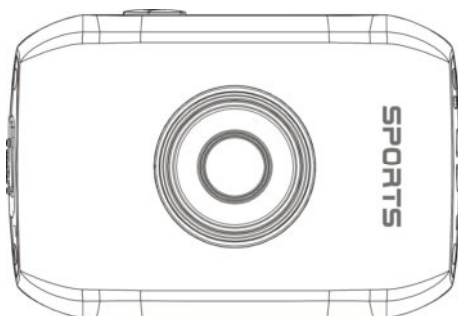




MANTA

Kamera sportowa

MM337



Instrukcja obsługi
User's Manual

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Uwaga!

Konstrukcja produktu i parametry techniczne mogą ulec zmianie bez wcześniejszego powiadomienia. Dotyczy to przede wszystkim parametrów technicznych, oprogramowania oraz podręcznika użytkownika. Niniejszy podręcznik użytkownika służy ogólnej orientacji dotyczącej obsługi produktu. Producent i dystrybutor nie ponoszą żadnej odpowiedzialności tytułem odszkodowania za jakiegokolwiek nieścisłości wynikające z błędów w opisach występujących w niniejszej instrukcji użytkownika.

**INFORMACJA O PRAWDŁOWYM POSTĘPOWANIU W PRZYPADKU
UTYLIZACJI URZĄDZEŃ ELEKTRONICZNYCH I ELEKTRYCZNYCH**

Umieszczony na naszych produktach symbol przekreślonego kosza na śmieci informuje, że nieprzydatnych urządzeń elektrycznych czy elektronicznych nie można wyrzucać razem z odpadami gospodarczymi.

Właściwe działanie w wypadku konieczności utylizacji urządzeń czy podzespołów lub ich recyklingu polega na oddaniu urządzenia do punktu zbiórki, w którym zostanie ono bezpłatnie przyjęte. W niektórych krajach produkt można oddać podczas zakupu nowego urządzenia.

Prawidłowa utylizacja urządzenia daje możliwość zachowania naturalnych zasobów Ziemi na dłużej i zapobiega degradacji środowiska naturalnego. Informacje o punktach zbiórki urządzeń wydają właściwe władze lokalne.

Nieprawidłowa utylizacja odpadów zagrożona jest karami przewidzianymi prawem obowiązującym na danym terenie.

**INFOLINIA SERWISOWA**

tel: +48 22 332 34 63 lub e-mail: serwis@manta.com.pl
od poniedziałku do piątku w godz. 9.00-17.00

Producent zastrzega sobie możliwość wprowadzenia zmian w specyfikację produktu bez uprzedzenia.

Strona główna www.manta.com.pl
Strona wsparcia technicznego www.manta.info.pl



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Precautions

Before using the camera, please carefully read this user's manual to ensure a correct and safe use of the camera, and to achieve the best performance and a prolonged lifespan of it.

- ◆ Keep the camera away from direct sunlight, and keep lens of the camera away from directing sunshine. Otherwise, image sensor of the camera may be damaged.
- ◆ Please be careful with the camera to avoid water or sand entering the camera while using it on sand beach or by water. Water, sand, dust or particles containing salt may damage the camera.
- ◆ Keep the camera away from contacting dust and chemical materials. It is a must to keep the camera at a cool and dry place with good ventilation. Do not place the camera at a place with high temperature, humidity or with much dusts to prevent abnormal operation caused to the camera.
- ◆ In case of dirt or dust accumulated on the camera, clean them with a piece of soft, clean and dry cloth. In case of sand on the camera or lens, gently blow off the sands.
- ◆ To clean the surface of the camera lens, it is firstly to blow off the sands on it, and then clean it with a piece of mop or paper suitable for optical instruments. If needed, please clean camera with cleanser. It is strictly prohibited to clean the camera with organic solution.
- ◆ Touching surface of the lens with finger is strictly prohibited.
- ◆ In case of the first time of using memory card of the camera, please firstly make a back-up of the data, and then format the memory card in a one-off way.
- ◆ External Micro SD card is a precise electronic component. The followings may cause loss or damage of the data:
 1. Improper use of the memory card.
 2. Bended card, fallen cards or impact against the memory card.
 3. High temperature and humidity or direct sunlight.
 4. Static field or electromagnetic field nearby.
 5. Taking out the memory card or interference with the camera power supply during visiting the memory card with the camera or computer (meaning reading, writing or formatting).
 6. Contact metal surface of the memory card with finger or metal article.
 7. Beyond lifespan of the memory card.

