GliderCom Raptor BT

The GliderCom Raptor BT is a wireless bluetooth helmet communications system designed for Paraglider and Hang Glider pilots. The primary focus is for two way radio communications, however stereo music, audio notifications and telephone support are also enabled for Android devices.

**IMPORTANT- Flying is inherently dangerous. It is even more dangerous if you are distracted. Do not allow this or any other device to distract you from the job of safe flying.

**IMPORTANT- Excessive helmet speaker volume can damage your hearing. Never listen to music or communications with this device at an excessive volume level. It is up to the user to determine their own safe volume level.

**IMPOPRTANT – The speakers, microphone, module and helmet buttons are NOT designed to be regularly moved from one helmet to another. This will reduce the lifespan of the components due to wear and tear.

**IMPORTANT – The Helmet Module will pair with TWO devices simultaneously. Typically, with the Dongle/Push to Talk and an Android smartphone. If a third device is paired it will bump one of the previously paired devices off the list. If you change Android devices or pair anything else you might need to pair the Dongle/Push to Talk units again.

NOTE – The Helmet Module is capable of excellent audio reproduction at a reasonable range of volume settings. To allow the use of peripheral devices with low audio outputs, high audio gain is available through the Helmet Module. ***BUT…..high Helmet Module volume settings used with high peripheral device volume will produce audio distortion*. If you experience audio distortion you must either turn down the volume on your peripheral device OR Helmet Module.

**NOTE – The best volume level and sound quality is achieved by having the speakers as close to the ear as possible. This means NOT burying them under the helmet padding. If your helmet fits properly the speakers should not cause any discomfort. Of course, you WILL notice they are present.

The system is comprised of three components.

1. The helmet module is mounted under the padding of the helmet, usually in-line with the chin guard and somewhat forward. The module works with a microphone, two speakers, an indicator light, and a charging jack. All components are completely enclosed in the helmet. Two sealed push buttons are mounted on the outside of the helmet for on/off and volume control. The indicator light and charging jack are visible along the bottom edge of the helmet. Volume is controlled in 15 steps. The module has a default level of 9 on start-up.

2. The radio adapter or "Dongle" plugs into the radio. The Dongle has an on/off/pair button (called the Multi Button), a charging jack, and an indicator light. There is also a recessed reset button accessible from the back.
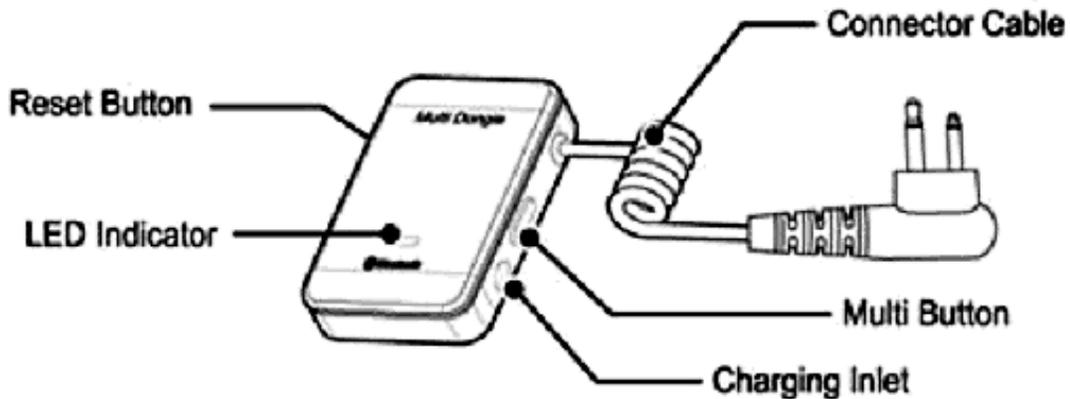
3. The Push to Talk unit can be clipped to the back of a glove, to a brake handle or any convenient place. The Push to Talk unit has an on/off/pair button (called the Power Button), charging jack, an indicator light, and the Push to Talk button itself. There is a recessed reset button accessible from the back. AN OPTIONAL WRIST STRAP IS AVAILABLE WITH A SMALL FINGER BUTTON.
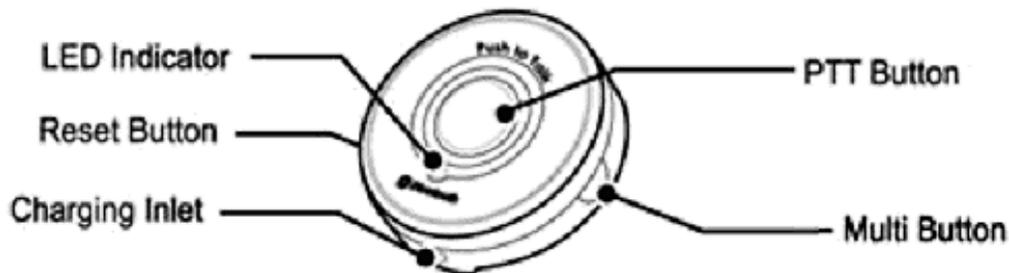
4. The charging kit consists of a wall mounted charger and a three way pigtail to allow charging all three parts at the same time.

