

# Defender

## Waterproof Outdoor Speaker

Model: GDI-EXDFNR00...22



## User Guide (V2)

# Important

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## Warning!

**ONLY use the 18V Power Adapter included with your Defender to charge your unit!**

Do **NOT** charge the Defender with any other manufacturer's power adapter.

Using an alternate power adapter is a **FIRE HAZARD** that may **DAMAGE** the unit, your property and cause personal injury.

Use of an alternate power adapter may cause the internal batteries to overcharge and overheat! In extreme cases, use of the wrong power adapter may cause the batteries to expand, leak, and catch **FIRE!**

**ATTENTION:** Before plugging the Power Cable into the Defender's Power Input Jack, please confirm that you are only using the supplied ECOXGEAR 18VDC Power Adapter. There is a tag on the Power Cable marked '**Defender**' on one side and '**ECOXGEAR**' on the other side.

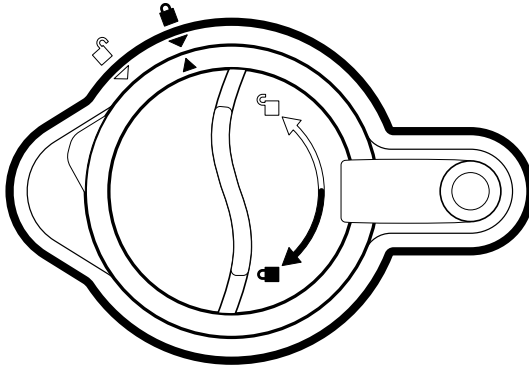
## Maintaining Waterproofness

The Defender has an IP67 waterproof and dust proof rating. Please note if the cap on the back is not properly closed, the unit is **NOT** watertight.

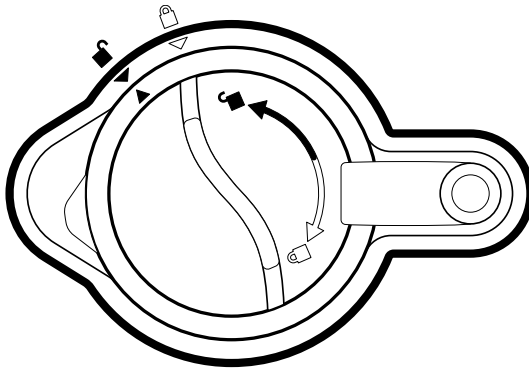
In the following situations the cap will not be closed; thus, the unit is not waterproof when:

1. The Defender is being charged by the included AC-DC Power Adapter.
2. An Aux-In cable (not included) is plugged in for Aux-In audio playback.
3. An external microphone (not included, sold separately) is plugged in.
4. The Defender is charging a phone via the USB-C port.

## Waterproof Caps



Lock



Unlock

To close properly, turn the cap clockwise so the cap's arrow point lines up with the right arrow.

To access the connections, turn the cap counterclockwise so the cap's arrow point lines up with the left arrow, then pull the tab on the cap to open.

# Introduction

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## Features & Functionality

The Defender includes the following features.

### Rugged Speaker with Big Sound

- 100% waterproof and dustproof. Meets IP67 international waterproof and dustproof standards. It floats too!
- 100 Watts Texas Instruments high performance dynamic power amplifier for massive sound.
- 6" x 9" Polypropylene carbon fiber blend woofer with High temperature vulcanized rubber.
- 1.7" titanium tweeter with ultra-strong magnet.
- Play up to 25+ hours on the rechargeable battery.

### ecoEQ Mode and External Microphone Special Effect

- Integrated high-performance proprietary 24-bit DSP (Digital Signal Processor) with audio enhancing engine provides the following 3 equalizer settings:
- Default: This setting rocks! Our team of sound engineers squeezed out maximum bass with no distortion and clear, crisp vocal presence to complement your favorite outdoor activity.
- Indoor: We changed the sound profile to be a bit warmer to complement the acoustics inside your home.
- Outdoor: We tweaked up the high frequencies a bit and turned down the bass slightly so we could max out the dB level to cut through wind and other noisy outdoor environments.
- A dedicated DSP to process external microphone signals for those who like to sing along with the music during those late-night campfires. You can choose from 3 External Microphone

Special Effect settings (this setting does not affect the built-in speakerphone function):

Default: No effect.

Reverberation: This effect makes your voice richer and warmer.

Echo: Adds an echo effect to your voice.

## **Multi-Audio Source Inputs and Output**

- Bluetooth streaming.
  - Bluetooth 5.1 long range and reliable connection to your phone.
  - Dual simultaneous connections – switch playback between two connected phones.
  - Built-in speakerphone function.
  - EcoTalk function: One-button press for easy Voice Assistant (Siri and Hey Google) activation.
- Aux-In audio connection.
- External Microphone Jack for PA or campfire sing-alongs (Dynamic mic only, mic sold separately).

## **Built-in EcoCast Wireless Audio**

- Wirelessly stream your speaker's Bluetooth music or Aux-In audio to EcoCast-enabled speakers. Supports up to 100 wireless connections between any mix of EcoCast-enabled ECOXGEAR and SoundExtreme soundbars, subwoofers, marine radios, and party speakers.
- Play audio streams wirelessly received from an EcoCast Transmitting speaker. No wires!

## **EcoCast ST for True Stereo Audio**

- EcoCast ST supports up to 100 wireless connections and allows you to set each speaker up in party mode (mono), left or right channel for true stereo audio. EcoCast ST is compatible with EcoCast\*.

\*EcoCast speakers can connect to EcoCast ST speakers, but only EcoCast ST speakers can change from party mode (mono) to left or right channel.

# Introduction

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## **LEDCast Lighting**

- Addressable RGB LED Party Lights behind the woofer and built-in LEDCast LED Lighting Controller.
- Built-in Flashlight with 3 brightness level settings.

## **SoundExtreme Smartphone App**

- With the free SoundExtreme Smartphone App customize your LED's colors, speed, brightness, music sync, and LED chasing.
- Create dozens of LED patterns. Have fun selecting colors to support your favorite sports team!
- With the app, you can add additional 4-Zone LED controllers (sold separately) and other LEDCast products to expand your light show. Create custom scenes to change all Zones at once with your favorite LED light show. Control them all from one app!
- Select your Flashlight's brightness (high, mid, and low) and set a timer to automatically turn the light off at a desired time.

## **5V USB-C Charge Out**

- A 5V, 2.1A USB-C charge output for charging your phone.

## **Backlit Buttons**

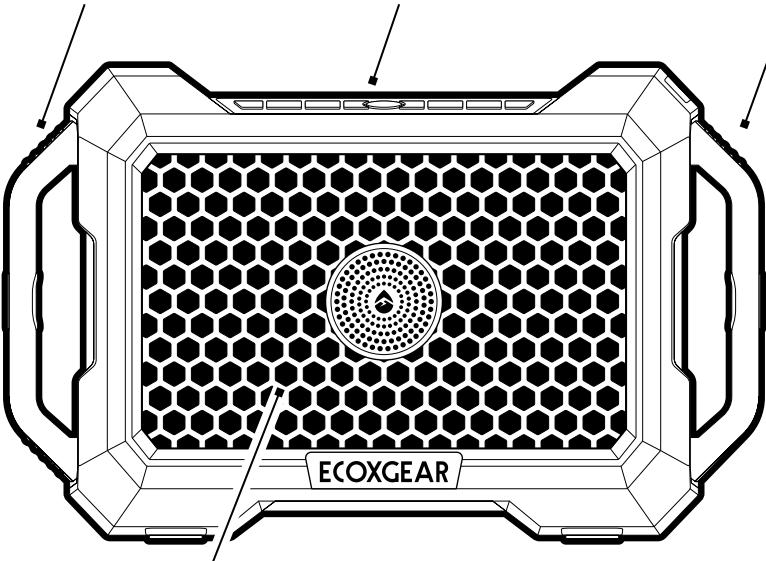
- When any button is pressed, the backlights will turn on to illuminate them for night use.

## **Built-in Bottle Opener**

- The built-in Bottle Opener is under the Defender's right handle.

