Setting up and using the Canon Vixia HF R200 HD video Camera.

The entire user manual for this camera can be found online. In this presentation, only the basic settings for recording video with the highest quality settings will be presented.

A fully charged battery will provide about 1 hour of recording time. To record for longer times, attach the DC power supply as indicated in Figure 1.

The HF R200 has two basic shooting modes AUTO and flexible recording. We will always use the camera in the flexible mode so that all the menu features can be used. See Figure 2 to set the camera to flexible mode, make sure you can identify the icon for this mode.
The HF R200 records video to 2 SDHC memory chips. The TPSS cameras will have 2 32 GB chips available for your use. These 32 GB chips have speed ratings of either 6 or 10. If you want to provide your own memory chips they should be at speed classes 4, 6 & 10.

You need to make sure that the camera is recording to the correct memory chip. For long recordings, the camera will automatically record to the secondary chip once the primary chip is filled. Setting the primary recording chip and relay setting is provided in Figure 3.

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**Figure 3, setting the video recording memory and relay option.**

**Inserting and Removing a Memory Card**

Make sure to initialize (図 41) all memory cards before using them with this camcorder.

1. Turn off the camcorder.
   Make sure the ON/OFF (CHG) indicator is off.

2. Open the double memory card slot cover.

3. Insert the memory card into one of the memory card slots.
   - You can also use two memory cards, one in each memory card slot.
   - Insert the memory card straight, with the label facing up, all the way into the memory card slot until it clicks.
   - To use the wireless communication features of an Eye-Fi card, insert it into memory card slot B. Be sure you understand the information provided in Eye-Fi Cards (図 37) before using an Eye-Fi card.

4. Close the double memory card slot cover.
   Do not force the cover closed if the memory card is not correctly inserted.

**To remove the memory card**

Push the memory card once to release it. When the memory card springs out, pull it all the way out.

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**HFR200**

- **[FUNC.] ➔ [MENU] ➔ [ ] ➔ [ ]**
- **[Rec Media for Movies] or [Rec Media for Photos] ➔ [A] (memory card A) or [B] (memory card B)**

* When selecting the memory, you can check the approximate available recording time, based on currently used settings.
Once the memory cards have been inserted into the camera they should be initialized (same as formatting) to clear off old files and restore the folder structure. See Figure 3a for instructions to initialize the memory cards.

![Figure 3a, initialize memory cards.](image)

1. Power the camcorder using the compact power adapter.
   Do not disconnect the power source or turn off the camcorder until the initialization is completed.
2. Initialize the memory.

   **HFR200**

   ![Operating modes: AUTO, Video, Photo](image)


To obtain true colors while recording video you should always set the White Balance prior to recording, especially when recording indoors with supplemental lighting. See figure 4 to manually set the White Balance.

![Figure 4, manually set the white balance.](image)

**White Balance**

The white balance function helps you to accurately reproduce colors under different lighting conditions so that white objects will always look truly white in your recordings.

Operating modes: **AUTO, Video, Photo**

- **POINTS TO CHECK**
  - Select a recording program other than the Special Scene recording programs.

  ![Operating modes: AUTO, Video, Photo](image)

  - [FUNC.] - [WB White Balance] - Desired option* - [X]

* When you select [Custom WB], Set the custom white balance with the following procedure before touching [X].

**To set the custom white balance**

Point the camcorder at a white object, so it fills the whole screen, and touch [Set WB].

When the adjustment is completed, * stops flashing and disappears. The camcorder will retain the custom white balance even if you turn it off.
An important aspect of recording seminar speakers is obtaining good audio. For all of our seminar recordings we will be using an external wireless microphone. You will need to have the external microphone jack plugged in before you can select it as your audio input source. When you reach the MIC Terminal Input menu select MIC = external microphone for your input source, see figure 5 below.

Figure 5, connecting the external microphone

Connect the external microphone to the MIC terminal.
Use commercially available condenser microphones with their own power supply. You can connect almost any stereo microphone with a Ø 3.5 mm plug but audio recording levels may vary.

Selecting the Type of Audio Input
Perform the following after connecting the external microphone or audio device to the MIC terminal.

[FUNC.] [MENU] [MIC Terminal Input] Desired option [X]

Options
(Default value)

[LINE External Audio] For audio input from an external audio source.
[MIC Microphone] For a microphone connected to the camcorder.
Once the external microphone is connected and turned on, you can adjust the recording level to either a manual or automatic setting. For your seminar recordings set the audio level to A, automatic.

Figure 6, audio recording level.

<table>
<thead>
<tr>
<th>Audio Recording Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>You can adjust the audio recording level of the built-in or an external microphone. You can display the audio level indicator while recording.</td>
</tr>
<tr>
<td>Operating modes: AUTO</td>
</tr>
</tbody>
</table>

1. Open the manual audio recording level adjustment screen.

- The audio level indicator and current audio recording level will appear on the screen.
- Touch [A Automatic] to return the camcorder to automatic audio recording levels.