About the Product

- ◆ This product features compact size and easy installation;
- ◆ The product features high definition video and dynamic images. Even under low illumination, video can be recorded, and it also supports AVI video format.
- ◆ Support VGA (640x480) and HD (1280x720) capturing.
- ◆ Three sizes (including 5M, 3M and 1M) of image are for option.
- ◆ This product supports time and date watermark function, and time and date can be synchronously displayed while recording.
- ◆ Support high-speed USB2.0.
- ◆ Support max. 32G Micro SD card.
- ◆ This product adopts loop coverage recording method and the new recording can automatically cover the former images achieving an endless rolling recording, take care of save all images when the message "Full memory" appear on the screen, otherwise all new captures will erase the oldest.
- ◆ This product is equipped with on-site replay function. You may check the video recorded on-site with the display.

Waterproof Case Using Notice

Before sealing the waterproof case, keep the camera housing's rubber seal clean, a single hair or grain of sand can cause a leak. You can test by closing the case without inserting the camera. Submerge the case completely in water for about a minute. Remove the case from the water, dry off its exterior with a towel, then open the case. If the entire interior is dry, the case is safe for use under water.

-
- ◆ Remember to put the Mode Switch in your desired recording position before inserting the camera in the waterproof case. There is no external button for the Mode Switch.
 - ◆ After every use in salt water you will need to rinse the outside of the housing with non-salt water and dry. Not doing this can eventually cause corrosion of the hinge pin and salt buildup in the seal, which can cause failure.
 - ◆ To clean the seal, rinse in fresh water and shake dry (drying with a cloth may cause lint to compromise the seal). Re-install the seal into the grooves in the backdoor of the housing.

System Requirements

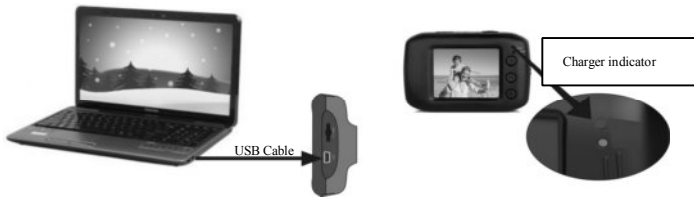
System Requirements	
Operation system	Microsoft Windows2000, XP, Vista, 7, or more
CPU	Above Intel Pentium III 800MHz or equivalent CPU
Memory	Minimum 512MB
Sound card, video card	Sound card and video card should support DirectX8 or higher version
Hard disk	Over 500MB free space
Others	1 standard USB1.1 or USB2.0 interface

Appearance and key introduction

Key/Indicator	Function	
Power On/Off	Power the camera on or off. When opening the menu, switch over between normal (effect parameters and replay of image, video) and setup menu.	
Shutter	In recording video mode, it is used to start/stop recording. In capture mode, it is used as a shutter. In replay mode; it is used to play the video. When operating the menu, it is used to confirm the selection.	
Up key	Digital zoom in (capture/video mode); menu selection (after opening the menu); pause, continue playing (when playing and recording video in replay mode).	
OK key	Open/exit from menu. Stop playing (when replaying video).	
Down key	Digital zoom out (capture/video mode); menu selection (after opening the menu).	
Mode switch	Switch over among modes of capture, video and replay.	
Operation indicator	The upper one is a charging indicator.	In power-off state, it keeps constant lighting when the charger is connected for charging.
	The lower one is an operation indicator.	It flashes once during capturing, and it keeps constant lighting when connected with computer portable disk.

Start Use

1. Charge built-in lithium battery



In power-off state, when the camera is connected with computer, charging begins. At this time, the charger indicator lights and it turns off when charged full. Generally, it costs 2-4 hours to charge full.

2. Use memory card

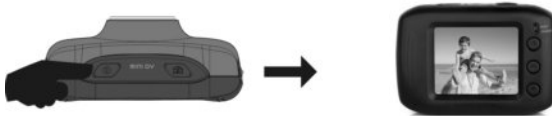
1. Follow the instructions carved by slot of the memory card, it is to insert FT card into the card slot till entirely inserted.
2. To take the FT card out, after gently pressing the end of the memory card inwards, the card will reject out.



Note: The camera is not equipped with a built-in memory, and thus a memory card is required.

3. Power On/Off:

- 3.1 Power-on: If to press and hold POWER key for 3 seconds, the screen starts up and the camera enters startup state.



- 3.2 Power-off: In idle state of the camera, if to click POWER key, the camera turns off.

