

# CQ Headset

By  
Card Machine Works

## User Guide



## Thank You

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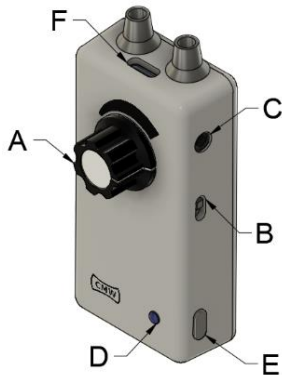
Thank you for choosing a CQ Headset by Card Machine Works. We hope you find our products provide both exceptional comfort and communication quality, contributing to an outstanding flying experience.

The CQ Headset with Bluetooth is a premium headset with a highly optimized Bluetooth control that is the most compact of any current Bluetooth aviation headset. It has a simplified, one button interface with stunning stereo music quality and an advanced auto-mute function. The headset performs the same as our original CQ1 Headset for excellent cockpit communication without the need for power. When the Bluetooth feature is powered on, it adds the ability to interact with a mobile device to make telephone calls and stream audio via wireless Bluetooth.

# Using your CQ Headset

## Bluetooth Enabled Control

- A. Volume control: The volume control knob adjusts the audio volume coming from the aircraft radio and intercom. This control is independent of audio from a media device. Volume from an external device such as a telephone is adjusted directly on the connected device.
- B. Mono / Stereo selector switch: This switch only affects audio from the aircraft panel and not an external device.
- C. Auxiliary audio input jack: This 3.5mm connection provides for a wired external audio device input.
- D. LED indicator: Displays the Bluetooth status.
- E. Bluetooth multi-function button (MFB): Turns Bluetooth on, off and toggles auto-mute functionality. It is also used for basic call control.
- F. USB-C port: Charging port for the internal battery.



# Using your CQ Headset

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## **The Perfect Fit**

The CQ Headset is pre-shaped but may benefit from some minor adjustments to be the perfect fit for your head. The size and location of the ear bend that is opposite the microphone side is just a suggestion. You can adjust the exact bend location and angle to the most comfortable fit for you. Please do not adjust the bend on the microphone side.

## **Charging the Battery**

The Bluetooth headset control contains a rechargeable lithium battery. *Remove the*

*headset from the aircraft before charging.*

The battery is only used for Bluetooth features and is not necessary for standard headset functionality. The headset will perform normally with a completely discharged battery.

The battery is charged with a standard USB Type C cable. When actively charging, the LED indicator will be solid RED and will go out when completely charged. The advanced charging circuit will usually reach approximately 80% charge within the first 30 minutes. When the battery charge is low, the LED will flash RED and a voice annunciation “Battery Low” will be heard.

# Using your CQ Headset

## Wearing the Headset

Generally, the headset is worn behind the head with the bends over the ears, a bit like glasses backwards.



Alternatively, some find it more comfortable if worn a bit higher over the ears or over a hat band as this gives even more clearance with sunglasses. This may produce a more stable and secure experience by avoiding pivoting fore and aft on your ears.

## Stereo / Mono Switch

The slide switch (B) on the side of the control is used to set the CQ Headset to match the signal from your aircraft audio panel. It should be on the side with the 'S' stamp for stereo audio panels and the opposite side for mono audio panels (default). If you hear communications only in one ear, try sliding the switch to the other side. This switch has no effect on auxiliary or Bluetooth audio inputs.

# Using your CQ Headset

## Microphone Positioning

There is a white dot on the microphone. It must be positioned on the side of the microphone directed toward your lips. You can feel the orientation of the microphone element inside the muff. You will get the best performance if the flat part is facing your lips. The foam mic muff should be just touching

the front of your lips.



## Mic Gain and Balance Adjustment

If you need to adjust the microphone gain or left/right balance, there is a small trim pot inside the control for each. Remove the two screws on the rear of the control to remove the back cover. A small flat head screwdriver is then used to carefully rotate the control labeled “Mic” for mic gain adjustment or “Bal” for left/right balance adjustment.

The Mic gain adjustment is quite sensitive. Only rotate it a few degrees at a time and test in the aircraft. Clockwise increases microphone sensitivity and counterclockwise decreases sensitivity.

## **Auxiliary Input**

The CQ Headset has a standard 3.5mm audio input jack (C) that can be used to connect an external wired audio source. Use the connected device to adjust the input volume. The wired connection cannot be used for phone calls.

## The Importance of Ear Tips

It is critical that the ear tips seal up all the open space in the ear canal to provide the best comfort and hearing protection. It is not as simple as pushing in the ear tip. Roll the foam tip between your thumb and index finger, progressively adding more pressure to compress the foam into a tight cylinder and avoid any creases. While the foam is compressed, pull up and out on your ear and insert the tip deep into the ear canal. Release your ear while holding the ear tip in your ear for a few seconds, allowing the foam tip to expand inward so that it can create a tight seal.