Manual audio level adjustment

Audio level indicator

Current audio level

Audio level adjustment bar

It is important to make sure you can monitor the audio coming into the camera. You will need to set the audio output to headphones and then adjust the level of the headphone output. See Figure 7 to monitor camera audio and set output levels.

Figure 7, connecting headphones and setting the output level.

<table>
<thead>
<tr>
<th>Using Headphones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use headphones for playback or to check the audio level while recording. The headphones are connected to the AV OUT/ terminal, which is used for both the headphones and the audio/video output. Before connecting the headphones, follow the procedure below to change the function of the terminal from AV output to (headphones) output.</td>
</tr>
<tr>
<td>Operating modes: AUTO</td>
</tr>
</tbody>
</table>

* Headphones can be used also in mode but the function of the terminal cannot be changed. Change the setting in advance in mode.

[FUNC] [MENU] [AV/Headphones] [Headphones] 
To close the menu: [X]
To continue adjusting the volume:
[ ] [Volume] Drag your finger left and right along the volume bar to adjust the volume [X]

* Only when performing the procedure in mode.

- appears.
Setting up and using the Audio-technica wireless microphone.

The wireless microphone used for class is a professional unit and is very expensive. Please be careful when you use this sensitive equipment. The components of the wireless microphone system are provided below in figure 8.

![Figure 8, components of the wireless microphone system](image-url)
It is important to understand the ATW-R1810 control panel, see figure 9 for front and back panels.

Figure 9, receiver front control panel.

**Power/Peak LED** Indicates when the unit is on. Also indicates receiver overload by turning off; too much signal will cause blinking LED (off during peaks). To correct overload, adjust audio gain on transmitter. (See Audio Input Level (Gain) Adjustments on your transmitter, page 12.)

**Audio Input Level (Gain) Adjustments** Correct adjustment of transmitter audio input, receiver audio output, and mixer/amplifier input on your Transmitter and output levels is important for best performance.

A 5-position audio input gain setting, selected through the function menu, allows you to match the audio input level to the transmitter for best modulation with minimum distortion. The choices are +18, +12 dB, +6 dB, 0 dB and -6 dB. The default value is +6 dB. Select the highest setting that does not result in over-modulation with the highest audio/instrument input levels (an AF indication on the receiver no higher than “0”).
The receiver and transmitter will be properly set up for your use prior to you signing out these devices. The operating instructions are provided here for your reference only. See figure 10 for receiver operation and figure 11 for the transmitter operation.

**Checklist for HF R200 Canon Camera and Wireless Mic**

1. Attach power supply to camera to charge battery or for long format recording.
2. Set Camera mode to “flexible” mode, screen icon = 
3. Set video record location to SDHC class 4+ memory chips, A & B slots for long recordings.
4. Initialize memory chips = formatting to erase files and reset folder structure
5. Set White balance for true color recording, custom white balance remains after shut down.
6. Attach microphone, set camera audio in to MIC and levels to A = auto.
7. Attach headphones to monitor camera audio input, make sure external mic works.
8. Assemble wireless receiver and microphone transmitter and attach receiver to camera.
9. Recharge batteries, plugin 8-bay charger prior to inserting batteries, F = full in LCD.
The transmitter and receiver must be paired to the same frequency; they should be properly set when you borrow the equipment. If you experience radio interference during your recording session you may have to find a frequency that works better for your specific location see figure 11 for more details.

NOTE: Set your transmitter and receiver to identical frequencies.

1. Turn transmitter on.
2. Press the Set button once and the small word “MENU” will appear above the frequency.
3. Press the Set button again and the small flashing word “EDIT” will appear to the right of “MENU.”
4. Use the Up/Down arrows to change the transmitter frequency. Press either arrow for 25 kHz steps, or hold down either arrow for rapid cycling through the range. Frequencies “wrap around” when the top or bottom of the band is reached. Select the exact frequency displayed on the receiver.
5. To activate this frequency selection, press and hold the Set button until the word “STORED” appears in the transmitter’s window. (If you do not wish to complete this selection, just press the Set button once: the word “ESCAPE” will appear briefly in the window and the transmitter will return to the Menu mode.)
6. When finished entering a frequency, press the Up arrow once to move to “QUIT.” Then press the Set button once to exit the menu. The word “MENU” in the transmitter window will go off, indicating the return to normal operation.

The batteries used to power both the transmitter and the receiver are Pearstone rechargeable batteries. The charger must be plugged in prior to inserting the batteries. Once batteries are inserted into the charging bays, the LCD will flash the charge level, F at the top of the charge level means full.