FUSION

USER MANUAL

JOIN THE GOPRO MOVEMENT

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Welcome to your new Fusion! Let’s get started.

MICROSD CARDS

Fusion requires two microSD cards (sold separately). Use brand name memory cards that meet these requirements:

- Md9-20.1 (l)-2r21.4 5es ttes ts7-16.7 (i)-1l.3 (D)25t.76srt seqomie1 (n)4 (!2 (d n)-2t5 (e41.3 -17a)-20.5(t)6.32t5 (e31.3 -18e b)-21.4 (r)-7.7 (a)-20.5 (n)-23.2 (d n)-.1 (-2, 8.2 (i)-1p.4 5e)

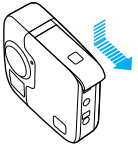
WARNING: Use caution when using your GoPro as part of your active lifestyle. Always be aware of your surroundings to avoid injury to yourself and others.

Abide by all local laws when using your GoPro and related mounts and accessories, including all privacy laws, which may restrict recording in certain areas.

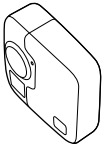
CHARGING THE BATTERY

For the best experience with your new camera, we recommend fully charging the battery before first use.

1. Hold down the Latch Release button on the battery door, then slide the door open.



2. Insert the battery, then close the door.



UPDATING YOUR CAMERA SOFTWARE

To get the latest features and best performance from your GoPro, make sure your camera is always using the most current software.

Updating with the GoPro App

When you connect your camera to the GoPro app, you are automatically noti□ed if an update is available.

1. Download the app from the Apple© App Store© or Google Play.™
2. Be sure that the camera contains both microSD cards.
3. Follow the on-screen instructions in the app to connect your camera. If an update is available, the app provides instructions for installing it.

Updating Manually (with an SD Card Reader/Adapter)

1. Visit **gopro.com/update**.
2. Select your camera, then click the option to update the camera manually.
3. Be sure that the camera contains both microSD cards.
4. Follow the on-screen instructions.

LOCATING YOUR SOFTWARE VERSION

1. Press the **Mode** button [

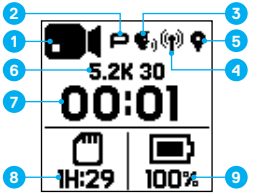
LOCATING YOUR CAMERA'S USERNAME AND PASSWORD

Your camera's username and password are needed when you connect your

GETTING STARTED

STATUS SCREEN

The status screen contains the following information about modes and settings so you can see the basics for your current setting at a glance:



1. Camera Mode
2. Protune™ Status*
3. Voice Control Status*
4. Wireless Status*
5. GPS Status*
6. Settings
7. Number of Files Captured or Video Duration
8. Remaining microSD Card Storage (based on the card with the lower remaining storage)
9. Battery Status

Note: The icons and settings that appear on the status screen vary by mode. Those shown above are for Video mode.

**Icon appears if this setting is turned on*

NAVIGATING YOUR GOPRO

CHANGING CAPTURE MODES AND SETTINGS

Your Fusion contains four camera modes: Video, Photo, Time Lapse, and Settings.

Video [ ]
Video mode contains one capture modes: Video. For a description, see *Video Mode: Capture Mode* (page 36).

Photo [ ]
Photo mode contains three capture modes: Photo, Burst, and Night. For descriptions, see *Photo Mode: Capture Modes* (page 41).

Time Lapse [ ]
Time Lapse mode contains three capture modes: Time Lapse Video, Time Lapse Photo, Night Lapse Photo. For descriptions, see *Time Lapse Mode: Capture Modes* (page 44).

Settings [ ]
Settings contains all of the settings for each camera mode. For details, see *Video Mode: Settings* (page 37), *Photo Mode: Settings* (page 42), and *Time Lapse Mode: Settings* (page 46). Settings also contains the Connections, Voice Control, and Preferences menus.

NAVIGATING YOUR GOPRO

1.

MAP OF MODES AND SETTINGS

Burst	
Connections	
FOV	
FPS	
Interval	

Night Photo	

QuikCapture is the fastest way to capture video or time lapse photos with Fusion. Because the camera is powered on only when it is capturing, you also conserve battery power.

To capture other types of content, see *Capturing Video and Photos* (page 26).

CAPTURING VIDEO WITH QUIKCAPTURE

1.

CAPTURING VIDEO AND PHOTOS

You can also use a more traditional method to capture video and photos in which you leave the camera powered on and capture, as needed. Unlike QuikCapture, the camera remains on when you are not capturing, so you must manually power it o to save battery life. (Fusion automatically powers o after 7 minutes of inactivity.)