## Defender Layout

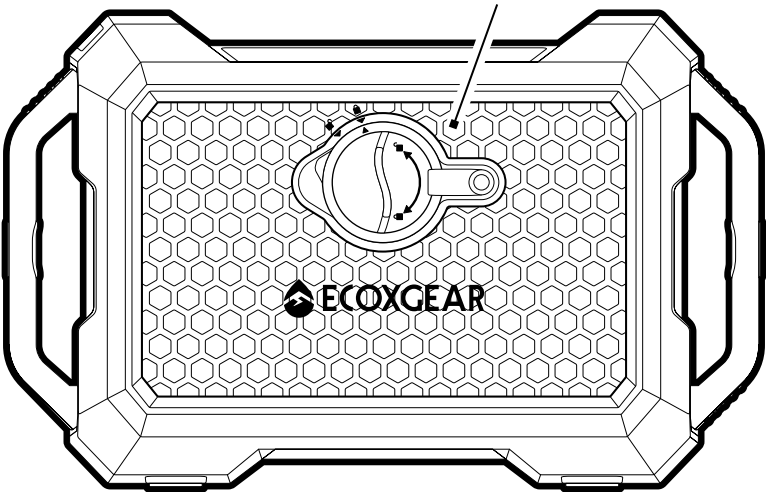
Rugged Carrying Handle    Control Panel    Rugged Carrying Handle



LED Party Lights

**FRONT**

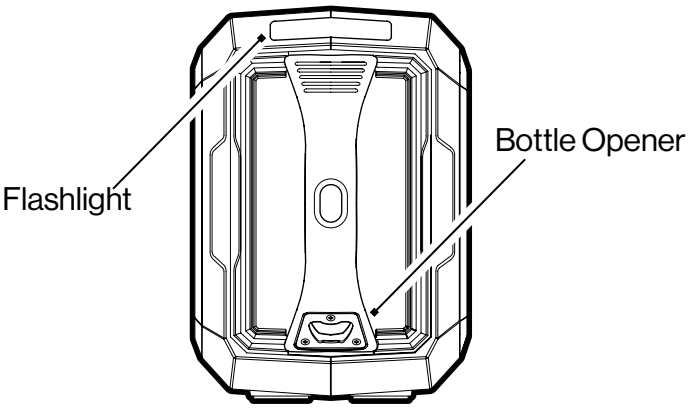
Connections + Power Ports



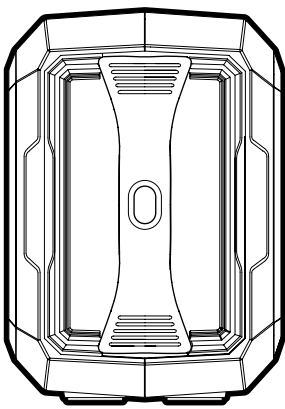
**BACK**

# Defender Overview

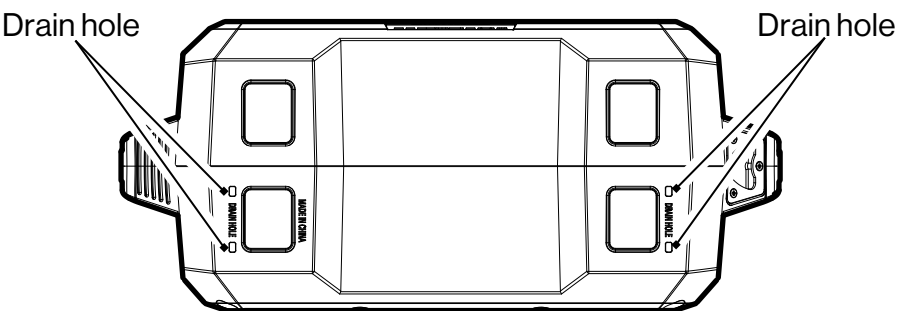
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RIGHT SIDE

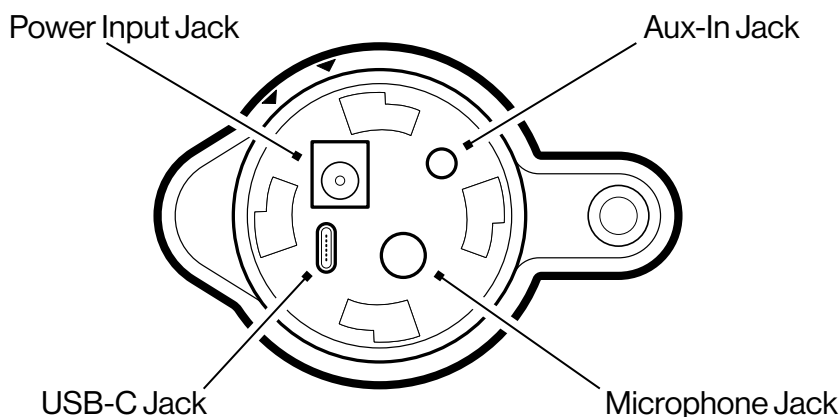


LEFT SIDE



**Note:** There are drainage holes at the bottom on the both sides. It is normal if water comes out from the holes after putting the speaker into water.





### Inputs and Outputs

Do **NOT** use these connections if they are wet.

**Microphone Input:** ¼" (6.35 mm) mic jack. You can input a microphone, guitar, or other musical instrument.

**Auxiliary Input:** 3.5mm audio jack. This input can be used to connect a phone, tablet, CD player, MP3 player, etc.

**USB-C Charging Output:** Connect your device's charge cable here to charge it. USB-C charging only functions when the Defender's power is turned on. USB-C port rating is 5V, 2.1A.

**Important:** This USB-C Jack is **NOT** the charging port to charge the Defender. Plugging in a USB-C charger to this port will damage the internal electronics and **VOID THE PRODUCT WARRANTY**.

**Power Input:** Plug in the included AC-DC Power Adapter here to charge the Defender. There are 5 Battery Level Indicator LEDs on the top of the unit. When the Defender is being charged, the LEDs will flash to indicate charging level. When fully charged, all 5 LEDs will be lit solid green, without flashing.

When the battery level drops below 15%, the first LED Indicator will flash Green.

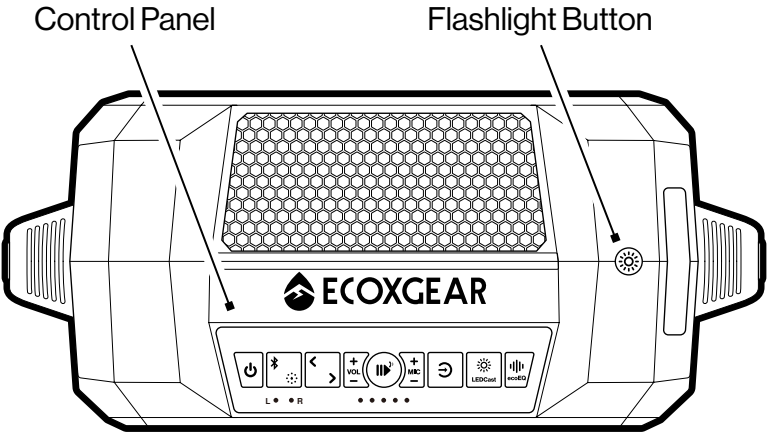
# Connections + Power

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## Notes:

- Fully charge prior to first use (5-6 hours).
- Fully charge prior to extended storage (5-6 hours).
- The Defender can be played while battery charges.
- Store unplugged, but fully recharge every 3 months (4-8 hours).

# Controls Overview








TOP

BUTTON	ACTION	FUNCTION
	<b>Press and Hold</b> (for 3 seconds)	Power on
	<b>Short-Press</b>	Power off
	<b>Short-Press</b>	Enter Bluetooth Pairing Mode
	<b>Press and Hold</b> (for 5 seconds)	Clear all Bluetooth and EcoCast pairing records
	<b>Short-Press</b>	Re-enter EcoCast Pairing Mode
	<b>Short-Press</b>	Play the previous audio track
	<b>Short-Press</b>	Skip forward to the next audio track
	<b>Press and Hold</b> (for 2 seconds)	Each Press and Hold to cycle through Mono, Left Channel and Right Channel modes

# Controls Overview

BUTTON	ACTION	FUNCTION
<b>VOL</b> —	Short-Press	Decrease Speaker Volume
<b>+</b> <b>VOL</b>	Short-Press	Increase Speaker Volume
	Short-Press	Play / pause audio  When receiving phone call: Answer*  When on a phone call: End*
	Press and Hold (for 3 seconds)	Activate your voice assistant (Siri or Hey Google)*  When receiving a phone call: Reject*
	*Before using these functions, your device must be connected to the Defender via Bluetooth.	
<b>MIC</b> —	Short-Press	Decrease external Microphone Volume
<b>+</b> <b>MIC</b>	Short-Press	Increase external Microphone Volume
	Short-Press	Cycle through the following Audio Source Modes: Bluetooth, EcoCast Transmitting, EcoCast Receiving, and Aux-In.

# Controls Overview

BUTTON	ACTION	FUNCTION
 <b>LED</b> <b>Cast</b>	<b>Short-Press</b>	Turn on the LED Lighting Scene; then each short-press will cycle through the 5 Scenes
	<b>Double-Click</b>	Turn on the LED Lighting Mode; then each double-click will cycle through the 44 LED Lighting Modes
	<b>Press and Hold</b> (for 3 seconds)	Turn the Party Lights off
 <b>ecoEQ</b>	<b>Short-Press</b>	Cycle through the three EQ Modes: Default, Indoor and Outdoor
	<b>Press and Hold</b> (for 3 seconds)	Cycle through the three External Microphone Special Effect settings: No effect, Reverberation, and Echo
	<b>Short-Press</b>	Cycle through the three Flashlight Brightness Levels (high, mid, low) and off
	<b>Press and Hold</b> (for 3 seconds)	Turn the Flashlight off
<b>VOL</b>   <b>LED</b> <b>Cast</b>	<b>Press and Hold Both Buttons</b> (at the same time for 1.5 seconds)	Disable / enable Button Backlight

# LED Status Indicators

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## Battery Level Indicators

There are five LED Battery Level Indicators located on the top of the unit. Each green LED represents 20% of a charge. Five full LEDs indicate a full charge.

