

# BikeCAM2

## Instruction & Installation Manual



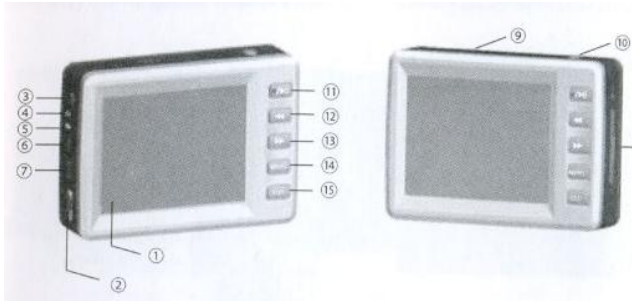
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**TECSTAR ELECTRONICS LTD**  
Universal Helmet Communication System

## DVR Operation

1. 2.5" TFT LCD Screen
2. ( ■ ) REC/OFF Switch button
3. AV In jack to connect with the Mini camera/TV
4. LED Indicators (red)
5. LED Indicators (blue)
6. AV out jack to connect with TV
7. USB jack to connect with PC
8. SD Card Slot
9. Microphone
10. ( ⏻ ) Power
11. ( • / >|| ) Play/OK (Enter)
12. ( << ) REV / Vol +
13. ( >> ) FWD / Vol -
14. (Menu) Menu key
15. (ESC) Return key



## Inserting the SD card

Insert the SD card as illustrated.



## Recording time of memory capacity

SD card capacity	720 X 480	640 X 480	320 X 240
2GB	Approx. 55 mins	Approx. 65 mins	Approx. 130 mins
4GB	Approx. 110 mins	Approx. 130 mins	Approx. 260 mins
8GB	Approx. 220 mins	Approx. 260 mins	Approx. 520 mins
16GB	Approx. 440 mins	Approx. 520 mins	Approx. 1040 mins
32GB	Approx. 880 mins	Approx. 1040 mins	Approx. 2080 mins

## Basic Recording from bullet camera

Connect mini camera to AV/IN.

Press and hold the power button ( ⏻ ) for 2 seconds into the state of preview.

Press ( • / >|| ) to start recording, the red LED is flickering during recording. "REC" shows in the upper left corner of the screen at the same time.

Press (ESC) to stop and save recording, the red LED is off.

## One Touch Record (Video & Audio)

When the main unit power off, connect the mini camera and slide the **REC/OFF** Switch upward, the first red LED indicator is flashing during recording.

Slide the **REC/OFF** Switch downward, to save the video & audio recording.

## Installing the battery pack

Open the cover by slightly pushing towards the SD card slot.

Insert the battery ensuring the terminals align with the DVR terminals.

Close the battery cover.

## Charging the battery pack

Connect the AC power adapter to the USB port on your DVR. The charge LED lights up when charging begins. When the charge LED goes off then charging is completed.

**Charging time:** for the 1400mAh battery is approximately 4 Hrs.

Battery pack capacity	1400 mAh	Fully charging time (Approx.)
Charging time		240 mins
Movie mode recording		180 mins (fully charged battery)
Movie mode playback		240 mins (fully charged battery)

## Maintenance

The manufacturers or their agents overseas will provide a repair service for any unit developing a fault.

## Cleaning

If the unit requires cleaning, use a cloth that is only lightly dampened with water or a mild detergent.

**WARNING! TO AVOID DAMAGE TO THE UNIT, NEVER ALLOW WATER TO GET INSIDE THE CASE. TO AVOID DAMAGE TO THE CASE, NEVER CLEAN WITH SOLVENTS.**

## Guarantee

The manufacturers provide a 12-month guarantee period from the date of purchase. The guarantee covers faulty materials and workmanship.

**The guarantee will be void if the equipment has been tampered with, modified, misused or subject to neglect.**

## Troubleshooting Guide

**DVR reports: 'NO SIGNAL'** When the recorder displays this message it means that there is not a valid signal from the camera, check the connections and that you are using the correct cable from the camera to the recorder.

**PC does not play video:** This will be due to the PC not having the require CODEC to view MPEG4 video files, The most commonly used codec divx can be downloaded from [www.divx.com](http://www.divx.com) free of charge.

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Issue 1.0

## Pack contents

- 1 x **Bullet camera** – Sony HAD CCD helmet/bike camera
- 1 x Camera suction mount kit
- 1 x Camera bar mount kit
- 1 x Camera stick mount kit
- 1 x DVR video recorder
- 1 x 4Gb SD memory card
- 1 x Recorder carry case and strap and belt clip
- 1 x Connection cable for camera and starcom1 communication system.
- 1 x 1400mah batteries
- 1 x universal mains Battery charger + Plug
- 1 x USB cable
- 1 x AV out cable
- 1 x Instruction manual

## Installation

Installations must only be undertaken by a person who has a full understanding of the electrical, safety and mechanical requirements involved. If in any doubt, please consult your dealer.

