AMACAM

AM-M80

ON DASH CAMERA

More then a dash camera

IMPORTANT: Please register your camera to receive firmware updates: **www.amacam.net**
For technical support please contact us at **support@amacam.net**

Please read this manual carefully before using your camera,and keep it for future reference.

Warning:

The dash camere should be set up before driving.

Concentration should always be maintained on the task of driving.

Let the dash camera record accidents caused by others not by yourself.

PACKAGE CONTENTS

- Camera – Note that the camera requires a micro SD memory card, which is not supplied with the camera.
- (See Section 4.1 Below)
- Mounting Bracket for car windscreen
- Charging lead for use in car (Car Cigarette lighter to Mini-USB cable)
- Connection lead for computer (Mini USB to USB Cable)
- User Manual
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OVERVIEW

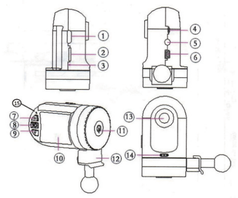
The Amacam AM-M80 camera is designed primarily as a small video camera for mounting on the front or rear windscreen of a car. This is for the purpose of recording the car movements and externals activities, and would be of use in providing evidence for Insurance purposes. It is designed in this mode to start recording as soon as the car ignition is switched on.

In addition it can be used for short periods hand held outside the car, but the battery life in this instance is limited to approximately 10 minutes of recording before being reconnected to the car or a charger for recharging..

The camera may also be used to take still photos as a manual operation.

The video or still pictures recorded can be reviewed on the inbuilt small screen, or the camera can be connected to a PC computer for review of all photos and videos taken.

DIAGRAM OF CAMERA



Key

1. HDMI Slot	10. Screen Display
2. Micro SD Card Slot	11. Power Button
3. Reset	12. Mounting Bracket
4. Microphone	13. Camera lens
5. AV Out	14. Speaker
6. USB Socket	15. Indicator Light
7. UP Button	• Blue- power on
8. OK Button	• Red – battery charging
9. DOWN Button	

Item	Sub Menu Choice	Default Setting	Function/Comment
Sharpness	Strong Normal Soft		This sharpens or soften the contours between tones.
White balance	Auto Daylight Cloudy Tungsten Fluorescent	Auto	This adjusts the color tones according to the ambient light conditions.
Color	Color Black & White Sepia	Color	
ISO	Auto 100 200 400	Auto	ISO setting represents the sensitivity to light. High ISO settings are more sensitive and useful when in dark or gloomy light. However the images are more noisy, i.e. they show more grain. Low ISO settings are used when there is plenty of light. The pictures will be less noisy, i.e. less grainy and sharper.
Exposure	+ 1/3 0 + 1/3 + 2/3	0	This will adjust the exposure setting from that sensed by the camera.
Face detection	Off Face detection Smile detection	Face detection	Face Detection detects the faces of your subject and adjusts the all the automatic settings to this face. Smile detection will release the shutter when a smile is detected on the face
Quick Review	Off 2 seconds 5 seconds	Off	This sets the time that the picture taken is shown after release of shutter, before returning to photo mode.
Date stamp	Off Date Date/Time	Date/Time	This only switches the date stamp on or off. The date must be set in the SET UP menu.

Note. Each selection can be made by using the UP(7) and DOWN(9) buttons and then fixed and move to next criterion with the OK Button (11)

SET UP MENU (All Modes)

Item	Sub Menu Choice	Default Setting	Function/Comment
Date/Time	Year : Month :Day H : M : S DD:MM:YY(Date Style)	None – to be set manually	Each figure can be set using the UP(7) and DOWN(9) buttons and then fixed and move to next number with the OK Button(11). The date style can be set as DD:MM:YY , MM:DD:YY, or YY:MM:DD
Beep Sound	Off On	On	To enable a beep sound when any button is pressed
Language	English German French Spanish Portuguese Italian Chinese Korean Japanese Russian	English	All displays in the selected language
Frequency	50 Hz 60 Hz	60 Hz	This is only relevant when charging from AC Mains. 60 Hz is normal in American continent, Caribbean and some Asian countries. 50 Hz is normal in Europe and rest of world. Please check in your location.
TV Mode	PAL NTSC	NTSC	This should be set to the Television encoding system in your country
Default Settings	Cancel OK	Cancel	This will return all menu's to the default settings.

