



# DT-CAM-E580 Datatoys 580 Line Bullet Camera



## Manual and Connection Guide

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## Introduction

Thank you for your purchase of the Datatoys DT-CAM-E580! The Datatoys 580 series cameras are a special breed of the Sony EXView HAD chip set with HQ1 DSP, specially designed for low light, changing light, and color optimization. The DT-CAM-E580 will capture phenomenal video no matter the condition.

This manual will guide you through the set-up, care and maintenance of your DT-CAM-E580 and its many accessories.

### Part Numbers:

DT-CAM-E580 Standard Bullet NTSC 3.6mm Lens  
 DT-CAM-E580P Standard Bullet PAL 3.6mm Lens  
 DT-CAM-E580VF Vari-Focal NTSC 4.0-9.0mm Lens  
 DT-CAM-E580VFP Vari-Focal PAL 4.0-9.0mm Lens

## Contact

Datatoys  
 500 W. Browndeer Rd. Suite 216  
 Milwaukee, WI 53217  
 F: 414.351.6555

W: [www.datatoys.com](http://www.datatoys.com)  
 E: [Sales@Datatoys.com](mailto:Sales@Datatoys.com)  
 P: 414.294.8017

## Warranty

Motorsports-Exchange.com LLC (Datatoys) warrants that each new DT-CAM-E580 will be free of defective materials and workmanship for a period of one (1) year from the date of original purchase. Motorsports-Exchange.com LLC will remedy and such defect by repair or replacement (at our option) of the unit, provided the unit is delivered to the address listed above, intact, with all transportation charges prepaid, and accompanied by a copy of the original receipt and return authorization number.

The provisions of the warranty shall not apply to any unit that has been subject to misuse, water exposure, neglect, incorrect installation, unauthorized modification, accident, or has been repaired or altered outside of our factory.

The express warranty contained herein is in lieu of all other warranties, expressed, or implied, or statutory, including without limitation any warranty of merchantability or fitness for a particular use. In no event will Motorsports-Exchange.com LLC be liable to the buyer and/or user for any damages, including special, incidental, indirect, or consequential.

For return merchandise authorization contact [Datatoys.com](http://Datatoys.com) at (414) 294-8017

## Packing List

### Included with DT-CAM-E580(P)



- 1 – DT-CAM-E580(P) Bullet Camera
- 1 – DT-CABLE-2, 4-PIN Fe to RCA Fe + 2.1x5.5mm Power (RCA Camera Break-Out Cable)
- 1 – DT-MNT-CLICK, “Around the Camera” Click Mount Adapter with ¼-20 Hole

### Included with DT-CAM-E580VF(P)



- 1 – DT-CAM-E580VF(P) Camera
- 1 – DT-CABLE-2, 4-PIN Fe to RCA Fe + 2.1x5.5mm Power (RCA Camera Break-Out Cable)
- 1 – DT-CAM-E580VFSUN Aluminum Sun Shield

## Technical Specifications

Features and Technical Specs	DT-CAM-E580(P)
Format	NTSC & PAL
Image Device	SONY 1/3" HQ1 Ex View HAD CCD DSP
Scanning System	2:1 Interlace
Effective Pixels	<u>NTSC</u> 768(H) x 494(V)
Horizontal Resolution	<u>Color</u> 580 TV Lines
	<u>(BW: True D&amp;N)</u> 600 TV Lines
Electronic Shutter	<u>NTSC</u> 1/60 ~ 1/50,000sec Auto PAL 1/50 ~ 1/100,000sec Auto
S/N Ratio	More than 50dB (AGC Off)
Environment - water	Waterproof (IP68) - camera is assembled in a vacuum
Environment - vibration	Vibration proof - internals potted in silicone
Gain Control	Auto, 4 dB~30 dB
Backlight compensation	Auto
White balance	Automatic (AWB)
Sensitivity	0.1 Lux @ F 2.0 (30 IRE / AGC OFF)
Gamma Correction	Y=0.45
Sync System	Internal
Video Output	Composite 1[Vp-π] 75(Ω) unbalanced
White Balance	Automatic (AWB)
Power	+12 VDC regulated min: +9 VDC max: +20 VDC
Current	130 mA @ 12VDC regulated
MTBF	80,000 hours
Dimensions	Φ 21mm x 72mm
Weight	1.6 oz / 45.3 grams
Lens Options	Standard: 3.6mm Options: 2.9, 4.3, 6.0, 8.0, and 16mm

## Maintenance and Care

Although the DT-CAM-E580 is designed for harsh environments standard maintenance and care is needed to insure optimal performance.