### DVR Recorder

The DVR recorder is solid state so is not unduly effected by bike vibration, although as with any electronic equipment care must be taken when locating to avoid potential heat or shock damage and also electrical interference from the bike ignition system.

Also, note the recorder is NOT water proof and therefore must be protected from direct or indirect water. Suitable mount positions would be a tank bag or under the seat.



### Camera fitting

#### Helmet:

The camera can be mounted to the helmet using the suction cup mounts provided. The suction mounts must be fixed to a flat clean surface, once in the require position tighten the thumb screws and ensure the fixing is secure before use.



#### Bike mount front or rear

The camera can be mounted to the bike directly on to a flat smooth surface, e.g. fairing. Using the suction mounts supplied. Use 2 or 3 mounts to fix the camera in the desired position, once fixed tighten the mount thumb screws to ensure the camera is secure before use.



## Setting the record mode

### Setting the pixels

In the state of preview, press the **(MENU)** button, Press **( << )** or **( >> )** to select "SETUP". Press **( << )** or **( >> )** to select "PIXELS". Press **( • / >|| )** to enter the pixels menu. Press **( << )** or **( >> )** to select "720 x 480" or "640 x 480" or "320 x 240" Press **( • / >|| )** to set.

Press **(ESC)** to go back to set up menu.

### Setting the frames

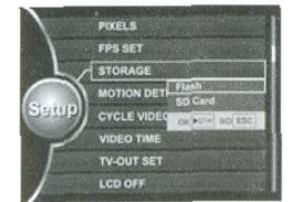
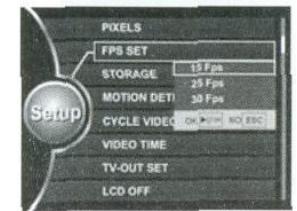
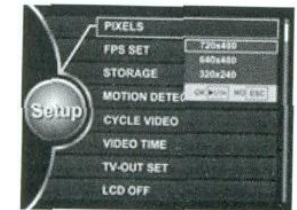
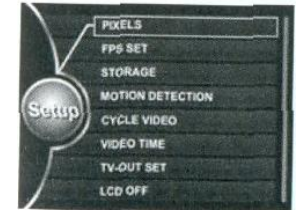
In the state of preview, press the **(MENU)** button, Press **( << )** or **( >> )** to select "SETUP". Press **( << )** or **( >> )** to select "FPS SET". Press **( • / >|| )** the enter FPS SET menu. Press **( << )** or **( >> )** to select "15Fps" or "25Fps" or "30Fps" Press **( • / >|| )** to set.

Press **(ESC)** to go back to se tup menu.

### Setting the storage

In the state of preview, press the **(MENU)** button, Press **( << )** or **( >> )** to select "SETUP". Press **( << )** or **( >> )** to select "STORAGE". Press **( • / >|| )** the enter STORAGE menu. Press **( << )** or **( >> )** to select "FLASH or SD card" Press **( • / >|| )** to set.

Press **(ESC)** to go back to set up menu.



This same set up procedure can be used to set up:

Frames	
Storage	FLASH or SD CARD
Motion detection	YES or NO
Cycle video	YES or NO
Video time	10MINS or 20MINS or 30MINS
TV output	LCD or PAL or NTSC
LCD off time	1MIN or 5MINS or NEVER
Power off time	1MIN or 5MINS or NEVER
Vibrate mode	YES or NO
Language	
Date & time	To set date stamp
Format	FLASH or SD CARD warning this will delete all data.

### Setting the MIC/AUDIO record mode

For audio recording you can select the internal DVR microphone. This allows background noise; engine etc to be added to the recording. Alternatively using the cable supplied you can connect to a Starcom1 intercom system and have your voice recorded onto the video.

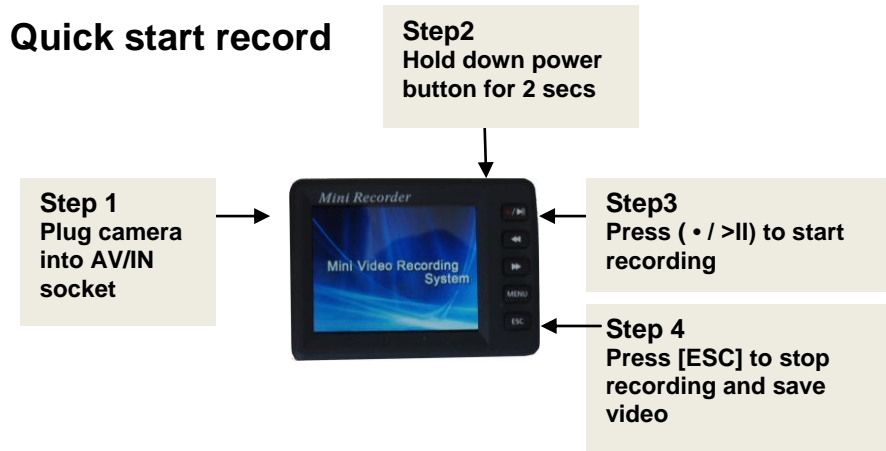
#### Setting the microphone mode

In the state of preview, press the (ESC) button, Press ( << ) or ( >> ) to select "Camera or Main unit". Press ( • / >|| ) to confirm selection. Press ( ESC ) to return to preview menu.