1. Press the **Mode** button [mo e

CONTROLLING YOUR GOPRO WITH YOUR VOICE

Mode Command	Description
GoPro Video mode	Changes the camera mode to Video (does *not* capture video)
GoPro Photo mode	Changes the camera mode to Photo mode (does not capture photos)
GoPro Burst mode	Changes the camera mode to Burst mode (does not capture burst photos)
GoPro Time Lapse mode	Changes the camera mode to Time Lapse (does not capture time lapse photos)

For the most updated list of commands, visit **gopro.com/help**.

PRO TIP: If you are recording video or time lapse, you must stop recording before issuing a new command.

CHANGING YOUR VOICE CONTROL LANGUAGE

1. Press the **Mode** button [mode

PLAYING BACK YOUR CONTENT

You can play back your content on a computer or mobile device.

VIEWING VIDEOS AND PHOTOS ON A COMPUTER

To play back your video and photos on a computer, you must first transfer these files to a computer. For details, see *Uploading Your Content* (page 35).

You can also insert the microSD cards directly into a computer.

VIEWING VIDEOS AND PHOTOS ON A MOBILE DEVICE

1. Connect your camera to GoPro app. For details, see *Connecting to Other Devices* (page 33).
2. Use the controls on the app to play back your footage on your smartphone/tablet. You can move the device itself or navigate with the touch screen to explore the full 360 image.

PRO TIP: While playing back your video with the GoPro app, you can mark the best moments by tapping [ ] to add a HiLight Tag.

CONNECTING TO THE GOPRO APP

The GoPro app lets you control your camera remotely using a smartphone or tablet. Features include full camera control, live preview, playback and sharing of content, and camera software updates.

Connecting to the GoPro App for the First Time

1. Download the GoPro app to your mobile device from the Apple© App Store© or Google Play™.
2. Follow the app's on-screen instructions to connect your camera.

Reconnecting to the GoPro App

After connecting to the GoPro app for the first time, you can connect in the future through the Connections menu [ ] on the camera.

1. Turn on your camera's wireless:
   a. Press the **Mode** button [

Video mode contains one capture mode: Video (default). For details about how to change settings, see *Changing Modes and Settings*

VIDEO MODE: SETTINGS

Use this table to help you determine the best resolution for your activity.

Video Resolution	Best Use
5.2K30	Beautiful high-resolution content. Enables 1080p30 OverCapture videos with the traditional GoPro look and feel. Results in a large viewing area, so is recommended for most situations.
3K60	High frame rate yields the smoothest, most immersive results for capturing fast-action activities. Enables 720p60 fixed-frame OverCapture videos. This FPS gives you the most natural playback in head-mounted displays (HMDs) and enables slow motion during editing.

VIDEO MODE: SETTINGS

FRAMES PER SECOND (FPS)

Frames per second (FPS) refers to the number of video frames that are captured in each second.

When selecting a resolution and FPS combination, consider the activity that you want to capture. For more details, see *Video Resolution* (page 37).

ASPECT RATIO

Fusion video resolutions are captured with a 16:9 aspect ratio, which is the standard for televisions and editing programs.

FIELD OF VIEW (FOV)

The field of view (FOV) refers to how much of the scene (measured in degrees) can be captured through the camera lens. The FOV for all Fusion video is Spherical, which captures a full 360 view.

FUSION VIDEO RESOLUTIONS

Video Resolution (RES)	FPS (NTSC/PAL)*	FOV	Screen Resolution
5.2K (default)	30/25	Spherical	4992X2496
3K	60/50	Spherical	3000X1504

**NTSC and PAL refer to the video format, which depends on the region that you are in. For more information, see Video Format (page 54).*

HIGH RESOLUTIONS/HIGH FRAME RATES

When capturing video at high resolutions or high frame rates in warm ambient temperatures, the camera may become warm and use more power.

In addition, lack of air□ow around the camera and using the camera with the GoPro app further increase camera temperature and power consumption, and decrease camera recording time.

RATE RATE

This setting applies only to Burst. Available rates:

- 30 photos in 1, 2, 3, or 6 seconds
- 10 photos in 1, 2, or 3 seconds
- 5 photos in 1 second
- 3 photos in 1 second

The default rate is 30 photos in 1 second.

SHUTTER NIGHT PHOTO)

Within Photo mode, Shutter applies only to Night Photo. This setting lets you determine the amount of time that the shutter is open. The options for this setting are Auto, and 2, 5, 10, 20, and 30 seconds. The default option is 2 seconds.

