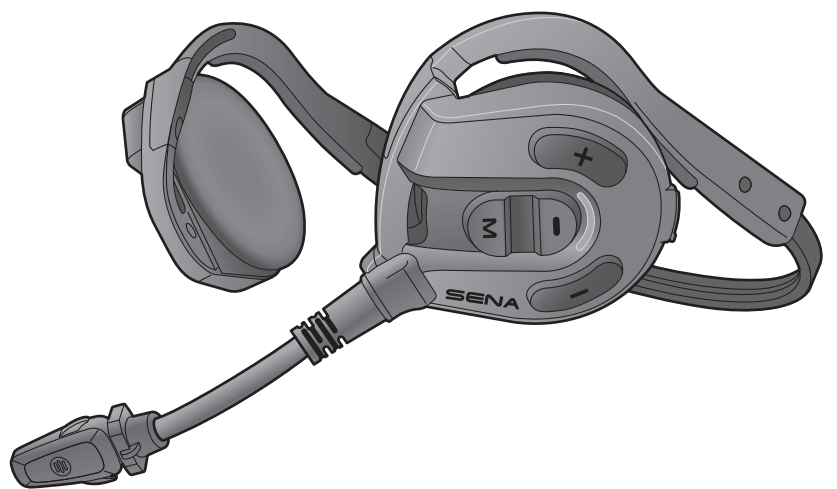


**SENA**



# **EXPAND MESH**

**BLUETOOTH® HEADSET WITH MESH INTERCOM™**

**USER'S GUIDE**

Version 1.0.0

ENGLISH

# TABLE OF CONTENTS

<b>1.</b>	<b>ABOUT THE EXPAND MESH</b>	<b>5</b>
1.1	Product Features	5
1.2	Product Details	6
1.3	Package Contents	7
1.4	Wearing the Headset	7
<b>2.</b>	<b>GETTING STARTED</b>	<b>8</b>
2.1	Downloadable Sena Software	8
2.1.1	Sena Outdoor App	8
2.1.2	Sena Device Manager	8
2.2	Charging	8
2.3	Legend	9
2.4	Powering On and Off	9
2.5	Checking the Battery Level	9
2.6	Volume Adjustment	10
<b>3.</b>	<b>PAIRING THE HEADSET WITH OTHER BLUETOOTH DEVICES</b>	<b>11</b>
3.1	Phone Pairing	11
3.1.1	Initially Pairing the Expand Mesh	11
3.1.2	Pairing When the Expand Mesh is Turned Off	12
3.1.3	Pairing When the Expand Mesh is Turned On	12
3.2	Second Mobile Phone Pairing - Second Mobile Phone and SR10	13
<b>4.</b>	<b>MOBILE PHONE USAGE</b>	<b>14</b>
4.1	Making and Answering Calls	14

4.2	Speed Dialing	14
4.2.1	Assigning Speed Dial Presets	14
4.2.2	Using Speed Dial Presets	14

---

5.	STEREO MUSIC	16
----	--------------	----

---

5.1	Playing Music with Bluetooth Devices	16
-----	--------------------------------------	----

---

6.	MESH INTERCOM	17
----	---------------	----

---

6.1	What is Mesh Intercom?	17
6.1.1	Open Mesh	18
6.1.2	Group Mesh	18
6.2	Starting Mesh Intercom	19
6.3	Using the Mesh in Open Mesh	19
6.3.1	Channel Setting (Default: channel 1)	19
6.4	Using Mesh in Group Mesh	20
6.4.1	Creating a Group Mesh	20
6.4.2	Joining an Existing Group Mesh	21
6.5	Enable/Disable Mic (Default: Enable)	22
6.6	Toggling Open Mesh/Group Mesh	22
6.7	Reset Mesh	22

---

7.	MESH AUDIO MULTITASKING (ALWAYS ON)	23
----	-------------------------------------	----

---

---

8.	FUNCTION PRIORITY AND FIRMWARE UPGRADES	24
----	---	----

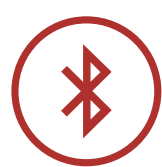
---

8.1	Function Priority	24
8.2	Firmware Upgrades	24

<b>9.</b>	<b>CONFIGURATION SETTING</b>	<b>25</b>
9.1	Headset Configuration Menu	25
9.2	Software Configuration Setting	25
9.2.1	Headset Language	26
9.2.2	VOX Phone (Default: Enable)	26
9.2.3	VOX Sensitivity (Default: 3)	26
9.2.4	Intercom-Audio Overlay Sensitivity (Default: 3)	26
9.2.5	Audio Overlay Volume Management (Default: Disable)	26
9.2.6	Voice Prompt (Default: Enable)	26
<b>10.</b>	<b>TROUBLESHOOTING</b>	<b>27</b>
10.1	Fault Reset	27
10.2	Factory Reset	28

