

# Neon User Manual

## INTRODUCTION

Thank you for choosing the Most Awesome Bluetooth Headphone Adapter Ever Made. Seriously. We appreciate it. And it shows you have impeccable discernment.

And yes, this manual is short. I mean, it's a Bluetooth adapter, not a lunar lander. And we've purposefully made the UI so simple even Dan and Ben can run it (which was no easy feat). We'll cover the basics – what are the controls, how to use it, what are the specifications, and what kind of warranty you get.

Now enough of the fluff, let's get going...

## SYSTEM DESCRIPTION

Neon is a Bluetooth receiver. Battery powered, portable. It supports all the normal protocols:

- A2DP (Advanced Audio Distribution Profile) for music and media streaming
- HSP (Head Set Profile) for 2 way audio during phone calls
- HFP (Hands Free Profile) for supporting remote control of a phone
- AVRCP (Audio Video Remote Control Profile) for play/pause and volume control
- BSP (Battery Status Profile) to report current battery level (10% increments)

Audio is the big focus here, though. Neon supports the following audio CODECs:

- SBC, the default Bluetooth A2DP CODEC you must support
- LowLatency – a widely compatible low latency CODEC to keep audio synced with video

Neon is tiny. See the specs for exactly how small in numbers, but you're probably fondling your Neon right now so you know how small it is. Even though it's tiny, it has 14 hours of battery life. Why did we target 14 hours? That's enough to watch the entire Lord of The Rings trilogy (extended editions) without charging.

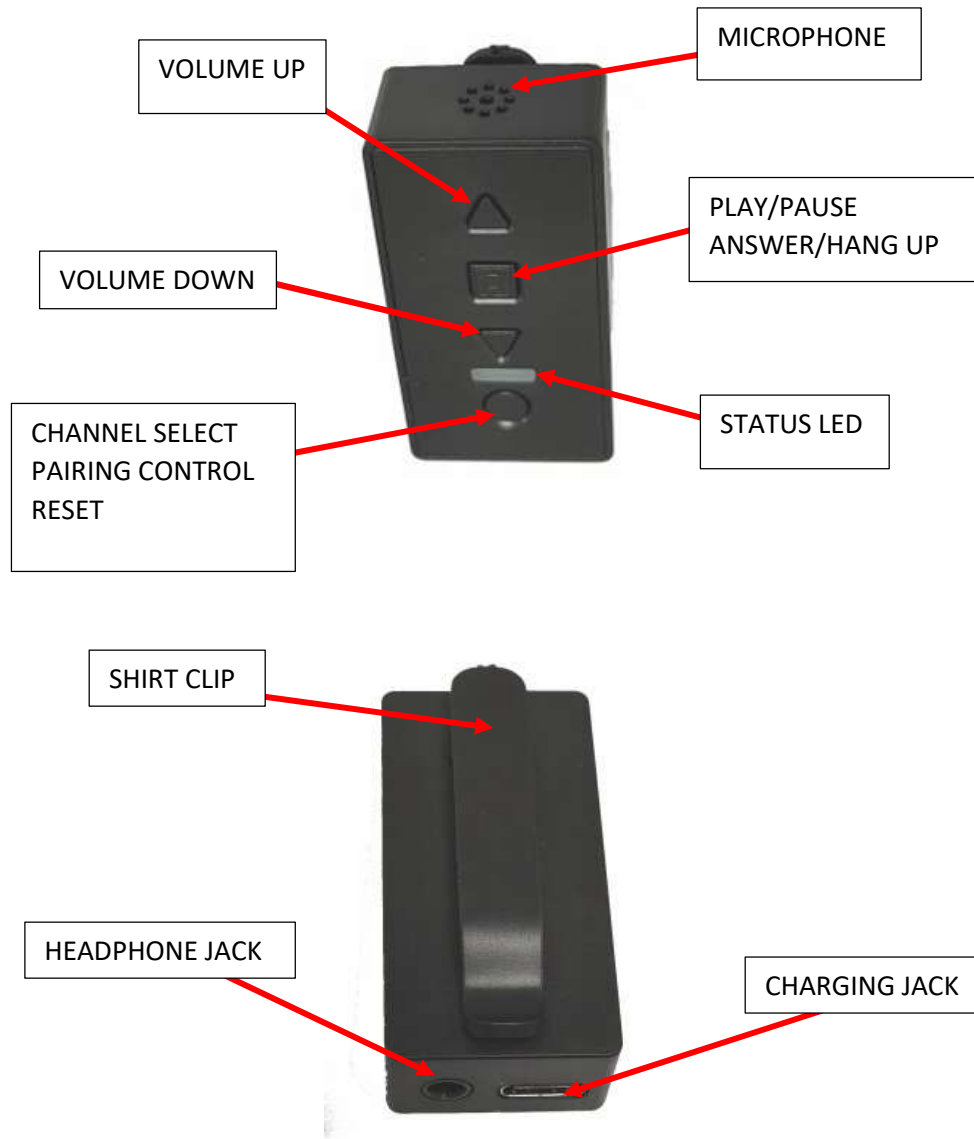
Neon has a discrete amplifier inside of it. This amp will do 125 mW continuous per channel into a 32 Ohm load (four times our Rhodium DAC). Plenty of power for our IEMs and most headphones. And since it's discrete, it has superior audio performance compared to the built-in amps in Bluetooth chips.