Settings	Examples
Auto (up to 2 sec)	Sunrise, sunset, dawn, dusk, twilight, night
2 sec, 5 sec, 10 sec	Dawn, dusk, twilight, tra□c at night, Ferris wheel, □reworks, light painting
20 sec	Night sky (with light)
30 sec	Night stars, Milky Way (complete darkness)

PRO TIP: To reduce the amount of blur when using Night photo, mount

TIME LAPSE MODE: CAPTURE MODES

Time Lapse mode contains three capture modes: Time Lapse Video, Time Lapse Photo (default), and Night Lapse Photo. Each capture mode has its own settings. For details about how to change settings, see *Changing Modes and Settings* (page 17).

TIME LAPSE VIDEO

Time Lapse Video creates video from frames captured at speci□c intervals. This option lets you capture a time lapse event and immediately view or share it as a video. Time Lapse Video is available in both resolutions and is captured without audio.

The default resolution for Time Lapse Video is 5.2K30, with the default interval set at 0.5 second. For more information, see these topics:

Fusion Video Resolutions (page 39)

Interval (Time Lapse) (page 47)

TIME LAPSE PHOTO

Time Lapse Photo captures a series of photos at speci□ed intervals. Use this mode to capture photos of any activity, then choose the best ones later.

The default interval for Time Lapse Photo is set at 0.5 second. For more information, see these topics:

Interval (Time Lapse) (page 47)

Protune (page 50)

TIME LAPSE MODE: CAPTURE MODES

NIGHT LAPSE PHOTO

Night Lapse Photo Interval
Interval determines the rate at which photos are captured. Night Lapse intervals are Auto, 4, 5, 10, 15, 20, and 30 seconds, and 1, 2, 5, 30, and 60 minutes.

Auto (default) causes the Interval to match the Shutter setting. For example, if Shutter is set to 10 seconds and Interval is set to Auto, your camera captures a photo every 10 seconds. Photos are captured at 18MP.

Interval	Examples
Auto	Great for all exposures. Captures as quickly as possible, depending on the Shutter setting.
4-5 seconds	Evening city scene, street lighting, or scenes with movement
10-15 seconds	Dim lighting with slow scene changes, like night clouds with a bright moon
20-30 seconds	Very low light or very slow scene changes, like stars with minimal ambient or street light

SHUTTER (TIME LAPSE)

Within Time Lapse mode, this setting applies only to Night Lapse Photo. Shutter lets you determine the amount of time that the shutter is open. The default option is 2 seconds.

Use this table to help you select the most appropriate setting for your activity:

Settings	Examples
Auto (up to 2 sec)	Sunrise, sunset, dawn, dusk, twilight, night
2 sec, 5 sec, 10 sec	Dawn, dusk, twilight, tra□c at night, Ferris wheel, □reworks, light painting
15 sec, 20 sec	Night sky (with light)
30 sec	Night stars, Milky Way (complete darkness)

PRO TIP: To reduce the amount of blur when using Night Lapse Photo, mount your camera on the Fusion Grip tripod or other surface that is stable and cannot move.

PROTUNE

Within Time Lapse mode, Protune is available for Time Lapse Photo and Night Lapse Photo. For details about Protune settings, see *Protune* (page 50).

PROTUNE

Protune unlocks the camera's full potential, yielding stunning image quality and cinema-caliber video and photos optimized for professional productions. Protune gives content creators more □exibility and work□ow e□ciency than ever before.

Protune is compatible with professional color correction tools, Fusion Studio, and other video and photo editing software.

Protune enables manual control of ISO and EV Comp for advanced control and customization of your video footage and photos.

PT PROTUNE

Protune is available as an advanced setting for supported capture modes. The options for this setting are O□ (default) and On. When Protune is on, [PT] appears on the camera screens.

Protune is not available for Time Lapse Video. Protune is available for all video and photo resolutions.

Changes that you make to Protune settings in one capture mode apply only to that capture mode. For example, changing the EV Comp for Night Photo does not a□ect EV Comp for Burst photos.

PROTUNE

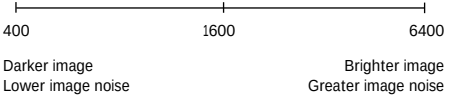
ISO ISO

ISO determines the camera's sensitivity to light, and creates a tradeo□ between brightness and resulting image noise. Image noise refers to the degree of graininess in the image.

In low light, higher ISO values result in brighter images, but with greater image noise. Lower values result in lower image noise, but darker images. When you change this setting, the touch display immediately shows you the e□ect on your image.