# 1. ABOUT THE EXPAND MESH

## 1.1 Product Features



Bluetooth® 5.2



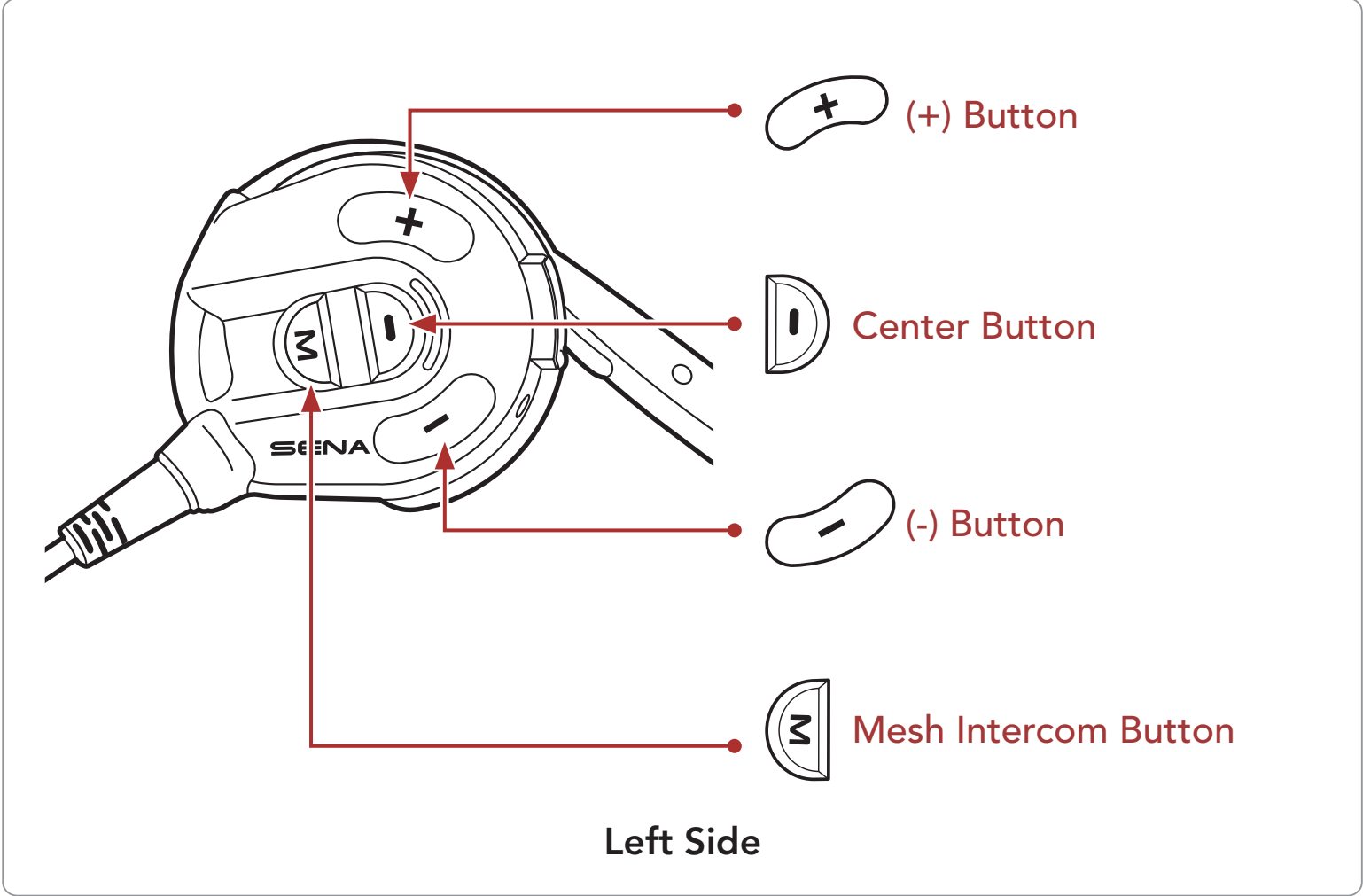
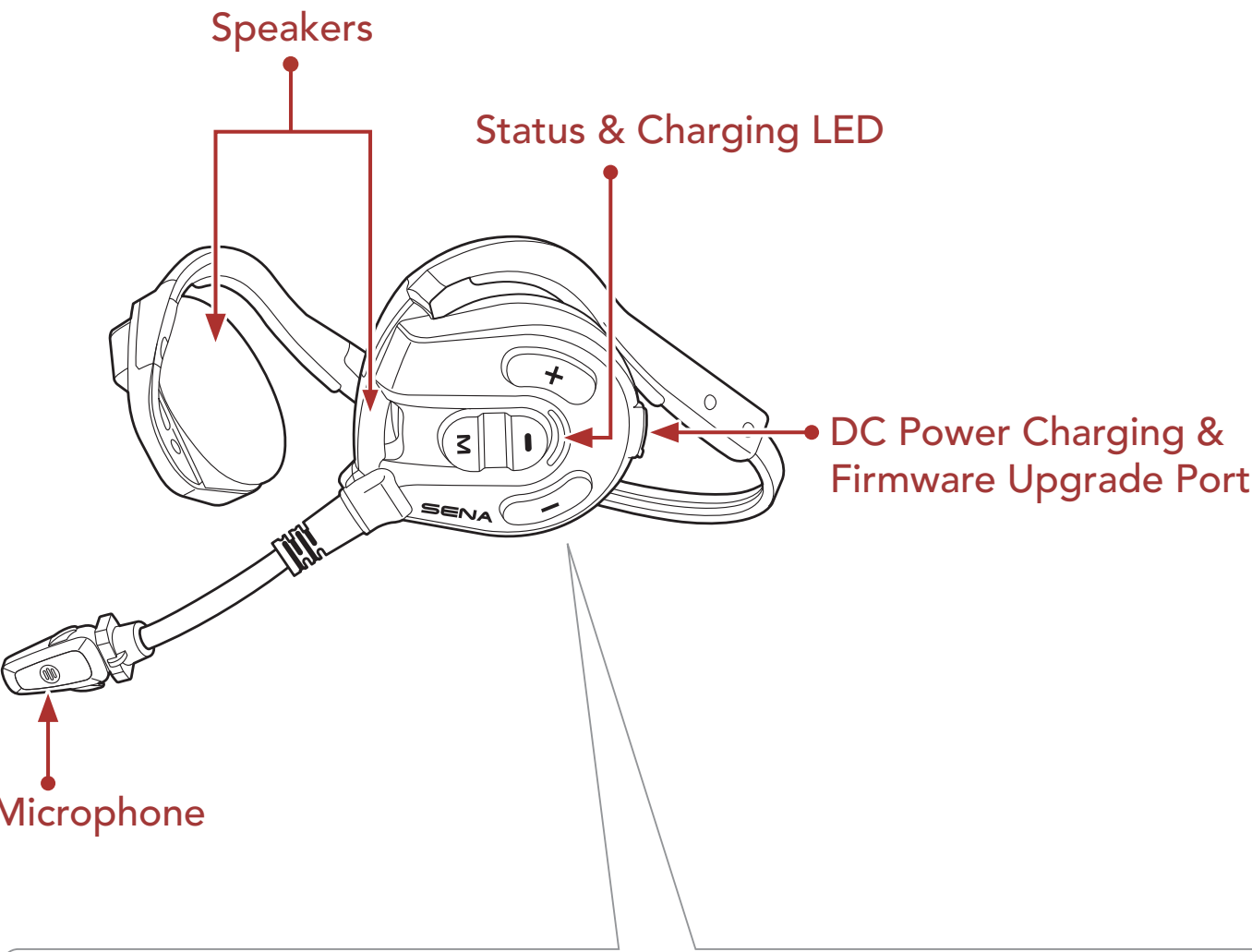
Mesh Intercom up to 0.4 km (0.2 mi)\*



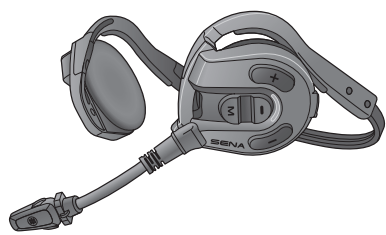
Audio Multitasking™

\* in open terrain

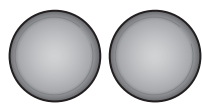
# 1.2 Product Details



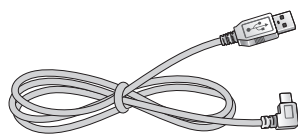
### 1.3 Package Contents



Headset

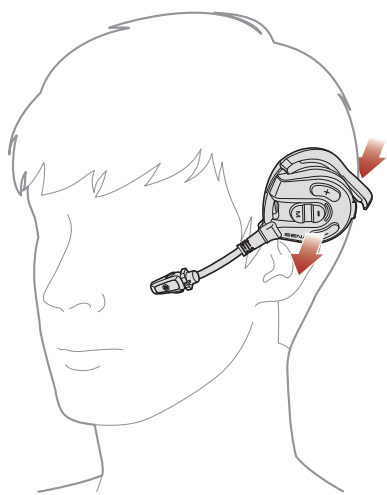


Speaker Pads

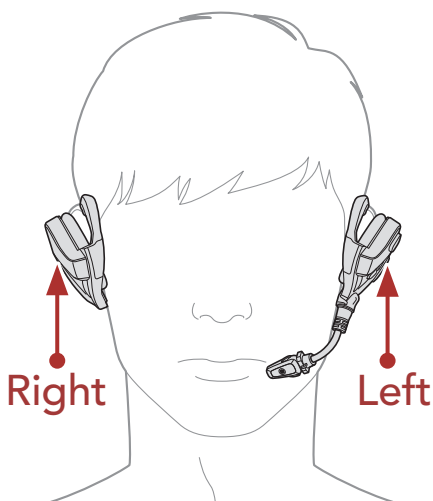


USB Power & Data Cable  
(USB-C)

### 1.4 Wearing the Headset



Left Side



Front

1. Check that the speaker with microphone is placed on the left ear.
2. Adjust the microphone to be located at a proper distance from your mouth.