## Left and Right Channel Indicators

There are two LED indicators. When the left LED is on, the speaker is set to play left channel only; when the right LED is on, the speaker is set to play right channel only. When both LEDs are off, the speaker is set to play mono.

## Audio Source Mode Indicator

The Audio Source Mode LED backlight has different colors to show different Audio Source Modes. Refer to Audio Functions for more details.

- Solid Blue - Bluetooth Audio Mode
- Solid Red - EcoCast Transmitting Audio Mode
- Solid Green - EcoCast Receiving Audio Mode
- Solid Yellow - Aux In Audio Mode

## EcoCast and Paring Indicator

The EcoCast Button's LED backlight has different color to show different status.

- Solid Red - EcoCast Transmitting pairing time out. Please try again.
- Flashing Red - EcoCast Transmitting pairing ready.
- Solid Green - EcoCast Receiving pairing successful.
- Flashing Green - EcoCast Receiving pairing ready.
- Slowly Flashing Green - EcoCast Receiving pairing time out.
- Please try again.

## Bluetooth Status Indicator

The Bluetooth Button's LED backlight serves as the Defender's Bluetooth Status Indicator.

- Flashing Blue – Bluetooth pairing ready.
- Solid Blue – Bluetooth pairing successful.
- LED Off – Bluetooth pairing time-out; pairing not enabled. Please try again.


The Defender also has an External Microphone Special Effect feature. Refer to **ecoEQ Mode** for more details.

- Flash Orange, once – No effect.
- Flash Cyan, once – Reverberation effect.
- Flash Purple, once – Echo effect.

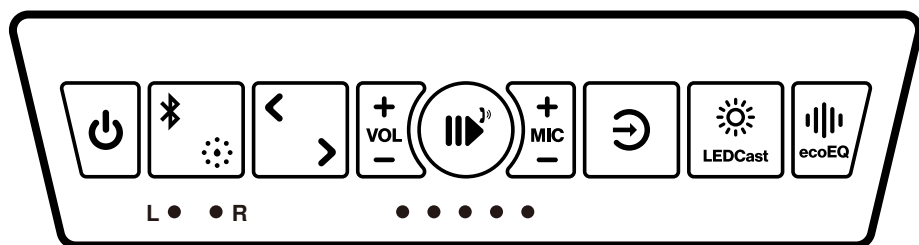
## Button Backlights

All the Control Panel buttons have backlights to illuminate them for night use. The factory default is for the LED lights to stay on after the Defender is turned on.

If you want the button backlights to remain off all the time, you can

**Press and Hold** the **VOL**  and LEDCast Party Lights  Buttons at the same time for 1.5 seconds. **Press and Hold** the two buttons again to turn on the backlights on again.

The Defender will remember your On/Off setting after you **Press and Hold** the two buttons. If you turn off the backlights, next time you turn on the Defender, the buttons will not be illuminated.







## Power On/Off

**Power On:** Press and hold  for 1 second to power on the Defender. The speaker will produce a prompt tone.

**Power Off:** Short-press  to power off the Defender.

## Connecting and Playing Bluetooth Audio


1. **Press and hold** the Power Button  to turn the speaker on.
2. Short-press the Audio Source Button  to cycle through the Audio Source Modes until you hear, "Speaker Mode," announced.
3. On your phone's Bluetooth settings, select '**ECOXGEAR-Defender**' to pair. If you don't see the speaker name, turn your phone's Bluetooth off and back on again to refresh the list, or short-press the Bluetooth Button  on the speaker to enable Bluetooth Pairing again.
4. Wait for a few seconds. Once the pairing and connection are complete, the speaker will produce a prompt tone and the Bluetooth Button's backlight  will shine solid Blue.
5. Once connected, select and play your desired audio. You can now use the Play / Pause Button, Volume Control Buttons, or Track Buttons to control your audio.



# Audio Functions



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## Notes:









- If the pairing is not complete within 5 minutes, the speaker will exit the pairing mode. You need to repeat the pairing steps again.
- After the connection is successful, if you turn the speaker off and turn it on again, it will reconnect to the last connected device automatically.
- **Press and hold**  for 5 seconds to clear all pairing records.

## Bluetooth Audio Controls

**Play / Pause:** After the Defender is connected to your Bluetooth device, press  briefly on the Defender to play. Press  again to pause.

**Tracking:** Short-press  to play the previous audio track. Short-press  to skip to the next track.

## Adjust the Speaker Volume



1. Press **VOL**  or  briefly to adjust the Speaker Volume.
2. **Press and hold** **VOL**  or  to adjust the Speaker Volume continuously.
  - a. Press  briefly to increase one volume level. **Press and hold**  to keep increasing the volume until maximum volume level is reached.
  - b. Press  briefly to decrease one volume level. **Press and hold**  to keep decreasing the volume until minimum volume level is reached.

## Notes:

- If a call is received when you are listening to music, the music will pause automatically.
- You can also control Volume and Play / Pause music operations from your Bluetooth enabled device.

## Dual Simultaneous Connections and Switching Media Player Between Two Phones

Your Defender is capable of maintaining simultaneous connections with two smartphones, which allows you and your family or friends to share music on the speaker by switching the music playback between your phone and your family member or friend's phone. Follow the steps outlined below to switch back and forth between two phones.

1. Connect your phone to the Defender.
2. Short-press the Bluetooth Button  on the Defender. This will disconnect your phone and enable Bluetooth pairing. Connect another phone to the Defender.
3. **Press and hold** the Power Button  on the Defender. The speaker will turn off. Then **press and hold** the button again to turn the speaker on.
4. Your Defender will automatically reconnect to both phones.
5. Play a selected music track on your phone. Your Defender will play your music.
6. On the other phone, select a music track to play. Your Defender will play the music from the other phone. The media player on your phone will pause or stop.
7. If you want to switch back to your phone, press the play button on your phone's media player, your Defender will play the music on your phone. The media player on the other phone will pause or stop.

## Play Aux-In Audio


To make an Aux-In audio connection, follow the steps below.

1. Open the waterproof cap on the back of the Defender.

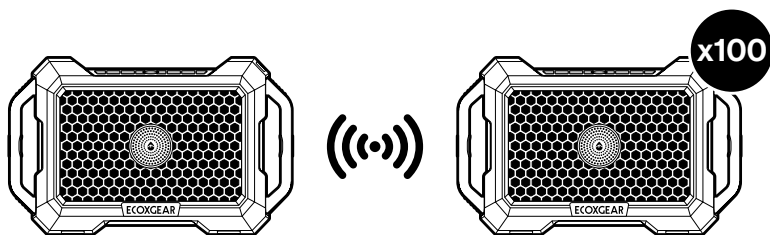
# Audio Functions

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2. Plug in a 3.5mm audio cable (not included) into the audio output on the source unit.
3. Plug in the other end of the 3.5mm audio cable into the Defender's Aux-In Jack.

To play the Aux-In audio, short-press the Audio Source Button  to cycle through to Aux-In Audio Mode. The speaker will now play audio from the source unit.

## EcoCast – Stream Music Between Multiple Speakers



The Defender has EcoCast built-in, which allows the speaker to broadcast (transmit) or receive wireless audio streams to or from other EcoCast-enabled products.

### EcoCast Streaming: Two Modes


Use the Audio Source Button  to set the speaker into EcoCast Transmitting Mode or EcoCast Receiving Mode:

1. EcoCast Transmitting Mode: When set in this Mode, the EcoCast Transmitting speaker broadcasts audio to multiple wireless connected EcoCast-enabled speakers.

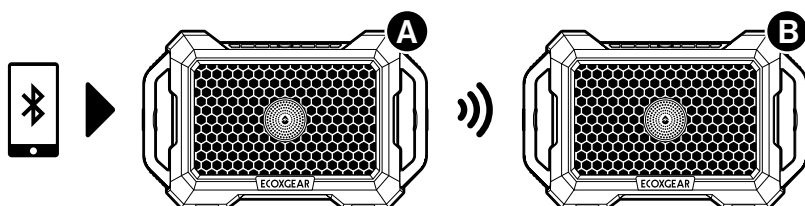
The Transmitting speaker's audio streaming can be the music played from your phone (via Bluetooth) or Aux-In Audio.

2. EcoCast Receiving Mode: When set in this Mode, the speaker will receive audio from an EcoCast Transmitting speaker, soundbar, or radio.

