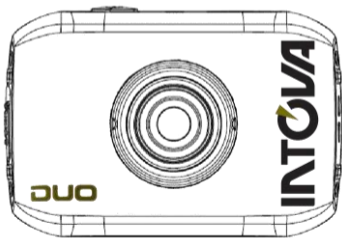


Product Manual

Intova Duo



Introduction

Thank you for purchasing an Intova Duo. Your Duo is a tough and robust Sports Camera with a wide range of features. Please read this manual carefully for usage instructions and care tips.

ENJOY!!!

Precautions

Before using the camera, read the precautions to ensure correct use, the best performance and longer lifespan.

- ◆ Do not leave or store the camera in direct sunlight, especially the lens, as prolonged exposure to direct sunlight can damage the image sensor.
- ◆ Store in a cool, dry environment.
- ◆ During storage, note that battery must be recharged periodically to maintain operating ability. Allowing total discharge may ruin the battery.
- ◆ Clean with a soft dry cloth and take special care around lens.
- ◆ Format Memory Card prior to first use

HOUSING MAINTENEBCE

Rinse housing in cool clean water after use

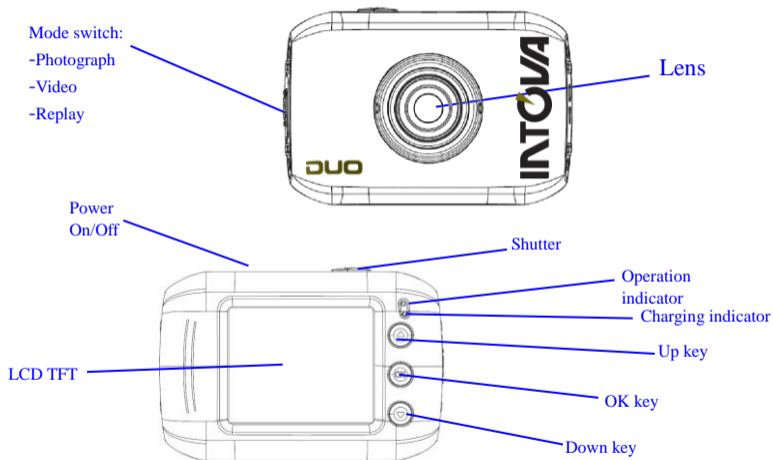
Inspect O-ring carefully prior to each use: any debris on O-ring can cause leakage

Store in a cool dry area with housing door slightly open to prevent O-ring deforming

System Requirements

System Requirements	
Operation system	Microsoft Windows2000, XP, Vista, 7
CPU	Intel Pentium III 800MHz or equivalent CPU
Memory	Minimum 512MB
Sound card, video card	Sound card and video card should support DirectX8 or higher
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	1) Power the camera on or off. 2) In menu, switch between normal and setup.	
Shutter	1) Video mode, start/stop recording. 2) Photo mode, shutter button. 3) Replay mode, start/stop video. 4) Menu Mode, confirmation	
Up key	1)Video/Photo Mode, Digital zoom in. 2) Menu, selection scroll up 3) Replay Mode, pause, continue playing	
OK key	2) Open/exit menu. Replay Mode, Stop	
Mode switch	Switch between capture, video, replay	
Operation indicator	Upper LED is a charging indicator.	In power-off state, LED will be lit when the charger is connected for charging.
	Lower LED is an operation indicator.	It flashes once during image capture, and stays constant when connected with computer portable disk.

Start Use

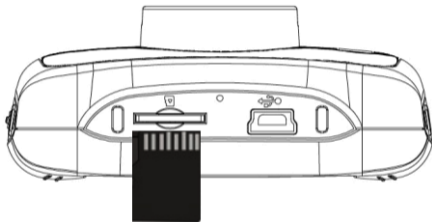
1. Charge built-in lithium battery



With power-off, connect camera to computer USB port or USB power adapter and begin charging. Charger indicator light will turn on while charging and turn off when fully charged. Generally, 2-4 hours for full charge.