**Note:** Proper fit on your ear and head is important both for comfort and optimal noise-reduction performance.

# 2. GETTING STARTED

## 2.1 Downloadable Sena Software

### 2.1.1 Sena Outdoor App

By simply pairing your phone with your headset, you can use the **Sena Outdoor App** for quicker, easier set up and management.



- Download the **Sena Outdoor App** on **Google Play Store** or **App Store**.

### 2.1.2 Sena Device Manager

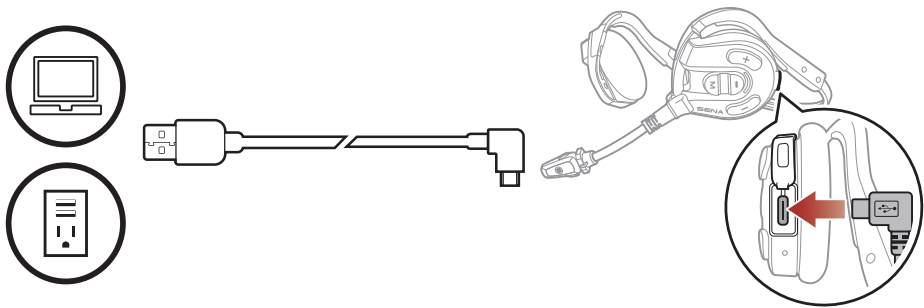
The **Sena Device Manager** allows you to upgrade firmware and configure settings directly from your PC.



- Download the **Sena Device Manager** at [sena.com](http://sena.com).

## 2.2 Charging

### Charging the Headset



Depending upon the charging method, the headset will be fully charged in about 2.0 hours.



**Note:**

- Please make sure to take off your headset while charging. The headset automatically turns off during charging.
- Any 3rd party USB charger can be used with Sena products if the charger is approved by either the FCC, CE, IC or other locally approved agencies.
- Use of a non-approved charger may cause fire, explosion, leakage, and other hazards which may also reduce the life time or performance of the battery.
- The **headset** is compatible with 5 V input USB-charged devices only.

2.3 Legend



**Tap** button the specified number of times



**Press and Hold** button for the specified amount of time



*"Hello"*

**Audible prompt**

2.4 Powering On and Off

**Powering On**




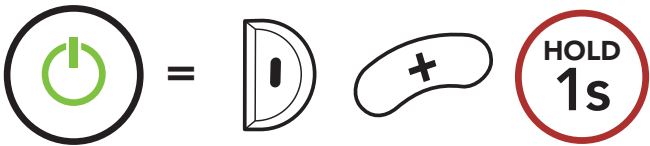
**Powering Off**




2.5 Checking the Battery Level


Instructions are for when powering the headset on.


**Powering On**







=






=





=

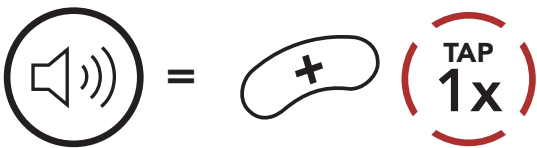


**Note:** When the battery is low while in use, you will hear a voice prompt saying **"Low battery"**.

## 2.6 Volume Adjustment

You can raise or lower the volume by tapping the **(+) Button** or the **(-) Button**. Volume is set and maintained independently at different levels for each audio source (i.e., phone, intercom), even when the headset is rebooted.

### Volume Up



### Volume Down



# 3. PAIRING THE HEADSET WITH OTHER BLUETOOTH DEVICES

When using the headset with other Bluetooth devices for the first time, they will need to be “paired.” This enables them to recognize and communicate with one another whenever they are within range.

The headset can pair with multiple Bluetooth devices such as a mobile phone, MP3 player, or Sena SR10 Two-Way Radio Adapter via **Mobile Phone Pairing** and **Second Mobile Phone Pairing**.



## 3.1 Phone Pairing

There are three ways to pair the phone.

### 3.1.1 Initially Pairing the Expand Mesh

The headset will automatically enter the phone pairing mode when you initially turn on the headset or in the following situation:

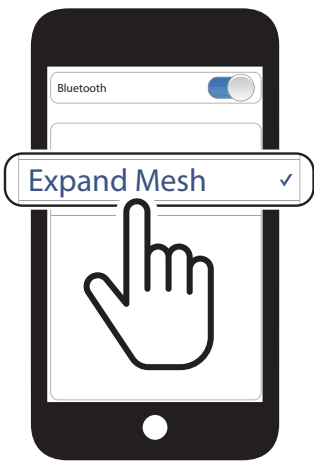
- Rebooting after executing **Factory Reset**.
1. Press and hold the **Center Button** and the **(+) Button** for **1 second**.



**Note:**

- The phone pairing mode lasts for **3 minutes**.
- To cancel phone pairing, tap the **Center Button**.

- 2. Select **Expand Mesh** in the list of Bluetooth devices detected. If your mobile phone asks for a PIN, enter 0000.

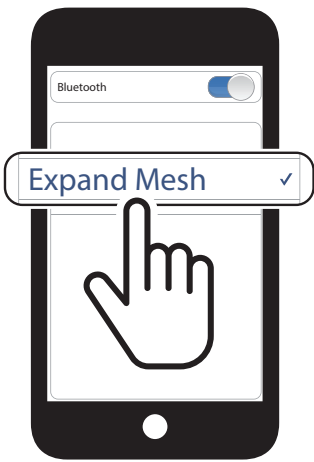


3.1.2 Pairing When the Expand Mesh is Turned Off

- 1. While the headset is off, press and hold the **Center Button** and the **(+) Button** until the LED flashes red and blue alternately and you hear a voice prompt, **"Phone pairing."**



- 2. Select **Expand Mesh** in the list of Bluetooth devices detected. If your mobile phone asks for a PIN, enter 0000.

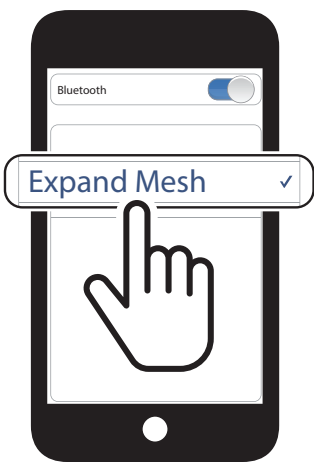


3.1.3 Pairing When the Expand Mesh is Turned On

- 1. While the headset is on, press and hold the **Center Button** for **5 seconds**.