Automatic power-off: When idle time set for the camera reaches, it automatically turns off to save power. The default time of the system automatic power-off is 5 minutes;

- 3.3 Power-off due to low battery: In case of extremely low battery, the icon “” appears on the LCD screen. Please timely charge the battery. When the icon turns red and flashes, the camera will automatically power off.

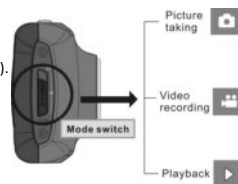
4. Functional mode switchover

The camera is equipped with three modes: capture, video and replay mode. After power-on, the modes can be switched over with MODE switch.

Capture mode: Take pictures.

Video mode: Record video and driving (5min, 3min and 1min).

Replay mode: Picture and video file playback.











5. Indicators

Operation indicator: When the camera works (e.g. recording video, capturing or automatic screen turn-off), the operation indicator lights.

Charger indicator: Constant lighting is to remind user that the camera is being charged.

6 Video mode

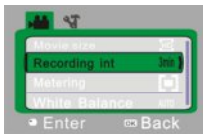
When pushing Mode switch to video mode, click shutter in preview state to start recording video; to stop video recording, it is to click it again. It will also automatically stop recording in case that no free room left in the memory card or the battery is over low:

- 1 **00:00:01**: time-meter, indicating 1 second left for recording (indicating 1 second recorded during recording).
- 2 : mode icon: indicates the current mode is video recording.
- 3  loop recording video time icon: indicates the current loop video recording time is 3 minutes.
- 4 : movie size: indicates the current movie size is 720P.
- 5 : indicates currently a memory card is inserted.
- 6  1.84: magnification of digital zoom: press Up and down key to adjust zoom among 1x-4x.
- 7 : battery icon: indicates current battery level.
- 8  AUTO: white balance icon: indicates the current white balance mode is automatic.
- 9 : metering icon: indicates it is currently the pan overall perspective metering.



Video menu setup

In video mode, press OK key to open menu, and then press Up and Down key to select menu. When selecting menu, background of the selected item will be highlighted. Press Shutter to enter sub-menu. In sub-menu, press Up and Down key for selection, press Shutter for confirmation and back to main menu. In the main menu, press OK key to exit from the menu.



▲Video menu

Video menu options

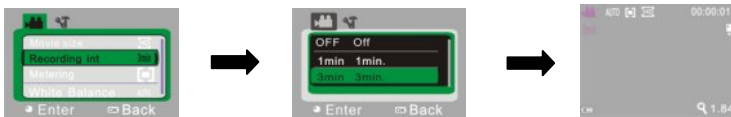
Main menu	Sub-menu	Description
Movie Siset	1280x720	High resolution format.
	640X480	Medium resolution format.
REC Interval	Off	Power-off driving record.
	1min	Set driving record to 1 minute as a repeating phase.
	3min	Set driving record to 3 minutes as a repeating phase.
Metering	5min	Set driving record to 5 minutes as a repeating phase.
	Center	Metering subject to the central area.
	Multi	Metering subject to multi-points.
	Spot	Metering subject to one point.

White balance	Auto	Using automatic white balance, suitable for most cases.
	Daylight	Suitable for daylight environment.
	Cloudy	Suitable for cloudy environment.
	Fluorescent	Suitable for fluorescent light source environment.
	Tungsten	Suitable for tungsten light source environment.
Special effect	Normal	Normal effect.
	B&W	White and black effect.
	Sepia	Sepia effect.
	Negative	Negative film effect.
	Red	Reddish effect.
	Green	Greenish effect.
	Blue	Bluish effect.
Date stamp	Off	Turn off printing date/time on the file.
	Date	During capturing/recording video, print date on right bottom corner of the file.
	Date and time	During capturing/recording video, print date and time on right bottom corner of the file.

7. Driving video recording:

Push Mode switch to Video mode, open the menu, press Down key to select "REC interval" menu, press Shutter key to enter sub-menu, "1min, 3min, 5min" recording loop mode are for free selection. After pressing OK key for confirmation, press OK key again to exit from the menu. When Shutter is pressed, it starts video recording. During video recording, the camera will automatically stop recording video based on 1min, 3min, 5min selected, and immediately starts next section of video recording (e.g. when 5min is selected in the menu, the camera will automatically stop when 5min recording reached, and starts next section of video recording).

WARNING ! When the memory card is full, the earliest recoded section of file will be deleted for corresponding room for further recording, and it repeats in such a method.



▲Open video recording menu

▲Select loop recording time
and press OK to confirm.


▲Exit from menu and press
Shutter to start loop video recording

Note: After selecting OFF in "REC interval" menu, the camera turns to normal video recording. Normal recording is beyond the limit of time, and it will not stop until the memory card is full.


