

Thank you for purchasing your RoadHawk Bullet Camera



These instructions cover the following cameras:

- dogcam Bullet HD2
- dogcam Bullet R+
- RoadHawk Ride Bullet R+
- RoadHawk Bullet R+ Moto Edition
- RoadHawk Ride R+ Cycle Edition

These cameras represent a revolution in high definition bullet cameras. Not only are they smallest and lightest full HD 1080p bullet cameras on the market, they are the only camera systems to offer software configuration to produce the highest quality video and audio no matter the operating conditions.

Track tested and developed in association with Formula One engineers, these cameras are the perfect helmet and motorsport camera and have been proven to withstand extreme vibration and temperature environments.



User Guide: Charging

Your Bullet camera has a built-in 660mAh li-poly battery for a recording duration of between 60 mins and 1.5 hours depending on the operating environment and temperature.

The battery is rated for over 1000 charge cycles. The Li-Poly battery does not suffer from battery memory effect and it is therefore not essential for the battery to be completely flat before charging.

Over the lifetime of the battery some degradation is expected. We recommend to occasionally run the battery completely flat as this helps the battery to maintain its condition. Charge your camera on a regular basis and avoid leaving it uncharged for long periods.

To charge the internal battery, connect to any USB power source. When you plug the camera into a USB supply, the LED on the rear of the camera will turn RED to indicate charging. Once the camera is fully charged the LED will go out. (The charging LED is located next to the USB port at the rear of the camera).

It is advisable not to leave the charging camera unattended for any amount of time. We recommend charging the camera in an area that cannot be damaged should a fire take place.'



User Guide: SD Memory Card

Video is stored on a MicroSD card which is inserted in to the rear of the camera.

The 8Gb MicroSD card supplied with the camera will hold around 1.5 hours of video at 1080p at its highest quality setting. Once the card is full, with the camera in standard mode you will not be able to continue recording.

In 'loop recording' mode the camera will delete the earliest 15 minutes of recording and continue to write to the memory card. Please copy any videos you wish to keep from the camera and format the card to make more space.

To insert the SD card:

Remove the screw-on end cap.

Gently insert the MicroSD card with the writing facing up and push until it clicks and holds in to place.

The SD card should not be protruding from the back plate of the camera when fully inserted.

Tighten the screw-on cap. Make sure it is screwed on very tight as this creates the waterproof seal for the camera.

Never force the MicroSD card in to the slot.

A note about SD memory cards:

We recommend using high quality, branded SD cards with your bullet camera.

Memory cards should be rated class 6 or higher.

You can use 4Gb to 32Gb Micro SD cards in this camera.

From time to time, SD cards can become corrupt causing the camera to not record video or to create corrupted video files. You should format your SD card on a regular basis to minimise the risk of the card becoming corrupt.

Formatting the SD card will wipe it clean and delete any videos you might have recorded.

To format the SD card PC:

Plug the camera in to a USB port on your computer.

Go to the start button in windows and select "Computer".

Locate the drive that represents the SD card in your camera.

Right click on the drive and click on Format. Check "quick format" and follow the on screen instructions.

To format the SD card MAC:

Connect the camera to a USB port on your computer.

Open your "disk utility" application (hint: press CMD + SPACE and type in disk utility).

On the left side, click on the disk the represents the SD card in the camera.

Click on the ERASE tab.
Make sure the drop down box says MS-DOS (FAT).

Click ERASE.



User Guide: Mounting your Camera

Camera Cradle Mount

Your bullet camera is supplied with various mounts.

Choose the mount most suitable for your application.

Camera Bar Mount (optional)

Make sure the surface is clean and dry before applying a 3M pad.

Make sure you know the exact position you want the camera to be in before applying the 3M pad.

Peel back the 3M sticker from the pad and press the tray firmly in to position.

Camera Helmet Mounted

Leave it to bond for at least a couple of hours before use.

Once the adhesive mount has been applied, do not remove and reuse.

Always use a safety tether.

Always tether your camera before use. A tether is supplied.

Attach the tether to the end cap of the camera.

Tether the camera in such a way so that it cannot be lost if a camera mount fails.

User Guide: Making a Recording

Your bullet camera has three / four states:

OFF.

ON & RECORDING.

USB Mode.

Remote standby (R+ models only).

The camera's LED next to the power button will flash GREEN/BLUE to indicate the camera is recording.

If the battery is flat or there is no available space on the SD card or if the SD card is not inserted then the camera will turn on briefly and turn off again.



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To Start recording:

Press and hold the power button for 2 seconds.

The camera will vibrate to let you know it is recording.

DO NOT LOOK DIRECTLY AT THE FRONT ON THE CAMERA WHEN STARTING OR WHILE THE LASER IS ON.

To Stop recording:

Press and hold the power button for 2 seconds.

The camera will vibrate twice and then shut down.