### Before Each Use

- Clean and inspect connection contacts, insure that connection and contacts are dry and free of debris
- Clean and inspect protective glass, insure that glass is clean and clear.
- Inspect cable for any abrasions or damaged. If any wire is exposed do not use and please send camera to Datatoys for repair.
- Inspect front hood, insure that the front hood is tight.

### After each year of use or when needed

- Adjust focus per the camera focus adjustment instructions
- Replace rubber o-ring per the replacement instructions
- Replace protective glass per the replacement instructions

## Installation Notes

*Safe and proper installation is the full responsibility of the owner and user. Please follow the connection and installation instructions to insure proper function and performance.*

- Insure that all camera mounts and attachments are tight can in a safe mounting position.
- Insure that the cabling is not pinched or sheered at any point.

NOTE: Cable Wrap and Zip Tie mounting of cabling to roll bars or hard surfaces must be done with care. Cable Wraps and Zip Ties have been known to cut, short, and shear the cabling.

- Choose a mounting route that avoids any communications or electronic equipment to avoid interference. If you have to cross a communications line at any point do so at a perpendicular angle.

4-PIN Locking connections should only be finger tight, over tightening or use of tools may damage the connector.

## Mounting Guide

### Mounting your Bullet Camera

Included with your MPVR-RTR is a click mount adapter which allows you to mount your bullet camera to any standard 1/4" x 20 mount. Start by attaching the click mount to your standard mount. The click mount has a threaded plate in the bottom which you can screw onto your 1/4" x 20 mount (see fig 7a).



Figure 7a



Figure 7b



Figure 7c

Once the click mount is in place, gently slide in your bullet camera with the top oriented towards zenith. Then apply equal pressure down on the camera until the mount closes one click (see fig 7b, 7c).

You may then make slight adjustments to the rotational alignment of the camera. Once you are satisfied with the position of the camera you may again apply pressure allowing the mount to reach its second adjustment click.

### Removing your Bullet Camera

To remove your DT-CAM-E580 camera from the click mount you must unlatch the click adjustments. Take a medium size flat head screw drive and apply upward force to the upper click mount latch (see fig 7d). You may want to apply equal downward pressure on the camera while opening the mount; this will alleviate the amount of pressure on the latch. Once the latch is opened you may remove the camera and unscrew the click mount.

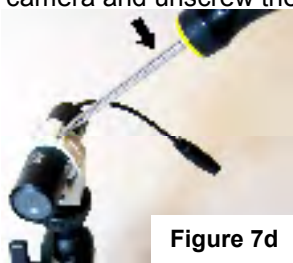


Figure 7d

## Connection Guide

### Connecting your DT-CAM-E580 to a Camcorder or Monitor



Figure 8a

Before your DT-CAM-E580 can supply a video signal it needs to be powered by a regulated 9-20 Volt DC source. We recommend the Datatoys Battery Case which houses 8-AA Batteries and will power the DT-CAM-E580 for ~20 hours (see fig 8a). The Datatoys Battery Case is available at [www.datatoys.com](http://www.datatoys.com).

The RCA Camera Break-Out Cable features a universal 2.1x5.5mm center pin positive barrel power connection. This allows the DT-CAM-E580 to be powered from a variety of different power supplies and battery packs. Once a power source is connected to the RCA Camera Break-Out Cable, the DT-CAM-E580 will begin outputting a video signal.