Charging:

1. Plug in the wall charger. Attach the three way pigtail to the charger cord.
2. Insert one charging plug into each unit. The smallest plug fits the helmet.
3. The helmet light will pulse with a series of long pulses while charging. The light will switch to short blinking pulses when charging is complete. Charging time for a fully discharged battery is about five hours.
4. The Dongle and Push to Talk unit will display a steady red light while charging. The light goes off when charging is complete.
5. All three units use lithium polymer batteries. These batteries DO NOT have the memory problem that you may have encountered with nicad batteries. It is best practice with these batteries to never drain them completely and keep them fully charged as much as possible.
6. The helmet module should run for 8 hours with very heavy use. For example constant music and frequent radio transmission and reception. Lighter use will yield a longer run period.

Power up and pairing:

1. Bluetooth devices require pairing before being used together. Make sure everything is OFF before starting.

2. Press and hold the upper helmet button, (the one with the white dot on the side), holding for a full 8 seconds. This will turn the helmet on. The module will play a series of ascending tones. The indicator light will start short blinking indicating an "on" condition.

3. If you are going to use an Android device pair it first. Open the bluetooth control menu on your Android and perform a search for devices. You should soon see GliderCon RaptorBT listed, and now you can pair the devices.

4. Next pair the Dongle and Push to Talk unit to the Helmet Module. Simultaneously, press and hold the Multi Button of the Dongle and the Multi Button of the Push to Talk units until both indicator lights are rapidly blinking. Pairing should occur quickly

and the indicator lights will stop the rapid blinking.

Operation, radio communications:

1. It is important that you understand how to operate your radio before going any further!

2. The Push to Talk unit and the Dongle are already paired as per previous instructions.

3. Turn on the radio and make sure it is functioning correctly. Set the volume at 25%. Check the audio output from the radio by momentarily pressing the monitor button on the radio. Alternatively, you can change the squelch setting until the squelch opens and you hear static on the radio speaker.

4. IF you just finished the pairing process and everything is still on, you can go right to step 7.

5. Power up the Dongle and Push to Talk first. Press and hold the Dongle multi button and the Push to Talk multi button. Release each button immediately when you first see the indicator light. (If you hold these buttons too long the unit(s) will enter the pairing mode indicated by constant rapid blinking). If this happens you will need to repeat the pairing process explained in the power up and pairing section.

5. Turn on the helmet Module by pressing upper helmet button, (the one with the white dot on the side), holding for a full 8 seconds. This will turn the helmet on. The module will briefly play a series of ascending tones. The indicator light will start brief blinking indicating an "on" condition.