(CAUTION: THE LASER WILL ALSO FLASH MULTIPLE TIMES WHEN SHUTTING DOWN).



Rear caps supplied with camera

There are two rear caps supplied with your bullet camera.

The sealed end cap is designed for when the camera is being submerged in water and heavy rain.

For better audio use the cap with holes in it.

If you are filming at speed, the sealed cap will reduce wind noise.

Also check the microphone volume level settings to help reduce wind noise.

User Guide: Playing back your Video

Your bullet camera produces .MOV video files.

These files are compatible with up to date computer operating systems.

In most cases, Windows media player for Windows or Quicktime for MAC computers will be able to play your video.

If you find the playback is not smooth or you get a message about the video codec not being supported then you will need to download some free software.

We recommend VLC which can be downloaded for FREE from www.videolan.org

VLC usually does a better job of playing back H.264 video than any built-in playback software.

Connect your camera to your computer.

When the camera turns on, it will act as an SD card reader.

WINDOWS:

Go to COMPUTER and you will see your camera as a removable device.

Double click to access the SD card. You will see a folder called DCIM.

Double click this to see your video files.

Double click the file to watch your video - OR - right click the video and select "open with VLC" if you have it installed.

MAC:

Click on your desktop background. Press CMD+N to open a finder window.

On the left under DEVICES you will see the SD card in the connected camera.

Click on this and then click on DCIM to see your videos.

Double click the file to watch your video - OR - right click the video and select "open with VLC" if you have it installed.



User Guide: Changing Settings

To change the settings you need to plug the camera into the computer and launch the camera software.

When you first turn your camera on it reads a file on the SD card called settings.txt.

Do not try to edit this file yourself.

Use the supplied software to make changes to your camera.

WARNING: If you use extreme values on some of these settings, the camera will not perform well.

For example: Setting the brightness too low will result in a completely black image being recorded.

Click SETTINGS in the configuration software.

Click to make a change to a setting and a brief explanation will show on the left side describing the functions of that setting.

Once you have made the desired changes to the settings on your camera, press the SUBMIT button to save them to the camera.

Unplug the camera and turn on to apply the new settings.

Setting the time/date:

The camera has a built-in clock.

If you enable time/date stamp in the settings it will be recorded in the lower right corner of your video.

Once you have made a recording with the time/date.

To set the time and date on your camera, click the Set Time link in the top right hand corner of the software.

Use the drop down boxes to choose your own time and date and click Set as Above to apply them to the camera.

Alternatively, click Set as System Time to apply the time and date as set by your computer.

As soon as you have done this, a Settime.txt file is written to the SD card of the camera. Unplug the camera and turn it on to apply.

User Guide: Bullet R+ Remote

Both the dogcam and RoadHawk Bullet R+ cameras are supplied with a wireless remote controller and a wireless remote receiver.

The Remote receiver part needs to be attached to the camera in order for the remote controller to be active.

Attach the remote receiver to your camera and twist until tightly in to position (being careful to ensure it is located in the 3 small locating lugs).

Press and hold the power button on the remote controller to power on the remote.

The LED on the remote will turn GREEN to indicate it is in standby mode.

Press and hold the button on the camera. The camera will vibrate once and the LED on the camera will be GREEN to indicate the camera is also in standby mode.

Controlling the camera with the remote:

To start recording, press and hold the middle button on the remote controller for about 2 seconds. The camera will vibrate once and start recording. The LED on the camera and on the remote will flash GREEN and BLUE to indicate recording.

To stop recording, press and hold the middle button on the remote for 2 seconds. The camera will vibrate 3 times and stop recording. The LED on the camera and the remote will turn GREEN to indicate the camera has gone in to standby mode.

To take a still photo, make sure the camera is in standby mode (green LED only showing on remote and camera) Press the left button on the remote control briefly. The camera will vibrate once and the LED on the remote will turn blue for a few seconds.

Controlling more than one camera with a single remote:

Turn on the remote by pressing the right button. The remote will turn on and go in to standby mode (GREEN LED)

With the cameras within 1m range of the remote, turn on both cameras at the same time. The remote will blink 3 times. The remote is now synced with both cameras and can be used to control both cameras simultaneously.

Charging the remote:

The remote controller has a built-in rechargeable battery. The battery is sealed inside the remote. To charge this battery, open the watertight door on the right side of the remote controller. Plug the remote in to any USB cable. The LED on the camera will light red to indicate it is being charged.

Once the remote controller is fully charged, the LED will go off. A full charge will take between 1 and 2 hours. It is possible to use the remote with the camera whilst it is charging.

When the remote controller is turned on, the battery will last for about 6 hours in standby mode.

PLEASE NOTE:

It is NOT possible to use the remote to turn the camera on and off. You have to manually turn both the camera and remote in to standby mode by following the instructions above.