*Note: The DT-CAM-E580 will continue to draw power when it is connected to a live power source. Please unplug the power connection after every use.*



Figure 8b



Figure 8c

You can connect your DT-CAM-E580 to any monitor or camcorder with a standard analog input. Most monitors have a built in RCA connection (see fig 8b) and most camcorders have a TRS type connection (see fig 8c). Some Sony camcorders have a proprietary connection and adapter cable.

Camcorders with a standard TRS type connection typically come with an RCA adapter cable (See fig 8d). This adapter cable can be used to convert your camcorders TRS connection to a standard RCA connection. If your camcorder or recorder did not come with this cable please contact the manufacturer



Figure 8d

If you are connecting your DT-CAM-E580 to a monitor you will need a standard male to male RCA cable. This cable is available in nearly any electronics department.



Figure 8e

Once the proper RCA cable or adapter is located you may simply connect the TRS or RCA video input connection to your device, and then connect the yellow RCA connection to the RCA connection on your RCA Camera Break-Out Cable (see fig 8e)

Lastly connect the 4-PIN connection on the RCA Camera Break-Out Cable to the 4-PIN connection on the DT-CAM-E580.

## Connection Guide

### Connecting your DT-CAM-E580 to a Datatoys System

All Datatoys systems use our standard 4-PIN connection and all camera inputs are pinned to work with all Datatoys cameras. To connect your DT-CAM-E580 to a Datatoys system, simply connect the 4-PIN connection to the camera input of your Datatoys System (see figure 9a,9b).



Figure 9a



Figure 9b

## Accessories

Datatoys offers a wide range of accessories for the E580 cameras including cabling, lenses and mounts. All accessories are available at [www.datatoys.com](http://www.datatoys.com).

### Cabling



#### Extension Cable

DT- CABLE-XM

The extension cable is used to extend all Datatoys 4-PIN connections and is available in 1,2,3,4, and 10 meter lengths.



#### BNC Camera Break-Out Cable

DT-CABLE-3

The BNC Camera Break-Out Cable is used to connect the E580 series cameras to a BNC device.



#### RCA Camera Break-Out Cable

DT-CABLE-2

The RCA Camera Break-Out Cable is used to connect the E580 series cameras to an RCA device. Included with the E580 cameras.

### Power



#### Battery Case

DT-PWR-CASE

The Battery Case holds 8-AA batteries and supplies power to Datatoys cameras and microphones.



#### Cig Plug Adapter

DT-PWR-CIG

The Cig Plug Adapter can be used in a standard cigarette lighter socket and power Datatoys cameras and systems.

## Accessories

### Lenses



#### Interchangeable Lens

DT-CAM-LENXX

Interchangeable Lenses can be used to change the field of view on the standard E580 Bullet Cameras.

Lens Size	Field of View
2.9mm wide angle lens	96 degrees
3.6mm wide lens (standard)	88 degrees
4.3mm lens	68 degrees
6.0mm zoom lens	52 degrees
8.0mm zoom lens	40 degrees
16mm zoom lens	20 degrees

### Replacement Parts

#### Replacement Glass

DT-CAM-GLASS

3-Pack of Replacement Bullet Camera Glass for the standard E580 bullet camera.



#### O-Ring Seals

DT-CAM-ORING

3-Pack of Replacement Bullet Camera O-Rings for the standard E580 bullet camera.

## Accessories

### Mounts



#### Aluminum Pro Mount

DT-MNT-PRO

Upgrade from the Click Mount



#### Quattro Pro Mount

DT-MNT-QPRO

Light weight quad suction cup mount



#### Super Clamp Mount

DT-MNT-SPRCMP

Clamp to anything sturdy



#### Suction Mount

DT-MNT-SCT

One large suction cup for any flat surface



#### Super Mount

DT-MNT-SPR

This will give you adjustability on a permanent mount



#### Universal Mount

DT-MNT-UNI

Great for a permanent mounting location



#### Adhesive Cradle Mount

DT-MNT-CRDL

Sleek cradle for sticking the camera virtually anywhere.