



SkyBridge Max

Quick Start Guide

Dear Amateur Radio Operator,

Welcome to the BridgeCom Community! We are so lucky to have a customer like you!

Join our BridgeCom Facebook group to be part of an active community with over 17,000 members that love to answer technical questions:

<https://www.facebook.com/groups/BridgeComSystems>

Account Registration and Setup

Before you begin, you will need:

1. A DMR ID

- a. Register for one at <https://www.radioid.net/>

2. A BrandMeister account

- a. Register for one at: <https://brandmeister.network/>

- b. The account type should be: **Personal User Account**

- c. Under “Anti Spam” the answer to the question, “What is the wavelength of the UHF band in centimeters?” is: **70**

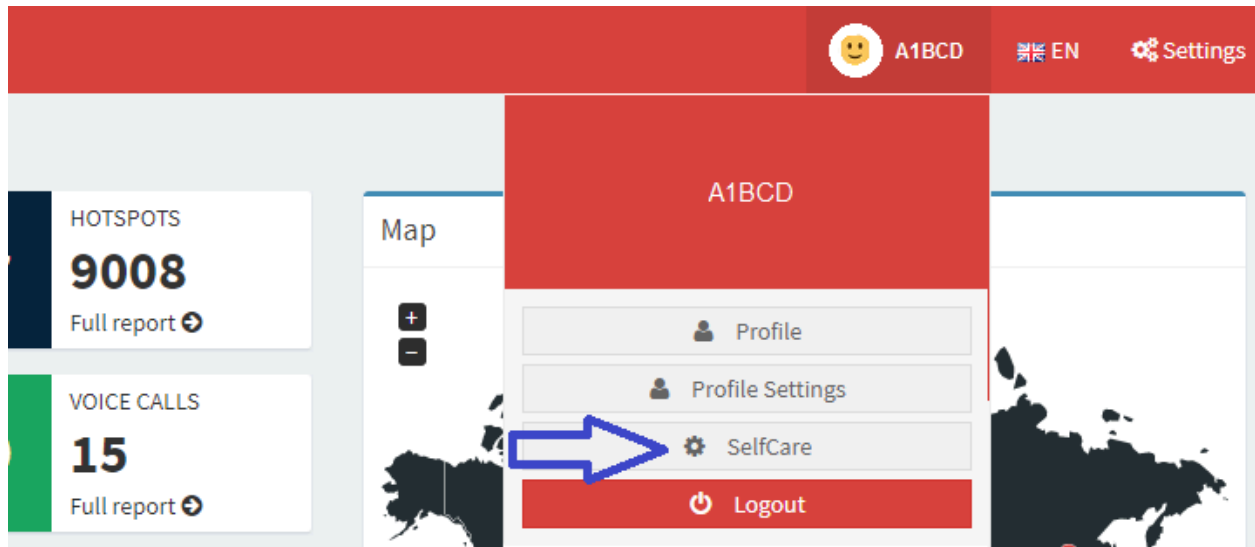
- d. After registering with BrandMeister, you will receive an initial confirmation email within a few minutes. Be sure to check your spam folder if you haven’t received anything in your inbox.

- e. You must click the link in the email to begin the registering process.**

- f. It takes a certain amount of time for BrandMeister staff to approve your newly created account. Once it has been approved, you will receive an additional email indicating that your account is active.

- g. Once your BrandMeister account is active, log in to it, and in the upper right corner of the screen,

click on your callsign. This will open a menu, and next, click **SelfCare**.



h. Scroll down to the section labeled **Hotspot Security** and type in a simple alphanumeric string that you will easily remember. Then click the **Save Password** button. A popup will appear to confirm the setting of this password.

A screenshot of a form titled 'Hotspot Security'. It contains a text input field with the placeholder text 'Enter new Password'. Below the input field is a blue button labeled 'Save Password'.

