



USER GUIDE

Firmware Version: 1.2.x

Last updated on Jul 23, 2026

PHANTOM FAMILY

**PHANTOM
PHANTOM ANC
PHANTOM EXTREME BASS
PHANTOM CAMERA
PHANTOM KV**

A FAMILY OF PURPOSE-BUILT MOTORCYCLE SMART HELMETS



The firmware version 1.2.x indicates that this manual is applicable to all firmware updates within the version 1.2 series.

QUICK REFERENCE

: (+) button

: (-) button

: Mesh Intercom button

: Center button

: Headlight button

: Taillight button

: ANC button*

: Camera button**

*PHANTOM ANC, PHANTOM KV only

**PHANTOM Camera only

Type	Operation	Button	Duration
Basic operations	Power on	&	Press for 1 second
	Power off	&	Single tap
	Volume up/down	or	Single tap
Camera operations	Camera on		Single tap
	Camera off	&	Single tap
	Video recording		Press for 1 second
	Photo shooting		Single tap
ANC & Ambient mode	ANC on/off		Single tap
	Ambient mode on/off		Press for 1 second
LED light	Headlight on/off		Single tap
	Taillight on/off		Single tap
Phone	Phone pairing		Press for 5 seconds
	Answer phone call		Single tap
	End phone call		Press for 2 seconds
	Reject phone call		Press for 2 seconds
	Speed dial		Press for 3 seconds
	Play/Pause music		Press for 1 second
	Track forward/back	or	Press for 1 second
Siri or Google Assistant			Press for 3 seconds
Mesh Intercom™	Mesh Intercom on/off		Single tap
	Mute/unmute mic		Press for 1 second
	Channel selection		Double tap
	Mesh grouping		Press for 5 seconds
	Mesh Reach-Out request		Triple tap
	Reset mesh		Press for 8 seconds
Wave Intercom™	Wave Intercom on		Double tap
	Wave Intercom off		Single tap
	Switch to Mesh Intercom		Single tap
Configuration menu			Press for 10 seconds

BEFORE GETTING STARTED

I Sena Motorcycles App

Download the Sena Motorcycles app from the Google Play Store or the App Store.



I WAVE Intercom App

Download the WAVE Intercom app from the Google Play Store or the App Store.



For detailed information on the Wave Intercom, please refer to the Wave Intercom User Guide at sena.com.

I Sena Camera+ App

Download the Sena Camera+ app from the Google Play Store or the App Store. Connect the PHANTOM Camera to preview, take shots, manage media files, and customize settings.



I SD Cards

You need a microSD card for the PHANTOM Camera. Save your media files and transfer them to other devices using a microSD card. Please use microSD cards that meet the requirements below:

- UHS Speed Class: U3
- Video Speed Class: V30 or higher
- File System: exFAT

CLICK ANY SECTION TO BEGIN



ABOUT THE
PHANTOM HELMETS



BASIC OPERATION



CAMERA OPERATION



ANC & AMBIENT
MODE



LED LIGHT



PAIRING WITH
BLUETOOTH
DEVICES



USING WITH A
SMARTPHONE



MESH INTERCOM



WAVE INTERCOM



AUDIO
MULTITASKING



VOICE COMMAND



FIRMWARE UPDATE



TROUBLESHOOTING

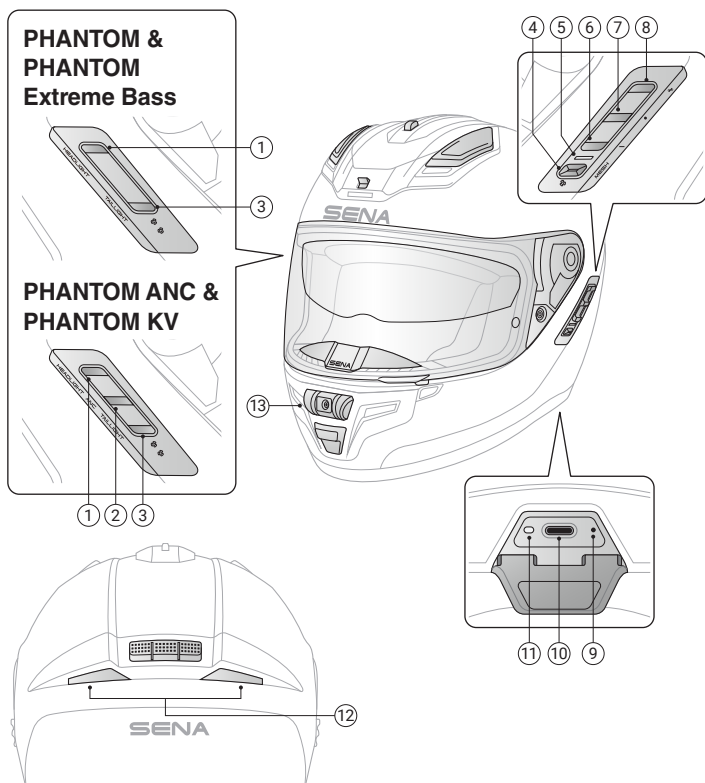


01 ABOUT THE PHANTOM HELMETS

Key Features

- Mesh Intercom 3.0 with improved sound quality, a more robust connection, and extended talk time
- Dual version Mesh: Mesh 2.0 for backward compatibility
- Professional studio quality sound with integrated speakers
- AI-based noise cancellation
- Enhanced voice command
- Front headlight
- Rear running and brake taillight
- Bluetooth version 5.3
- Over-the-Air (OTA) firmware update
- Active Noise Cancellation & Ambient mode (PHANTOM ANC, PHANTOM KV only)
- Enhanced bass sound with Pulse Drive Matrix (PHANTOM Extreme Bass only)
- Built-in 4K camera (PHANTOM Camera only)

