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Canon Vixia HF G30
Workshop Notes

Contents

Introduction

The VIXIA HF G30 allows you to record video directly to widely available SD, SDHC and SDXC memory cards with capacities ranging from over 32GB to 2TB. With two SD memory card slots this allows for continuous "relay recording" and "dual recording." As well as a tilt-able viewfinder, it features a 3.5" OLED (organic light-emitting diode) Touch Panel Display and joystick offering fast and easy control of the menus and functions.

Features like 20x HD Video Lens and 8-Blade Circular Aperture offers professional quality video. The lens provides a 26.8 - 576mm (35mm equivalent) focal length and a manual focus ring that can easily be set to control the zoom instead. The Camcorder shoots 1920x1080 Full HD video at 60 fps in MP4 (35Mbps) and AVCHD Progressive (28Mbps) for high quality capture of moving subjects; Slow and Fast Motion recording; plus Native 24P recording.

The touch screen menus and five assignable buttons allow users to setup manual focus, aperture, exposure, and many other features. A custom key dial allows for manual adjustment of focus, exposure, mic level, and aperture.

Parts and Functions

Back View

Top View

Left Side

Right Side
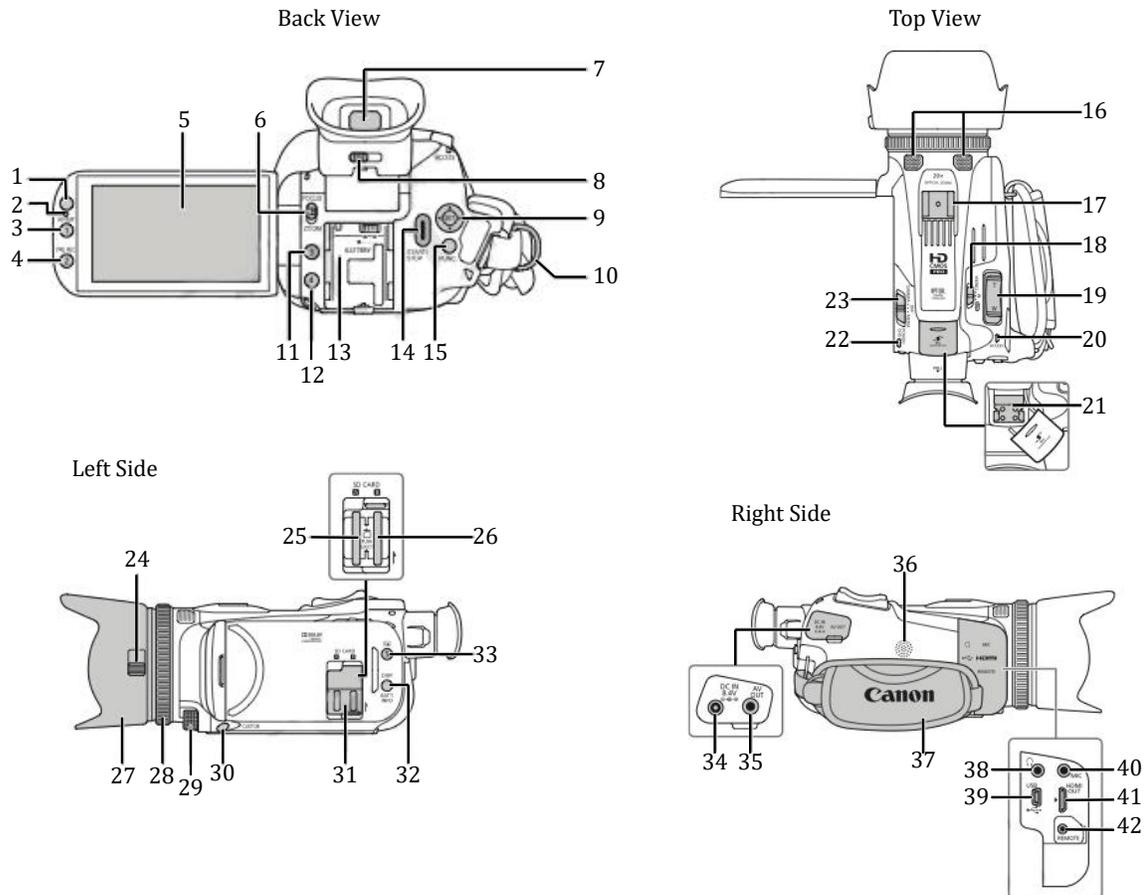
1. Remote Sensor
2. Illumination Sensor
3. AF/MF button/
    Assignable button 1
4. PRE REC button/
    Assignable button 2
5. OLED touch screen
6. FOCUS/ZOOM ring switch
7. Viewfinder
8. Dioptric adjustment lever
9. Joystick/SET button
10. Strap mount