## Notes:

- When set to Speaker Mode, the speaker turns the EcoCast capability off.
- When you have two or more Defenders or other ECOXGEAR or SoundExtreme speakers bearing the EcoCast symbol , you can build a broadcast system by initiating EcoCast Transmitting Mode in one speaker and broadcasting your music to one or more EcoCast-enabled speakers in EcoCast Receiving Mode.

## EcoCast: First Two Speakers



Follow the steps below to pair two Defender speakers:

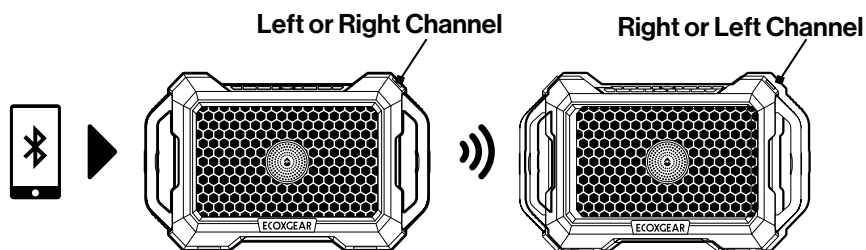
1. Follow the **Connecting and Playing Bluetooth Audio** instructions to connect one Defender (**Speaker A**) to your Bluetooth device. After your device is connected to **Speaker A**, you can play your desired audio.
2. Press the Audio Source Button on **Speaker A**  to cycle through to and initiate EcoCast Transmitting Mode. The Audio Source Mode Indicator will flash Red, and the speaker will announce, "EcoCast transmitting."
3. Turn on the other speaker (**Speaker B**) and press the Audio Source Button  to cycle through to and initiate EcoCast Receiving Mode. The Audio Source Mode Indicator will flash Green, and the speaker will announce, "EcoCast receiving."
4. Once the connection between the speakers is successful, **Speaker B** will produce a prompt tone and start playing audio streams received from **Speaker A**.

## EcoCast: Stereo Setting on 2 Defenders

If you have 2 Defender speakers with EcoCast ST you can set one Defender as transmitter speaker and another as receiving speaker.

The factory default setting is that both Defenders in EcoCast Transmitting and Receiving play Mono audio.

You can set one Defender to play Left Channel and another Defender to play Right Channel for a stereo audio experience with the following steps.



1. Set up EcoCast on the 2 Defenders by the procedures described in Section “EcoCast: First Two Speakers.”
2. If you want to set the Defender in EcoCast Transmitting (which also has a Bluetooth connection to your phone) to playing Left channel audio, press and hold the Skip Next > button on the speaker for 2 seconds, until the “L” LED Indicator shines solid Green. Note that each press and hold will cycle through 3 channel modes.
3. On another Defender in EcoCast Receiving, press and hold the Skip Next > button on the speaker for 2 seconds, until the “R” LED Indicator shines solid Green.
4. Now, your Defender in EcoCast Transmitting mode will play Left channel audio only, and another Defender in EcoCast Receiving will play Right channel audio only.

You can also set the Defender in EcoCast Transmitting mode to play Right channel audio, and another Defender in EcoCast Receiving to play Left channel audio.

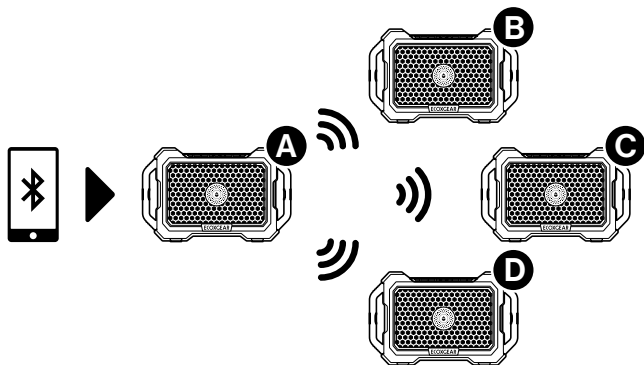
### Note:



- When you conduct a factory reset by pressing and holding the LEDCast Party Light Button and the ecoEQ Button on the Control Panel at the same time for 5 seconds, the Defender will reset to play Mono audio.

# Audio Functions

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## EcoCast: Additional Receiving Speakers

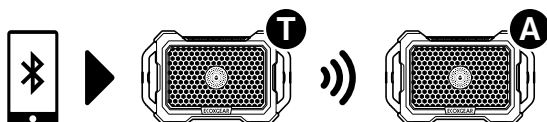


1. Turn on the additional EcoCast-enabled speakers (**Speaker C** and **Speaker D**) and press the Audio Source Button  to cycle through to and initiate EcoCast Receiving Mode. The Audio Source Mode Indicator will flash Green, and the speaker(s) will announce, “EcoCast receiving.”
2. On **Speaker A** (the speaker with the Red Audio Source Mode Indicator), short-press the EcoCast Button . The Audio Source Mode Indicator will begin to flash Red.
3. Once the connection between the speakers is successful, **Speaker C** (and **Speaker D**) will produce a prompt tone and start playing audio streams received from **Speaker A**.



### Notes:

- If all the speakers are turned off, then turned on, the speakers in EcoCast Receiving Mode (**Speakers B, C, and D**) will automatically reconnect to the speaker in EcoCast Transmitting Mode (**Speaker A**). If they do not automatically reconnect, please follow the above steps to reconnect.
- The EcoCast functionality has a maximum range of 30 feet between speakers.
- While connecting the speakers, make sure that they are within a few feet of each other.

## Play Audio Streams From Another EcoCast-Enabled Speaker



If there is an EcoCast-enabled speaker in EcoCast Transmitting Mode nearby, you can set your Defender speaker (**Speaker A**) to EcoCast Receiving Mode and play audio streams from the EcoCast Transmitting speaker (**Speaker T**):

1. Turn on **Speaker A**, press the Audio Source Button  to cycle through to EcoCast Receiving Mode. The Audio Source Mode Indicator will flash Green, and the speaker will announce, “EcoCast receiving.”
2. On **Speaker T**, short-press the EcoCast Button . The Audio Source Mode Indicator will flash Red, and the speaker will announce, “EcoCast transmitting.”

**Note:** If **Speaker T** is not a Defender, it may require a different button operation to enter EcoCast Transmitting (Pairing Ready) Mode. Please refer to **Speaker T's** User Guide.

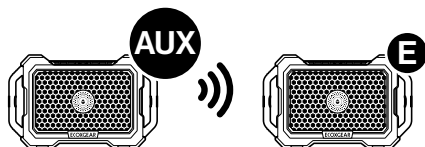
3. Once the connection between the speakers is successful, **Speaker A** will produce a prompt tone and start playing audio.

**Note:** You can press **VOL -** or **+** on the EcoCast Receiving speaker to adjust the volume for the EcoCast Receiving speaker only. However, as soon as the EcoCast Transmitting speaker has a playback change (e.g., track change or a volume change), the audio stream volume level received by the EcoCast Receiving Defender will be the same as the audio stream output from the EcoCast Transmitting speaker. So, the overall volume on the EcoCast Receiving speaker will change accordingly.

# Audio Functions

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## EcoCast: Streaming Your Aux-In Audio to Multiple Speakers



The Defender speaker (**Speaker AUX**) also has the capability to stream Aux-In Audio to other EcoCast-enabled speakers in Receiving Mode.

Each time the Audio Source Mode is switched to Aux-In Audio, EcoCast Transmitting is enabled.

- To disable EcoCast Transmitting, press the Speaker Volume **—** and **⦿** Buttons on the Control Panel at the same time. The speaker will announce, “EcoCast disabled.”
- To enable EcoCast Transmitting again, press the Speaker Volume **—** and **⦿** Buttons on the Control Panel at the same time. The speaker will announce, “EcoCast enabled.”

To transmit Aux-In Audio streaming via EcoCast, follow the steps below:

1. Turn on another EcoCast-enabled speaker (**Speaker E**), press the Audio Source Button **⤷** to cycle through to EcoCast Receiving Mode. The Audio Source Mode Indicator will flash Green, and **Speaker E** will announce, “EcoCast receiving.”
2. On **Speaker AUX**, short-press the EcoCast Button **⦿**. The Audio Source Mode Indicator will flash Yellow.
3. Once the connection between the speakers is successful, **Speaker E** will produce a prompt tone and start playing audio.




## Adjust the External Microphone Volume

1. Press **MIC** **—** or **+** briefly to adjust the Microphone Volume.
2. **Press and hold** **MIC** **—** or **+** to adjust the Microphone Volume continuously.
  - a. Press **+** briefly to increase one volume level. **Press and hold** **+** to keep increasing the volume until maximum volume level is reached.
  - b. Press **—** briefly to decrease one volume level. **Press and hold** **—** to keep decreasing the volume until minimum volume level is reached.

### Notes:

- This function only adjusts the external Microphone Input Jack.
- The internal Microphone used for EcoTalk (the activation of voice assistants, such as Siri and Hey Google, on your device), and phone calls is not independently adjustable from the Speaker Volume.
- To achieve the maximum external Microphone Volume, the Defender Speaker Volume and Microphone Volume must be turned to maximum.