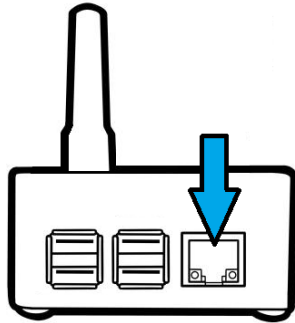
- **You will need this password later when setting up your SkyBridge, so be sure to keep a record of this information somewhere safe.** For convenience, we have included a space to write this information down below. Note that all passwords are case sensitive!

Callsign	
DMR ID	
BrandMeister Account Password	
BrandMeister Hotspot Security Password	

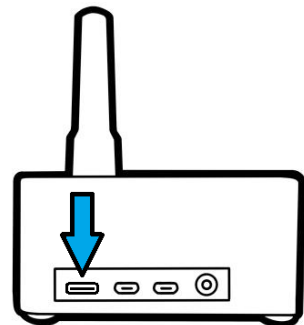
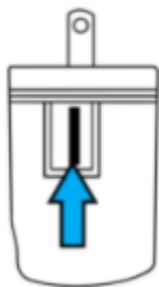
Note: You may also use other DMR networks with your SkyBridge after registering with them. However, we do not currently offer direct support on this.

Initial Setup

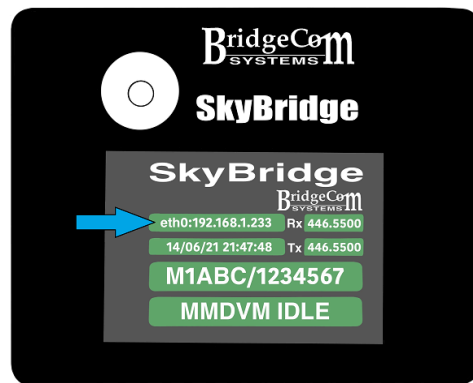
1. Screw the included antenna into your SkyBridge and plug one end of the provided Ethernet cable into the RJ-45 port on the side. Plug the other end into your network switch/router. The SkyBridge needs an active network connection with internet access to fully boot.



2. Plug the included wall power supply into an electrical outlet, plug the larger USB Type A end of the power cable into the power supply, and plug the small USB Type C end of the cable into your SkyBridge. After displaying a brief splash image, your SkyBridge will display **Initializing...** for up to 2 minutes.



- a. Note: Do not use the included battery at this time. Fully charge the battery before using it. See the **Using the External Battery** section for more information.
3. Once fully booted, the screen on your SkyBridge will populate with information. Note the IP address displayed in the upper-left corner. On a computer or smartphone connected to the same local network as the SkyBridge, type this number into your internet browser.



4. You will be directed to the dashboard page as shown below. Click **Admin**.

WPSD Dashboard for N0CALL			
Profiles Live Caller Simple View SysInfo Admin			
Modem Port	Modem Speed	TCXO Freq.	Modem Type
/dev/ttyAMA0	115,200 bps	14.7456 MHz	SkyBridge-v.1.6.1

5. You will likely be prompted for a username and password. Enter **pi-star** as the username and **raspberry** as the password.

Sign in
http://192.168.1.249
Your connection to this site is not private

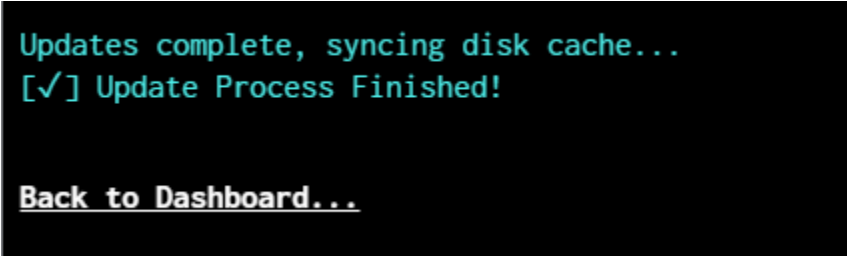
Username

Password

6. If entered correctly, you will be directed to the admin page. Click **Configuration** at the top. This will take you to the Configuration page.