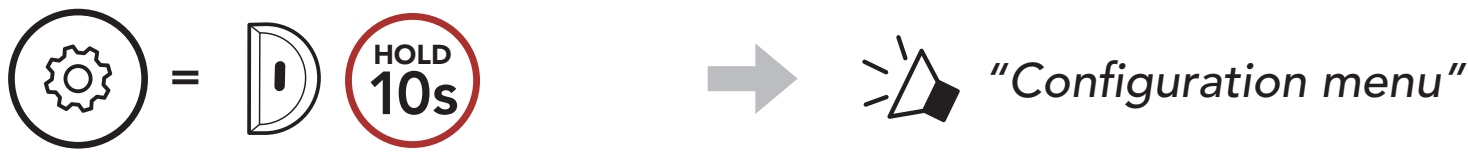


- 2. Select **Expand Mesh** in the list of Bluetooth devices detected. If your mobile phone asks for a PIN, enter 0000.



### 3.2 Second Mobile Phone Pairing - Second Mobile Phone and SR10

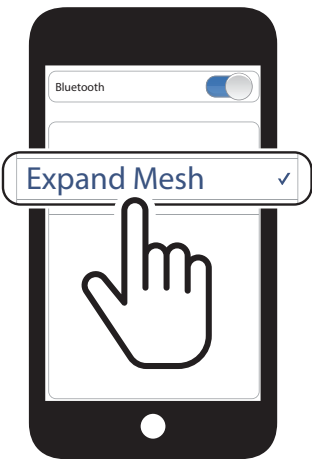
1. Press and hold the **Center Button** for **10 seconds**.



2. Tap the **(+) Button**.



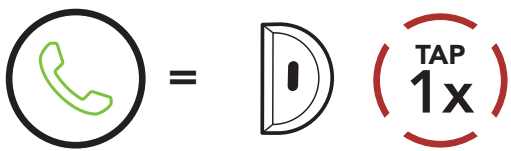
3. Select **Expand Mesh** in the list of Bluetooth devices detected. If your Bluetooth device asks for a PIN, enter 0000.



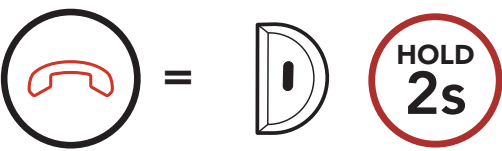
# 4. MOBILE PHONE USAGE

## 4.1 Making and Answering Calls

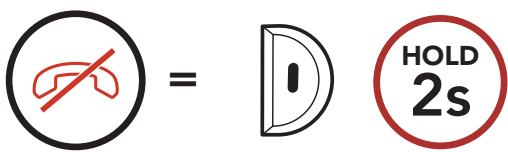
### Answer a Call



### End a Call



### Reject a Call



### Make a Call with Voice Dial



## 4.2 Speed Dialing

### 4.2.1 Assigning Speed Dial Presets

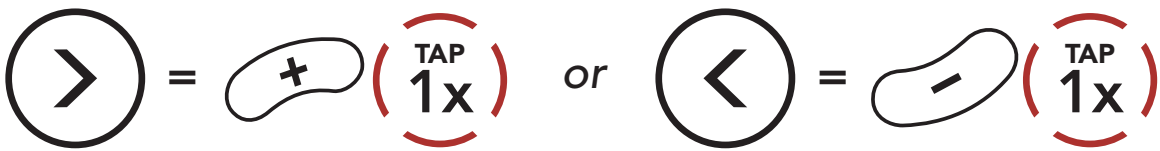
**Speed Dial Presets** could be assigned through the **Sena Device Manager** or the **Sena Outdoor App**.