## EcoTalk

**Press and hold** the Play/Pause Button  to activate the voice assistant on your device (Siri, Hey Google, etc.). Once activated, the speakerphone mic on your Defender will hear your voice commands and transfer them to the voice assistant on your device.

### Notes:

- Before using the EcoTalk function, your device must be connected to the Defender via Bluetooth.
- Not all devices have voice assistant functionality; refer to your device for details.


# Audio Functions

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## ecoEQ Mode

The Defender provides the following 3 equalizer settings:

1. Default: This is Defender's factory default setting. It optimizes a combination of maximum bass, no distortion, and crisp vocals.
2. Indoor: This sound profile is warmer to complement the acoustics inside your home.
3. Outdoor: For this setting, the high frequencies have been tweaked up and the bass has been turned down in order to max out the dB level, cutting through wind and noisy environments.


To change the equalizer setting, short-press the ecoEQ Button . Each short-press will cycle through the above 3 settings.

## External Microphone Special Effect

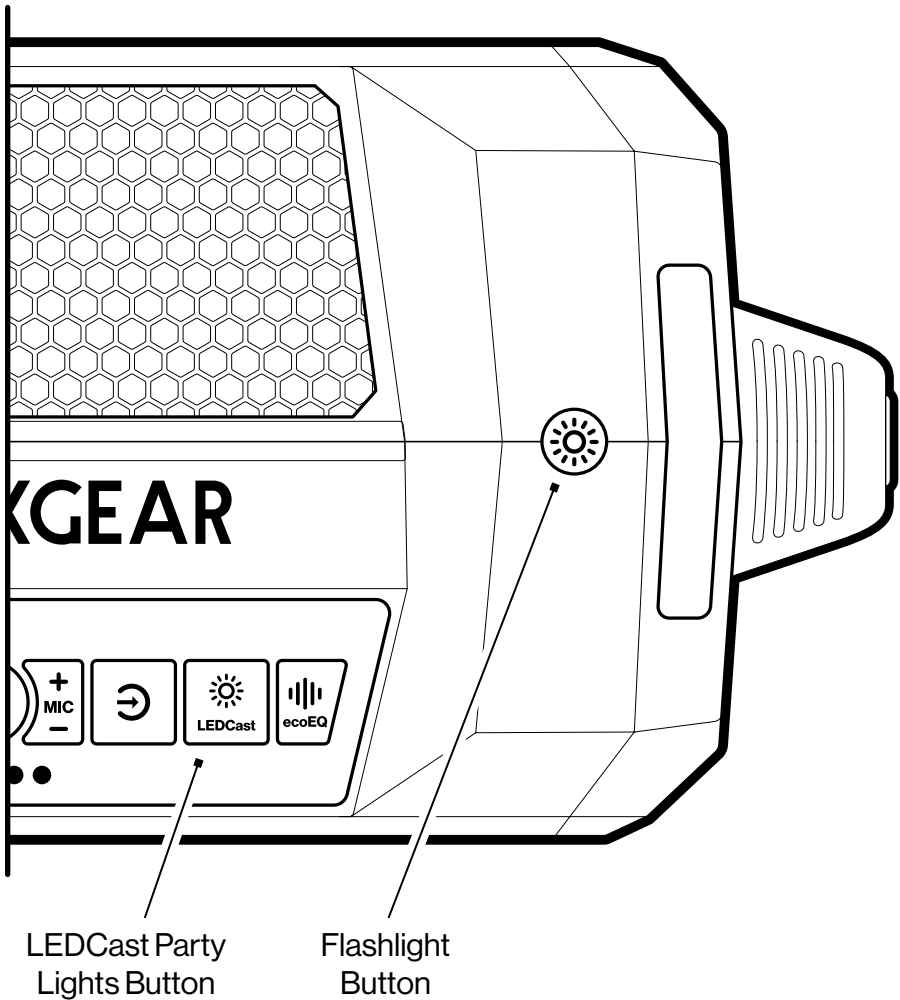
The Defender has 3 External Microphone Special Effect settings.

**Note:** This feature does not affect the Defender's built-in speakerphone Microphone).

1. Default: No effect.
2. Reverberation: This effect makes your voice richer and warmer.
3. Echo: Adds an echo effect to your voice.

To change the External Microphone Special Effect setting, **press and hold** the ecoEQ Button  for 3 seconds. Each **press and hold** will cycle through the above 3 settings with a voice prompt "Default", "Indoor" or "Outdoor" respectively.

**Note:** The Defender will automatically save your EQ settings even after powering the speaker off.



## LED Lighting Zones, Modes, and Scenes

The Defender has addressable RGB LED Party Lights behind the woofer and a built-in LEDCast LED lighting controller. In addition to the LEDCast Party Lights Button ☀️ on its Control Panel, the Party Lights can also be controlled by the Free SoundExtreme Smartphone App. Below are some terms and definitions to help you better understand the LED lighting control functions.

# Lighting Control Concepts

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## Zone



A Zone corresponds to all the LED lights that are connected directly to one physical connection on an LED Lighting Controller output, either integrated in the Defender or in an ExtremeController (sold separately). When you change a Zone status (on / off, Mode, etc.), the LEDs connected to that Zone will change accordingly. You can control one Zone or multiple Zones at a time.

The integrated LED Lighting Controller on the Defender supports 2 Zones:

- Zone 1 – The RGB LED Party Lights behind the woofer.
- Zone 2 – The white Flashlight on the top-right side of the Defender (referred to as **Dome/Light Bar** in the SoundExtreme Smartphone App).

## Mode

There are 3 LED Mode categories, totaling in 44 Modes supported by the LEDCast Party Lights Button . The SoundExtreme app can support many more Color Modes.

1. Color Mode: Each Color Mode lights up the LEDs in a solid color. Among the 44 Modes, there are 8 predefined Color Modes: Red, Green, Blue, White, Orange, Yellow, Cyan, and Purple. You can create a custom color by utilizing the SoundExtreme Smartphone App.
2. Party Mode: There are 20 predefined Party Modes accessible via the Party Lights Button  and SoundExtreme Smartphone App. The app allows you to customize each of the 20 Party Modes, allowing for nearly unlimited color, cascading, and LED chasing options.
3. Music Mode: There are 16 Music Modes accessible via the Party Lights Button  and SoundExtreme Smartphone App.

## Scene

A Scene is programmed via the SoundExtreme Smartphone App. You can customize each Zone into a Scene (a preset). Setting the Scenes on the app allows a 1-button press to bring up your desired custom settings for all of the LED products connected to the LED Lighting Controller.

The Defender has 5 Scene settings. They are user customizable and programmable. The default Scene settings are:



- Scene 1: Patriot 1 (Red, White, and Blue)
- Scene 2: Flowing colors
- Scene 3: Zoom
- Scene 4: Fading colors
- Scene 5: Christmas (Red, Green, and White)

## Control Panel: LEDCast Party Lights and Flashlight Buttons

### LEDCast Party Lights Button

The LEDCast Party Lights Button  on the Defender Control Panel has two functions:



#### 1. LED Lighting Mode Control

- If the Party Lights are off, double-click the Party Lights Button  to turn on the lights and access / change the LED Lighting Mode. Each double-click after that will cycle through the 44 LED Lighting Modes.
- When the LED lights are on, **press and hold** the Party Lights Button  for 3 seconds to turn the LED lights off.



# Lighting Control Concepts

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## 2. LED Lighting Scene Control

- If the Party Lights are off, short-press the Party Lights Button  to turn on the lights and access / change the LED Lighting Scene. Then, each following short-press will cycle through the 5 predefined Scenes.
- When the LED lights are on, **press and hold** the Party Lights Button  for 3 seconds to turn the LED lights off.

### Flashlight Button

- Short-press the Flashlight Button  on the top-right side to turn on. Each consecutive short-press will cycle through the three Flashlight brightness levels (high, mid, low) and then turn the Flashlight off.
- **PRESS AND HOLD**  to turn the Flashlight off.

The Defender's Party Lights can be operated via the SoundExtreme Smartphone App.

## Download and Install

For iPhones, download the app from the following URL:

**<https://apps.apple.com/us/app/soundextreme/id1670708941>**

For Android phones, download the app from the following URL:

**<https://play.google.com/store/apps/details?id=com.cchip.ecoxgear>**

Alternatively, use the following QR Codes to download the SoundExtreme Smartphone App.



iOS



Android

## App Overview

**Password Secured:** The app is password protected so others cannot gain access and control your Defender. The default password is 0000.

**Name Your Devices:** You can change and customize the name of your devices and Zones, such as My Party Speaker, Backyard Speaker, etc.

**Set Up Modes:** Use the app to set up the LED Mode for each of the Zones on your speaker. You can also change the Brightness and Speed.