ISO values for photos:

ISO values for video:



ISO behavior depends on the Shutter setting:

- Shutter set to Auto: The ISO that you select is used as the maximum ISO value. The ISO value that is applied might be lower, depending on the lighting conditions. Available ISO values are 6400, 3200, 1600, 1200, 800, 400.
- Shutter *not* set to Auto: The ISO that you select is used as the maximum ISO value, unless you tap [🔒] at the bottom of the screen to lock the value. Available ISO values are 6400, 3200, 1600, 1200, 800, and 400.

EXPOSURE VALUE COMPENSATION (EV COMP)

Exposure Value Compensation affects the brightness of your video or photo. Adjusting this setting can improve image quality when shooting in environments with contrasting lighting conditions.

Options for this setting range from -2.0 to +2.0. The default (0) is -1.1 (0) -0.7 -0.3 (1) +0.1 +0.5 +0.9 +1.3 +1.7 +2.1 +2.5 (2) +2.9 +3.3 +3.7 +4.1 +4.5 (3) +4.9 +5.3 +5.7 +6.1 +6.5 (4) +6.9 +7.3 +7.7 +8.1 +8.5 (5) +8.9 +9.3 +9.7 +10.1 +10.5 (6) +10.9 +11.3 +11.7 +12.1 +12.5 (7) +12.9 +13.3 +13.7 +14.1 +14.5 (8) +14.9 +15.3 +15.7 +16.1 +16.5 (9) +16.9 +17.3 +17.7 +18.1 +18.5 (10) +18.9 +19.3 +19.7 +20.1 +20.5 (11) +20.9 +21.3 +21.7 +22.1 +22.5 (12) +22.9 +23.3 +23.7 +24.1 +24.5 (13) +24.9 +25.3 +25.7 +26.1 +26.5 (14) +26.9 +27.3 +27.7 +28.1 +28.5 (15) +28.9 +29.3 +29.7 +30.1 +30.5 (16) +30.9 +31.3 +31.7 +32.1 +32.5 (17) +32.9 +33.3 +33.7 +34.1 +34.5 (18) +34.9 +35.3 +35.7 +36.1 +36.5 (19) +36.9 +37.3 +37.7

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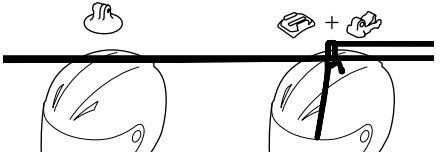
MOUNTING GUIDELINES

Follow these guidelines when attaching adhesive mounts:

- Attach the adhesive mounts at least 24 hours before use.
- Adhesive mounts must be mounted only on smooth surfaces. Porous or textured surfaces do not enable a proper bond. When applying the mount, firmly press it into place and ensure full contact over the entire surface.
- Apply adhesive mounts only to clean, dry surfaces. Wax, oil, dirt or other debris reduce adhesion, which can result in a weak bond and risk of losing the camera should the connection fail.
- Attach adhesive mounts in room temperature conditions. Adhesives do not bond properly if applied in cold or damp environments to cold or damp surfaces.
- Check state and local regulations and laws to ensure that attaching a camera to equipment (such as hunting equipment) is permitted. Always comply with regulations that restrict the use of consumer electronics or cameras.
- During water activities, use a camera tether (sold separately) for added security to keep your camera afloat.

WARNING: The Curved Fusion Mount is not recommended for helmet mounting. To mount Fusion on a helmet, use the Curved Adhesive Mount and Mounting Buckle. These items are available in the Grab Bag, sold separately at **gopro.com**.



In some situations, such as when capturing content while charging Fusion, it might be useful to remove the side door to access the USB-C port.

WARNING: Remove the side door only when you are using the camera in a dry, dust-free environment. When the door is open or removed, the camera is not waterproof. Never operate the camera with the battery door open.

REMOVING THE SIDE DOOR

1. Hold down the Latch Release button and slide the door open.
2. Pull the door o□ of the camera.

Follow these guidelines to get the best performance from your camera:

- Always store the camera in the Fusion Case when not in use. The lenses are exposed to capture spherical content and are unprotected. Scratches to the lenses are not covered under the warranty.
- To protect the lenses from damage, do not rest Fusion on its front or back side. Be sure the lenses are not resting against any surface.

BATTERY INFORMATION

BATTERY DISPOSAL

Most rechargeable lithium-ion batteries are classified as non-hazardous waste and are safe for disposal in the normal municipal waste stream.

TROUBLESHOOTING

I CAN'T FIND MY CAMERA'S SERIAL NUMBER

The camera's serial number is listed in several places:

- In Preferences > About (the serial number automatically appears after the camera name and password)
-