Item	Sub Menu Choice	Default Setting	Function/Comment
Version		Check at www.amacam.net/support/firmware-updates	This is the version of the software in the camera
Anti-shaking	Off On	Off	
Image Rotation	Off On	Off	This will rotate the image through 180° to allow the camera to be mounted upside down in the car if preferred.
Screen Savers	Off 1 minute 3 minutes 5 minutes	Off	This sets the time when the screen saver switches on

Note The camera will retain the last setting input when the camera is switched off.

PLAYBACK MENU (Playback or Review Mode)

Item	Menu Choice	Sub menu choice	Function/Comment
Delete	Delete Current	Erase this? Cancel OK	For this item, use UP(7) and DOWN(9) buttons to choose between 'Delete Current' image and 'Delete All' files. If 'Delete Current' is chosen, confirmation is requested with 'Erase this?' 'Cancel' or 'OK' should be selected with UP(7) and DOWN(9) buttons, and confirmed with OK(8) button.
	Delete All		If Delete All is chosen there is no confirmation requested, all pictures will be deleted immediately. **Important Note.** Protected files will NOT be deleted using this function.
Item	**Menu Choice**	**Sub menu choice**	**Function/Comment**
Format	SD Card	All data will be deleted. Cancel OK	This is used to format new SD cards and will result in all data on the card being deleted.

BASIC OPERATION

First Set Up
Before the camera is used the following actions must be taken. This should be read in conjunction with the Menu Options description in this User Manual.

The number references below refer to the Diagram and Key in Section 3 of this user manual.

- Switch camera on by pressing Power button (11) once.
- Set up date and time in settings (See Section 8 below).
- Set up Loop recording time. The default is set to 3 minutes. (See Section 6 below)
- Insert a Micro SD card into slot (2). Good quality. Speed rating minimum Class 4. 4GB, 8GB, 16GB or 32GB.
- Camera will now operate in default settings mode.

Note.
If problems are experienced setting up the camera from the SET UP menu, it is suggested that the SD card is removed temporarily during the set up and then replaced after Set up is completed.

Power Button (11)
The Power button (11) is used to
- switch the camera on (in manual operation)
- switch between menu pages
- switch the camera off

Care should be taken to press the button for the correct amount of time.

Switch on (from Off) – one press
Switch between Menus – one press
Switch off – Press and hold for approx. 3 seconds until camera switches off.

Mounting in the Car

- Fix the suction operated mounting bracket to the car windscreen, usually this is done behind the rear view mirror.
- The mounting bracket on the camera (12) can be rotated to any position between 0 and 90°, to accommodate the slope angle of the car windscreen.
- Connect the car charging lead from the mini USB socket (6) on the camera to the Cigarette lighter in the car.
- Alternatively the power cable can be hard wired in, but this requires an auto-electrician to carry out the wiring work. Cables for this are not provided.

Recording

In car operation
The camera will start recording automatically when the ignition is switched on and the car starts to travel. Recording will stop when the car ignition is switched off.

Hand held Manual operation
Video recording (Video camera depicted in top left)
Switch power on by pressing Power button (11) once.
Camera will turn on in Video mode
Press OK (8) to start recording. Red indicator light on screen will start to flash
Press OK (8) to stop recording.
Whilst recording, To Zoom in – press Up button (7)
To Zoom out – press Down button (9)

Photo Mode. (Still camera depicted on top left corner)
To take still pictures change to Photo mode.
From Video mode, Press the OK button (8) and hold for 2 seconds.

To Zoom in – press Up button (7)
To Zoom out – press Down button (9).
To take picture, Press the OK button (8) for 1 second omly (Warning, pressing for a longer period will bring up the menu options)

Play Back

Play back or review of the video files and photos may be carried out either on the camera or by connecting the camera to a computer.

To review on the computer
see Section 10.4 (Connecting to the computer) below.

Note
Protected Files (See section 10.3) can only be deleted using a connection to the computer.

To review files on the camera
- Turn the camera on by pressing the Power button (11)
- Change to Photo Mode (Press the OK button (8) and hold for 2 seconds .)
- Press the OK button (8) and hold for 2 seconds
- Use Up button (7) or Down button (9) to scroll between the various video files/pictures.
- When desired video file is selected use OK button (8) to start video playing
- To fast scroll between files, press and hold the Up (7) or Down (9) button until the desired file is reached.
- The Name or number of the file is shown in top right hand corner of screen. Resolution, date and time are also indicated on screen.

