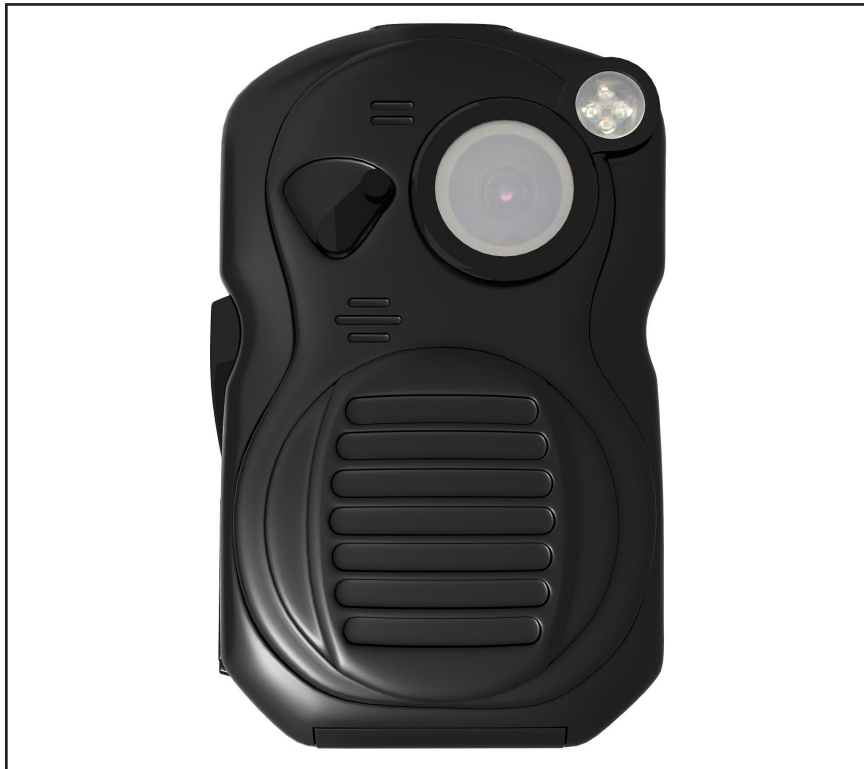


BULLET DVR™



HD-3G

Video Recording System

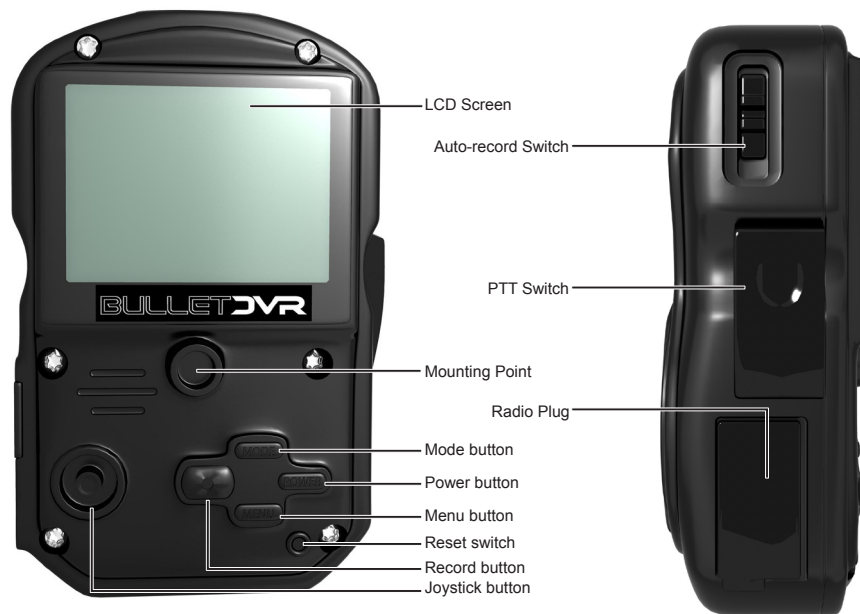
User's manual

HD-3G

Video Recording System

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Explaining the control buttons:

Joystick

The **joystick** button has four different functions:

Left= LCD On/Off

Up= Zoom in

Down= Zoom out

Press= Flip Image/OK

Record

Press to start/stop a recording or to take a snapshot.

Mode

Press to switch modes: Video, Photo, Playback

Power

Press to start the unit and press & hold to shut down

Menu

Press the **menu** button under any mode, to bring up the configuration screen for that specific mode. You can navigate through the different menus, pushing up or down on the joystick, and pushing left or right to change it. When you're done, press the menu button again to exit.

Night vision

Toggle the switch to the left to activate nightvision mode. Switch it back to the right to turn it off.