PHANTOM & PHANTOM Extreme Bass & PHANTOM ANC & PHANTOM KV



① Headlight button

③ Taillight button

⑤ Status LED

⑦ Center button

⑨ Reset pinhole

⑪ Charging LED

⑬ Headlight

② ANC button*

④ Mesh Intercom button

⑥ (-) button

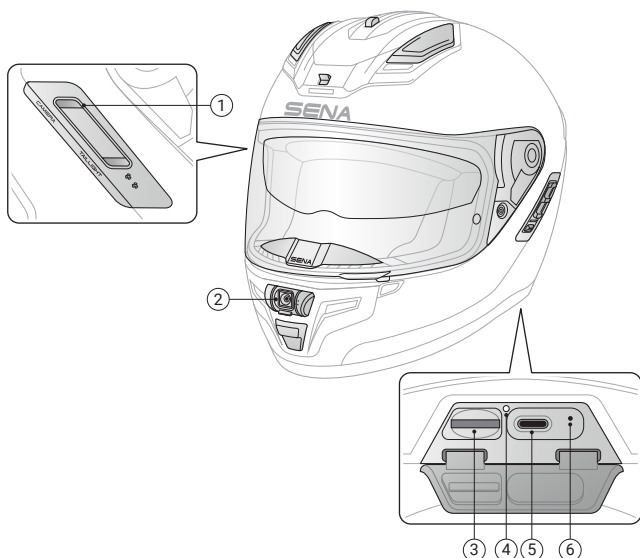
⑧ (+) button

⑩ USB-C charging port

⑫ Taillight

*PHANTOM ANC, PHANTOM KV only

PHANTOM Camera



① Camera button

③ SD card slot

⑤ USB-C charging port

② Camera lens

④ Charging LED

⑥ Reset pinhole

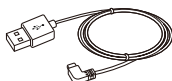
Package Contents



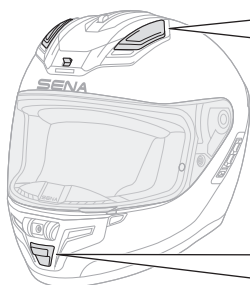
Helmet



Microphone sponges



USB-C charging cable



Open



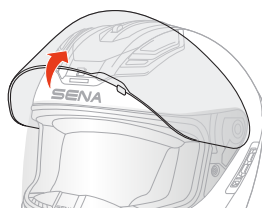
Closed



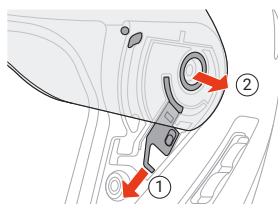
Open



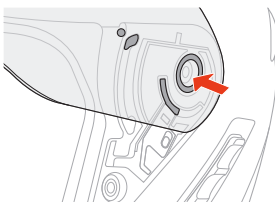
Closed



Removal



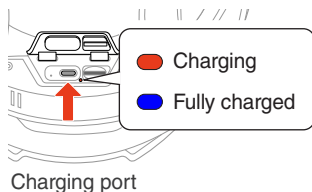
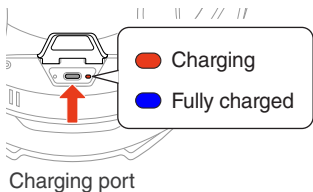
Installation



02 BASIC OPERATION

	Tap Tap the button the specified number of times
	Press and Hold Press and hold the button for the specified amount of time
	Voice Prompt
	Voice Command
	LED

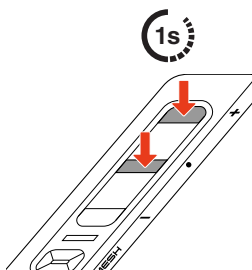
Charging



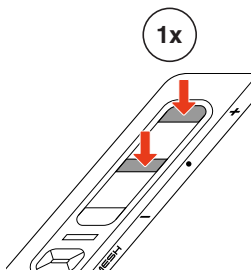
It takes 2.5 hours to fully charge.

- The PHANTOM helmets feature fast charging, delivering 7 hours of Mesh Intercom with just a 20-minute charge.
- Safe power mode provides continuous power without battery charging to ensure safe, uninterrupted use on the road.
- Any third-party USB charger can be used, as long as it is approved by the FCC, CE, IC, or other locally recognized regulatory agencies.
- Using a non-approved charger may cause fire, explosion, leakage, and other hazards, potentially reducing the battery's lifespan or performance.

