

X² INSTRUCTIONS



Thank you for purchasing the Intova X² marine grade action cam! The rugged, durable and waterproof X² will help you capture high quality video and photos in many different venues and environments. Please read this manual carefully for usage instructions and care tips.

Enjoy!

INTOVA

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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.
- » Before each use, clean and maintain all O-rings in areas that have been opened by removing any dirt, sand and any other debris.
- » Format Memory Card prior to first use.

FCC STATEMENT:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

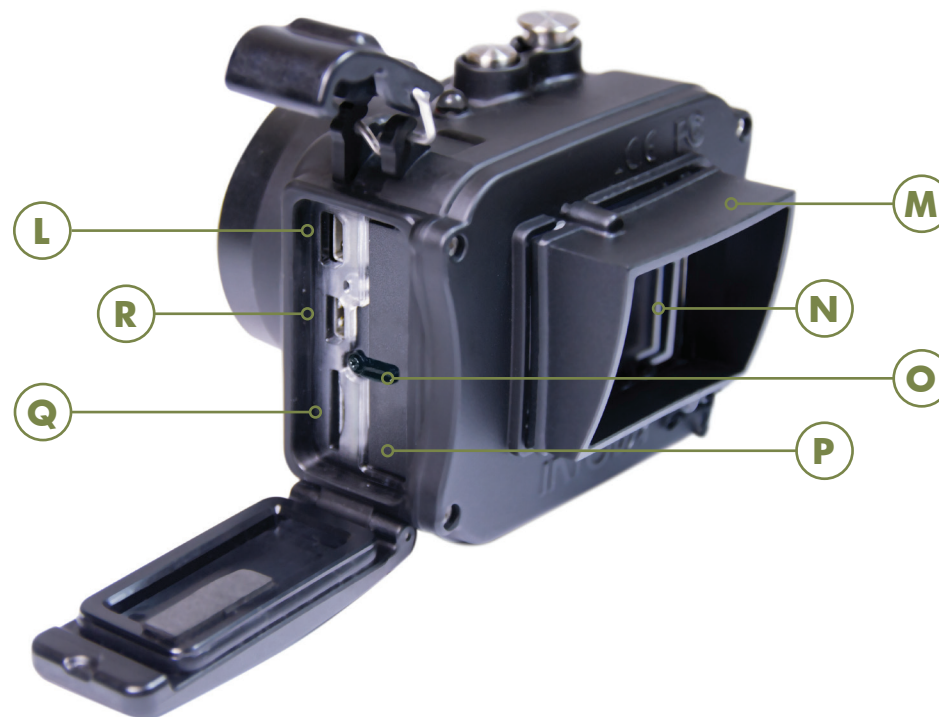
- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- » Reorient or relocate the receiving antenna.
- » Increase the separation between the equipment and receiver.
- » Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- » Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

LIMITED WARRANTY: This product has a limited 1 year warranty, to the original purchaser, to be free from defects in materials and workmanship. Follow all product instructions and warnings as warranty does not cover damage due to misuse, improper care, accidents, or alterations. See www.intova.com for further details, limitations, and restrictions.



A. Video Light/Flash

B. Shutter Button

- » Video mode: start/stop recording.
- » Photo mode: shutter button.
- » Power flash on/off (press & hold 2 seconds).
- » Thumbnail view mode: enter delete function.
- » Exit menu.

C. Power Button

- » Power the camera on/off (press & hold).
- » Video/Photo/View mode: Select.
- » Playback mode: return to thumbnail view & return to video screen.

D. Indicator Light

- » **Red LED** is ON while charging and OFF when charge is complete. FLASHES when video recording is in progress.

E. Door Lock

F. Removable Housing Door

G. Tripod Mount

H. Float Strap Attachment

K/I. Up/Down Buttons

- » Navigate/select menu.
- » Scroll up/down to select thumbnail to view.
- » Video/photo mode: Adjust digital zoom.
- » Playback mode: speed up video playback (down button) and slow down video playback (up button).
- » Down: one touch LCD off.

J. Menu/OK Button

- » Access Menu.
- » Select.
- » Playback mode: start and stop video.
- » Press and hold 3 seconds to turn ON or OFF WiFi.