11. Assignable button 3
12. Assignable button 4
13. Battery Attachment lever
14. START/STOP button
15. FUNC. button
16. Built-in Stereo microphone
17. Accessory shoe
18. Mode switch
19. Zoom rocker
20. Access indicator
21. Mini advanced shoe
22. Power/CHG indicator

23. Power switch
24. Lens barrier switch
25. Memory card slot A
26. Memory card slot B
27. Lens hood
28. Focus/zoom ring
29. CUSTOM dial
30. CUSTOM button
31. Double memory card slot cover
32. DISP/BATT info
33. Review recording button/ Assignable button 5
34. DC IN terminal
35. AV OUT terminal
36. Built-in Speaker
37. Grip Belt
38. Headphones terminal
39. USB terminal
40. MIC terminal
41. HDMI out terminal
42. Remote terminal

Precautions

Care & Handling

1. When signing out and returning gear from AV, **check the contents of your kit** and ensure that all items are accounted for. If you return the kit with anything missing, you can be invoiced for replacement costs.
2. When connecting ANY cables, DO NOT force connectors. **Always start at the camera and work your way to the power source.**
3. Keep camera away from **moisture, dust** and of course, **DO NOT drop**.
4. When connecting to computer for offloading, **power down camera FIRST**, then connect and power on. NEVER connect or unplug any cord while powered on.
5. **Never EVER leave camera in high heat** (car, window etc.) and **never let the sun shine into the lens** as this can damage the sensor.
6. Since this camera uses a touch screen, ensure your hands are free from dirt and oils before use.
7. Clean lens ONLY with **special lens-cleaning papers**.

Memory

1. When changing SD cards, ensure that the camera is powered OFF and insert card straight, with the label facing the front of the camcorder, all the way into one of the memory card slots until it clicks.
2. The camera will not recognize SD memory unless the card-bay door is closed.
3. Never unplug from a computer or change cards while the Access Light (red) is lit. Doing so may erase your files and damage the card.
4. If recording movies using a recording mode with video quality of 28 Mbps or 35 Mbps use a SD card with a speed class 6 or 10.
5. When taking out the camera from AV, initialize the memory before going through all the menus and settings, this will permanently delete all the

recordings it contains. **[FUNC]>[MENU]>** ⬚ **>scroll to [Initialize]**

Power

AV has specially configured a Lead-acid motorcycle battery to work with this camera.

1. Always turn off camera before connecting or disconnecting the battery pack. The green light must go out before your data is safe.
2. Be very careful when connecting the cables between camera and battery. Do NOT force the connectors; ensure they are the right way around.

Note: Since we are using custom batteries, battery life is not indicated on screen. Charge lasts approx. three hours, depending on camera settings.

Setup & Operation

Modes

The camcorder has three modes of operation. **Auto**, **M** (manual), and **Cinema**
You can find the **Mode switch** on top of the camera to the left of the Zoom rocker.

1. You can use **Auto** mode to shoot video and photos, the camcorder will automatically adjust various settings for you.
2. When set to **M** (manual) you have full access to the menus and manually adjust the exposure, focus, white balance and many more of the camcorder's settings to your preference.
3. **Cinema** mode gives your recordings a cinematic look and use cinema-look filters to create unique movies with a distinctive appearance.

Note: You can take photos in Auto and Manual mode. However, you will not be able to take photos in cinema mode or record movies at 28Mbps or 35 Mbps.

Let's set the camera to **Manual mode**.

Menu Navigation

The touch screen works much like an iPhone, and allows gestures like sliding up, down, and sideways to scroll through the menu items or by pressing the digital arrow buttons on the left side of the OLED screen. You can also use the touch screen to control zoom or to track a subject for focus.
You can navigate some of the camcorder's menus and screens using the FUNC. button and joystick instead of using the touch panel.

Many of the camcorder's functions can be adjusted from the **[FUNC]** panel and the setup menus.

To play back what you have shot turn the power switch to **Media.**

Setting up for a Shoot

Before shooting begins, set to Manual mode to access all the manual settings for focus, aperture, frame rate, etc. The following setup will give you the best control and overall results 99% of the time.

A) White Balance
White balance can be set manually or controlled by a program within the camera. To access this function touch **[FUNC] > [White Balance].** Choose a preset like cloudy, sunny, shade, snow, beach, tungsten, etc.

Try manually setting your white balance: touch **[White Balance] > [Set 1]** then point the camera at something white, like a white card or foam-core. Once you're focused on your white object, touch **[Set WB]** and wait for the flashing icon to disappear and you're done.