WPSD Dashboard for N0CALL			
Dashboard Appearance Log Viewer System Details Power Advanced WPSD Update Configuration			
Modem Port	Modem Speed	TCXO Freq.	Modem Type
/dev/ttyAMA0	115,200 bps	14.7456 MHz	SkyBridge-v.1.6.1

7. It is recommended to run an update before configuring. Do this by clicking **WPSD Update** at the top of the screen. You will be taken to a page with a console output window that will automatically perform the update. Wait until the text indicates that updates are finished.

A screenshot of a terminal window with a black background and green text. The text reads: "Updates complete, syncing disk cache..." followed by "[✓] Update Process Finished!". At the bottom, there is a link that says "Back to Dashboard..." in green.

```
Updates complete, syncing disk cache...  
[✓] Update Process Finished!  
  
Back to Dashboard...
```

Scroll to the top of the page and click **Configuration**.

8. Many of the settings have been pre configured as part of the stock SkyBridge setup and do not need to be adjusted. However, there are settings that need to be configured for each individual. Enter the following:

Under General Configuration:

- a. Node Callsign: Your callsign
- b. DMR/CCS7 ID: Your DMR ID

- c. Radio Frequency: If using a different frequency, set to the simplex frequency you are using

Under Location and Hotspot Info Settings:

- d. Town and Country are self-explanatory.
Latitude: A positive value indicates North, and a negative value indicates South.
Longitude: A positive value indicates East, and a negative value indicates West.
- e. URL: By default, this is set to your QRZ page. If desired, you can change this to an alternate webpage.

Under MMDVMHost Configuration:

- f. DMR Mode is turned on by default. If you are not using your hotspot for DMR, turn this off.
- g. Turn on the other digital modes that you will be using. We do not offer direct support on setting up other digital modes, but there are great resources on the internet that provide guidance on doing this.

Under DMR Configuration:

- h. For normal use with DMR, DMR Master should be set to **DMRGateway**.

- i. BrandMeister Master should be set to the following:
- Western US:
BM_3103_United_States
 - Central US:
BM_3102_United_States
 - Eastern US:
BM_3104_United_States
 - Other locations: Set this to a server to the closest geographic location to you. You can find the location of the servers on the BrandMeister website.
- j. BM Hotspot Security: Set this to the same password that you set earlier in the **Account Registration and Setup** section of this quickstart guide.
- k. BrandMeister Network ESSID: If you are using multiple hotspots that you want to treat independently, this allows you to use a single DMR ID to accomplish this. If this is the only hotspot you plan on using, leave this set to **None**.

- l. Enable and configure the other DMR networks you plan on using. BrandMeister is currently the largest DMR network, and currently the only network we offer direct support on configuring. Information on configuring other DMR networks can be found on their respective websites.
- m. DMR Color Code: Unless you are using a code plug configured to a different color code, leave this set to **1**.
- n. Node Type: In most cases, this should be set to **Private**. If you want to share this hotspot with others, you will need to enter a comma-separated list of all the DMR IDs in the **DMR Access List** box and click **Apply Changes**. Then you can set the **Node Type** to **Public**. This precaution is put in place to prevent network loops.
- o. Click any of the **Apply Changes** buttons. After several seconds, the screen will refresh.
- p. Click **Dashboard** at the top of the page. This will take you to the main dashboard page. If everything is configured correctly,

DMR and **DMR Net** should now be green as shown below.

Mode Status	
D-Star	DMR
YSF	P25
M17	NXDN
DMR X-Mode	YSF X-Mode
POCSAG	
Network Status	
D-Star Net	DMR Net
YSF Net	P25 Net
M17 Net	NXDN Net
DMR2NXDN	DMR2YSF
YSF2DMR	YSF2NXDN
YSF2P25	APRS Net
POCSAG Net	

- i. If **DMR Net** is red, there is likely an invalid DMR ID entered.
- ii. At the bottom of the page, if the entry under **DMR Master** is red, there is likely a mismatch between your actual BrandMeister hotspot security password and the password you entered when configuring your SkyBridge. Refer to