L. Mini USB Port

M. LCD Hood

N. LCD Screen

O. Battery Lock

P. Battery

Q. Micro SD Card Port

R. Micro HDMI Video Out Port

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QUICK START GUIDE



1. OPEN HOUSING DOOR



2. INSERT BATTERY



3. CHARGE



4. INSERT MICRO SD CARD

(Up to 32GB class 10 microSD card)



5. POWER ON (press & hold)



6. PRESS SHUTTER TO SHOOT/RECORD



PRESS SHUTTER (press & hold) **FOR LIGHT**

OPENING THE HOUSING



Unlock Housing:

- » Slide lock towards back of camera and hold.
- » Flip latch up away from camera.
- » Un-hook latch from side door and pull open door.



CHARGE



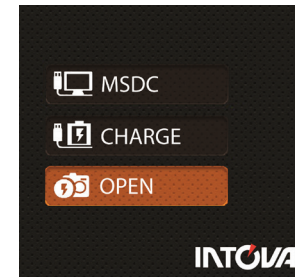
Insert the Li-ion battery into battery chamber with gold contacts facing lens port. Rotate battery lock latch 90° to secure battery.



Charge the battery by connecting the camera to a computer or other USB charging adapter using the included USB cable.



When prompted, select “charge” from the menu. The camera charging indicator light turns on during charging and turns off when charging is complete.



To recharge the battery power and operate the camera at the same time select “open” from the menu. When “open” is selected, LCD will show live view.

The camera does not come fully charged. Charging time is up to 6 hours. When charging with a computer, be sure that the computer is connected to a power source. If the camera status light does not turn on, use a different USB port. No damage occurs to the camera or battery if used without a full charge. For more battery information, see Battery.

POWER ON/OFF



Power-on: press and hold POWER key for 2 seconds, the screen starts up and the camera enters startup mode.

Power-off: press and hold POWER button for 2 seconds.

CHOOSE MODE

The camera is equipped with three modes: photo, video and playback. To switch modes, quickly press the power button.

Note: Automatic power-off will occur after selected time in AUTO POWER OFF function in settings menu. 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.

MICRO SD CARD USE

Insert the micro SD Card: Insert card into Micro SD card port with gold contacts facing towards LCD screen. Push down until card clicks into place.

To Remove the micro SD Card: Lightly press the memory card further into the camera. The card springs out far enough to be removed.

NOTICE: The camera is not equipped with built-in memory, a memory card is required. HD2 uses Micro SD card up to 64 GB. For 1080p HD video, speed class 10 is required. The **card must be formatted** prior to use. Format a new Micro SD card before first use or as necessary after first use such as when memory card becomes full. To format SD card, press MENU, scroll to SYSTEM submenu, press OK, press UP 5 times, press OK, select YES and press OK. Format will erase all data from card. Transfer and save any data prior to formatting. Use care when handling memory cards. Avoid liquids, dust and debris. As a precaution, power off the camera before inserting or removing the card. Check manufacturer guidelines regarding use in acceptable temperature ranges.

ALERTS & IMPORTANT MESSAGES

Missing SD card Notification: Notification that there is no SD card in the camera. A Micro SD camera is required to capture photos/videos and to playback images. Insert Micro SD card and this notification will vanish.

Operation indicator: light illuminates when the camera is capturing imagery or connected to a computer.

Charger indicator: light illuminates when the camera is charging.

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ACTION VIDEO LIGHT & FLASH



PRESS SHUTTER (press & hold for 2 seconds) **TO ACTIVATE**

PHOTO FLASH

Built-in LED flash provides approximately 120 lumens of flash power. Set to **on** or **off** by pressing and holding the shutter for 2 seconds when in photo mode or through the Photo sub-menu, selecting the Photo Flash function item and then selecting **off** or **exter** (external).

EXTER FLASH: for use with fiber optic cable and external slave strobe.

EXTER MODE 1: for use with fiber optic cable and external slave strobe.

INTER HIGH: when using built-in LED flash at max lumen output.

INTER MEDIUM: when using built-in LED flash at medium lumen output.

INTER LOW: when using built-in LED flash at low lumen output.

VIDEO LIGHT

The video light provides approximately 100-150 lumens of illumination. Set to **on** or **off** by pressing and holding the shutter for 2 seconds when in video mode or through the video sub-menu, selecting the Record LED function and then selecting **on** or **off**. When set to **on**, the video light will turn on when video recording is started and turn off when video recording is stopped.

WIFI CONTROL



1. **Install Intova App** onto an iOS or Android wireless device such as a smart phone or tablet.
2. **Turn on Wifi** by pressing and holding MENU button for 3 seconds until "Processing" in red appears. WiFi icon should turn green.