Power On

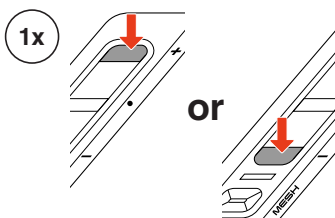


Power Off



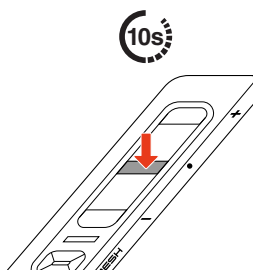
- The PHANTOM helmets enter sleep mode if they remain motionless for 2 minutes.
- If any motion is detected within 3 hours, they wake up. Otherwise, they power off completely after 3 hours.
- To enable or disable this function, go to Device Settings and toggle Auto On/Off in the Sena Motorcycles app.

Volume



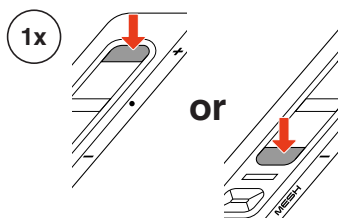
Configuration

Enter Configuration

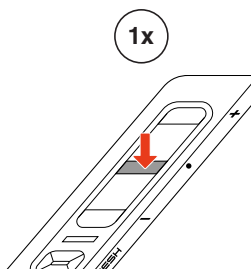


"Configuration menu"

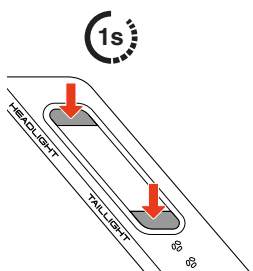
Navigate



Confirm



Sound Demo



"Sound demo"

*PHANTOM Extreme Bass only

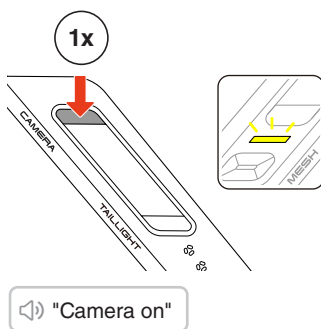
- Press the center button to cancel.

03 CAMERA OPERATION

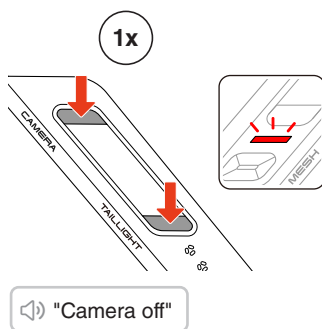
This chapter is for the PHANTOM Camera only.

Basic Operations

Camera On



Camera Off



- The camera turns off automatically if it remains idle for 5 minutes.

Video Recording

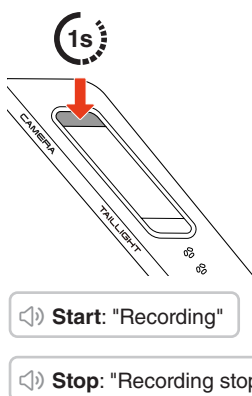
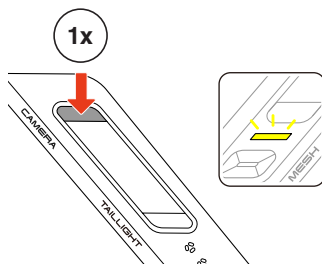


Photo Shooting



Video Recording

The PHANTOM Camera supports 4 video modes. Regardless of the selected mode, all videos are taken in 16:9 aspect ratio.

Modes	Descriptions
Video	Standard video recording
Timelapse	Captures images at set intervals and turns them into a high-speed video.
Loop Recording	Continuously records a video in fixed-length segments. Once the memory is full, new recordings overwrite the oldest files.
Slow Motion	Records at a fixed rate of 30FPS.

Recording Time

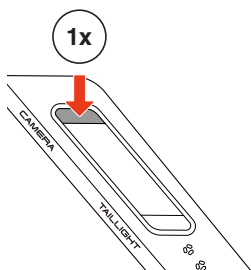
At 4K/30FPS, the maximum recording time without charging is 3 h 45 min. The maximum recordable time depends on the storage capacity as shown below.

Storage Resolution	16 GB	32 GB	64 GB	128 GB
4K/30FPS	33 min	1 hr 8 min	2 hr 17 min	4 hr 29 min
2.7K/60FPS	40 min	1 hr 22 min	2 hr 44 min	5 hr 21 min
2.7K/30FPS	55 min	1 hr 52 min	3 hr 4 min	7 hr 21 min
1080P/120FPS	1 hr 11 min	2 hr 23 min	4 hr 47 min	9 hr 21 min
1080P/60FPS	1 hr 29 min	3 hr	6 hr	11 hr 45 min
1080P/30FPS	2 hr	4 hr 2 min	8 hr 4 min	15 hr 46 min
720P/120FPS	1 hr 29 min	3 hr	6 hr	11 hr 45 min
720P/60FPS	2 hr	4 hr 2 min	8 hr 4 min	15 hr 46 min

- The maximum file size is limited to 4 GB. Once the file reaches 4 GB during recording, it is automatically saved and a new video is created to continue.

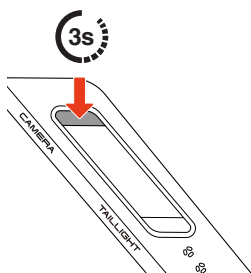
Screenshot

You can take a screenshot of a video while you are recording.