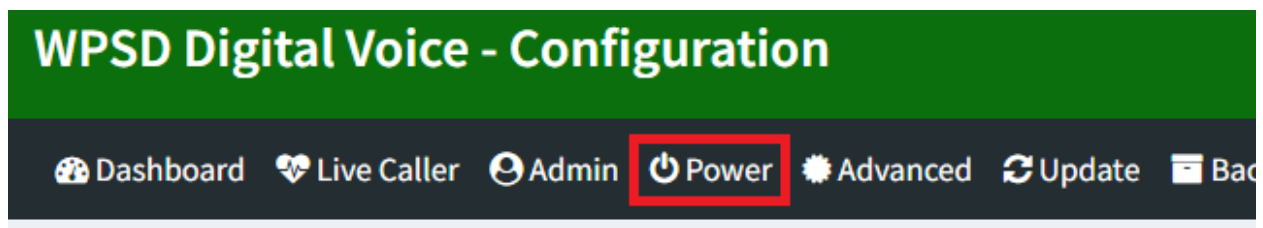
the password that was created in the **Account Registration and Setup** section, and be sure the password entered in the **BM Hotspot Security** field matches.

- q. You are now ready to perform a Parrot test and make contacts!
 - i. A Parrot test is not necessary, but it verifies that everything is set up correctly, and that audio quality is desirable. To perform a parrot test, simply initiate a private call to ID 9990 on timeslot 2 with your radio. If you purchased a code plug or a Plug and Play Package from us, a channel for this is already built in.

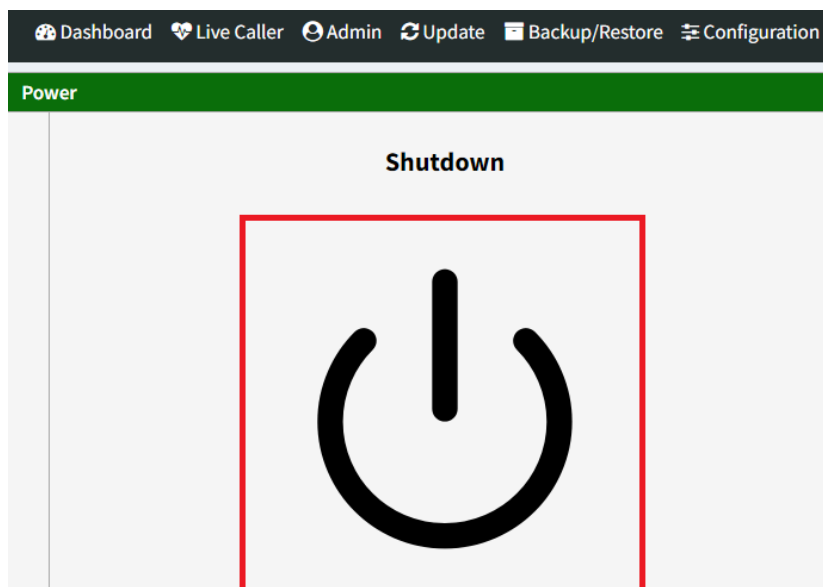
Proper Shutdown Procedure

The SkyBridge is a computer with an OS running on it. Therefore, simply pulling the power plug without properly shutting it down may cause file corruption.

1. Follow steps 3-6 in the **Initial Setup** section of this quickstart guide to log in to your SkyBridge.
2. Click **Power** at the top of the page.