# SoundExtreme App

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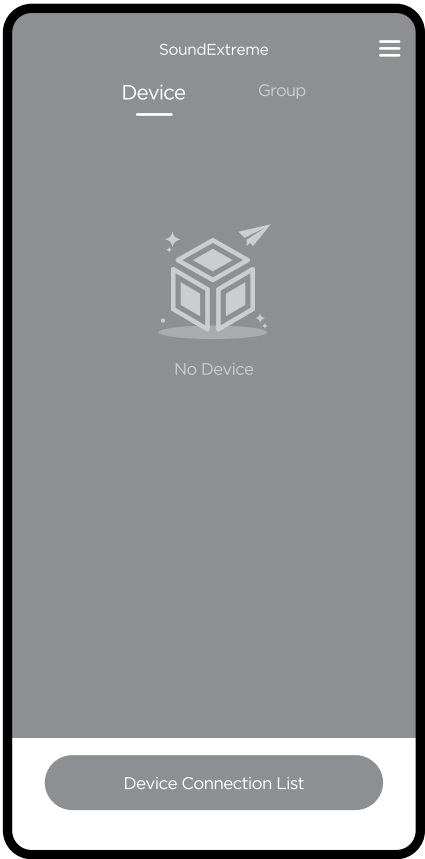
**Create and save Scenes:** A Scene is a preprogrammed light show that you can save for later quick-access. We have created 5 default Scenes that are fully customizable and programmable.

**Set Up a Group:** Create and set up a group of devices (multiple speakers, or other ECOXGEAR or SoundExtreme products with LEDCast built-in). This will allow all the LED lights connected to different devices to be controlled by the SoundExtreme Smartphone App at the same time.

**Bluetooth Low Energy:** The SoundExtreme Smartphone App relies on a BLE (Bluetooth Low Energy) connection between your phone and the Defender. Make sure you turn on Bluetooth on your smartphone.

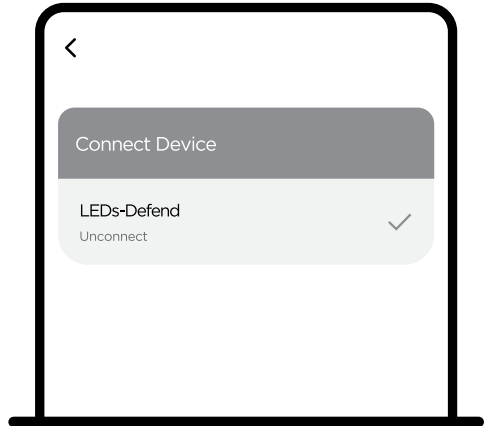
## Initial App Connection

1. Launch the SoundExtreme App on your smartphone or other BLE-enabled device.
2. On the SoundExtreme App homepage, tap **Device Connection List**.




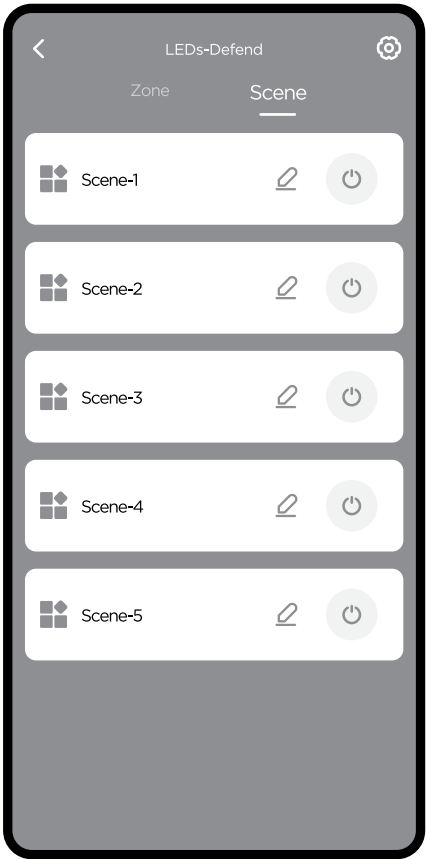
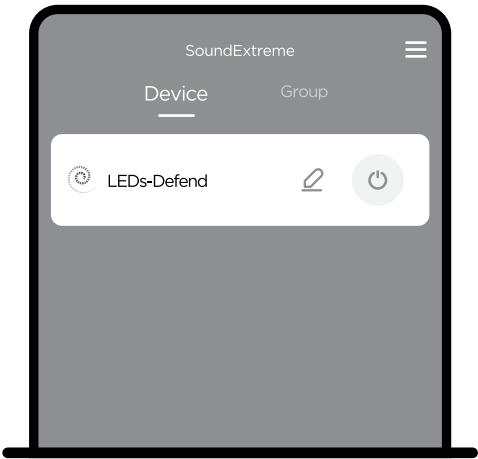


3. If your Defender is powered on, it will show up as **LEDs-Defend** on the app's **Connect Device** screen. Tap the device name on the screen. A check mark will appear on the right. Tap the **Connect** button.
4. A dialog window will popup asking you to enter a password. The Defender default password is 0000.



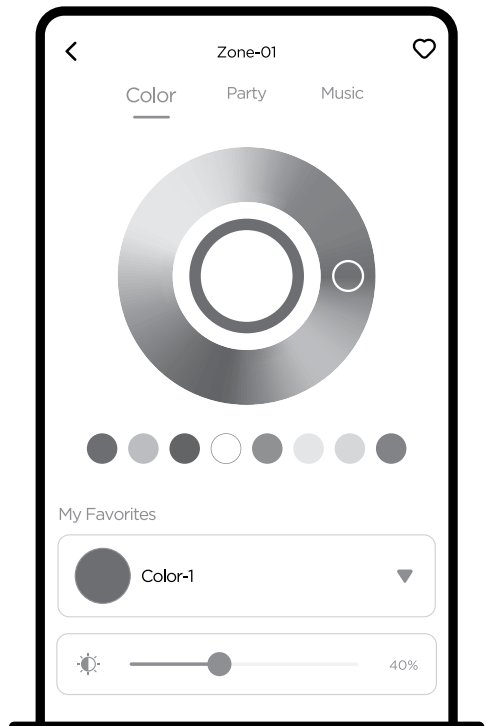
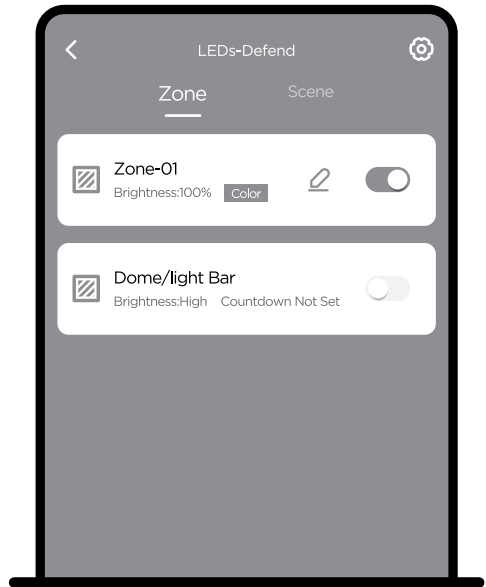
# SoundExtreme App

5. Select your Defender. It will take you to the **Scene** screen. There are 5 predefined Scenes on the Defender. You can turn on one of the 5 Scenes to light up the LEDs. For example, tap the On / Off button  at the right for Scene 1. The Party Lights will light up Red, White, and Blue, which is the LED Lighting Mode defined for Scene 1 – Patriot 1.



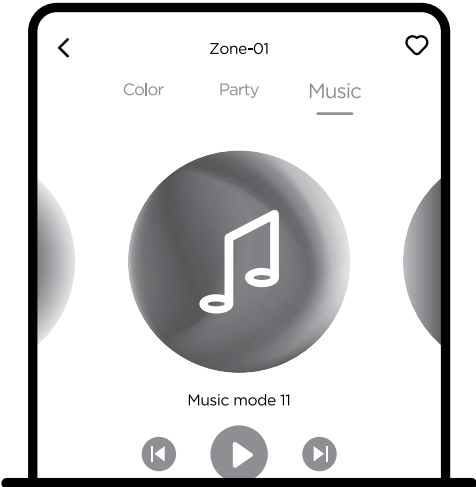
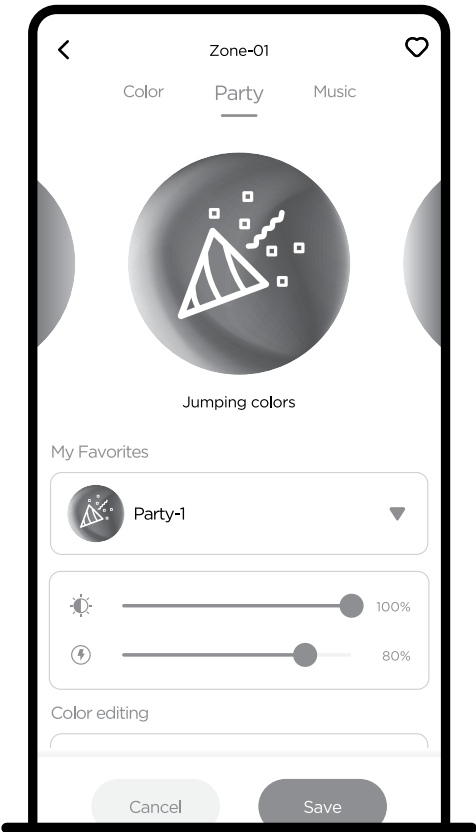
## Set Up Zones

1. Select your Defender on the Device list, and the app will bring you to the **Zone** screen.
2. On the Zone screen, Tap Zone 1 and you will go to the Zone LED Mode Settings screen. There are 3 tabs: Color, Party, and Music, which allow you to select a solid Color, a Party Mode, or a Music Mode.