Video Tagging

Video tagging helps you save the important events in Loop Recording mode. It creates three clips: the previous one, the current one, and the next one. The files are stored in EVENT folder.



 "Video tagging"

- To set the loop recording interval, go to Presets in the Sena Camera+ app.

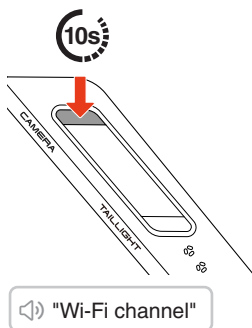
Photo Shooting

The PHANTOM Camera supports 4 photo modes. Regardless of the selected mode, all videos are taken in 4:3 aspect ratio.

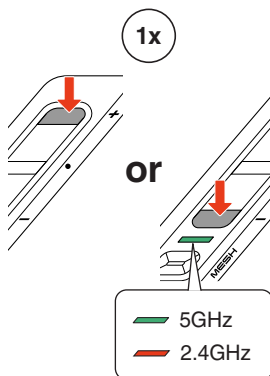
Modes	Descriptions
Single	Takes one photo at a time.
Burst	Takes multiple shots at a time.
Timelapse	Takes a sequence of photos at set intervals for timelapse use.
Self-Timer	Starts a countdown before taking a shot.

Wi-Fi Channel Setting

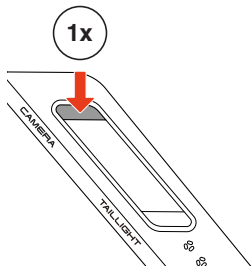
1.



2.

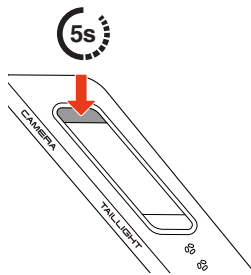


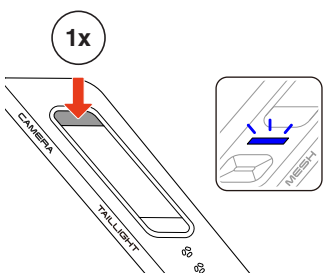
3.



- If no channel is selected for 5 seconds, it will be automatically cancelled. In this case, you will hear a voice prompt saying, "Cancelled."

Format SD Card

1. 

A diagram of a device with a 'CAMERA' button and a 'TAILLIGHT' button. A red arrow points to the 'CAMERA' button, and a circular timer icon with '5s' indicates a 5-second press. Below the diagram is a speaker icon and the text "Format SD card".
2. 

A diagram of the same device. A red arrow points to the 'CAMERA' button, and a circular timer icon with '1x' indicates a single press. To the right, an inset shows a close-up of the 'CAMERA' button with blue arrows indicating the pressing action. Below the diagram is a speaker icon and the text "Format SD card completed".

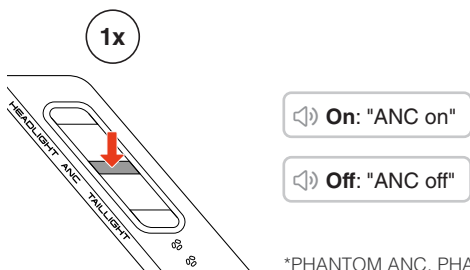
- To cancel, press the taillight button once.
- If no button is pushed, it will be automatically cancelled. You will hear a voice prompt saying, "Cancelled."

04 ANC & AMBIENT MODE

ANC (Active Noise Cancellation)

When ANC is activated, the helmet detects external sounds and generates sound waves that cancel them out, reducing surrounding noise.

ANC On/Off



*PHANTOM ANC, PHANTOM KV only

Ambient Mode

When the ambient mode is activated, it allows you to hear external sounds clearly while wearing the helmet.

Ambient Mode On/Off



*PHANTOM ANC, PHANTOM KV only

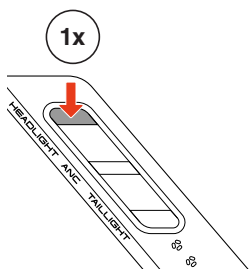
- Turning on ANC while the ambient mode is active will disable the ambient mode after ANC is turned off.

05 LED LIGHT



In some regions, local laws and regulations restrict the use of LEDs on helmets. Therefore, ensure you are familiar with and comply with the relevant laws and regulations in the area where you use the helmet.

Headlight On/Off

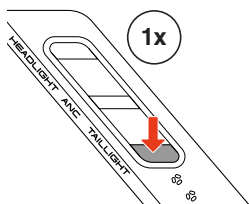


 **On:** "Headlight on"

 **Off:** "Headlight off"

- The headlight automatically turns off approximately 10 minutes after being turned on. Go to Headlight Off Timer on the Sena Motorcycles app to change the settings.
- The headlight is not available with the PHANTOM Camera.

Taillight On/Off



 **On:** "Taillight on"

 **Off:** "Taillight off"

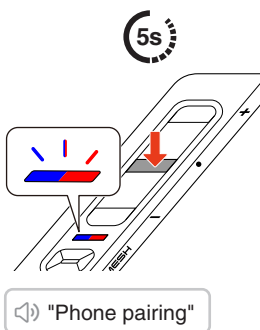
The taillight can be customized through the Sena Motorcycles app. The brake light activates automatically when braking is detected.