2. Memory card

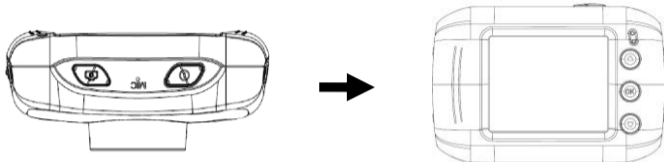
1. To install, fully insert FT card in the card slot until it clicks into place.
2. To remove, press card to release.



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


3. Power On/Off:

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



3.2. Power-off: click POWER key, the camera turns off;

Note: Automatic power-off will occur if no usage for 5 minutes

3.3. Power-off due to low battery: In case of extremely low battery, an icon of  will appear on the LCD screen indicating urgent charging need. When the icon turns red and flashes, the camera will automatically power off.

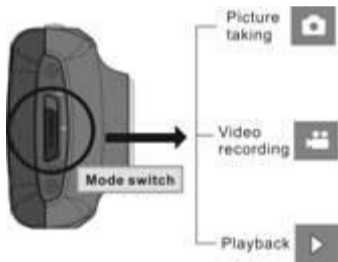
4. Function mode selection

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

Photo mode: Take pictures;

Video mode: Record video

Playback mode: Picture and video file playback











5. Indicators

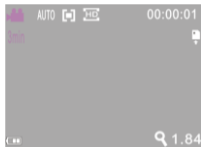
Operation indicator: Shows when camera is in use

Charger indicator: Indicates charging mode when illuminated.

6 Video mode

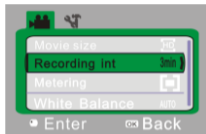
In video mode, click shutter button to start/stop video recording, repeat as needed. Camera will automatically stop recording when the memory card is full or the battery is extremely low:

- 1 **00:00:01**: time-meter, indicating time of recording
- 2  : mode icon: indicates the current mode
- 3  : loop recording video time icon
- 4  : movie size: indicates the current movie size is 720P;
- 5  : indicates 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  : white balance icon: indicates the current white balance mode
- 9  : metering icon: indicates perspective metering.



Video menu setup

In video mode, press OK key to open menu, press Up or 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 or Down key for selection, press Shutter for confirmation and return to main menu. In the main menu, press OK key to exit the menu.



▲ Video menu

Video menu options

Main menu	Sub-menu	Description
Video format	1280x720	High resolution format
	640X480	Medium resolution format
Recording int	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.
	5min	Set driving record to 5 minutes as a repeating phase.

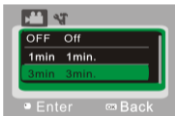
Metering mode	Central metering	Metering subject in the central frame area
	Multi-point metering	Metering subject to multi-points
	Point metering	Metering subject to one point
White balance	Automatic	Automatic white balance, suitable for most cases;
	Daylight	Suitable for daylight environment
	Cloudy	Suitable for cloudy environment
	Fluorescent light	Suitable for fluorescent light source environment
	Tungsten light	Suitable for tungsten light source environment
Special effect	Normal	Normal effect
	White and black	Black and White effect
	Antique	Retro effect
	Negative film	Negative film effect
	Red	Reddish effect
	Green	Greenish effect
	Blue	Bluish effect
Date stamp	Off	Turn off printing date/time on the file
	Date	Photo/video, print date on right bottom corner of the file
	Date and time	Photo/video, print date and time on right bottom corner of the file

7 Loop video recording:

Select Video mode, open the menu, press Down key to select “Recording Int” menu, press Shutter key to enter sub-menu, “1min, 3min, 5min” recording loop mode are options. After pressing OK key for confirmation, press OK key again to exit the menu. When Shutter is pressed, video recording starts. During video recording, the camera will automatically stop recording video based on 1min, 3min, 5min selected, and immediately start next section of video recording (e.g. when 5min is selected in the menu, the camera will automatically stop when 5min recording reached, and start next section of video recording). When the memory card is full, the earliest recorded section of file will be recorded over



▲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 “Recording Int” menu, when existing menu, the camera returns to normal video recording. Normal recording is not time restricted and it will continue until the memory card is full.


8 Photo mode:


Select Photo Mode. Push Shutter once to take photo.