3. Connect to X2 Camera

Wifi signal default network name: **INTOVA X2**.

Password: 0123456789

4. **Open INTOVA Wifi app & control camera** by selecting the **Intova X2** in the app. Mobile device will show live view. Control camera, view files, etc. by using touch controls.

*Notice: For some Android phone models, "AUTO CONNECT" function in WiFi advanced menu needs to be disabled.

COMPUTER REQUIREMENTS FOR 1080P HD VIDEO

Minimum recommended setup for viewing 1080p 30fps video.

PC	Mac
Windows® 7, 8, 10	Mac OS X 10.6.3 or later
Intel® i3™ or faster	Intel® i3™ or faster
DirectX™ 10.0 or later	
Minimum 4GB of system RAM	Minimum 4GB of system RAM
Video card with minimum 1GB of RAM	Video card with minimum 1GB of RAM
Monitor resolution 1920x1080	Monitor resolution 1920x1080

TRANSFERRING FILES TO A COMPUTER

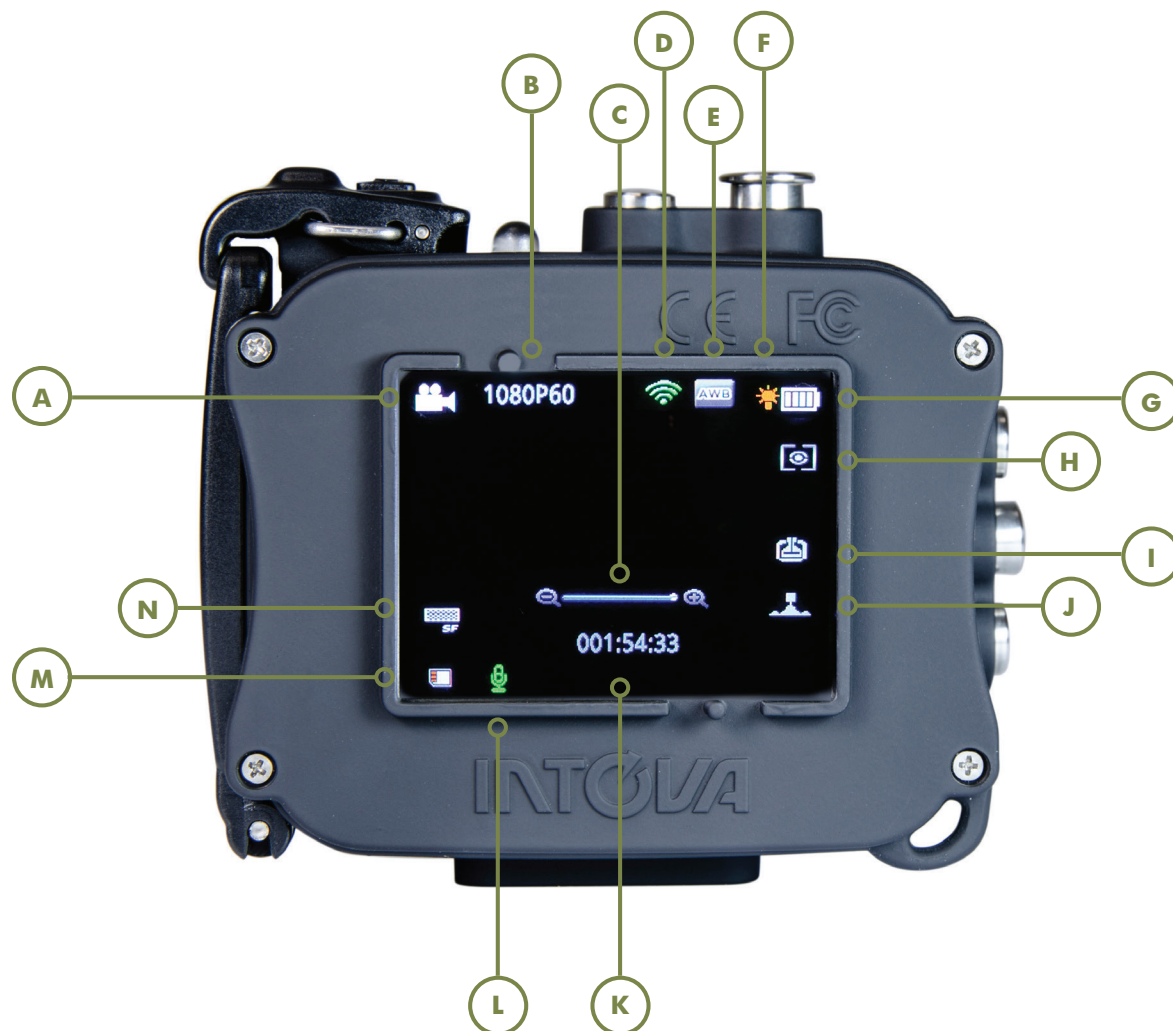
1. Make sure camera is powered off.
2. Connect device to computer with USB cable.
3. When prompted, select "MSDC." The screen with "USB CONNECTED" should appear and camera will be detected by the computer. Files can then be transferred.