### 4.2.2 Using Speed Dial Presets

1. Enter into the **Speed Dial** menu.



2. Navigate forward or backward through **Speed Dial Preset** numbers.



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

- (4) Speed dial 3
- (5) Cancel

3. Call one of your **Speed Dial Presets** numbers.



4. Redial the last number called.

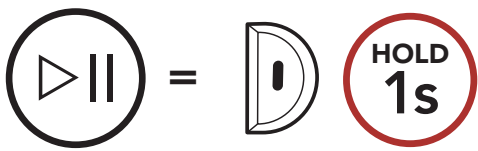
**Redial Last Number**



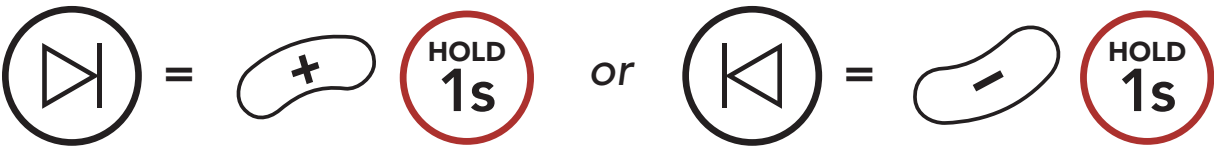
# 5. STEREO MUSIC

## 5.1 Playing Music with Bluetooth Devices

### Play/Pause Music



### Track Forward/Backward



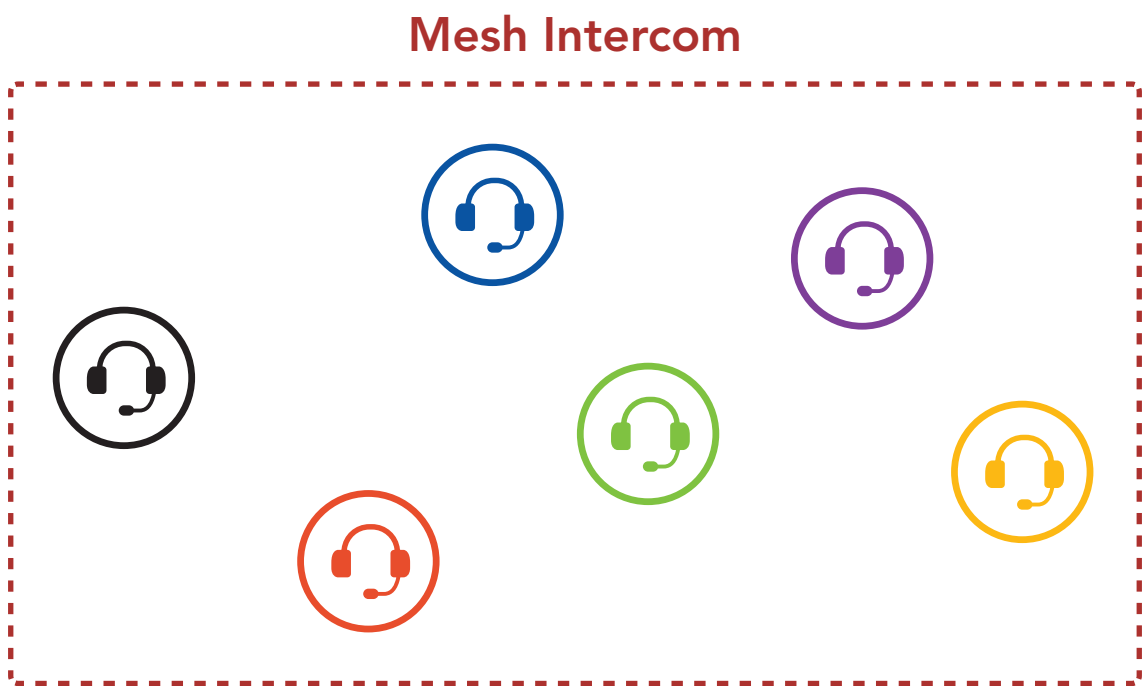


# 6. MESH INTERCOM

## 6.1 What is Mesh Intercom?

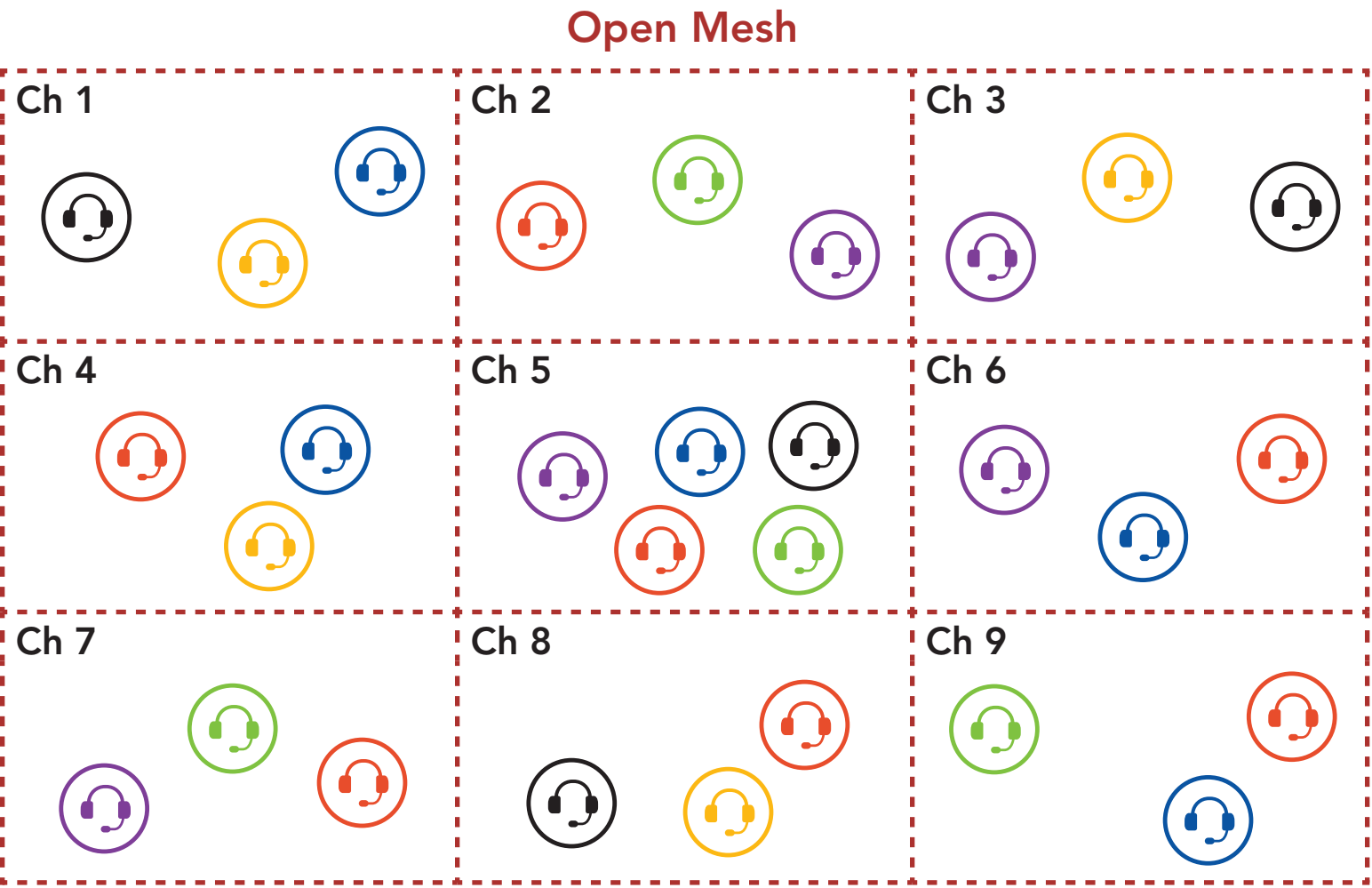
**Mesh Intercom™** is a dynamic communication system created by Sena that provides instant and effortless bike-to-bike communication without a pre-grouping process. **Mesh Intercom** allows riders to connect and communicate with nearby users without the need to pair each headset together.

The working distance between each **Expand Mesh** in **Mesh Intercom** can be up to 0.4 km (0.2 miles) in open terrain. In open terrain, the **Mesh** can be extended up to 1.6 km (1 miles) between a minimum of six users. Within the same channel in **Open Mesh™** or the same private group in **Group Mesh™**, six users can talk at the same time and enjoy the optimal quality for their conversation.



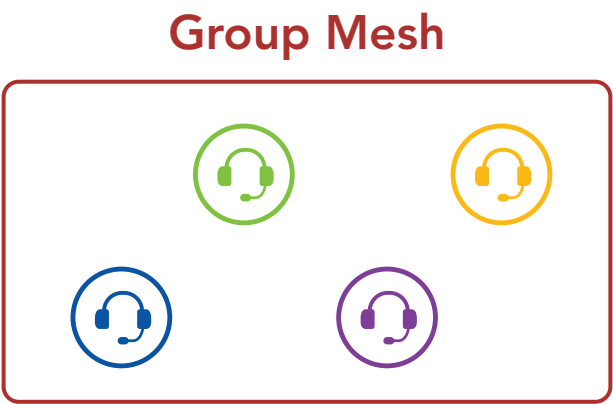
### 6.1.1 Open Mesh

**Open Mesh** is an open group intercom function. Users can freely communicate with each other in the same **Open Mesh** channel and select which channel (1-9) to use through the headset. It can connect with a virtually unlimited number of users in each channel.



### 6.1.2 Group Mesh

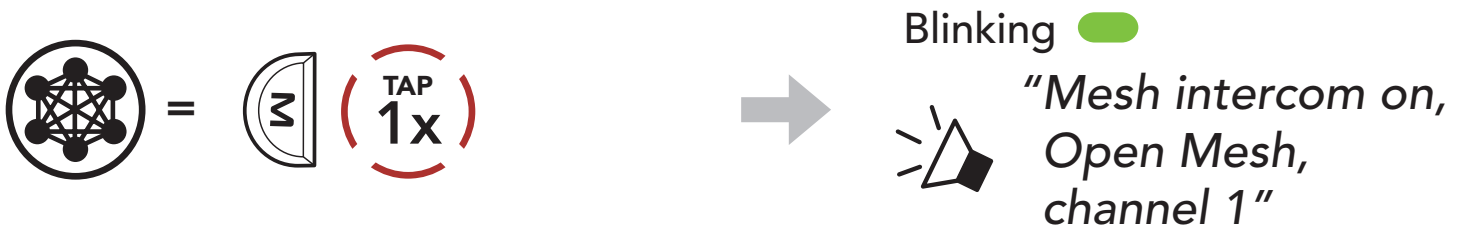
**Group Mesh** is a closed group intercom function that allows users to join, leave, or rejoin a group intercom conversation without pairing each headset. Users can freely communicate with each other in the same private group in **Group Mesh**. For closed intercom conversations using **Mesh Intercom**, a **Group Mesh** needs to be created by the users. When users create a private group in **Group Mesh** by **Mesh Grouping**, the headset automatically switches from **Open Mesh** to **Group Mesh**. Up to 24 users can all be connected in each private group.



