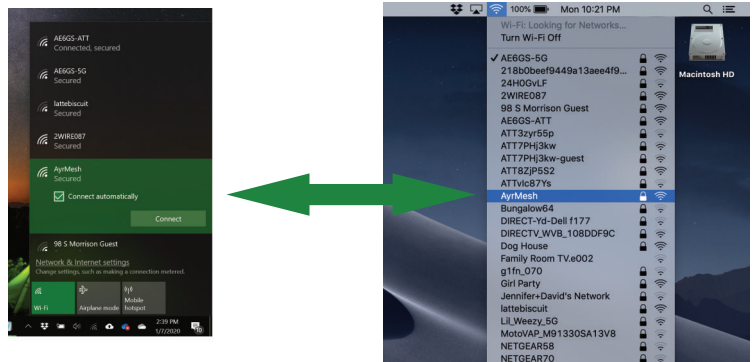
The AyrMesh Hub provides normal 802.11n WiFi, just like any other WiFi access point. Unless you have changed it in your AyrMesh.com account, the default SSID is "AyrMesh" and the default encryption passkey is "Ayrmesh1" (note the capital "A").

NOTE: Once you have tested the Hubs, **MAKE SURE** you **CHANGE THE ENCRYPTION PASSKEY** (and the SSID if you want) in your AyrMesh.com account to ensure the security of your network!

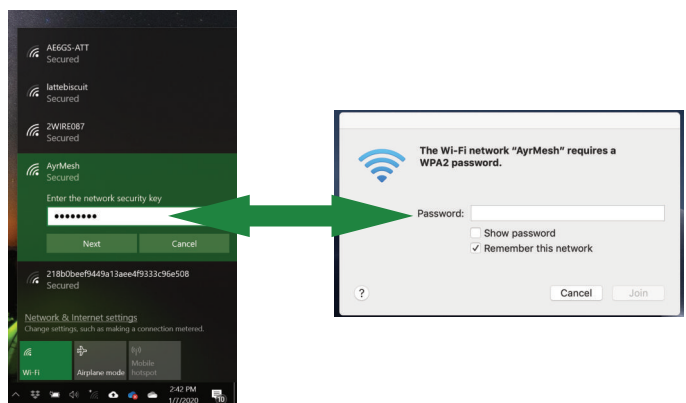
Changes on AyrMesh.com may take up to half an hour to take effect on your network - the Hubs wait before changing to make sure all the devices in the network receive the new configuration.

The AyrMesh network extends the IP network of your router, so, from a networking perspective, everything connected to the AyrMesh network appears as if connected directly to your router.

Select AyrMesh network (default: **AyrMesh**)



Enter the passkey (default: **Ayrmesh1**)



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Troubleshooting

• NO LIGHTS ON

- make sure power supply light is on steady (not pulsing or blinking); if not, make sure power cable is fully plugged into Cab Hub and the utility plug. Make sure the utility plug has power. Check the fuse.

• SIGNAL LIGHTS CONTINUE TO "CHASE" AND/OR HUB DOES NOT CHECK IN TO AYRMESH.COM

- If Hub does not appear in your account, enter the MAC address into your account on AyrMesh.com by hand.

- Make sure the Hub is getting good signal from the nearest "upstream" Hub - make sure it is within 2 miles, that the "Fresnel zone" between the Hubs is mostly clear, and that there isn't too much interference on the channel selected on AyrMesh.com.

- Make sure the antennas are at the highest point on the machine, are pointing straight up, and are not blocked - e.g. by a combine hopper opening.

• DIFFICULT TO CONNECT TO THE WIFI SIGNAL OR LOW SIGNAL/SLOW PERFORMANCE

- Make sure you can connect to the other Hubs in your network; don't use special characters (especially "%," "#", "&," and "\$") or spaces in the SSID or encryption passkey.

- Make sure you are spelling the passkey correctly - for example, the capital "A" in "Ayrmeshr"

- Trees and tall crops will weaken the signal significantly, while hills, buildings, and anything metallic will almost certainly block the signal completely.

- Make sure the antennas are at the highest point on the machine, are pointing straight up, and are not blocked - e.g. by a combine hopper opening.

• NETWORK CRASHES

- Check for another router - do not use secondary routers on your network unless you understand IP networking, especially subnets and NAT.

- Check for static addresses on your network - do not use static IP addresses on devices in your network; use DHCP reservations instead to avoid IP address conflicts.

- Check for network loops - commonly caused by devices with multiple ways to connect to the network (e.g. printers or cameras with both Ethernet and WiFi)

See <http://support.ayrstone.com> for additional information, hints, and troubleshooting tips.