B) Selecting Recording Media
Movies and photos are recorded on a memory card. You can select on which memory card your movies and photos will be recorded.

[FUNC]>[MENU]> ⌐ 🖥 ⌐ > **[Recording Media]** touch the desired memory card.

The camera has two High Capacity SD card slots. Using two SD cards, it's possible to shoot dual/relay recording. Dual recording is used to record simultaneously on both memory cards so that you can use one of the movies as a backup. Alternatively, you can use relay recording so that if the memory card being recorded on becomes full, the recording will continue uninterrupted on the other memory card. With the 32 GB memory card supplied with the camera, you can shoot a single scene continuously for 12hrs. For most of our purposes, we'll just shoot in Standard recording. To set the camcorder to Standard recording touch **[FUNC]>[MENU]>** ⌐ 🖥 ⌐ >**[Dual/Relay Recording]** and select Standard Recording.

C) Movie Format/Recording Mode
The Camcorder offers two recording modes, depending on whether the movie format is AVCHD or MP4. AVCHD is an uncompressed format perfect for watching videos on a HDTV or archiving them onto a blu-ray disc. MP4 is a compressed format that is used for direct uploading to the internet.

We will set the format to AVCHD

[FUNC]>[MENU]> **>[Movie Format]>**AVCHD

The recording Mode menu (touch **[FUNC]>[MENU]>** **>[Recording Mode]**) allows you to choose the quality of the recording and affects file size, detail level, and battery life. There are six different options to choose from. We will choose 28Mbps LPCM (59.94P), this is the highest recording mode that has a two-channel linear PCM (pulse code modulation) audio recording with a sampling frequency of 48kHz while recording at a frame rate of 60 frames per second.

If you want to conserve battery life, select a lower quality mode.

D) Set the Frame Rate
When the recording mode is set to 28 Mbps LPCM (59.94P) or 28 Mbps (59.94P) for AVCHD movies or 35 Mbps (59.94P) for MP4 movies, the frame rate will automatically be set to 59.94P so you will not be able to select the frame rate. If you want to be able to set your frame rate select a lower quality of your recording. When you are in AVCHD mode and you want your project to have a filmic look, choose **[23.98P]**. This is a true 24 frame per second capture in progressive mode. **[PF29.97]** is used if you want to easily edit your recordings, for example, and post them on the web.

Touch **[FUNC]>[MENU]>** **>[Frame Rate]** then choose a frame rate. Once you've made your selection, touch **[X]** to exit menu.

E) Zebra Striping
Turn on **Zebra striping** to indicate what regions of our shot may be overexposed (100%) or getting close to overexposed (70%). Touch **[FUNC]** then **[EXPOSURE]** to access this function. Touch the **[100]** button to turn on Zebra, touch the wrench to select between 70% and 100%. I use 100% or too many objects look zebra-striped.

F) Lens Functions
The lens has several controllable parameters within the **[FUNC]> [Rec. Programs]** menu. The options are:

- **[P Programmed AE]** Automatic control of aperture and shutter.
- **[Tv Shutter-Pri. AE]** Manual shutter speed, automatic aperture.

- **[Av Aperture-Pri. AE]** Manual aperture control, automatic shutter.
- **[Manual]** Manual aperture, shutter speed and gain.
- **[*Custom*]** Depends on last user. Contains presets for cloudy, sunny, beach, snow, tungsten, fluorescent, etc. conditions.

The **[P Programmed AE]** progam will be the easiest to use and works quite well for most situations, especially for the new user. With the other two programs, you can manually control the shutter and aperture using a slider on the touch screen. Practice holding the camera and making smooth changes using the sliders.

G) Focusing
Focusing the lens can be done automatically or manually. Use the focus/zoom ring to focus manually. Touch **[FUNC]>[FOCUS]** then touch **[MF]** to toggle between manual and auto focus. Touch **[PEAK]** to display peaking lines; they can help you with manual focus by illuminating on the screen when your subject is in sharp focus. To switch to auto focus without opening the focus controls, press the **AF/MF** (see item 3 on page 2).

If you want to assign focus, exposure, AGC limit, etc. control to the custom dial. You touch **[FUNC] > [MENU] >** ⬚ **> [Custom Key/Dial]**. This camcorder also has five assignable buttons that act as a short cut key for different controls. Touch **[FUNC] > [MENU] >** ⬚ **> [Assign Button 1]**. After you assign a function to one of the buttons, press the button to activate the function.

H) Image Stabilization
The lens has a good image stabilizer that can be controlled by Touching **[FUNC]** then scrolling down to **[IMAGE STABILIZER]**. Dynamic mode is for walking and shooting while normal is for static shots.

Note: You can assign button 1-5 to control "Powered IS" this helps while zoomed in to get rock-steady image stabilization.