NOTE: You can also transfer files to a computer using a **card reader** (sold separately). Connect the card reader to your computer and insert the micro SD card into the reader. You can then transfer files to your computer or delete selected files on your card.

VIDEO STATUS SCREEN

Your X² camera displays the following information about modes and settings when in the video mode:



VIDEO MODE ICONS & SETTINGS

A	Video	Video mode
B	Resolution	1920x1080P 60/30/48/24 1920x1200P 60/30/48/24 1280x960P 60/30/48/24 1280x720P 60/30/48/24/120 848x480P 60/30/48/24/120/240 640x480P 60/30/48/24/120
C	Zoom	0-60x (digital)
D	Wifi	Green: On White with red X: Off
E	White Balance	Auto Sunny Cloudy Fluorescent Incandescent
F	Video Light	Off/On
G	Battery	Battery level
H	AF Mode (Metering)	Center Multi Spot
I	Motion Detection (records when motion is detected in field of view)	Off/On
J	Date Stamp	Off Date Time Date & Time
K	Recording Time	Remaining recording time.
L	Mute (Audio Status)	Off/On
M	Loaded Micro SD	Loaded card
N	Quality	Super Fine Fine Normal

VIDEO STATUS SCREEN - RECORDING

Your X² camera displays the following information about modes and settings when recording:



VIDEO RECORDING INDICATORS

A	Recording Indicator (Blinking red dot)	Recording in progress
B	Recording Time	Length of time recording current video
C	Picture in Video Indicator	To take a photo while recording video (picture in video), press OK button (camera icon will change to orange color).

PHOTO STATUS SCREEN

Your X² camera displays the following information about modes and settings when in the Picture mode:

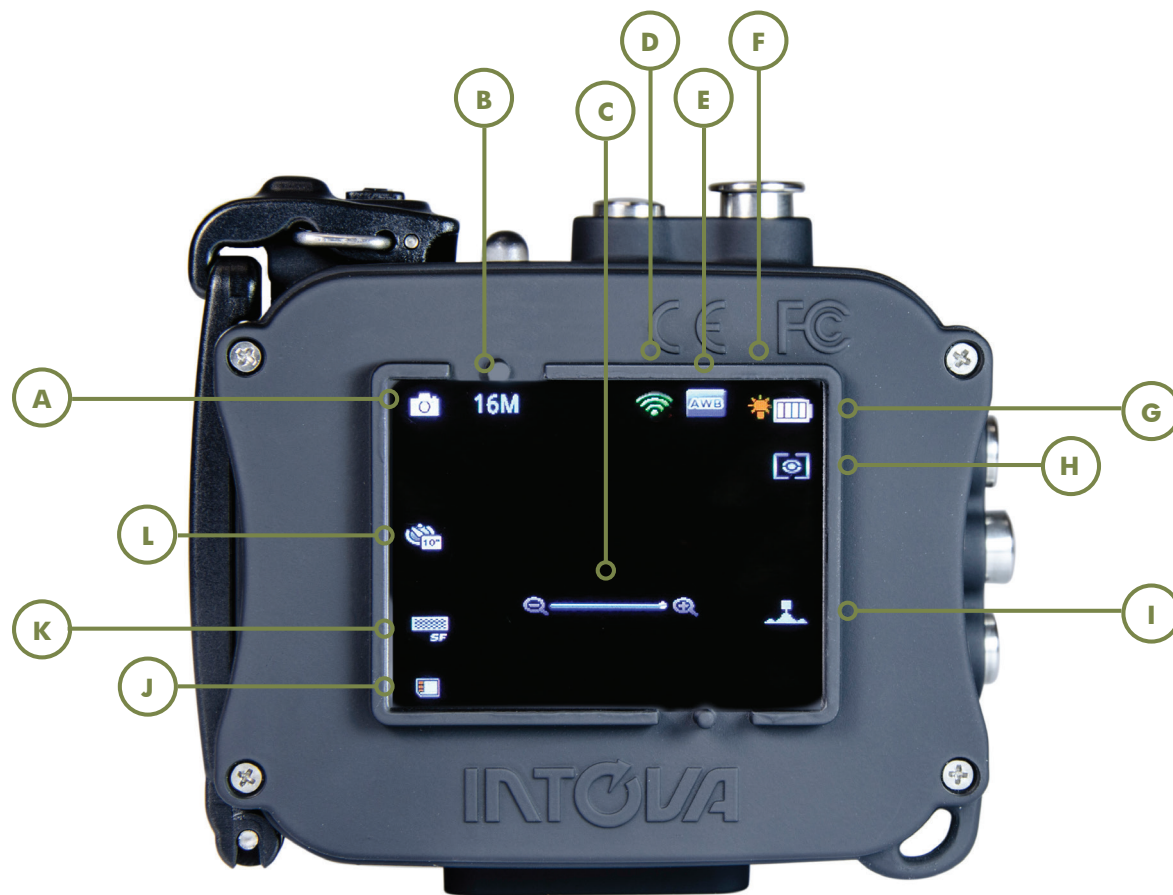


PHOTO MODE ICONS & SETTINGS

A Photo	Photo mode
B Resolution	16M: 4608 x 3456 14MP: 4000 x 3000 8MP: 3264 x 2448 5MP: 2592 x 1944
C Zoom	0-60x (digital)
D Wifi	Green: on White with red X: Off
E White Balance	Auto Sunny Cloudy Fluorescent Incandescent
F Photo Flash	Off/On
G Battery Status	Charge level
H AF Mode (Metering)	Average Center Spot
I Date Stamp	Off Date Date & Time
J Loaded Micro SD	Loaded card
K Quality	Super Fine Fine Normal
L Self-Capture	3 Seconds 5 Seconds 10 Seconds

PLAYBACK VIDEOS/VIEW PHOTOS

Go to Playback mode by pressing the **power** button twice when in Video mode. Press **up/down** buttons to scroll through files. Press the **power** button to exit playback mode and return to video mode screen.



VIEWING FILES ON AN HDTV

1. Connect the camera to an HDTV with a micro HDMI cable (not included). Plug the micro HDMI plug into the camera's HD output port and the other end with USB plug into the HDTV.
2. Turn camera on and confirm that TV SYSTEM (NTSC or PAL) in SETTING Menu is matched to TV.

PLAYBACK MODE ICONS & SETTINGS

A	Playback	Playback/view mode
B	File Number	Image/Video Number

TO PLAY MOVIE CLIPS:

Play: Press **OK** button twice.

Stop: Press **OK** button.

CHANGE PICTURE VIEW:

Enlarge: Select photo you wish to enlarge. Press **OK** button.

Thumbnail view: Press the **power** button.

DELETING FILES

1. Press **up/down** buttons to select a file and then press the **shutter** button.
2. Press **OK** button to enter delete function.
3. Press **up/down** buttons to select **THIS** or **ALL**.
4. Press **OK** button to confirm choice.
5. Press **up/down** buttons to select **O** to delete or **X** to cancel.
6. Press **OK** to perform deletion.

NAVIGATING MENUS TO ADJUST SETTINGS

The menu controls and adjusts the camera's functions and settings. To access the menu and adjust settings:

1. Press the **OK** button to enter the main menu from either video or photo mode.
2. Press the **up/down** buttons to scroll through the five sub-menus—VIDEO, PHOTO, WIFI, SYSTEM, and IMAGE QUALITY.
3. Press the **OK** button to enter the selected sub-menu.
4. Use the **up/down** buttons to cycle through the functions and settings.
5. Press the **OK** button to display the setting choices.
6. Press **up/down** buttons to cycle through the choices
7. Press the **OK** button to confirm the choice.
8. Press the **shutter** button to exit the menu and go back to the video mode screen.