Neon also has a few cool features:

- High quality 6mm electret mic. No cheap, bad-sounding MEMS mic here, we're using a high quality discrete, analog 6mm unit usually found on "prosumer" recording gear.
- Periodic's legendary Nearly-Idiot-Proof™ User Interface. About as intuitive as you can get.
- SPS Single Press Switching™. Support for TWO audio sources, with single click instant-switch. Yes, you can pair your phone and laptop, for example. Enjoy a movie on the laptop, but when a call comes in, a quick click and you're paired to your phone and ready to talk.

## CONTROL OVERVIEW

It's a pretty simple box with just 4 buttons, 2 connectors, one LED, one spring clip, and one mic grille.



## HOW TO WEAR

Well, the spring clip should be pretty intuitive. Clip it on your shirt/jacket/whatever. If you want to use it for phone calls (meaning use the built-in microphone), make sure the grille is uncovered and aimed towards your mouth. No need to hold it close to your mouth, clipped on a shirt pocket is fine.

## HOW TO USE

This table will teach you how to use your Neon. Most of this will be obvious; the only real “curve ball” is the Channel select, since we’re the only ones who do it. But we kept it, in Periodic fashion, incredibly intuitive.

Turning It On/Off	Turn it on by plugging a headphone in. That’s it. Turn it off by unplugging the headphone. Simple, eh?
Pairing Channel 1	Press and hold the round button for 1-4 seconds. Release. The LED will then fast flash <b>BLUE</b> when it’s in channel 1 pairing mode.  Pair Neon to the host as you would normally pair a Bluetooth audio device (varies based upon the host – iOS, Android, Windows, MacOS, Linux, Symbian, BlackberryOS, RTOS, etc).
Pairing Channel 2	Press and hold the round button for 4-6 seconds. Release. The LED will then fast flash <b>GREEN</b> when it’s in channel 2 pairing mode.  Pair Neon to the host as you would normally pair a Bluetooth audio device (varies based upon the host – iOS, Android, Windows, MacOS, Linux, Symbian, BlackberryOS, RTOS, etc).
Switching Channels	Click the round button (press for less than 1 second). The LED should be <b>BLUE</b> for channel 1, and <b>GREEN</b> for channel 2.
Play/Pause Audio	Click the square logo button. This will play or pause the current audio stream, if you’re streaming audio.
Track Skip/Rewind	Double click the square logo button to skip forward to the next track. Triple click the square logo button to go back a track (or to the beginning of the current track if it’s been playing for more than a few seconds).
Answer/Hang Up a Call	If a call comes in, click the square logo button. You’ll pick up. Click again to hang up.
Increase Volume	Click the up triangle (the one closest to the microphone) to bump the volume up one notch. What’s a notch? Depends upon the source. For most smartphones, this is a 3-5% increase in volume. For laptops it’s often a 1% change.
Decrease Volume	Click the down triangle (the one between the square button and the LED) to bump the volume down one notch. What’s a notch? Depends upon the source. For most smartphones, this is a 3-5% increase in volume. For laptops it’s often a 1% change.
Charge The Unit	Plug in a cable to the USB C port. The LED will show <b>BLUE</b> and <b>GREEN</b> at the same time while it’s charging. When the LED turns off, it’s full.
Reset Both Pairings / Factory Reset	You can overwrite/replace either channel pairing by following the channel pairing instructions above. But if you want to do a factory reset and wipe both pairings, then REALLY long hold the round button (10+ seconds). The LED will show both <b>BLUE</b> and <b>GREEN</b> for a few seconds. Now it’s reset. You will have to pair devices for Channels 1 and 2 – the memory is wiped.

## LED STATUS

The LED is dual color – **BLUE** and **GREEN**. Note that the LED will TURN OFF after about 1 minute of operation. We don't like walking around like a lit-up Christmas tree, and we think you don't like it either. So after a status change, the LED indicates status for about a minute then turns off.

<b>BLUE</b> fast flash	Pairing mode for channel 1
<b>GREEN</b> fast flash	Pairing mode for channel 2
<b>BLUE</b> slow flash	Waiting for channel 1
<b>GREEN</b> slow flash	Waiting for channel 2
Solid <b>BLUE</b>	Playing channel 1
Solid <b>GREEN</b>	Playing channel 2
<b>GREEN</b> / <b>BLUE</b> solid simultaneously	Charging (turns off when fully charged)

## SPECIFICATIONS

RF Band	2.4 GHz Bluetooth Channels
Battery Size	300 mAh (14 hour run time, typically)
Charge Time	1 Hour
Frequency Response	10 Hz to 20 kHz
Output Power	125 mW @ 32 Ohms (2Vrms)
THD+N	0.02%
Size	45mm tall, 23mm wide, 13mm thick
Mass	12.5 grams
Certifications	FCC, KC, JATE, CE, WEE, RoHS

## WARRANTY

Two year warranty against manufacturing defects and parts failure. Wear and tear or misuse is not covered. See our website for more details.