6. If initial pairing was done correctly, the Helmet Module will automatically connect to the Dongle and Push to Talk units. You can check for correct operation by watching the helmet indicator light while pressing the Push to talk button momentarily. The indicator light will switch from brief blinking to a single long blink. Brief blinking then resumes.

7. Put the helmet on and plug the Dongle into the radio headset receptacle. Open the radio squelch. You should hear the radio static in the helmet speakers. Adjust the volume on the radio to an appropriate and comfortable level. IF full radio volume does not produce enough volume in the helmet speakers, press the top helmet button briefly to increase the Helmet Module gain by one step. *SEE VOLUME NOTE

8. Check your ability to transmit. Press the Push to Talk button and perform a radio test speaking in a

normal tone with someone listening on another radio. You will be able to hear your voice at a low level in the helmet speakers due to the side-tone feature of the Helmet Module.

9. You are ready to go at this point. During flight it is always best to have access to the radio controls for volume adjustment or frequency change. Alternatively, the helmet mounted volume controls may be used. You have good control over volume level this way. Briefly press the top button (with the white dot) for volume up or briefly press the lower button for volume down. The volume changes with each press. You may also turn the volume down to zero in the event you are faced with annoying radio traffic, senseless dribble, or the extremely annoying pilot with a stuck mic/PTT. *If you turn the combined volume up too high, audio distortion will result*.

Operation, Streaming Music from an Android Device:

10. The Android device is already paired as per previous instructions.

11. Open the Bluetooth Dialog menu on your Android device and connect to the Helmet Module, listed as the GliderCom RaptorBT.

12. Your Android device should show the connection as being active for media and calls.

13. Open your music player of choice and hit the play button. You should now be able to hear music through the helmet speakers. Adjust your volume using the volume control on the Android device.

14. You can also control the music volume with the helmet buttons but remember you will also be changing the radio volume when you do this.

15. If you are listening to music and a radio call comes in, the music stops immediately to allow clear reception of the radio traffic. After approximately 8 seconds the music will resume. The same thing happens when you make a radio transmission by pressing the Push to Talk button.

16. Selection of the music track or playlist must occur at the Android device. If you want to stop or pause the music stream you must do so at the Android device. (The exception to this is when the music pauses during radio traffic).

Operation, Phone Calls from an Android Device:

1. Phone call audio from your Andriod device is also automatically routed to your helmet speakers and microphone.

2. Phone call control like dial, answer, and hang up must be handled at the Android device. The Android telephone application can be set to auto-answer for a more hands-free experience.

3. You can temporarily disable the telephone application on your Android device if you do not want to be bothered with calls while you are flying. (I place my device in the airplane mode for this). Follow the recommendations for your device or application.

4. A phone call WILL interrupt radio traffic and radio traffic WILL NOT mute a phone call.

5. The Push to Talk unit is not used for telephone calls.

Operation, Other Audio from an Android Device:

1. Typically audio from applications running on the Andriod device stream in much the same way as music. This type of audio will also be paused when a radio transmission is made or received.

2. If you are using the system for audio notifications from your Android device and a radio transmission is sent or received within a couple seconds of an Andriod audio event, the system will send a resume audio command to the Android device after the radio traffic ends. It is possible for the Andriod device to interpret this command as RESUME or PLAY the music stream. It may be necessary to modify some settings on the Android device to prevent this.

Operation, Android Walkie Talkie Apps like ZELLO

1. YES, this system WILL work with ZELLO. The Dongle is not used. The PTT Push to Talk unit is compatible with ZELLO. Follow the ZELLO instructions for bluetooth operation.

2. You will probably NOT be able to use ZELLO and stream music at the same time.

Operation, Power off:

1. Dongle/Push to Talk units. Press and hold the multi buttons until the indicator lights are ON constantly. Then release the multi buttons.
2. Helmet. Press and hold the top button for 8 full seconds then release. The helmet Module will turn off and the indicator will stop blinking after a few seconds.