When the camera and the remote are in standby mode, the batteries will eventually go flat even if you are not recording. The life of the battery in the camera when in standby mode is approx. 4 to 5 hours.

With the remote attached to the camera, you should be getting between 60 and 75mins record time depending on the temperature and conditions the camera is being used in.

When connecting the remote receiver to the camera, ensure it is fully tightened so that the camera will still be waterproof. If the remote receiver is not all the way in then it may fail to operate correctly.

User Guide: Maintenance

With the rear cap fully screwed on tightly you can wash your camera in warm water.

Dry the camera with a soft cloth.

Clean the lens of the camera with a micro fibre lens cloth.

If the outer lens becomes scratched or damaged then it can be replaced.

Your camera uses a Li-Poly battery.

This battery can go out of condition if left uncharged for a long time.

You should try to charge and use your camera on a regular basis.

Try not to leave the camera's battery uncharged for a long time.

User Guide: Updating your Camera

From time to time there might be firmware updates available for your camera.

The firmware is the operating system for your camera.

A new firmware might resolve bugs, make the camera more reliable, increase battery life or add new features.

Load your camera's configuration software.

Connect the camera to the computer using the USB cable.

The software will recognise your camera is connected and check for updates.

If an update is available the software will prompt you to update.

The updated firmware will download and be saved on to the SD card in your camera.

Once this has happened, unplug the camera from your computer and wait for 5 seconds.

Plug the camera back in to your computer and wait for the LED to stop flashing.

DO NOT REMOVE THE CAMERA BEFORE THE UPDATE IS FINISHED

Once the LED is OFF, unplug the camera and start to use as normal.

After a successful update, you can plug the camera back in to your computer and the software will tell you if your camera is up to date.

MOTO Hardwire Kit

The Moto version is supplied with a hardwire kit so you can permanently power your camera while your ignition is on. There are 3 wires to the control unit, Red (Live), Black (Negative), Blue (Switched Live). We recommend you have the hardwire kit fitted by a Qualified Motorcycle electrician. The other end has the USB socket specific to the camera.

If fitting yourself, please refer to your make of motorcycles workshop manual.

User Guide: Specification

Sensor: 5 Mega Pixel

Resolution: 1920 x 1080 (30, 25fps) - 1280 x 720 (60, 50fps)

Scan type: Progressive

Video Encoding: H.264 .MOV Files

Bit Rate: Up to 12mb/s in high quality mode

Power Supply: Embedded 660mAh Li-Polymer Battery

Battery Life: 60 to 90 mins record time

Power Consumption: <1.5w

Memory: Up to 32GB MicroSD Card Class 6 or better

Lens: 6 element glass lens

Field of View: 135 degrees at 720p

Working Temp: -10C to +55C

Storage Temp: -20C to +60C

Waterproof Depth: 10m MAX

Laser: Class 2 Single Laser <1w

Dimensions: 84mm (l) x 23mm (dia)

Weight: 62g

USB: 2.0 (high speed)

Operating System: Win 8 / Win7 / WinXP / Vista / Max OS 10.7 or better

1080p/30fps @ 12 Mbit/s data rate, 1GB memory can record 10 minutes of video.

720p/60 @ 12 Mbit/s data rate, 1GB memory can record 12 minutes of video.



User Guide: Laser Warning

Your camera has a class 2 red laser.

When you turn the camera on, it will fire the laser from the front lens.

WARNING:

Never look in to the laser beam.

Never point the laser at anyone's face.

Never point the laser at road traffic or aircraft.

Never point the laser at animals.

The laser function can be disabled in the configuration software.

If you are using the camera in or on a vehicle on a public road then you should disable the laser.

User Guide: Trouble Shooting

Camera turns off within a few seconds of being turned on.

Check the battery is charged fully.

Check the SD card is fully inserted.

Check the SD card is not full.

No sound can be heard during playback:

Check the Mic Sensitivity settings in the software.

When the sealed rear cap is used, audio will be much quieter.

Sound is too loud/distorted:

Check the mic sensitivity settings in the software.

When recording at high speeds, use the sealed rear cap to reduce wind noise.

Recorded image is too dark or too bright:

Check the settings of the camera using the configuration tool.

Click "Default settings" in the software to return the camera to its factory set condition.

Video files are corrupt or files are not being saved correctly.

This will almost certainly be related to the SD card itself rather than the camera.

Make sure you format your SD card on a regular basis.

If you use a SD card that is too slow, the camera will not be able to save the video files correctly.

Use only high quality class 6 or higher SD cards with this camera.

Video is not smooth during playback:

This is almost certainly related to your computer or the video playback software you are using.

Check your computer meets the minimum specification required for 1080p video playback.

Most netbooks cannot reliably playback 1080p video.

Ensure your anti-virus software is up to date and scan your computer for malware.

Install VLC for FREE from www.videolan.org and use it to play your video files.