## Quick setup guide

### Quick start record



The red LED flashes during recording. "REC" shows on the upper left corner of the screen at the same time.

### Setting the MIC/AUDIO record mode

In the state of preview, press the (ESC) button, Press ( << ) or ( >> ) to select "Camera or Main unit". Press ( • / >|| ) to confirm selection. Press ( ESC ) to return to preview menu

Main unit = sound from internal DVR MIC.  
Camera = sound from starcom1 intercom.



### View video on computer

Using the black USB cable supplied, connect to the small connector to the USB OUT connection on the recorder unit. Connect the other end to computer USB connection.

Turn ON the DVR

The DVR will be seen as a removable drive, select the directory and click on file windows media will then play the video.

You may need to load a codec see: [How to edit Mpeg4 video files](#)

## BikeCam2 DVR Specification

Digital Screen	2.5" TFT LCD
Colour System	PAL/NTSC (Auto)
Resolution	960 X 240
Recording Format	AVI
Recording Resolution	720 X 480 / 640 X 480 / 320 X 240
Motion Activated	Yes
Cycle Recording	Yes
Real-time Stamp	Yes
Video Time	10/20/30 Mins
LCD Off	1/3/5 Mins/Never
Auto Power Off	5/10 Mins/Never
Vibration Function	ON/OFF
TV-OUT	NTSC/PAL
AV-IN	NTSC/PAL
Storage	FLASH SD CARD
Playback	Video Yes
Media	Yes/Music/Movie/Photo
Frame Rate	30fps/25fps/15fps
Built In Flash memory	256MB
USB Jack	High-Speed USB2.0
Battery Pack Capacity	3.7 14000mAh
SD Card	SD 1GB-32GB
Power output of Camera	DC 5V 200mAh
AV Input Jack	3 rings 2.5mm diameter
AV Output Jack	3 rings 2.5mm diameter
<b>Camera Specification</b>	
<b>Specifications Sony HAD CCD (Hole-Accumulation Diode) sensor</b>	
Image sensor	1/3" color Sony CCD HAD
Horizontal definition	480TV Lines
Total number of pixels	NTSC: 537 x 505 approximately PAL: 537 x 597 approximately
Minimum illumination	0.5 lux
Power supply	DC 5V, 150mAh
Dimensions	Φ 18x75cm
Camera Cable	1.5m
TV System	PAL/NTSC

## How to edit Mpeg4 video files

This guide will tell you how to edit your mpeg4 files. No matter which video editing software package you use, this is an easy way to convert the mpeg4 video file in to a format that can be edited by just about any software on the market.

### Download and install a codec.

The first thing you need to do is install a codec. This is a small piece of software that tells your computer how to play an MP4 file.

For Windows XP we recommend going to [www.xpcodecpack.com](http://www.xpcodecpack.com) and downloading their pack. For Windows Vista you should download and install the DivX codec from [www.divx.com](http://www.divx.com) You should reboot your computer after installing a codec

### Set up windows movie maker.

We will be using windows movie maker in this tutorial. It's simple and above all free. You can find windows movie maker by clicking on your START (windows key) button, click "all programs" > "Accessories" and click "Movie Maker"

In Movie Maker, click the Tools>Options and then click the compatibility tab. Uncheck all the boxes EXCEPT for ffdshow Video Decoder. Click OK

### Import your movie.

Connect your device to your computer with the USB cable. The recorder device will show up as an external drive.

**For XP:** In movie maker click File > Import in to collections Make sure you **untick** the "create clips for video files" box.

**For Vista:** In movie maker click File > Import media items Click the video file you wish to use.

### Export the movie file.

Drag your movie on to the time line / story board. Do not try and edit the video at this point.

### For Windows XP

Click File > Save movie file; Select "my computer" and press next

Give your video file a name and press next; Click show more choices

Click "other settings" and select DV-AVI (PAL)

This will save the mpeg4 file as a standard DV.AVI file that can be used in any video editing package. If you re-import this new file back in to windows movie maker then you'll be able to chop it and edit it as normal.