## 6.2 Starting Mesh Intercom

When **Mesh Intercom** is enabled, the **Expand Mesh** will automatically connect to nearby **Expand Mesh** users and allow them to talk to each other by pressing the **Mesh Intercom Button**.

### Mesh Intercom On



### Mesh Intercom Off



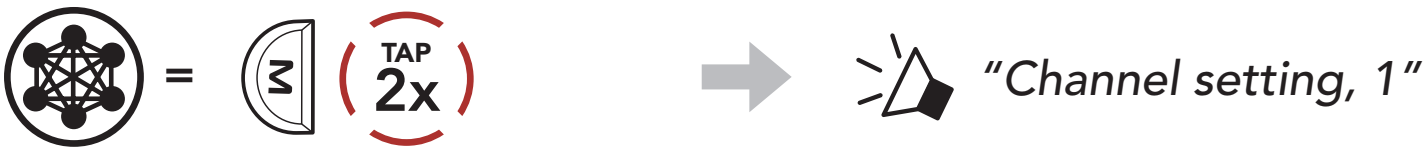
## 6.3 Using the Mesh in Open Mesh

When **Mesh Intercom** is enabled, the headset will be in **Open Mesh (default: channel 1)** initially.

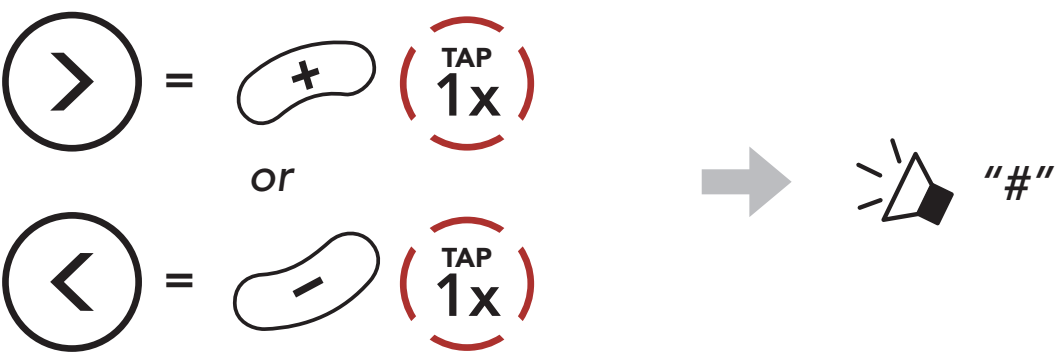
### 6.3.1 Channel Setting (Default: channel 1)

If the **Open Mesh** communication experiences interference because other groups are also using **channel 1 (default)**, change the channel. You can select from channels 1 to 9.

- 1. Double tap the **Mesh Intercom Button**.



- 2. Navigate between channels.  
(1 → 2 → ... → 8 → 9 → Exit → 1 → ...)



3. Save the channel.



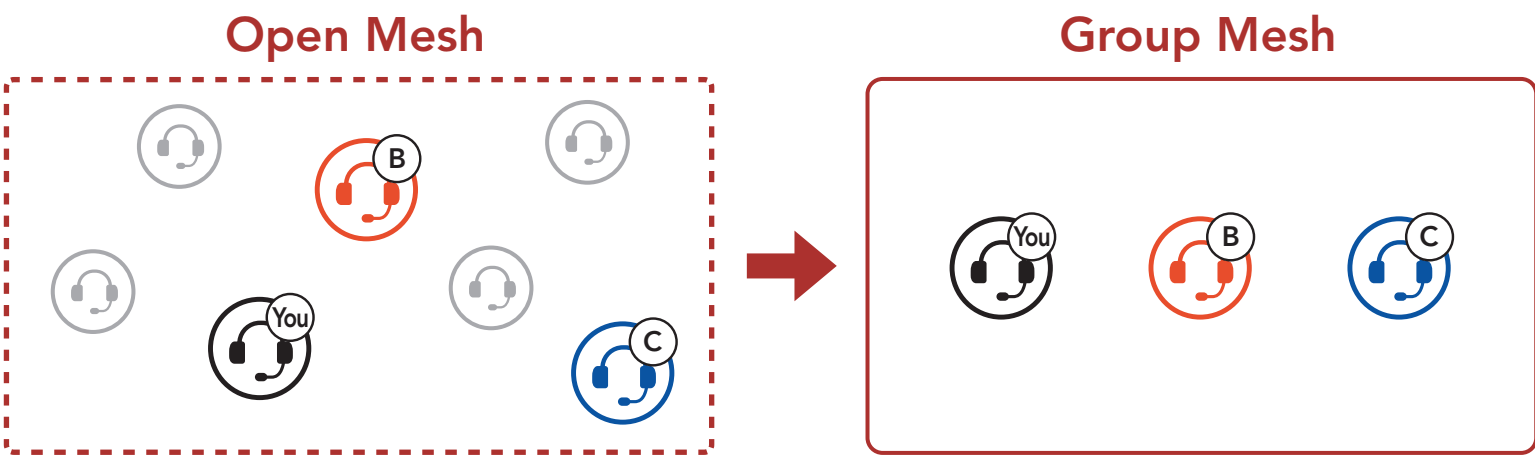
**Note:**

- **Channel Setting** always starts with channel 1.
- If you do not press any button for approximately **10 seconds** in a specific channel, the channel is automatically saved.
- The channel will be remembered even if you turn off the **Expand Mesh**.
- You can use the **Sena Outdoor App** to change the channel.

## 6.4 Using Mesh in Group Mesh

### 6.4.1 Creating a Group Mesh

Creating a **Group Mesh** requires **two or more Open Mesh users**.



1. To enter **Mesh Grouping** to create a **Group Mesh**, press and hold the **Mesh Intercom Button** for **5 seconds** on the **users (You, B, and C)** headsets.



2. When **Mesh Grouping** is completed, the **users (You, B and C)** will hear a voice prompt on their headset as **Open Mesh** switches to **Group Mesh**.