06 PAIRING WITH BLUETOOTH DEVICES

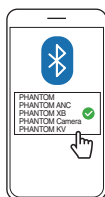
When using the helmet with other Bluetooth devices for the first time, they need to be paired. The PHANTOM Family can pair with multiple devices, including two mobile phones and one GPS. However, it supports only one additional device, alongside a mobile phone, for simultaneous connection.

Phone Pairing

1.



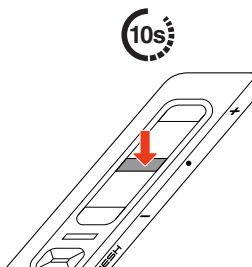
2.



- When you turn on the helmet for the first time or reboot it after a factory reset, it will automatically enter phone pairing mode.
- Press any button to cancel phone pairing.

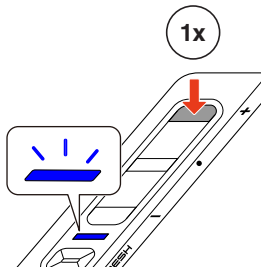
Second Mobile Phone Pairing

1.



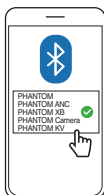
"Configuration menu"

2.



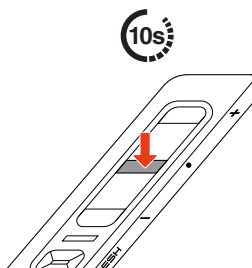
"Second mobile phone pairing"

3.



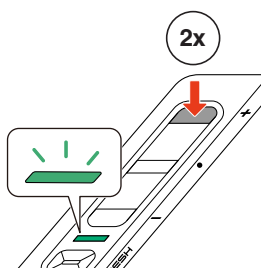
GPS Pairing

1.



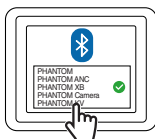
"Configuration menu"

2.



"GPS pairing"

3.



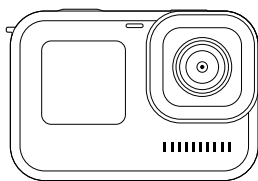
Action Camera Pairing

Pairing the PHANTOM helmets with an action camera allows you to record audio from the Mesh Intercom conversations. You can also use the action camera's voice commands via the headset's microphone.

- For detailed instructions on voice commands, refer to the user guide for your action camera.

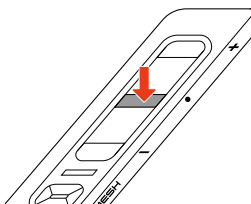
Device Pairing

- Put your action camera in Bluetooth pairing mode.



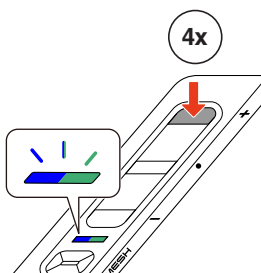
-
-

10s



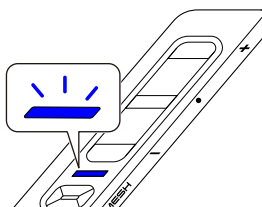
"Configuration menu"

-
-
-



"Action cam pairing"

-
-
-
-



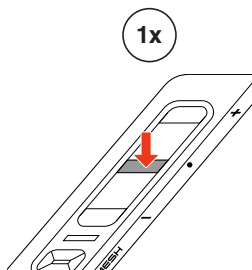
"Device connected"

- When paired with an action camera, music is disabled.

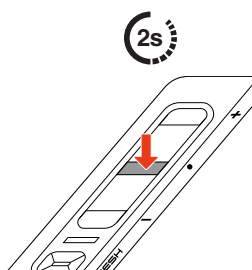
07 USING WITH A SMARTPHONE

Making and Answering Calls

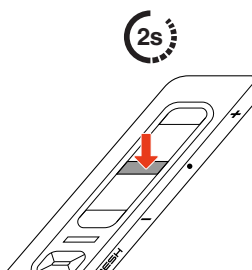
Answer a Call



End a Call



Reject a Call

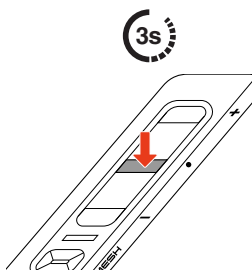


Siri or Google Assistant

Say "Hey Siri", "Hey Google," or press the center button for 3 seconds to activate Siri or Google Assistant.



or



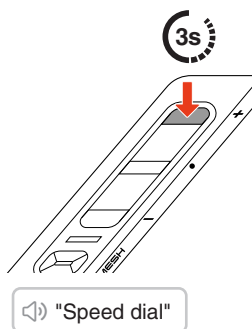
Speed Dial

I Assign Speed Dial Presets

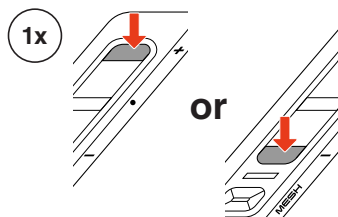
Speed dial presets can be assigned using the Sena Motorcycles app.