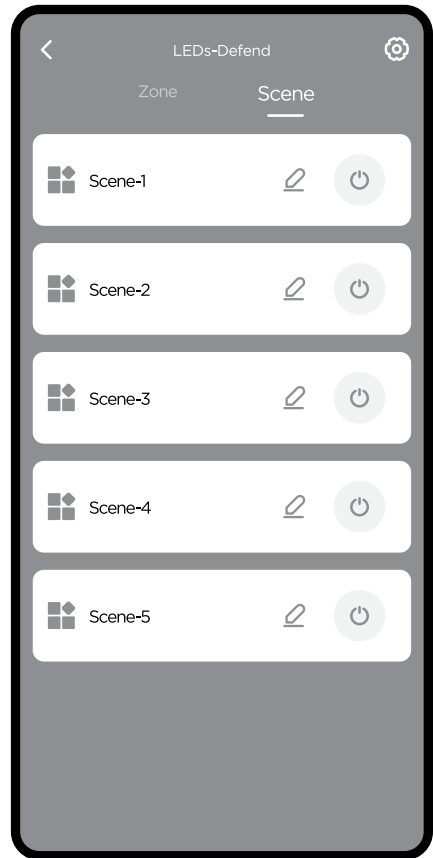
# SoundExtreme App

- When you choose a Mode, the LEDs connected to the Zone you selected will light up accordingly, giving you a preview.
  - If you tap the **Save** button on the screen, the app will save your setting for the selected Zone.
  - If you tap the **Cancel** button or exit the LED Mode Settings screen, your Mode selection will not be saved and LEDs connected to that Zone will display the previously selected LED Mode.
3. After you set up the Modes for each of the Zones, the Defender setup is complete.



## Set Up Scenes

1. On the **Device** List screen, select your Defender (**LEDs-Defend**) and the app will bring you to the **Zone** screen. Tap the **Scene** tab. The app will show 5 predefined scenes on your Defender.
2. You can change a Scene's LED settings by selecting any of the 5 Scenes. When you select the Scene, you will go to the LED Mode Setting screen. You can use the same procedure as in the **Set Up Zones** section to set up each Zone and save the Scene's new LED settings.
3. After you set up LED Modes for the Zone, the setup is complete for the selected Scene.



## Flashlight Control

You can control the Defender's Flashlight with the following steps:



- 1. On the **Device** List screen, select your Defender (**LEDs-Defend**), and the app will bring you to the **Zone** screen.
- 2. On the **Zone** screen, tap **Dome/Light Bar** (Zone 2) and you will go to the **Dome/Light Bar** Settings screen.
- 3. There are 3 Brightness Levels (High, Mid, and Low) on the slide bar for you to choose from.
- 4. You can also set a countdown timer for the Flashlight by tapping **Count Down**. Set up a time on the popup window. Once the countdown is over, the app will turn off the Flashlight.

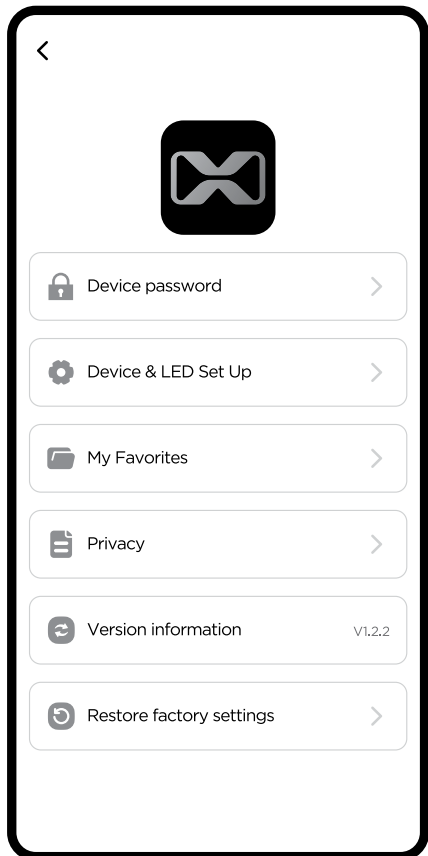
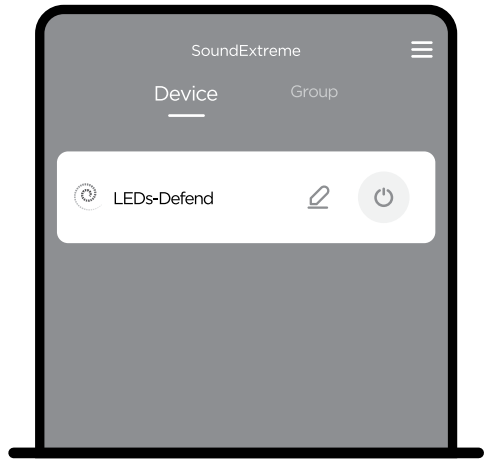


## Change Password

To add extra security, you can change the default password of 0000 to your desired 4-digit numeric password. Please note that the password is stored in your Defender, not the SoundExtreme App. So, after you change the password, please make a note in case you forget your password. The password won't be reset by reinstalling the app or changing to another smartphone. The only way to reset your password is to conduct a factory reset on your Defender speaker.

Follow the steps below to change your password:

1. Select the Menu Icon  at the top-right corner of the screen.
2. Select  **Device Password** from the menu.



# SoundExtreme App

- 3. Once at the Device Password screen, select the device that you want to change the password to.
- 4. Enter the current password, the new password, and re-enter the new password. Then tap the **Confirm** button.
- 5. If the change is successfully saved, the app will display a confirmation message.

This is a one-time event. You do not have to enter in your password every time you launch the app, as your app will remember your password.

<

Device password

DeviceLEDs-Defend >

Current passwordpassword

New passwordpassword

Reenter new passwordpassword



\* The password is 4 characters

Save



## Factory Reset

If you forget the password, you will need to do a Factory Reset on the Defender so that the password is reset to its default value: 0000.

- While the Defender is turned on, **press and hold** the LEDCast Party Light Button  and the ecoEQ Button  on the Control Panel at the same time for 5 seconds. The Defender will produce a prompt triple-beep tone, to show that the reset is successful.

**Note:** Besides the password reset, a Factory Reset will also configure the Defender to the following factory settings:

Zone 1 is set to Scene 1 – Patriot 1 with 100% Brightness and the Speed is set to 80%.

All 5 customer configurable Scenes are set to the factory default Scenes.

All the EcoCast and Bluetooth pairing records are erased.

The Defender's ecoEQ is set to Default Mode.

The External Microphone Special Effect is set to the factory default: no effect.

The Speaker Volume and Microphone Volume are set to 75%.

The Defender is set to play Mono audio.

# Troubleshooting

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## **The sound is distorted**

Try lowering the volume control of your connected device or musical instrument. Also, try to reduce the overall volume of the Defender.

## **Cannot Pair With Bluetooth Device**

Make sure that your device is compatible with Bluetooth. Turn off your Defender and Bluetooth device, then power on and reconnect. Make sure that Bluetooth mode is selected on your Defender.

## **There is a high-pitched whistling noise when using microphone**

This is probably feedback. Point the microphone away from the speaker.

## **If you can't hear the microphone over the music volume**

Turn up the Microphone Volume on the Defender and turn down the music volume directly from your Bluetooth device to balance the two audio signals.

## **Can NOT play music from a flash drive**

The USB-C port is only for charging devices.

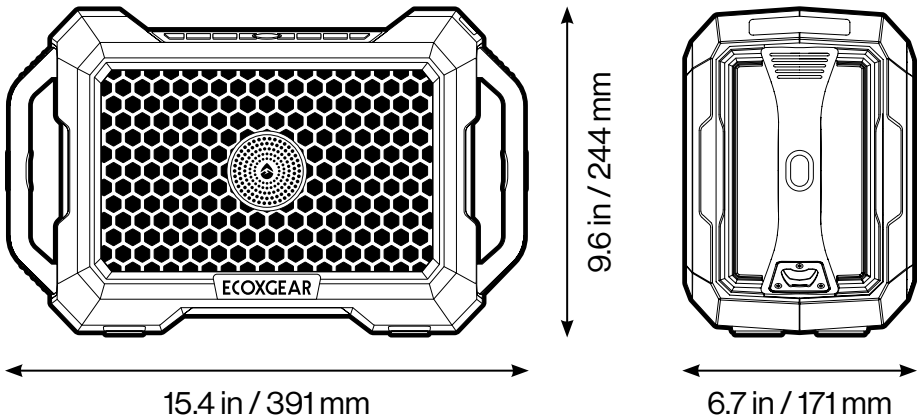
## **Volume level is too low**

Increase the volume on the Defender and / or increase the volume on your Bluetooth device.