Autorecord switch

Up = Off , Down = On

PTT Switch

Push-To-Talk Radio Switch

Radio Plug

For compatible motorolla radios

Battery Maintenance

The HD-3G camera uses a rechargeable, high capacity Lithium-Polymer battery pack, capable of providing over 6 hours of run time on a single charge. We recommend charging the battery completely before the first use. A full charge takes around 10 hours to complete.

• Charging the Unit

Connect the supplied cable into the A/V plug of the camera, and the USB connector into the AC wall charger, then connect to any wall outlet. The led indicator on the charger will remain red while charging, and turn to green once completed.

• Memory Card Installation

Insert the card into the camera, with the metal pins facing the LCD screen. Slide in the plastic card cover and fasten it in place with the supplied screw. **Caution:** *Do not over tighten the screw!*

The required card type is SDHC, and you can use up to 32Gb capacity. We recommend using the Kingston brand, with a Class 4 or 6 rating.

Caution: *Never remove/insert the memory card while power is applied, or you risk damaging the data integrity on the card!*

Explaining the Configuration Menu

Each of the 3 available modes (Video, Photo & Playback) allows you to change different settings, to adjust the camera to the ambient light conditions and also to configure other system settings. Press the **menu** button once to enter the configuration screen, and by default you will be shown the options for camera adjustments (**Image B**). If you need to change the system settings, move the joystick up, then right, to get to the system settings menu (**Image C**).



Image B

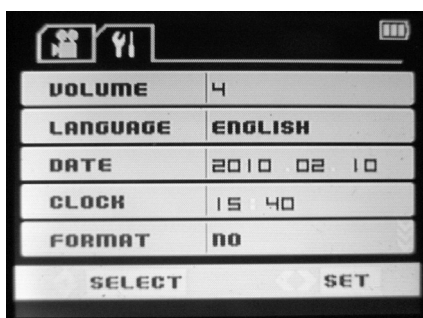


Image C

When you power on the system, the default mode is always the **video mode**. Use the **mode** button to select the mode for which you need to change settings, and press the **Menu** button to enter the configuration screen of the selected mode.

Password Protection

In order to protect the files from being deleted, and settings from being changed by an unauthorized party, these options are password protected. The default password is 999888 and can be changed by the administrator, using the joystick button.

Video Mode settings

- **Size** = Select the desired resolution: 1920x1080 @ 30fps, 1440x1080 @ 30 fps, 1280x720 @ 30 fps, 848x480 @ 60 fps.
- **EV** = Exposure compensation. Override the automatic settings of the camera. Select + for sharper or – for darker settings.
- **White Balance** = Select the lighting conditions: Auto, Fluorescent, Tungsten, Cloudy or Sunny.
- **Contrast** = Standard, Soft, Hard.
- **Sharpness** = Standard, Soft, Hard.
- **Effect** = Add some special effect to your video: Off, Vivid, Monochrome, Negative, Sepia or Art.
- **Duration** = Preset amount of time for recording: No (continuous), 15, 30 or 45 minutes.
- **Recycle** = Set time of recording before overwriting occurs: No (continuous), 1, 5, 10 and 15 minutes.
- **Volume** = Adjust the playback volume from 0 to 8
- **Language** = English only.



- **Date** = Configure the current date.
- **Clock** = Configure the current time.
- **Format** = If you are having problems with the memory card, you can re-format it.
- **System Reset** = Restore to original factory settings.
- **Auto Off** = Shut down the unit automatically after a set period of time: OFF, 1, 3 or 5 minutes.
- **Light Frequency** = Select the lighting frequency for your country: Europe 50 Hz or north America 60 Hz.
- **Stamp** = Add the time/date over the recorded video.
- **GPS OSD** = On Screen Display of the GPS Data
- **Password** = Must be 6 digits, select SET to change the default password.
- **ID** = Unique factory assigned number used to identify this unit.
- **Version** = Camera firmware version number.


Photo Mode Settings



- **Size** = Image resolution: 5 or 8 Mega pixels
- **EV** = Exposure compensation
- **Quality** = Image quality: Normal, Good, Fine.
- **White Balance** = Select the ambient light that best suits the lighting conditions
- **Contrast** = Standard, Soft, Hard.
- **Sharpness** = Standard, Soft, Hard.
- **Effect** = Add a special effect to your image.
- **Self Timer** = 10 seconds delay before a picture is taken.
- **Burst** = Number of images that will be taken each time you press the Record button: No, 3 pics, 5 pics.

Playback Mode

When you enter the Playback mode, if there are no videos or images stored on the memory card, the message **NO FILE** will appear on a blue screen.

Otherwise, the first image or video will be shown. If the image has the **play** stamp on it  , it means the file is a video. You can browse all images and videos using the joystick button, moving right to go to the next item and left to go back.