SYSTEM MENU (GENERAL)

TV System	Configures the video file for playback on either an NTSC or PAL system device.	NTSC PAL
Video Rotation	Corrects orientation when camera is mounted upside down.	Off/On
Digital Zoom	This setting allows digital zoom feature for either video or photo mode to be activated. When digital zoom is activated, use the up button to zoom in and the down button to zoom out.	Off 4x 10x 16x 60x
Auto LCD Off	Turns LCD off after selected time to conserve battery power.	30 seconds 1 minute 3 minutes

Volume	Adjust beep volume.	0 (off) - 5 (high)
Language	Select/change menu language.	English Chinese (traditional) Chinese (simplified) Japanese French German Dutch Portuguese Spanish Russian Korean Italian
Firmware V (version)	Indicates installed firmware version. Please note when updating firmware in order to confirm new firmware has been installed.	
Time Setup	Set date and time: Set date and time by pressing up/down button to change number and press mode button to scroll to next. When done, press OK button to confirm and go back to sub-menu.	
Format	Format Micro SD Card. WARNING: Format will erase all data from card. Transfer and save any data prior to formatting.	
Default Setting	Resets camera to factory default settings.	
Auto Power Off	Turns Camera off after selected time to conserve battery power.	30 seconds 1 minute 3 minutes 5 minutes
Lens Correct	This feature corrects for "fisheye" distortion in videos and photos by straightening the curved edges.	Off/On
FOV	This feature changes the "field of view" angle in both videos and photos. "One touch LCD off" will not work when set to FOV1 or FOV2.	FOV0: wide angle FOV1: medium angle FOV2: narrow angle

VIDEO MODE MENU

Resolution	Adjusts video's pixel width x height and frames per second.	1920x1080P 60/30/48/24 1920x1200P 60/30/48/24 1280x960P 60/30/48/24 1280x720P 60/30/48/24/120 848x480P 60/30/48/24/120/240 640x480P 60/30/48/24/120
Motion Detection	Video recording will start when motion is detected in camera's field of view. Video recording will stop if no motion detected after 5 seconds.	Off/On
Video Duration	Video is recorded in continuous time segments shorter than the default 20 mins.	Off (20 minute segments) 1 min 3 min 5 min 10 min
Video Loop	Allows the camera to continue capturing video after card has become full by recording over previous video files from the beginning.	Off/On
Mute (Audio Status)		Off/On
Dual Stream		Off/On
Video Stamp		Off Date Time Date & Time
Time Lapse V	Allows the camera to record video clips with delays between each frame corresponding to selected time interval in seconds.	1 sec 2 sec 3 sec 5 sec 10 sec 30 sec 60 sec
Record LED	Activates/deactivates built-in LED video light. Turns on when video recording starts and turns off when recording is stopped.	Off/On

PHOTO MODE MENU

Size	Adjusts photo's pixel width x height.	16M: 4608x3456 14M: 4608x3072 12M: 4608x2592 5M: 2592x1944
Photo Quality	Adjusts the photo file compression.	Super Fine: best quality Fine: good quality Normal: standard quality
Photo Burst	Adjusts the quantity of continuous photos to be taken per shutter button press.	Off 3 frames 5 frames 10 frames 20 frames 30 frames
Photo Flash	Activates/deactivates built-in LED flash. The flash is useful only in very low light to dark conditions.	Off EXTER FLASH: use with fiber optic cable and slave strobe. EXTER MODE 1: use with fiber optic cable and slave strobe. INTER HIGH: max power output INTER MEDIUM: medium power output INTER LOW: minimum power output
Self Capture	Allows time delay in seconds between pressing of SHUTTER button and taking of photo.	0 3 sec 5 sec 10 sec
Time Lapse P	Allows the camera to take continuous photos with delays between each frame corresponding to selected time interval in seconds.	0 1 sec 2 sec 3 sec 5 sec 10 sec 30 sec 60 sec
Photo Stamp	This feature places the date only, time only or both date and time on the photo which is visible when viewed or printed.	Off Date Time Date/Time