## **Battery not properly charging**

Please do **NOT** attempt to fix your Defender. Please contact our Customer Support at **support@gracedigital.com** or call us at **800.903.9524**.

## Unit Dimensions



### Unit Weight

10.1 lbs / 4.58 kg

### Bluetooth Compliance

Bluetooth V 5.1

### Bluetooth Frequency Band

2.402-2.480GHz ISM  
Spectrum

### Modulation

GFSK,  $\pi/4$ -DQPSK, 8DPSK

### Bluetooth Range

Up to 100 ft / 30m

### Compatibility

Mobile phone/device  
supporting Bluetooth V1.1  
(and above)

### EcoCast Range

30 ft / 9.1 m between Casting  
speaker and Receiving speakers

### Elliptical Full Range Speaker

6" x 9" (152 mm x 229 mm)

### Tweeter

1.7" (43 mm)

### Speaker Output Power

100 W (peak)

### Internal Battery

14.8V, 76.96Wh Lithium-Ion

### Power Input for Charging

18V, 1A

# Specifications

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## **AC-DC Adapter for Charging**

Input voltage: AC 100-240V

50/60Hz, 0.55A

Output voltage: DC 18V, 1A

## **USB-C Output**

5V, 2.1A

## **Charging Time**

Approximately 5-6 hours

## **Play Time**

25hrs play time; 6hrs play time at maximum volume

## **Microphone Input**

¼" (6.35 mm) mic jack for

Dynamic Microphone

## **Storage Temperature**

-40°F to 122°F / -40°C to 50°C

## **Operating Temperature**

23°F to 95°F / -5°C to 35°C

## **Waterproof / Dustproof Rating**

IP67

## FCC STATEMENT:

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.

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

**NOTE:** To maintain compliance with FCC's RF Exposure guidelines, this equipment should be installed and operated with minimum distance between 20cm the radiator to your body. Use only the supplied antenna. FCC ID: 2AAUI-GDIEXDFNR01

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.

## RF WARNING STATEMENT:

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

## IC STATEMENT:

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

- 1.) This device may not cause interference, and
- 2.) This device must accept any interference, including interference that may cause undesired operation of the device.

IC ID: 11210A-GDIEXDFNR01

## PRODUCT USE AND PROTECTION:

**Read and follow all instructions. Use only as intended.**

The ECOXGEAR Bluetooth speaker is intended to be used indoors or outdoors and in land or water environments. The speaker has been tested to IP67 waterproofing standards, which means the speaker can be submerged in up to 3 feet of water for 30 minutes without any damage. However, the speaker is **NOT** intended for constant underwater use.

Always make sure the cap(s) / cover(s) are clean, free from sand or debris, and correctly fitted. The speaker will only meet IP67 ratings if all rubber seals, gasket(s) and cover(s) / cap(s) are in place. If you notice a muffling of audio after submersion, gently shake the unit to clear excess water. If your speaker is exposed to salt water, clean it thoroughly after use with fresh water.

The power cable and the unit with an improperly fitted cap are **NOT** waterproof.

To prevent fire or shock, do **NOT** attempt to charge this unit if it is wet or you suspect water has entered the unit. In this situation, please return the unit to Grace Digital for a free assessment. If we have found that the unit has carried water, we will repair or replace the unit free of charge.

## SAFETY ADVISORY & WARNING:

**Read and follow all instructions. Use only as intended.**

**CAUTION:** Do **NOT** open to repair. A qualified technician must carry out repair work.

**ATTENTION:** Do **NOT** charge while the unit is wet. Towel dry the unit **AND** make sure all connections are dry **BEFORE** plugging in the charging connector. Failure to do so may result in electrical damage to the unit and may void the warranty.

 **WARNING:** Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**WARNING:** Danger of explosion if battery is incorrectly replaced.

**CAUTION:** The unit can be used with the main power cord disconnected, the unit is readily operable with the main power cord disconnected.

**ATTENTION:** Do **NOT** dispose of in a landfill. Contact Grace Digital at [www.gracesupport.com](http://www.gracesupport.com) or a certified recycling agent to dispose of the unit.

# Important Legal Information

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## SAFETY:

This product has a limited life span of use and should be replaced when it shows obvious signs of wear.

Do not modify or remove any original component parts of the speaker. Doing so could cause damage to the unit, allowing water to ingress. A unit with water ingress should not be charged due to potential risk of fire or shock.

Please exercise care and good judgment when using your ECOXGEAR speaker. Audio levels should be appropriate to your environment, comply with all local regulations, and always ensure that you can hear and be aware of any potential hazards around you.

### You should always

- 1.) Use the ECOXGEAR speaker in accordance with any music or noise rules and regulations.
- 2.) Properly seal the ECOXGEAR prior and after each use when in humid or water environments to avoid water damage to the internal components. Salt water / air is particularly corrosive. Always make sure that the gaskets are sealed when in a salt water environment and that the unit is properly rinsed off after use.
- 3.) Properly clean the ECOXGEAR and ensure the gaskets have no sand, dirt, or water on them prior to storage.
- 4.) Store your unit with all caps properly sealed to avoid long term internal moisture damage inside your unit.
- 5.) Completely dry and clean your ECOXGEAR prior to attempting to charge the unit.
- 6.) Return the ECOXGEAR to Grace Digital if you suspect water ingress into the unit or if the unit has experienced a severe impact that may have affected the integrity of the unit to take on water.

### You should never

- 1.) Never charge your ECOXGEAR if you suspect water has entered the device. Charging a device with water inside could be potentially hazardous and cause fire or a spark.
- 2.) Never use your ECOXGEAR if you have dropped it or thrown it against a hard surface which may have destroyed the integrity of the speaker, housing, or gaskets. In the event of a severe impact to your unit, please return the unit to Grace Digital to review for potential damage.
- 3.) Never open the auxiliary doors in a water environment. This could cause water to ingress into the unit which could potentially be hazardous and cause a fire or a spark.
- 4.) Never connect a device to the auxiliary input jacks when in a water environment. The auxiliary jacks should only be used in a dry environment.
- 5.) Never attempt to fix, repair your ECOXGEAR unit. Please send it back to Grace Digital for any assessments and repairs.

## CARE, MAINTENANCE & PRECAUTIONS:

- 1.) The unit is waterproof only when the cap is properly closed.
- 2.) Close the cap properly before use. If the unit is placed in water without the cap properly closed, water may enter into the unit and void your warranty.
- 3.) Dry unit completely before opening the cap. Do **NOT** open the cap if wet or in a wet environment.
- 4.) Do **NOT** apply excessive force to any surfaces of the unit when wet or in a wet environment.
- 5.) Do **NOT** use or store the unit in places with high temperature.
- 6.) **AVOID** prolonged exposure to strong magnetic fields.
- 7.) Periodically check the rubber seal on the cap for premature wear.
- 8.) Periodically clean the rubber with a soft moist cloth and ensure no objects such as dirt, hair, sand are on the rubber seal ring. Do **NOT** use any oily solvent or chemicals for cleaning.
- 9.) Rinse off the unit with tap water after use in salt water or swimming pool.
- 10.) Power and / or charge the built-in rechargeable battery for portable use by connecting the AC cord to an AC outlet.
- 11.) Noise and audio distortion may occur when the batteries are nearing end of charge.
- 12.) Do **NOT** remove the built-in battery. Do **NOT** remove the grille covers.

# Important Legal Information

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## LIMITED MANUFACTURER'S WARRANTY:

The Defender is covered by a 1-year, limited warranty that covers defects in workmanship and / or materials for a period of 1 year from original purchase date. This warranty does not apply to any products which have been abused, neglected, modified or used for a purpose other than the one for which they were manufactured. Please refer to the above care and maintenance instructions for suggested care details. The warranty is valid only for the original owner who purchases the unit from an authorized dealer. Transfers do not qualify for warranty protection. Grace Digital reserves the right to replace any out-of-stock or discontinued product with a comparable product. Discontinued products may not be available for warranty replacement. Any contents are **NOT** covered by the limited manufacturer's warranty. Warranty terms may be revised without notification at the discretion of the manufacturer. Please visit [www.ecoxgear.com](http://www.ecoxgear.com) for additional product & warranty information.



Defender by ECOXGEAR, a division of Grace Digital Inc., San Diego, California.  
Designed in Texas. Made in China.

Patents Pending.