8. Capture mode:


Push Mode switch to Capture mode. Press Shutter once in preview state for a picture taken:

1 9999: Counter: indicates quantity of pictures available to be taken.





2 : mode icon: indicates it is currently the mode of capture.

3 : movie size: click this icon to select among 1M/3M/5M.

4 : indicates currently a memory card is inserted.

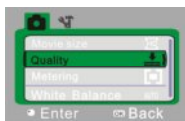
5 : magnification of digital zoom: press Up and down key to adjust zoom among 1x-4x.



- 6  : battery icon: indicates current battery level.
- 7  : Self-timer icon: indicates the current self-timer mode is set to 10 seconds.
- 8  : white balance icon: indicates the current white balance mode is automatic.
- 9  : metering icon: indicates it is currently the pan overall perspective metering.

Capture menu setup

In capture mode, press OK key to open menu, and then press Up and Down key to select menu. When selecting menu, background of the selected item will be highlighted. Press Shutter to enter sub-menu. In sub-menu, press Up and Down key for selection, press Shutter for confirmation and back to main menu. In the main menu, press OK key to exit from the menu.



▲ Capture menu





Capture menu options

Main menu	Sub-menu	Description
Resolution	2592x1944	5 megapixel resolution.
	2048x1536	3 megapixel resolution.
	1280x960	1 megapixel resolution.
Quality	Super Fine	Best quality image.
	Fine	Good image quality.
	Normal	General quality image.
Metering	Center	Metering subject to the central area.
	Multi	Metering subject to multi-points.
	Spot	Metering subject to one point.
White balance	Auto	Using automatic white balance, suitable for most cases.
	Daylight	Suitable for daylight environment.
	Cloudy	Suitable for cloudy environment.
	Fluorescent	Suitable for fluorescent light source environment.
	Tungsten	Suitable for tungsten light source environment.
Exposure	/	Use Left and Right key to adjust exposure compensation.
Self-Time	Off	Use general single shot mode.
	2s	Use 2sec. delay self-timer mode.
	10s	Use 10sec. delay self-timer mode.
	Continuous shooting`	Use continuous shooting.
Effect	Normal	Normal effect.
	B&W	White and black effect.
	Sepia	Sepia effect.
	Negative	Negative film effect.
	Red	Reddish effect.
	Green	Greenish effect.
	Blue	Bluish effect.
Date stamp	Off	Turn off printing date/time on the file.

	Date	During capturing/recording video, print date on right bottom corner of the file.
	Date / time	During capturing/recording video, print date and time on right bottom corner of the file.

9. Playback mode:

9.1 After power-on, push Mode switch back to Playback mode:

- 1  :mode icon: indicates it is currently the mode of playback.
- 2  : Indicates that there is one file in current folder/totally one folder.
- 3  : indicates that the current folder is locked.
- 4  : indicates the current file is a video file.



9.2 Playback menu setup

In playback mode, press OK key to open menu, and then press Up and Down key to select menu. When selecting menu, background of the selected item will be highlighted. Press Shutter to enter sub-menu. In sub-menu, press Up and Down key for selection, press Shutter for confirmation and back to main menu. In the main menu, press OK key to exit from the menu.



▲Playback menu

Playback menu options

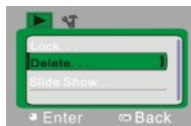
Main menu	Sub-menu	Description
Lock	Lock/unlock this file	Lock/unlock this file.
	Lock all	Lock all files.
	Unlock all	Unlock all files.
Delete	One	Delete the current file.
	All	Delete all files.
Slide Show	Start	Start playing slide show.
	Interval	1sec.~10sec.
	Repeat	Yes/No.

9.3 Play movie clips:



During playing, press Shutter key to play, press Up key for pause, press Shutter key to stop playing.

9.4 Delete file:



1) After selecting the file to be deleted, open the menu, press Up and Down key to select “Delete”.



2) Press Shutter key to enter, after selecting “One”, press Shutter key for confirmation). “All” means to delete all files.)



3) After selecting “Yes”, press Shutter key to delete the file. When the file is deleted, press OK key to exit from the menu.

10. System setup menu:

In capture, video recording or playback mode, press OK key to open menu, and then press Power key to switch over to setup menu. In setup menu, press Up and Down key for selecting menu. When selecting menu, background of the selected item will be highlighted. Press Shutter to enter sub-menu. In sub-menu, press Up and Down key for selection, press Shutter for confirmation and back to main menu. In the main menu, press OK key to exit from the menu.