Use Speed Dial Presets

1. Enter the speed dial menu.

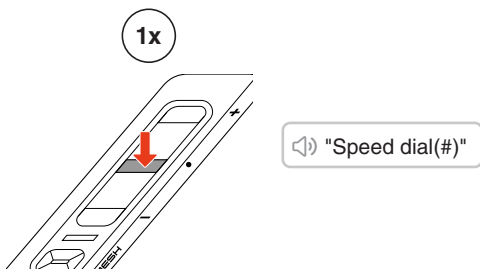


2. Navigate forward or backward through speed dial preset.



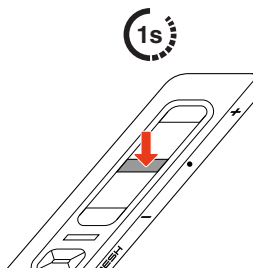
- ① Last number redial
- ② Speed dial (1→2→3)
- ③ Cancel

3. Tap the center button to confirm.

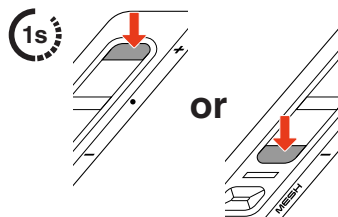


Music

Play/Pause Music



Track Forward/Backward

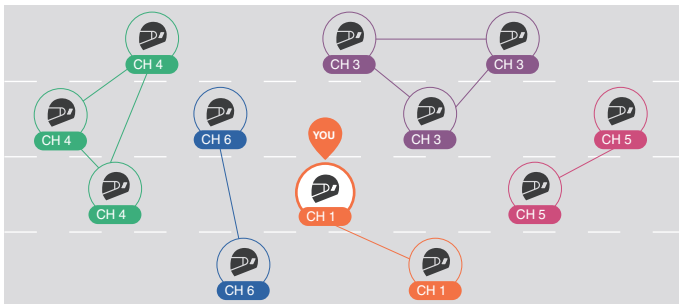


08 MESH INTERCOM

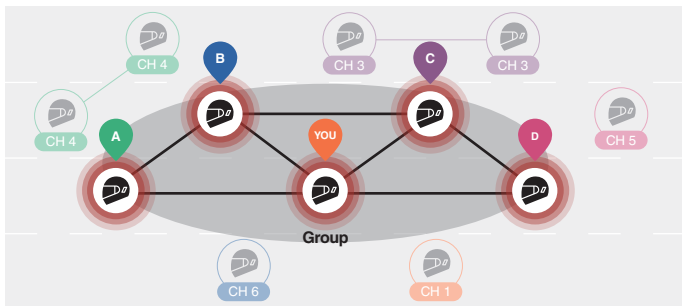
The PHANTOM Family provides two Mesh Intercom modes:

- Open Mesh™ for open group intercom conversations.
- Group Mesh™ for private group intercom conversations.

Open Mesh



Group Mesh



Mesh Version Switch

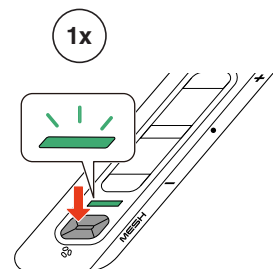
Switch to Mesh 2.0 for Backward Compatibility

Mesh 3.0 is the latest Mesh Intercom technology, but to communicate with legacy products using Mesh 2.0, please switch to Mesh 2.0 using the Sena Motorcycles app.

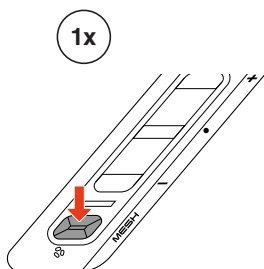
Open Mesh

You can freely communicate with virtually unlimited users in each of the 6 available channels. The default Mesh Intercom channel is 1.

Mesh Intercom On/Off



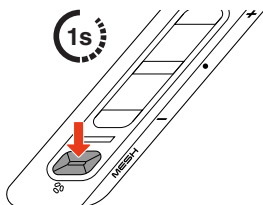
On: "Mesh intercom on, Open Mesh, channel 1"



Off: "Mesh intercom off"

Mute/Unmute Mic

Press the Mesh Intercom button until the voice prompt is heard to mute/unmute the microphone during Mesh Intercom communication.



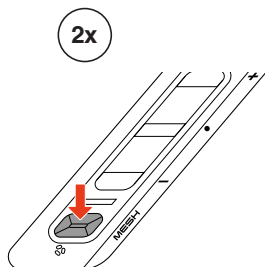
 **Mute:** "Mic off"

 **Unmute:** "Mic on"

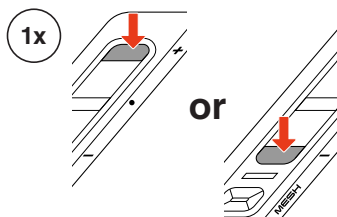
Channel Selection

1. Enter the channel setting.

2. Navigate between channels.

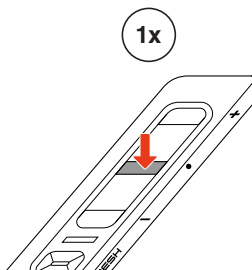


 "Channel setting, 1"