[cqheadset.com](http://cqheadset.com)

## Ear Tip Options

We supply ear tips with excellent performance and comfort. However, everyone has different ear canals and may find better performance or more comfortable ear tips elsewhere. We encourage you to experiment as ear tips are a very personal choice and everybody has a different opinion and like/dislike. Your ear canals are unique to you and your left and right may require different sizes.

The blue tubes in the package with the replacement ear tips are meant to be used to test out any other ear tips you may



desire. Be sure to insert the tubing about half-way into an ear tip core for a secure fit, which may require twisting. Do not be afraid to try different sizes. Sometimes, smaller is better for ease of proper ear tip insertion and comfort.

## **Replacement**

Ear tips should be replaced regularly. They are not intended for perpetual use. Clean tips will also perform better.

## **New to In-the-ear Headsets**

If you are new to in-the-ear headsets or have had trouble getting a good seal, please view the video in the Ear Tips link at [cqheadset.com](http://cqheadset.com) for proper insertion techniques. Also, we recommend you try them on a few short flights before embarking on a long day of flying.

# Using Bluetooth Devices

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## First Bluetooth Connection

The Bluetooth functionality of the CQ Headset provides stunning audio fidelity from your device or telephone calls while connected to the aircraft. Maybe you connect to a tablet for audio alerts from your EFB or your cell phone for music or calls.

## Pairing Your Device

1. With your CQ Headset powered off (see “Bluetooth Power On/Off”, page 8), press and hold the multi-function button (MFB) on the side of the control for approximately 6 seconds or until the LED

indicator alternates red and blue.

“Pairing” is heard. Release the MFB.

The headset is now in pairing mode and will remain so for approximately three minutes. If the indicator stops flashing before you have paired your device, start over.

2. With the headset in pairing mode, follow Bluetooth pairing instructions for your device. Select “CQ Headset” from the available Bluetooth devices.

The headset will exit pairing mode with just the blue indicator flashing periodically. Your device is now connected to the headset.

# Using Bluetooth Devices

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The CQ Headset reconnects to the most recently connected device automatically when powered on. If it does not, or you want to switch devices, you may need to select the connection from within your device settings.

## **Bluetooth Power On/Off**

There is no need to power on the headset for normal flight. The power control only affects the Bluetooth functions and does not have any effect on the connection or use of the aircraft radio or intercom.

**To power ON:** Press and hold the multi-function button for approximately 3 seconds until you hear “Power On” and the blue indicator flashes.

**To power OFF:** Press and hold the multi-function button for approximately 4 seconds until you hear “Power Off” and the red indicator flashes. The headset Bluetooth will automatically power off after 10 minutes of not being connected to a device.

# Using Bluetooth Devices

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## **Auto-mute**

By default, streaming media via Bluetooth will not be muted during radio communications. To temporarily toggle the internal auto-mute function ON, simply double click the multi-function button while Bluetooth is powered on. You will hear a tone, and the headset will initially mute for approximately 2 seconds.

With auto-mute enabled, radio or intercom audio that is of sufficient volume will trigger the Bluetooth audio stream to temporarily mute/pause then resume when the radio traffic is quiet.

To toggle auto-mute OFF, simply double click the multi-function button again.

To enable auto-mute by default each time Bluetooth is powered on, change the position of internal DIP switch #1 to be ON.

To change the default auto-mute mode to not do a media pause (default) and only mute the audio output without pausing, change the position of internal DIP switch #2 to be ON.

The mute toggle double click works no matter the position of the DIP switches that control mute default configuration.

## Telephone and Playback Controls

The CQ Headset Bluetooth control is highly optimized for its exceptionally small form factor and simplified controls. As such, it does not present any media controls from your connected Bluetooth device. Use the controls on your connected device to manage telephone calls, music and their volume. *Note: for telephone calls, the headset must be connected to an aircraft audio panel or intercom that is providing mic bias voltage for the microphone to work. In general, you need to be able to hear yourself for the microphone to be useful for Bluetooth telephone calls.*

[cqheadset.com](http://cqheadset.com)

## Bluetooth Call Control

The CQ Headset MFB may be used to answer or hang up telephone calls. For incoming calls, press the MFB once to answer or press and hold for 1 second to reject the incoming call. To hang up an established or outgoing call, press the MFB once.



## MFB Button Summary

Action	Button Press	Indication
Power ON	Press and hold 3 seconds	Flashing Blue, "Power On" heard.
Power OFF	Press and hold 4 seconds	Flashing Red, "Power Off" heard.
BT pairing mode	Press and hold approx. 6 seconds	Alternating Flashing Red/Blue, "Pairing" heard.
Answer incoming call	Press button once	
Reject incoming call	Press and hold for 1 second	
Hang up active call	Press button once	
Toggle auto-mute On/Off	Double click button	Tone heard.