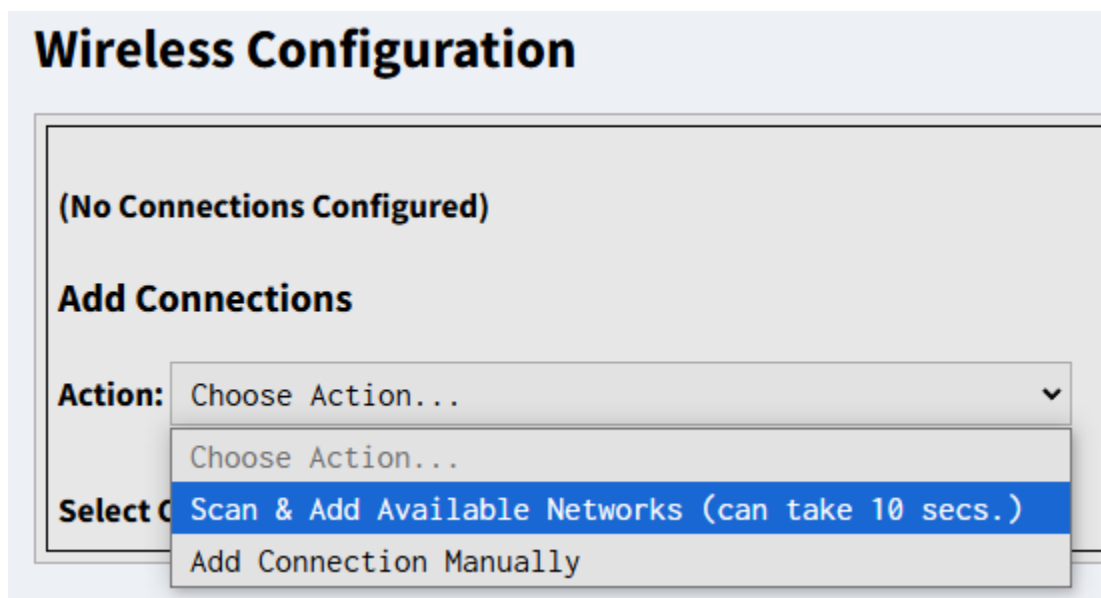
3. Click the button under **Shutdown** and wait 60 seconds before unplugging your SkyBridge.



WiFi Configuration

The SkyBridge can be configured to connect to the internet through a WiFi connection. To set this up, follow the steps below.

1. Follow steps 3-6 in the **Initial Setup** section of this quickstart guide to log in to your SkyBridge.
2. Scroll down to **Wireless Configuration**, click the **Scan & Add Available Networks** button.



3. Wait approximately 10 seconds until nearby network connections populate in the list below. Enter the passphrase (if applicable) next to your network name. Then click **Add This Network**.

Wireless Configuration						
SSID	Signal Strength	Band	Channel	Security Type	Passphrase	Add Connection
██████████	100%	5 GHz	48	WPA2	<input type="text" value="Enter Passphrase"/>	<input type="button" value="Add This Network"/>
██████████	95%	2.4 GHz	11	WPA1 WPA2	<input type="text" value="Enter Passphrase"/>	<input type="button" value="Add This Network"/>
██████████	82%	5 GHz	36	WPA1 WPA2	<input type="text" value="Enter Passphrase"/>	<input type="button" value="Add This Network"/>
██████████	78%	5 GHz	149	WPA2	<input type="text" value="Enter Passphrase"/>	<input type="button" value="Add This Network"/>

This will store the network and cause it to appear above. If configured correctly, it will automatically connect. Rebooting is not necessary.

Connection '██████████' (██████████) successfully added.

(Please give the Wifi Information some time to initialize and refresh its status)

Configured Connections

Connection Name

BridgeCom Wireless

Wireless Information and Statistics

Interface Information	Wireless Information
Interface Name : wlan0	Connected To : ██████████
Interface Status : Interface is active	AP Mac Address : ██████████
IP Address : 192.168.1.110	Bitrate : 180.0 MBit/s
Subnet Mask : 255.255.255.0	Signal Level : -38 dBm
Mac Address : ██████████	Transmit Power : 31 dBm
Interface Statistics	Link Quality : 100 %
Received Packets : 2542	Channel Info : 5.0GHz Ch48 (5.24 GHz)
Received Bytes : 335258 (327.4 KiB)	WiFi Country : US
Transferred Packets : 104	
Transferred Bytes : 15749 (15.3 KiB)	