 "#"

3. Confirm and save the channel.



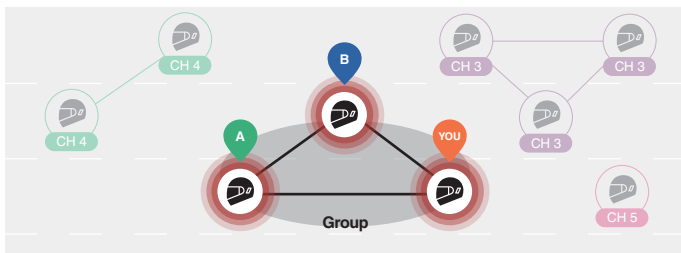
 "Channel is set,
channel #"

- The channel will be automatically saved if no buttons are pressed for 10 seconds on a specific channel.
- The channel will be saved even if the helmet is turned off.

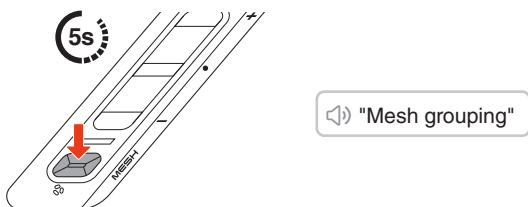
Group Mesh

By using group mesh, a private conversation group can be created for up to 24 participants.

Create a Group Mesh



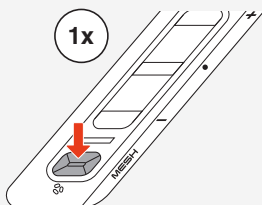
1. Users (You, A, and B) enter the mesh grouping by pressing the Mesh Intercom button until the voice prompt is heard while staying in the open mesh. They don't need to be on the same open mesh channel to create a group mesh together.



2. When mesh grouping is completed, it automatically switches from open mesh to group mesh.

"Group Mesh"

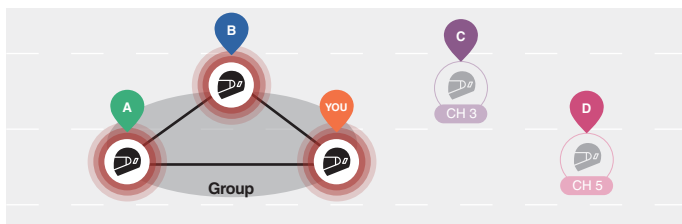
- If you want to cancel mesh grouping, tap the Mesh Intercom button.



- If the mesh grouping is not successfully completed within 30 seconds, users will hear a voice prompt saying, "Grouping failed."

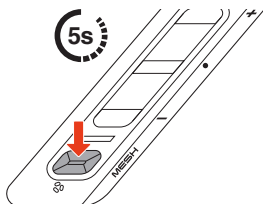
Join an Existing Group Mesh

When you are in a group mesh, you can invite other users in open mesh to join the group.



You are already in group mesh with A and B, and the other users, C and D, are in open mesh.

1. You and the other users, C and D, enter mesh grouping by pressing the Mesh Intercom button until the voice prompt.



"Mesh grouping"

- When mesh grouping is completed, the other users, C and D, automatically join the group mesh while leaving the open mesh.

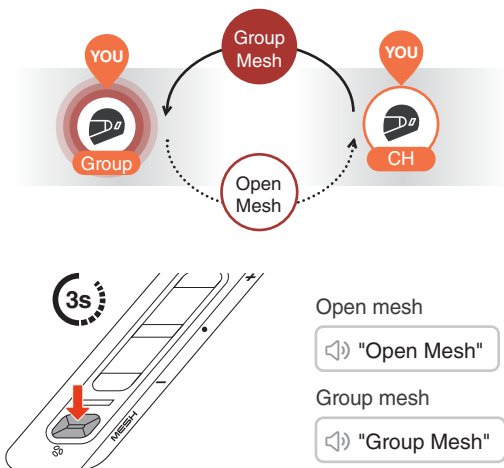
 "Group Mesh"

New participants (C and D)

- If the mesh grouping is not successfully completed within 30 seconds, the current user (You) will hear a low tone double beep and the new users (C and D) will hear a voice prompt saying, "Grouping failed."

I Toggle Open/Group Mesh

You can toggle between open mesh and group mesh without resetting the mesh.



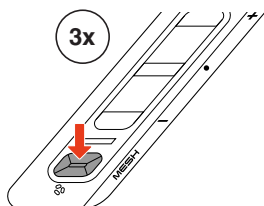
- If you have never participated in group mesh, you cannot toggle between open mesh and group mesh. You will hear a voice prompt saying, "No group available."

Mesh Reach-Out Request

You (caller) can send a Mesh Reach-Out request to turn on Mesh Intercom to nearby* friends who have it turned off.

1. If you want to send or receive a Mesh Reach-Out request, you need to enable it in the Sena Motorcycles app.
2. You can send a Mesh Reach-Out request using the Mesh Intercom button or the Sena Motorcycles app.