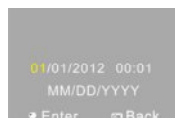
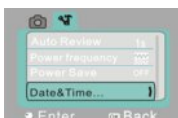
▲System setup menu

System setup menu options

Main menu	Sub-menu	Description
Auto Review	Off	No playback performed after capture.
	1 second	Playback performed 1 second later after capture.
	3 seconds	Playback performed 3 seconds later after capture.
Power frequency	50Hz	Set to 50Hz light source frequency.
	60Hz	Set to 60Hz Playback performed 1 second later after capture.
Power Save	1 minute	Automatic shutdown performed in case of 1 minute idle.
	3 minutes	Playback performed 3 seconds later after capture.
	5 minutes	Playback performed 5 seconds later after capture.
	OFF	Cancel automatic shutdown.
Date and time	/	Set up date and time format.
Language	/	Set up the language.
Format	Yes/No	Format memory card.
Reset All	Yes/No	Back to default value.

Setting date and time:

Press OK key to open the menu, and then press Power key to enter setup menu. Press Down key to select “Date&Time” item, and press Shutter key to enter setup window.



In setup window, press Power key to select the item to be adjusted (Date, time). The selected item will be highlighted in yellow. Then press Up key or Down key for adjustment. At completion of adjustment, press Shutter key to confirm the adjustment, or press OK key to cancel the setup and return. Finally press OK key to exit from setup mode.

Application in PC

1. Connect with PC

The camera is equipped with function of plug and play. In power-in state, after connecting this device to the computer with USB cable, it can be switched over to portable hard disk mode.

Portable hard disk icon will be shown in the window of "My Computer". Images/video shot by you are stored in portable hard disk folder I:\DCIM\100MEDIA ("I" indicates equipment portable hard disk)

2. Use computer camera function

After connecting the camera with the computer, press OK key to enter camera mode.

Technical Parameters

Image sensor	1.3 megapixel (CMOS)	
Function mode	Video, capture, car mode, portable disk, PC cam	
Lens	F3.1 f=9.3mm	
Digital zoom	4x	
Shutter	Electronic shutter	
LCD display	1.77" TFT screen	
Image resolution	5M(2592×1944), 3M(2048×1536), 1M(1280×960)	
Video resolution	VGA: 640x480 (60 frame/second); 720P:1280x720 (30 frame/second)	
White balance	Automatic /Sunny / Cloudy / Fluorescent light / Tungsten light	
Exposure	-2.0 ~ +2.0	
File format	Video	AVI
	Image	JPEG
Storage medium	Micro SD card (Max. support 32GB)	
USB interface	High-speed USB 2.0 interface	
Power supply	Built-in 3.7V chargeable lithium battery	
Dimensions (LxWxH)	67*48*29mm	
Weight	Roughly 48g	

Standard package



Camera



User Manual



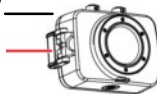
USB cable

Accessories:

1) Waterproof case :

The transparent case included with this product allows you to make movies or photos in wet conditions even in the water. To do this, simply select the desired mode (photo or video), select the desired criteria, placing the camera in the waterproof case and take care to well close it using the locking clip located right of the case, once installed on / off and shutter buttons can be used by pushing the push buttons located on the top of the waterproof case.

Locking clip



Warning :

- Once the camera installed in the case water intrusions.
- Do not use aggressive product such as damage.

make sure that all seals are in place to prevent acetone to clean the case to prevent permanent

2) Handlebar clamp:

The handlebar mounting can hang satisfactorily camera on handlebars or other bars of the same type.

3) Helmet clamp :

Camera can be fixed on a ventilated helmet as those used for the practice of mountain bikes, with the provided strap and the helmet kit.

Note!

Product design and Technical parameters may be change without notice. This mainly concerns parameters technical, software and user manual present. User's Manual is a general orientation on service product. Manufacturer and distributor do not assume any responsibility as compensation for any inaccuracies errors in the descriptions appearing in this user manual.

Note about disposal

Older appliances, which display the symbol as shown in the picture, may not be discarded in household waste. You must take them to a specific disposal site (check with your local authority) or to your retailer. These sites will guarantee disposal without harming the environment



CUSTOMER SERVICE

tel: +48 22 332 34 63 lub e-mail: serwis@manta.com.pl

FROM MONDAY TO FRIDAY, IN HOURS: 9.00-17.00

The manufacturer reserves the right to make changes to product specifications without notice.

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Technical support page: www.manta.info.pl



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