4. Repeat steps 1-3 in this section for each WiFi network.

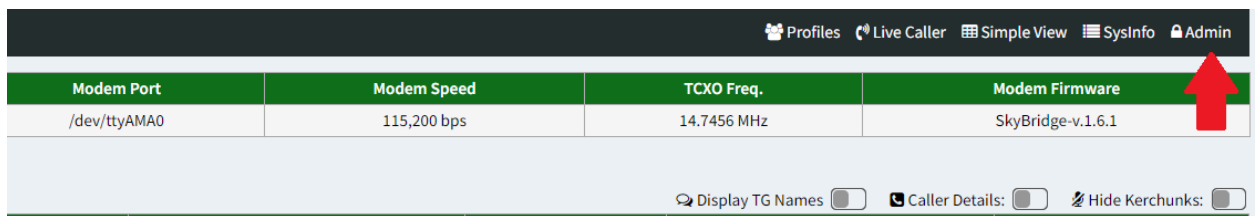
Remote RF Commands

It is possible to configure the SkyBridge Max to listen for specific radio transmissions that will cause it to shut down or reboot. Configuration for DMR is covered in this section. If not already logged into the web interface, follow steps 1-3 in the **Initial Setup** section before continuing.

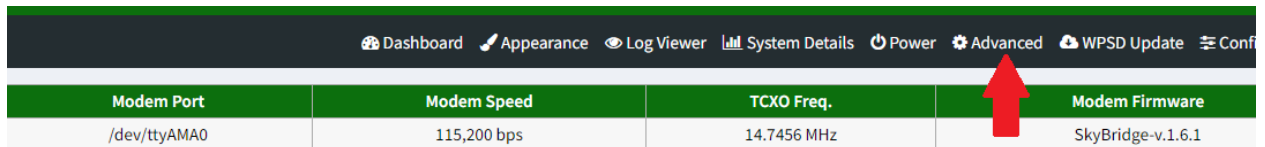
To work properly, both the SkyBridge Max and the radio to be used with it must be correctly configured.

SkyBridge Max Configuration:

1. From the web interface dashboard page, click **Admin**



2. Click **Advanced**



3. Navigate to **Full Editors->RF Remote Commands**



4. Change the following lines:

a. enabled=true

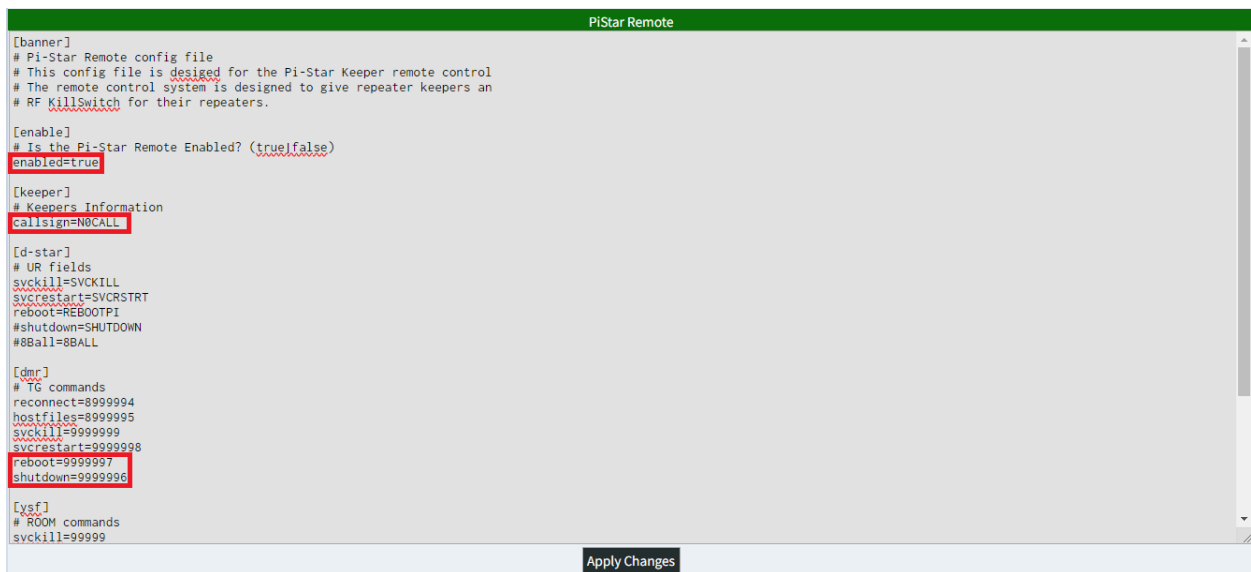
b. callsign=Your Callsign

i. Replace “Your Callsign” with your actual callsign

c. Under the dmr field, remove the ‘#’ at the beginning of the reboot and shutdown lines