Note. This menu is only available if there is a SD card in the camera. If there is no SD card, the message No File will appear on screen.

Further operations

Indicator Light
Item 15 on the camera is the indicator LED. This will shine BLUE when the camera is switched on. When the battery is charging this light will shine RED, and will not shine at all when the camera is fully charged, or disconnected from the power source.

External Power Supply - Charging the Battery
The internal battery is charged by connecting the camera through the USB connection socket (6) to any of the following power sources.
- Car lighter socket using the cable supplied
- USB 2.0 socket on a personal computer using the cable supplied
- 240V or 110V Mains to USB adapter plug (Not supplied).

The mains frequency setting in the SET UP menu must be set to the correct frequency for the mains supply used.

Protecting Files
Files may be protected. This will prevent them from being deleted on the camera. Thus when loop recording is being used, protected files will NOT be overwritten.

Files are protected automatically when the G sensor senses an acceleration of more than 4G. Thus if the car is involved in a collision the file will be automatically protected

Files can be protected manually by making a short press on the Power button (11) during recording. All protected files will display a small key on the screen to signify that they are protected.

Protected files cannot be unprotected. They cannot be deleted on the camera, but can only be deleted by connecting the camera to a computer. See below.

Connecting to the Computer
The camera can be connected to a computer using the Mini USB/USB cable supplied to a USB 2.0 socket on your computer. When this connection is made, the camera cannot be used.
Immediately a menu is displayed listing
- Mass storage
- PC Camera

Scroll between the two settings using UP(7) and DOWN(9) buttons and select with OK button (8)

Mass Storage
On selecting 'Mass Storage', a blue screen with "Mass Storage" will appear on the camera screen.

In Windows Explorer on your computer, under "My Computer" select "Removable disc" and then select "DCIM" directory. This will then list all the sub-directories and files stored on the SD card in the camera.
- Still Photos are stored as .JPG files
- Video clips are stores as .AVI files

From here files may be downloaded to your computer or deleted completely.

Note that there is no indication in this directory whether the files are protected, and all files may be deleted. **This is the only way that protected files can be deleted.**

PC Camera
On selecting 'PC Camera', the device will act as a camera for your PC and can be used with other applications, such as Skype, which may require a webcam to be connected to the computer.

Please note that the camera will not record on the SD card when this function is used and this function may not be effective in some computer systems.

Connecting to the TV
The camera can be connected to a TV to allow the files to be viewed on the TV screen.
There are two ways to connect this.

a. Using the mini HDMI out socket (1) on the camera. (The cable for this is not supplied with the camera)
b. Using the 3.5 mm AV out socket (5) by using a suitable cable adaptor as illustrated. (This cable is not supplied with the camera)

System Reset
There are two methods to reset the camera to the factory default settings.
a. Insert a small pin or paper-clip into the Reset hole (3) until the internal button has been depressed.
b. Go to the "Default Settings" location on the SET UP Menu, select OK and then press the OK button (8)

Specification

Model	Amacam AM-M80
Size	70 x 40 x 40 mm
Weight	55.2 gms
Processor	NT96220 Chipset
Image Sensor, Pixels	1280x720, 720x480, 640x480,320x240
Viewing Angle	120 degrees
LCD Screen	1.5" TFT Display
Video Format	AVI - 24 fps
Photo format	JPEG
Storage	Micro SD Card, Class 4 or above, - 4 GB, 8 GB, 16 GB or 32 GB. (Not included)
USB Interface	USB2.0
AV Out	3.5 mm Mini jack or HDMI – NTSC or PAL format
Battery capacity	250 mAH (approx.15 mins recording)

Menu Options

Various menu pages are obtained by pressing the Power button (11). Different menus are obtained depending on the operating mode of the camera at the time.

In Video Mode

One press (click) of the Power button (11) will result in the VIDEO menu
Two clicks of the Power button (11) will result in the SET UP menu

Video Mode

To exit the menu, press the Power button (11) twice (from VIDEO Menu) or one more time (from SET UP menu) to return to the Video mode

Setup Menu

Video Menu

In Photo Mode
One press (click) of the Power button (11) will result in the STILL menu
Two clicks of the Power button (11) will result in the SET UP menu
(Note that this is the same SET UP menu as in Video mode.

Photo Mode

To exit the menu, press the Power button (11) twice (from STILL Menu) or one more time (from SET UP menu) to return to the Photo mode

Still Menu

In Playback Mode

One press (click) of the Power button (11) will result in PLAYBACK menu
Two clicks of the Power button (11) will result in the SET UP menu
(Note that this is the same SET UP menu as in Video mode.)