IMAGE QUALITY MENU

Flicker	Prevent flickering caused by fluorescent lights.	AUTO 60Hz 50Hz
Scene Mode	Adjusts camera shutter speed, aperture or color balance to improve videos and photos in various situations.	Off Night Scene Diving: below 20' in saltwater Diving2: below 50' in saltwater Diving3: below 75' in saltwater Diving4: below 100' in saltwater Sports Landscape Sunset Sand/Snow
White Balance	This setting improves color accuracy when the ambient light is either too cool (blue or green) or too warm (yellow/orange).	AUTO SUNNY CLOUDY FLUORESCENT INCANDESCENT
Image Effects (filter)	This setting allows selection of image altering effects.	Off Art Sepia Negative Black & White Vivid
Contrast	This setting increases or reduces the difference between dark and light areas.	Enhance Standard Low
Sharpness	This setting increases or decreases video/photo sharpness.	Hard Standard Soft
Meter	This feature selects the general area in a scene that the cameras uses to calculate image exposure.	Center Average Spot
ISO	This setting adjusts the camera's sensitivity to light. A higher ISO number will result in a lighter video/photo and is useful in low light conditions.	AUTO 100 200 400 800
EV Setting	This setting adjusts the brightness or darkness of the video/photo. Setting to positive values will brighten imagery. Negative values will darken imagery.	-2.0 to +2.0 +0.0 is the default

WIFI MENU

Wifi	Turns WiFi signal ON or OFF. This feature allows camera to be connected to an iOS or Android wireless device such as a smart phone or tablet for remote operation, live viewing and file transferring using the INTOVA WiFi app.	Off On
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BATTERY

Important: DO NOT allow Li-ion battery to become fully discharged. If not using camera for a prolonged period, recharge every 3 months to prevent battery from becoming fully discharged.

Maximizing Battery Life:

The battery icon has a line across it when the battery is very low. If the battery reaches 0% while recording, the camera saves the file and powers off. Extreme cold temperatures can decrease battery life. To maximize battery life in cold conditions, keep the camera in a warm place prior to use. Shooting at higher frame rates and resolutions increases power consumption.

The battery charges to 100% in approximately 6 hours when using a USB-compatible Wall or Auto Charger.

Battery Storage & Handling:

The camera contains sensitive components, including the battery. Avoid exposing your camera and battery to very cold or very hot temperatures. Low or high temperature conditions may temporarily shorten the battery life or cause the camera to temporarily stop working properly. Avoid dramatic changes in temperature or humidity when using the camera, as condensation may form on or within the camera.

The camera housing protects the camera from water damage. For more information, see Camera Housing. Do not turn on your camera if it is wet. If your camera is already on, turn it off. Allow the camera to dry thoroughly before using it again. Do not dry the camera with an external heat source such as a microwave oven or hair dryer. Damage to the camera caused by contact with liquid is not covered under the warranty.

Battery Disposal:

Most rechargeable lithium-ion batteries are classified as non-hazardous waste and are safe for disposal in the normal municipal waste stream. Many localities have laws in place requiring battery recycling. Check your local laws to make sure that you can dispose of rechargeable batteries in your regular trash. To safely dispose of lithium-ion batteries, protect terminals from exposure to other metal with packing, masking or electrical tape so they do not cause a fire while being transported. Lithium-ion batteries, however, do contain recyclable materials and are accepted for recycling by the Rechargeable Battery Recycling

Corporation's (RBRC) Battery Recycling Program. We encourage you to visit Call2Recycle at call2recycle.org or call 1-800-BATTERY in North America to find a convenient recycling location. Never dispose of a battery in a fire because it may explode.

WARNING: Do not drop, disassemble, open, crush, bend, deform, puncture, shred, microwave, incinerate or paint the camera. Do not insert foreign objects into the battery opening on the camera. Do not use the camera or the battery if it has been damaged—for example, if cracked, punctured or harmed by water. Disassembling or puncturing the battery can cause an explosion or fire.

HOUSING MAINTENANCE

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.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Camera will not turn on	Battery not charged	Use supplied USB cable and connect to powered-on computer to charge.
Camera freezes, does not operate correctly or shows "card error" message on LCD.	MicroSD card is improper size or has files on it recorded on another device.	Use microSD card maximum size 64GB (class 10 recommended). Format card if it has files on it from another device.
Photos are blurry	Moving or shaking camera when taking photo.	Hold camera as steady as possible when taking a photo or use a tripod.
Video are shaky or shows motion blur.	Moving camera in with shaking motion or panning too fast.	Move camera in even slow movements when taking videos.
Camera is not recognized by computer when plugged in via USB cable.	Connection failure or defective USB cable.	Check to make sure connections are secure, restart computer or try another USB cable.
Camera turns off by itself after a few minutes.	Power save is set to 1, 3 or 5 minutes or battery charge level is low.	Turn off power save function in camera's menu or make sure battery has sufficient charge.

SUPPORT

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INTOVA IS PART OF A FAMILY OF BRANDS:

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