i. Be sure there is not a ‘#’ character present at the beginning of the enabled, callsign, reboot, and shutdown lines

d. The resulting file should resemble the image below



```
[banner]
# Pi-Star Remote config file
# This config file is designed for the Pi-Star Keeper remote control
# The remote control system is designed to give repeater keepers an
# RF KillSwitch for their repeaters.

[enable]
# Is the Pi-Star Remote Enabled? (true|false)
enabled=true

[keeper]
# Keepers Information
callsign=N0CALL

[d-star]
# UR fields
svckill=SVCKILL
svcrestart=SVCRSTRT
reboot=REBOOTP1
#shutdown=SHUTDOWN
#8Ball=8BALL

[dmr]
# TG commands
reconnect=8999994
hostfiles=8999995
svckill=9999999
svcrestart=9999998
reboot=9999997
shutdown=9999996

[ysf]
# ROOM commands
svckill=99999
```

Apply Changes

5. Click the **Apply Changes** button when finished.

Radio Programming:

Note: If you purchased a Plug and Play and/or a codeplug from us, the radio already contains preprogrammed channels for shutdown and reboot. No further channel programming is necessary.

1. Add the following talkgroups:
 - a. 9999996 (shutdown)
 - b. 9999997 (reboot)
2. Add 2 additional DMR channels, each assigned to the respective talkgroups listed above, to the radio that match the frequency, color code, and timeslot of the SkyBridge Max.
3. Add the channels to a zone on the radio (if applicable) and write to the radio.

Using Remote RF Commands

1. Select the desired remote channel on the radio (shutdown or reboot)
2. Be sure the SkyBridge Max is not currently transmitting, and briefly press the PTT button on the radio.
 - a. Within 30 seconds, the main line of text on the SkyBridge Max display should change to

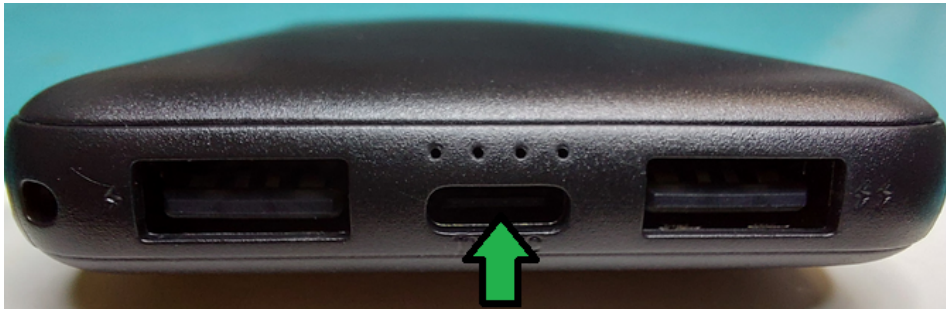
Stopped and the line below it should change to **MMDVM Inactive**.

3. If step 2 was successful:
 - a. If the shutdown command was sent, wait for the SkyBridge Max display to indicate that it is safe to power off, and remove power.
 - b. If the reboot command was sent, the SkyBridge Max display should indicate that it is rebooting. Simply wait for the reboot to complete.

Using the External Battery

For convenience, an external rechargeable battery is included with the SkyBridge Max. This is a USB power bank for powering the SkyBridge Max on-the-go.

1. Completely charge the battery before using it. Use the USB Type C connector to charge it.



2. After the battery is completely charged, unplug the charging cable from the battery, and use one of the USB Type A ports to supply power to your SkyBridge Max.



For further support, create a ticket on our support page at the following link:

<https://support.bridgecomsystems.com/kb-tickets/new>