I) Viewfinder
The viewfinder must be pulled out to be active. It has a lever for magnification adjustment, allowing closer or more distant viewing and is also tilt-able.

*Using this instead of the LCD can really extend battery life and helps when working in bright sunlight.

J) Audio Levels

You can have the camcorder optimize the audio settings of the built-in microphone by selecting the audio scene that matches your surroundings. This will greatly enhance the sense of "being there".

- **[Standard]** To record most general situations. The camcorder records with standard settings.
- **[Music]** To vibrantly record music performances and singing indoors.
- **[Speech]** Best for recording human voices and dialog.
- [Forest and Birds] To record birds and scenes in forests. The camcorder clearly captures sound as it spreads.
- **[Noise Suppression]** To Record scenes while reducing noise from Wind, passing vehicles and similar ambient sound. Ideal for recording at the beach or in places with a lot of noise.
- **[Custom Setting]** Allows you to adjust the audio setting to your liking. Such as mic level, mic directionality, wind screen, attenuator, and frequency response.

To set input levels, you need to have selected **[Custom Setting]** under Audio Levels. Touch **[FUNC]** then touch **[Mic Level]**. Now choose Manual Mode. When using manual, touch the **[<] [>]** to increase or decrease the input level from the mic. Auto Mode uses a compressor that ends up increasing the background noise floor. I recommend using Manual Mode.

- Think of the meter as displaying how much room you have in volume before the audio distorts. The closer you get to 0dB, the louder your audio will be. Try to keep it around -18, only momentarily getting higher on the loudest parts of your scene. Use the meter. Trust it, but above all, use your ears (which are in your headphones, of course). In general, you want to keep your audio meter lit around half-way. Any less could be too thin sounding later; too much more and it will get close to distorting and become unusable. If the audio level is too high and the audio sounds distorted while recording, activate the microphone attenuator.

- You can then set your mic directionality, wind screen, etc. These are located under menu. Touch **[FUNC] > [MENU] >**

Miscellaneous Features

- **Slow & Fast Motion Recording**
  When you record MP4 movies, you can create a slow motion effect or opposite a fast motion effect.

- **Backlight Correction**
  When recording in situations in which the subject is constantly backlit, you can use backlight correction to make the entire picture brighter, especially dark areas.

Importing Footage (getting footage into a computer for editing)

Hopefully you've taken some time the day(s) before your shoot to practice shooting with the camera. Now you're ready to ingest that footage into a computer for editing.

- Power off the camera, then connect the USB cable to its port and connect the other end to the computer.

- Start up FCP and switch the camera to Media.

- Select **[Memory card A]** on the OLED screen on the camera.

- Then you can select clips and add them to the queue for importing.

HF G30 Quick Start Guide

ALWAYS: ***Check through all the menus each time, as the settings will be saved from the previous user and may not be appropriate for your shoot. Also ERASE (initialize) the camera memory first. (pg.3)**

1. Carefully connect the adapter to the camera, then the adapter to the battery.

2. Set camera to **M**. (Page2, item 18)

3. Power up the camera. The Power switch is on the top of camera.

4. Select Recording Media. Go to the **[FUNC] > [MENU] >** [🔧] **>** scroll down to **[Recording Media]** > select **[Mem. Card A].**

5. Select Movie Format. Touch **[FUNC] > [MENU] >** [🔧] **> [Movie Format]** then select **AVCHD**.

6. Set Recording Mode. Touch **[FUNC] > [MENU] >** [🔧] **> [28 Mbps LPCM]** your frame rate will automatically be set to 59.94P (60 fps). *See pg. 6 section D for more info.*

7. Set the lens functions. Touch **[FUNC] > [Rec. Programs]** > select **[P Programmed AE]** which auto-controls aperture and exposure.

8. Set auto-focus. Touch **[FUNC] > [FOCUS]** then touch **[MF]** to toggle between manual and auto focus. Orange dot indicates selection made.

9. Activate Image Stabilization. Touch **[FUNC]** then scroll down to **[IMAGE STABILIZER]**. Select Dynamic for most situations.

10. Set White Balance. Touch **[FUNC] > [White Balance] > [Set 1]**. Customize your white balance to your environment.

11. Select Audio Scene. Choose according to what and where you are shooting.

12. **If you have selected Custom Setting** in **Audio Scene** you can manual set Mic levels. Touch **[FUNC] >[Mic Level].** If using Manual, touch the arrows **[<] [>]** to increase or decrease volume. *See page 8, section F for more info.*

13. Shoot a test image then play back your test recording, observing image quality and audio levels. (pg. 5)

14. Based on your test shot, re-adjust any settings and start shooting!