Playback Mode

To exit the menu, press the Power button (11) twice (from PLAYBACK Menu) or one more time (from SET UP menu) to return to the Playback mode

Playback Menu

USB Mode
When connected to the computer the USB mode is displayed Automatically. No other menus can be accessed whilst the USB cable is connected between camera and computer

VIDEO MENU (Video Mode)

Item	Sub Menu Choice	Default Setting	Function/Comment
Resolution	720P 1280x720 WVGA 720x480 VGA 640X480 QVGA 320x240	720HD	Higher resolution will increase file sizes and recording time on SD card but will enable number plates to be more easily read.
Loop Recording	Off 3 mins 5 mins	3 mins	Determines the size of files into which the recording is divided. When the memory card is full and when loop recording is on, the files are progressively recorded over, one file at a time. When loop recording is off, the camera will stop recording when the memory card is full.

Item	Sub Menu Choice	Default Setting	Function/Comment
Motion Detection	Off On	Off	This applies only when the camera battery is being charged (by being connected to the in car charger). When 'On' is selected the camera will start recording when motion of the camera or the image is detected.
Date Stamp	Off On	On	Puts the date/time stamp on the Video recording
Record Audio	Off On	On	Records Audio as well as video material.
G Sensor	High Normal Low Off	Off	This senses an impact, and then protects that file to prevent it being overwritten by loop recording.

STILL MENU (Photo Mode)

Item	Sub Menu Choice	Default Setting	Function/Comment
Capture mode	Single 2 seconds 5 seconds 10 seconds	Single	This is a delay timer for taking photo after pressing OK.
Resolution	12M 4032 x 3024 10M 3648 x 2736 8M 3264 x 2448 5M 2592 x 1944 3M 2048 x 1636 2M 1920 x 1080 VGA 640 x 480 1.3M 1280 x 960	12M 4032 x 3024	This gives the resolution as the number of pixels in the picture
Quality	Fine Normal Economy	Normal	This refer to the quality of the STILL photos

Charger Time	1 hours
Operating temp. range	+10°C to 60°C
Storage temperature	-20°C to 70°C

Technical Support

For further technical Support please e-mail to support@amacam.net stating :
- Name and e-mail address
- Camera model
- Nature of your problem.

Or contact us through the website at www.amacam.net

Quick Reference Guide

Assume Camera is ON

Date & Time
Press the "POWER" button twice to enter "Set Up Menu" Select "Date/Time"
Each figure can be set using the "UP" and "DOWN" buttons and then fixed and move to next number with the OK Button. The date style can be set as DD:MM:YY , MM:DD:YY, or YY:MM:DD

Loop Recording
Press the "POWER" button once to enter "Video Menu" Then select "Loop Recording" and select either - 3 Minutes - 5 Minutes. When Loop Recording is on, the older video files are over written (unless protected). So the memory card will never be full and stop recording. However, when Loop Recording is off, the camera will stop recording when the memory card is full

Install The Suction Cup Mount
Please follow these instructions:
1. Clean the windscreen with a non greasy glass cleaning solvent.
2. Make sure that the windscreen is completely dry.
3. Ensure that the suction cup is dry and clean.
4. Pull the suction lever fully back so that the cup is almost flat.
5. Place the suction cup firmly on the windscreen.
6. Push the suction cup lever towards the windscreen.
7. Full suction should now be attained and the mount is firmly secured

Protect Video Files
To save a video file whilst the camera is recording, press the "POWER" button once and that will protect that video file. Remember that the next video file will not be saved unless you press the "POWER" button again. Protected files will not be over written and can only be deleted using a computer.

System Reset
There are two methods to reset the camera to the factory default settings.

1. Insert a small pin or paper-clip into the Reset hole until the internal button has been depressed.
2. Go to the "Default Settings" location on the SET UP Menu, select OK and then press the OK button.

Format The Memory Card
Press the "POWER" button twice to enter "Set Up Menu" Select "Format" Select "SD Card" then select "OK"

Firmware Version & Update
Press the "POWER" button twice to enter "Set Up Menu" Select Version, Check the version number. The latest version can be downloaded here>>>
www.amacam.net/support/firmware-update

Register
To keep up to date with the latest Firmware, Please ensure that you register your Amacam AM-M80 here>>>
www.amacam.net/product-registration