Caller



Caller: "Mesh reach-out request"

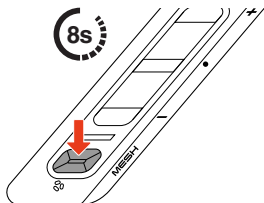
Nearby Friends: "Mesh intercom requested"

3. Friends who receive the Mesh Reach-Out request need to manually turn on their Mesh Intercom.

* Up to 330 ft in open terrain

Reset Mesh

If the helmet resets the mesh while in open mesh or group mesh, it will automatically return to open mesh, channel 1.



"Reset Mesh"

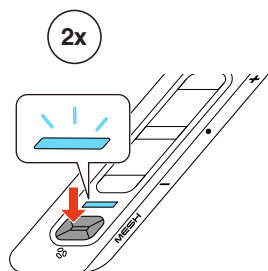
09 WAVE INTERCOM

Wave Intercom enables open communication using cellular data. For detailed information, please refer to the Wave Intercom User Guide on sena.com.

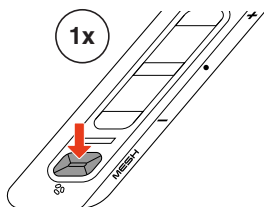
Wave Intercom On/Off

Open the WAVE Intercom app, then double-tap the Mesh Intercom button to join Wave Intercom.

- You must open the app before starting Wave Intercom.



 **On:** "Wave Intercom on"



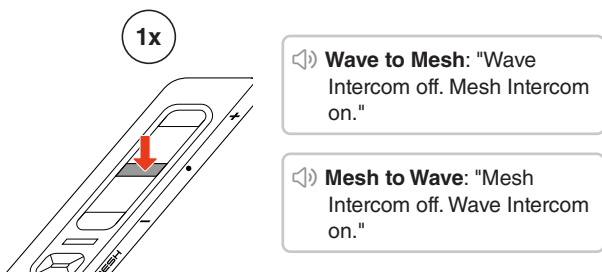
 **Off:** "Wave Intercom off"

When you start Wave Intercom, you will automatically connect with users in the Wave Zone. The Wave Zone covers a 1-mile radius in North America and a 1.6-km radius in Europe.

To end Wave Intercom, single-tap the Mesh Intercom button.

Switch between Wave Intercom and Mesh Intercom

You can easily switch between Mesh Intercom and Wave Intercom with a single tap on the center button.



10 AUDIO MULTITASKING

Audio multitasking on the PHANTOM Family allows you to listen to music and GPS turn-by-turn instructions while having a Mesh Intercom conversation.

For more details, go to Device Settings on the Sena Motorcycles app to configure the settings.

Background Volume

Background audio, such as music playback, will automatically lower in volume during an active intercom conversation. You can adjust the volume reduction percentage in the app under 'Background Volume'.

11 VOICE COMMAND

The PHANTOM Family offers multi-language voice commands in eight different languages, which can be easily set through the Sena Motorcycles app. A complete list of available voice commands is also provided in the Sena Motorcycles app.

To activate voice commands, simply say, "Hey Sena."



Voice Command List

"Answer"

"Ignore"

"Hey Sena, Check Battery"

"Hey Sena, Volume Up"

"Hey Sena, Volume Down"

"Hey Sena, Phone Pairing"

"Hey Sena, Redial Number"

"Hey Sena, End Call"

"Hey Sena, Play Music"

"Hey Sena, Stop Music"

"Hey Sena, Previous Track"

"Hey Sena, Next Track"

"Hey Sena, Mesh Intercom On"

"Hey Sena, Mesh Intercom Off"

"Hey Sena, Wave Intercom On"

"Hey Sena, Wave Intercom Off"

12 FIRMWARE UPDATE

Over-the-Air (OTA) Update

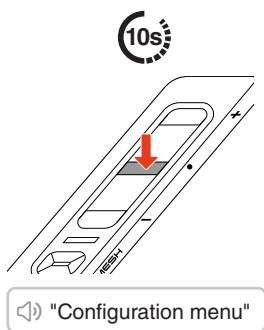
You can update the firmware via Over-the-Air (OTA) directly from the settings in the Sena Motorcycles app.

13 TROUBLESHOOTING

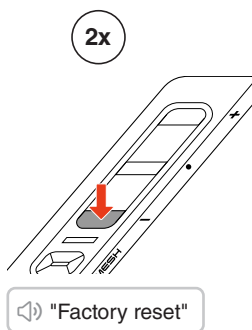
Factory Reset

To restore the helmet to its factory default settings, simply use the factory reset feature.

1.



2.



3.

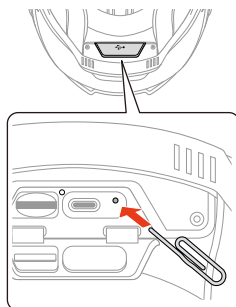
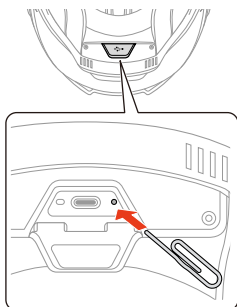


Fault Reset

If the helmet is on but not responding, you can perform a fault reset to restore normal functionality.

Use a clip to press the reset pinhole next to the USB-C charging port.

All settings will remain unchanged.





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