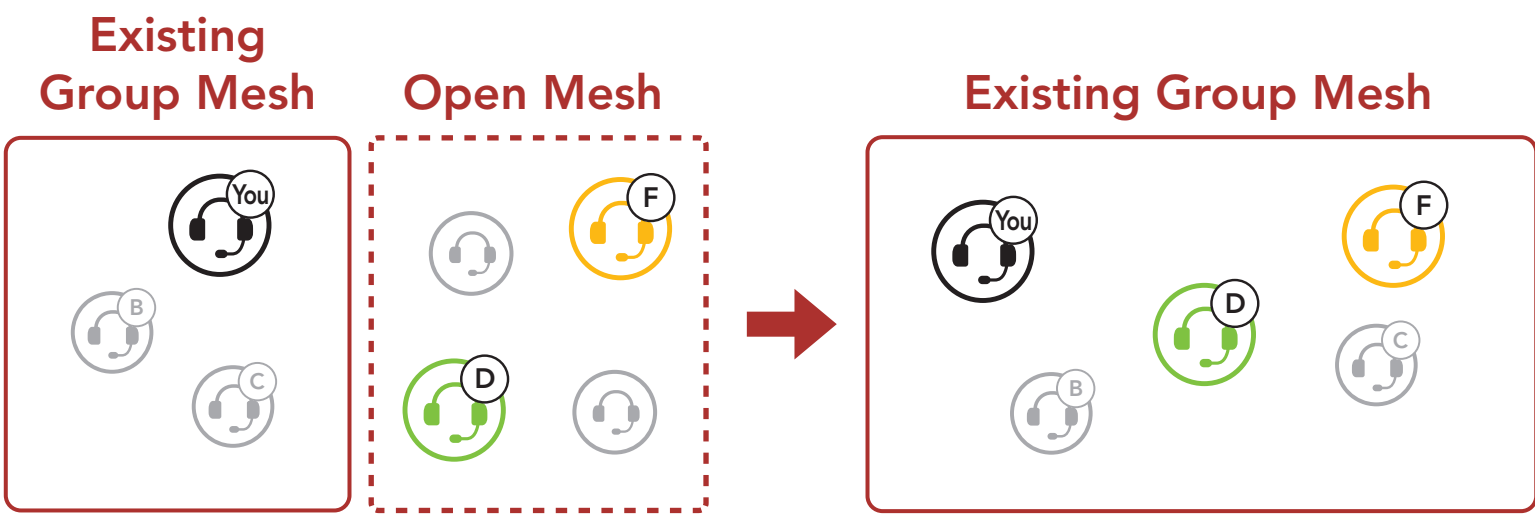


**Note:**

- If the **Mesh Grouping** is not completed within **30 seconds**, users will hear a voice prompt, **"Grouping failed"**.
- If you want to cancel during the **Mesh Grouping**, tap the **Mesh Intercom Button**.

6.4.2 Joining an Existing Group Mesh

One of the **current users** in an **Existing Group Mesh** can allow **new users (one or more)** in **Open Mesh** to join the **Existing Group Mesh**.



1. To enter **Mesh Grouping** to join the **Existing Group Mesh**, press and hold the **Mesh Intercom Button** for **5 seconds** on the headsets of **one (You) of the current users** in the **Existing Group Mesh** and the **new users (D and F)** in **Open Mesh**.



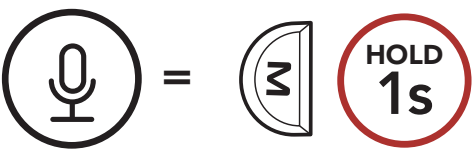
2. When **Mesh Grouping** is completed, the **new users (D and F)** will hear a voice prompt on their headset as **Open Mesh** switches to **Group Mesh**.



**Note:** If the **Mesh Grouping** is not completed within **30 seconds**, the current user (You) will hear a low tone double beep and the new users (D and F) will hear a voice prompt, **"Grouping failed"**.

## 6.5 Enable/Disable Mic (Default: Enable)

Users can enable/disable the microphone when communicating in a **Mesh Intercom**.

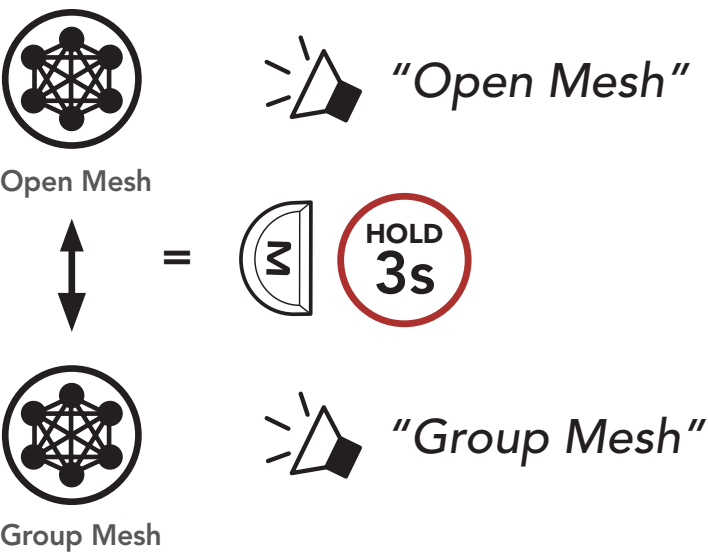


## 6.6 Toggling Open Mesh/Group Mesh

Users are able to toggle between **Open Mesh** and **Group Mesh** without resetting the **Mesh**. This allows users to keep the **Group Mesh Network** connection information while in **Open Mesh**.

Users can toggle to **Group Mesh** to communicate with participants from the stored **Group Mesh Network** connection information.

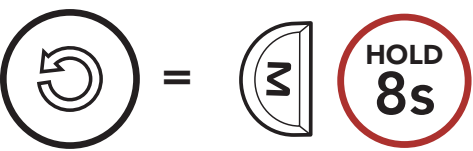
### Toggle Between Open Mesh and Group Mesh



**Note:** If you have never participated in **Group Mesh**, you cannot toggle between **Open Mesh** and **Group Mesh**. You will hear a voice prompt, **"No Group Available"**.

## 6.7 Reset Mesh

If a headset in an **Open Mesh** or **Group Mesh** resets the **Mesh**, it will automatically return to **Open Mesh (default: channel 1)**.



## 7. MESH AUDIO MULTITASKING (ALWAYS ON)

**Audio Multitasking** allows you to have an intercom conversation while simultaneously listening to music.

The overlaid audio is played in the background with reduced volume whenever there is an intercom conversation and will return to normal volume once the conversation is finished.

The **Audio Multitasking** can be configured through the **Intercom-Audio Overlay Sensitivity** and the **Audio Overlay Volume Management settings**.

The **Intercom-Audio Overlay Sensitivity** and the **Audio Overlay Volume Management settings** can be found in the **Software Configuration Setting**, accessible through the **Sena Device Manager** or the **Sena Outdoor App**.

## 8. FUNCTION PRIORITY AND FIRMWARE UPGRADES

### 8.1 Function Priority

The headset prioritizes connected devices in the following order:

- (highest) Mobile phone
- Mesh Intercom
- (lowest) Bluetooth stereo music

A lower-priority function gets interrupted by a higher-priority function. For example, stereo music will be interrupted by an incoming mobile phone call.

### 8.2 Firmware Upgrades

You can upgrade firmware using the **Sena Device Manager**.

The **USB Power & Data Cable (USB-C)** must be connected to your PC to upgrade firmware using the **Sena Device Manager**.

Please visit **sena.com** to download the **Sena Device Manager**.




[Click Here to Visit sena.com](https://sena.com)






# 9. CONFIGURATION SETTING




## 9.1 Headset Configuration Menu

Access the Configuration Menu




 =  

Navigate Between Menu Options

 =  

 =  

Execute Menu Options

 =  

Headset Configuration Menu

Voice Configuration Menu	Tap the Center Button
Second Mobile Phone Pairing	None
Factory Reset	Execute
Exit	Execute

## 9.2 Software Configuration Setting

You can change the settings of the headset through the **Sena Device Manager** or the **Sena Outdoor App**.