1 **9999**: Counter: indicates quantity of pictures taken or available

to be taken;


2  : mode icon


3  : movie size


4  : indicates a memory card is inserted;

5  1.84 : 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

8  : white balance icon: indicates the current white balance mode

9  : metering icon: indicates perspective metering.



Capture menu setup

In capture mode, press OK key to open menu, 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 return to main menu. In the main menu, press OK key to exit the menu.



▲ Capture menu

Capture menu options





Main menu	Sub-menu	Description
Image size	2592x1944	5 megapixel resolution
	2048X1536	3 megapixel resolution
	1280X960	1 megapixel resolution

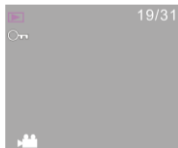
Image quality	Excellent	Best quality image
	Good	Good image quality
	Normal	General quality image
Metering mode	Central metering	Metering in central frame area
	megapixel resolution	Metering multi-point
	Point metering	Metering one point
White balance	Automatic	Automatic white balance, suitable for most cases
	Daylight	Suitable for daylight environment
	Cloudy	Suitable for cloudy environment
	Fluorescent light	Suitable for fluorescent light source environment
	Tungsten light	Suitable for tungsten light source environment
Exposure	/	Use Left and Right key to adjust exposure compensation
Capture mode	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
Special effect	Normal	Normal effect
	White and black	Black and White effect

	Antique	Retro effect
	Negative film	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

9 Playback mode:

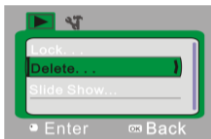
9.1 After power-on, select Playback mode:

- 1  : mode icon: indicates playback mode
- 2  : Indicates files in current folder
- 3  : indicates that the current folder is locked
- 4  : **indicates the current file is an AVI 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 menu.



▲ Playback menu

Playback menu options

Main menu	Sub-menu	Description
File lockup	Lock/unlock this file	Lock/unlock this file
	Lock all	Lock all files
	Unlock all	Unlock al files
File deletion	Delete this file	Delete the current file
	Delete all	Delete all files

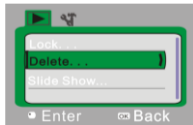
Slide show	Start	Start playing slide show
	Interval	1sec.~10sec.
	Repeat	Yes/No

9.3 Play movie clips:

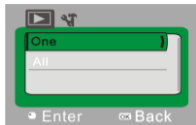


Press Shutter key to play, press Up key for pause, press Shutter key to stop playing.

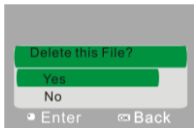
9.4 Delete file:



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



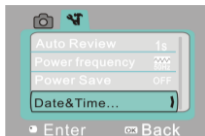
2) Press Shutter key to enter, after selecting “One”, press Shutter key for confirmation). “All” means to delete all files.)



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 Photo, video 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 menu.



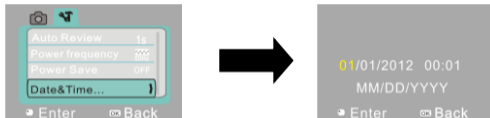
▲System setup menu

System setup menu options

Main menu	Sub-menu	Description
Automatic playback	Off	No playback performed after capture
	1 second	Playback performed 1 second 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
Automatic shutdown	1 minute	Auto shutdown after 1 minute idle
	3 minutes	Auto Shut down after 3 minutes idle
	5 minutes	Auto shutdown after 5 minutes idle
	OFF	Cancel automatic shutdown
Date and time	/	Set up date and time format
Format	Yes/No	Format memory card
Default value	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 elect 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 PK key to exit setup mode.

PC

1. Connect with PC

The camera is plug and play. In power-on state, after connecting device to computer with USB cable, 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)

Specifications

Image sensor	1.3 megapixel (CMOS)	
Function mode	Video, capture, car mode, portable disk, PC cam	
Lens	F3.1 f=6.5mm	
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	TF 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 46g	

Standard package



Camera



User Manual



USB cable

Industrial Revolution, Inc.
5835 Segale Park Dr. C.
Tukwila, WA 98188

www.industrialrev.com

www.intova.com