If you move it down, all files will be shown in thumbnails mode, and you can navigate through them more quickly. Press **OK** on the joystick to view the selected file in full screen. If you press **OK** on a video file, playback will begin. If you press **OK** again, it will pause it. When a video is playing, you can **fast forward** it by moving the joystick to the right. Doing so once will speed up to 2x, again for 4x and another time for 8x speed. You can do the same thing if you need to go **backwards**, by moving the joystick to the left.

Playback volume

Moving the joystick Up or Down while a video file is playing, will raise or lower the volume accordingly.

Deleting files

To delete a file, press the Menu button while you are viewing it. This will bring up the file delete menu. To avoid deleting files by an unauthorized party, you must set password before you can delete it.

File Storage

Use the supplied **USB cable** to connect the camera with your computer. You can easily transfer the files from the memory card to any **PC** or **MAC** that way, without having to remove the card from the unit.

Once connected, Power on the camera, and you will see 3 options: MSC, CHARGE and POWER.

Select **MSC** to allow your computer to search for data on the memory card. You will find 2 locations with data stored, one for the memory card and one for the small internal memory. If no memory card is present, it will only show the internal memory storage.

Selecting **CHARGE** will allow you to recharge the battery from your computer. Select **POWER ON** to use the camera normally.

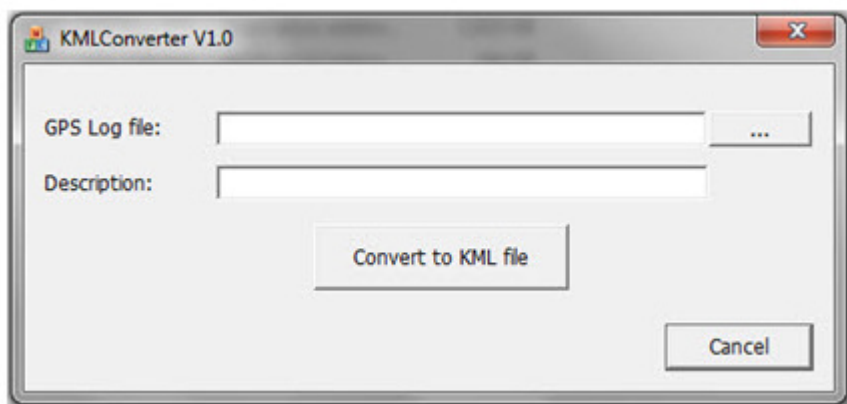
GPS Conversion Software

The Compact Disc provided with your HD-3G camera contains a file conversion utility for Windows PC computers. You will need it to convert the raw GPS data into a format that can be read by 3rd party applications, such as Google Earth and others.

Before the first use, copy the GPS folder from the CD-ROM to any location on your computer. Then go to That location and launch the KML Converter application.



Note: Before you can record the GPS data along with your video, the G logo must appear on the LCD screen, meaning that the satellites are locked in. This can take a few minutes after the camera is powered on(cold start)



Select the raw GPS data file from the memory card (with a .txt extension) that you wish to convert. Click on “...” to browse your files. Enter an optional description name for the data, then click on “Convert to KML file”. The same file name will be created on the card, but with a .kml extension. Now open this file using your favorite GPS mapping application, to view the recorded route.

Connecting to an HDTV set

The **HD-3G** camera can be connected to any **HDTV** (1080p resolution is recommended) to see the image on a large screen while you are monitoring, recording or to playback your files. Connect the supplied **HDMI cable** between the camera unit and the HDTV monitor, and press the **power** button. The display that usually appears on the **LCD screen** of the camera unit will now be shown on the larger HDTV set. Note that during monitoring, the image will be mirrored, but the actual recording will be normal.

BULLET DVR™

HD-3G

Specifications

Sensor	Canon 1/2" CMOS
Max. Resolution	2592x1944 pixels, 8 mega pixels Int.
Zoom	4x Digital Zoom
Display	2.0" TFT LCD Screen
Video Output	HDMI CTS1.2, 1080p output
Video Format	.mov H.264 file type
Frame&Bitrate	30fps @ 12 Mb/s, 60fps @ 5 Mb/s
Storage	Internal 32Mb, SD card up to 32 Gb.
Audio	Internal mic (AAC format) and speaker
Flash	Infra-red night vision mode
Battery type/ capacity	Lithium-Polymer 3.7v, 4000 mAh
Runtime	6 hours of recording, 10 hours of stand-by
Connectivity	USB 2.0 and HDMI out ports
GPS Logging	Refresh rate 1 Hz
Dimensions	62 x 98 x 31 mm (2.4" x 3.8" x 1.2")
Weight	143 gr. (5 oz)
Waterproofing	Conforms to IP67 standards

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