 **Sena Outdoor**

 **Sena Device Manager**

## 9.2.1 Headset Language

You can select the device language. The selected language is maintained even when the headset is rebooted.

## 9.2.2 VOX Phone (Default: Enable)

If this feature is enabled, you can answer incoming calls by voice. When you hear a ringtone for an incoming call, you can answer the phone by saying a word such as **"Hello"** loudly or by blowing air into the microphone. **VOX Phone** is temporarily disabled if you are connected to intercom. If this feature is disabled, you have to tap the **Center Button** to answer an incoming call.

## 9.2.3 VOX Sensitivity (Default: 3)

**VOX Sensitivity** can be adjusted depending on your riding environment. **Level 5** is the highest sensitivity setting and **level 1** is the lowest.

## 9.2.4 Intercom-Audio Overlay Sensitivity (Default: 3)

The music will be lowered to play in the background if you talk over the intercom while the overlaid audio is playing. You can adjust the intercom sensitivity to activate this background audio mode. **Level 1** has the lowest sensitivity and **level 5** has the highest sensitivity.

**Note:** If your voice is not louder than the sensitivity of the selected level, the overlaid audio will not be lowered.

## 9.2.5 Audio Overlay Volume Management (Default: Disable)

The music overlaid audio reduces in volume whenever there is an ongoing intercom conversation. If **Audio Overlay Volume Management** is enabled, the volume level of the overlaid audio will not be reduced during an intercom conversation.

## 9.2.6 Voice Prompt (Default: Enable)

You can disable **Voice Prompts** by software configuration settings, but the following voice prompts are always on.

- Headset configuration settings menu, battery level indicator, speed dial

# 10. TROUBLESHOOTING

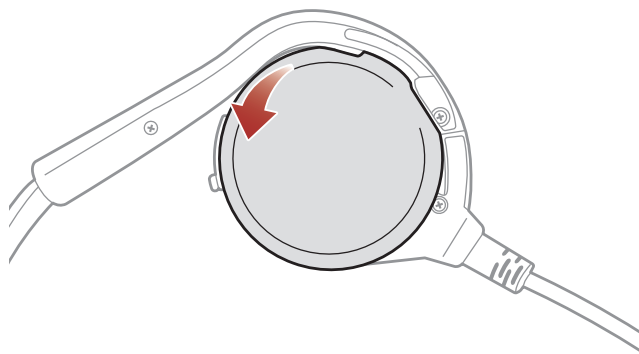
Please visit [sena.com](https://sena.com) for more troubleshooting information.

- Customer Support: [sena.com](https://sena.com)

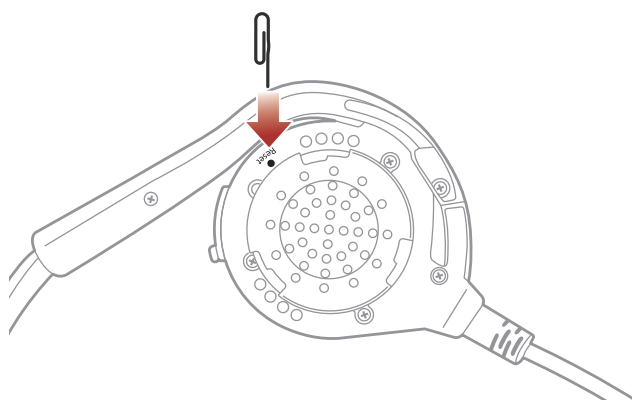
## 10.1 Fault Reset

When the Sena **Expand Mesh** is not working properly or is faulty for any reason, you may reset it by pushing the **Pinhole Fault Reset Button** at the back of the headset main unit.

1. Rotate the speaker pad of the left headset counter-clockwise to detach it.



2. Insert a paper clip into the hole and tap the **Pinhole Fault Reset Button** for a second using light pressure. The Sena **Expand Mesh** will be switched off, and you have to turn the system back on and try again.







**Note: Fault Reset** will not restore the headset to factory default settings.


# 10.2 Factory Reset




To erase all of your settings and start fresh, the headset can be restored to factory default settings using the **Factory Reset** feature.


1.


 =  







 "Configuration menu"
2.


 =  



 "Factory reset"
3.

 =  



 "Headset reset, good-bye"



Copyright © 2022 Sena Technologies, Inc.  
All rights reserved.

© 1998–2022 Sena Technologies, Inc. All rights reserved.

Sena Technologies, Inc. reserves the right to make any changes and improvements to its product without providing prior notice.

Sena™ is a trademark of Sena Technologies, Inc. or its subsidiaries in the USA and other countries. SF1™, SF2™, SF4™, SFR™, SRL™, Momentum™, Momentum INC™, Momentum Lite™, Momentum Pro™, Momentum INC Pro™, Momentum EVO™, Cavalry™, Latitude SR™, Latitude SX™, Latitude S1™, 30K™, 33i™, 50S™, 50R™, 50C™, 5S™, 5R™, 5R LITE™, 20S EVO™, 20S™, 10S™, 10C™, 10C PRO™, ProRide EVO™, 10C EVO™, 10U™, 10Upad™, 10R™, ACS10™, ACS-RAM™, C1™, 3S™, 3S PLUS™, SMH5™, SMH5-FM™, SMH5 MultiCom™, SMH10™, SMH10R™, SPH10™, SPH10H-FM™, Savage™, Prism Tube WiFi™, Prism™, Bluetooth Audio Pack for GoPro®, Impulse™, FURY™, R1™, R1 EVO™, R1 EVO CS™, R2™, R2 EVO™, R2X™, M1™, M1 EVO™, RUMBA™, RC1™, RC3™, RC4™, Stryker™, Handlebar Remote™, Wristband Remote™, PowerPro Mount™, Powerbank™, FreeWire™, WiFi Docking Station™, WiFi Sync Cable™, WiFi Adapter™, +mesh™, +Mesh Universal™, MeshPort Blue™, MeshPort Red™, MeshPort Black™, Econo™, OUTRUSH™, OUTRUSH R™, OUTSTAR™, OUTSTAR S™, OUTFORCE™, OUTRIDE™, OUTRUSH M™, ORCA 1™, EcoCom™, Parani A10™, Parani A20™, Parani M10™, pi™, Snowtalk™, Snowtalk2™, SR10™, SR10i™, SM10™, SPIDER RT1™, SPIDER ST1™, X1™, X1 Pro™, X1S™, Expand™, Expand Boom™, Expand Mesh™, Bluetooth Mic & Intercom™, Tufftalk™, Tufftalk Lite™, Tufftalk M™ are trademarks of Sena Technologies, Inc. or its subsidiaries. These trademarks may not be used without the express permission of Sena.

GoPro® is a registered trademark of Woodman Labs of San Mateo, California. Sena Technologies, Inc. ("Sena") is not affiliated with Woodman Labs, Inc. The Sena Bluetooth Pack for GoPro® is an aftermarket accessory specially designed and manufactured by Sena Technologies, Inc. for the GoPro® Hero3 and Hero4 allowing for Bluetooth capabilities.

The Bluetooth® word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by Sena is under license. iPhone® and iPod® touch are registered trademarks of Apple Inc.

Address: 152 Technology Drive Irvine, CA 92618