### For Windows Vista

Click File > Publish movie

Select "my computer" and press next

Give your video file a name and press next

Click "more settings" and select DV-AVI (PAL)

This will save the mpeg4 file as a standard DV.AVI file that can be used in any video editing package. If you re-import this new file back in to windows movie maker then you'll be able to chop it and edit it as normal.

## Motion Detection recording

With the main unit powered off, connect the mini camera, press and hold the power button (⏻) for 2 seconds to a state of preview. Press the menu button (Menu), Press (◀) or (▶) to select "Setup", Press (•/▶) into the Setup menu.

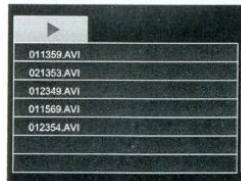
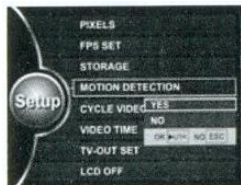
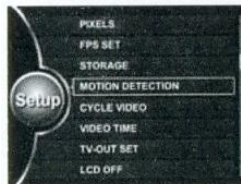
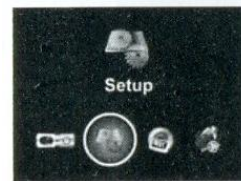
Press (◀) or (▶), and select "MOTION DETECTION"

Press (•/▶) and Select "YES" and press (•/▶) to start the Motion Detection function, as illustrated.

Turn unit off and on again using (⏻) to return to preview,

Press (•/▶) to enter detection recording mode Status is shown in the bottom-left of the screen at the same time.

Press [ESC] to stop detection recording.



## Playback

In the state of preview, press (Menu), Press (◀) or (▶) to select "Video" and press (•/▶)

Press (◀) or (▶) to select "Record playback" and press (•/▶)

Press (◀) or (▶) to select the desired video file, press (•/▶)

Press (•/▶) key to play back the selected video file.

Press (•/▶)key to stop playing

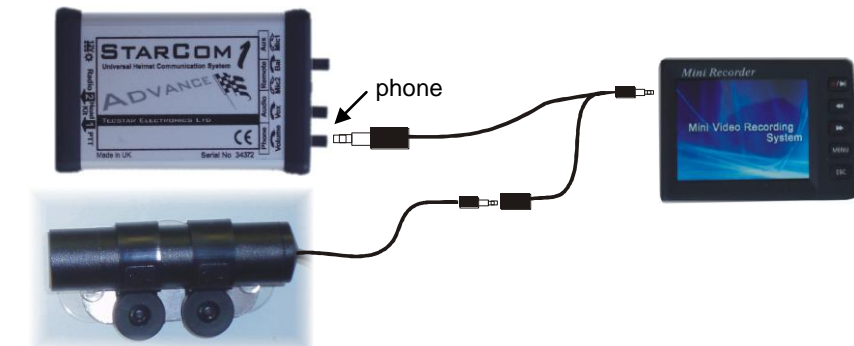
Press (ESC) key to return to the recorded file list.

## Connections – recording Video only or internal mic connection:



Connect the camera cable directly into the DVR AV/IN socket

## Connections – Video & Audio from StarCom1 connection



The interconnect cable supplied connects the Recorder to the camera unit and to a StarCom1 communication system to add audio to the recording.

The interconnect cable has a 2.5mm 4 pole plug that connects to the recorder AV IN socket. The camera plug, plugs into the jack socket and if audio is required the 3.5mm stereo jack plug is connected to the starcom1 system phone input socket.

## Connections – to computer

Using the black USB cable supplied connect the small connector to the USB OUT connection on the recorder unit. Connect the other end to a computer USB connection.

## Connections – TV or video display

Using the AV cable supplied connect the 2.5mm 4 pole plug to the A/V OUT socket on the recorder, the 3 phono plugs connect to the matching coloured sockets on a AV input on a TV system, ensure the DVR player is set to DISPLAY = TV

## Safety First

### Please read carefully before installing or using this equipment

The StarCom equipment is designed for motorbike use but it remains the responsibility of the rider to ensure that their safety is in no way impaired when using the equipment.

The system must only be used when the rider is completely confident that their riding will in no way be impaired with the use of video/audio equipment.

Distraction of any kind can be dangerous when riding a motorcycle.

When installing on the helmet, the helmet must not be modified in any way.

All cabling should be installed so that it will not fly free. There should be no cable slack that could potentially catch in the moving parts of the vehicle.

Tecstar Electronics will not accept any liability relating to the installation or use of this equipment. It remains the user's responsibility to ensure that their safety will not be impaired in any way before installing and/or using the system. If you are not completely satisfied that you can use the system safely, it should be returned to the place of purchase.

## Accessories and Spares

Order Code	Description
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For a full accessories list, please consult your dealer or visit [www.starcom1.com](http://www.starcom1.com)