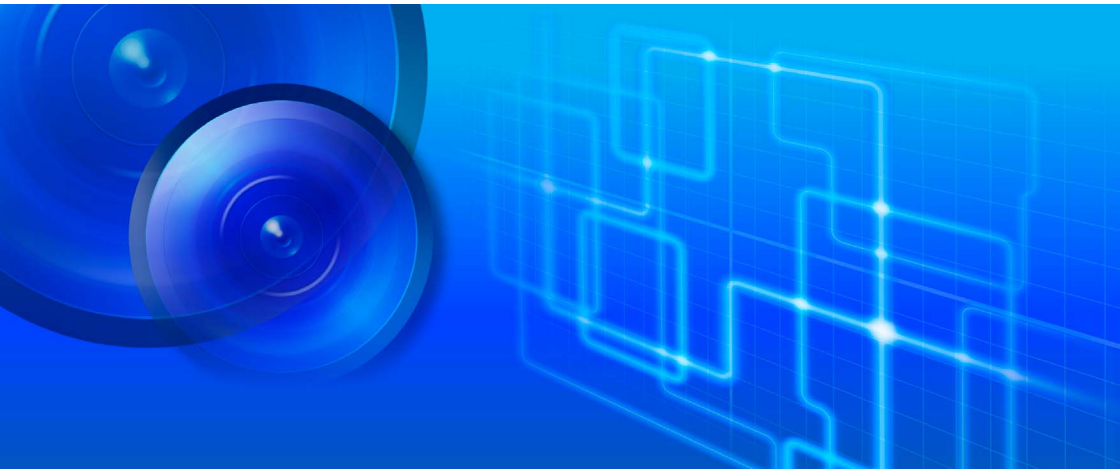
Network Camera

Button Operation Guide



ME20F-SHN

This User Manual should be read before using the network camera.

ENGLISH

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About This Manual

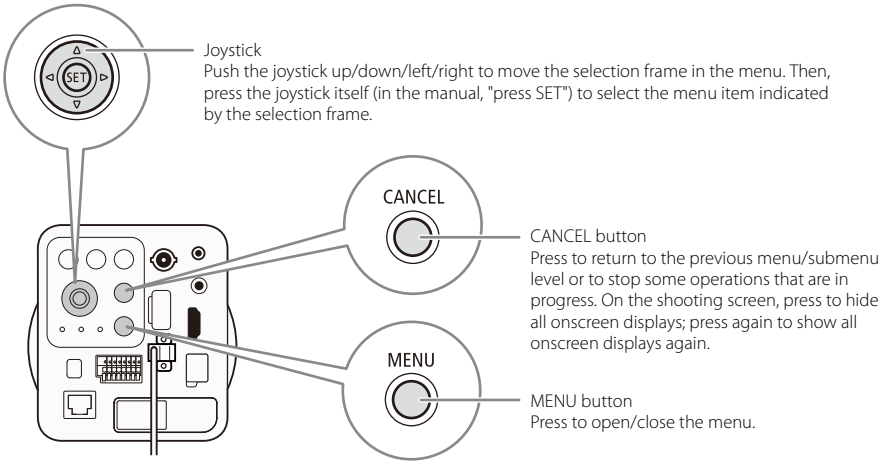
This *Button Operation Guide* gives instructions on the operation of buttons and a joystick provided on the rear side of the camera. Before reading this manual, please refer to *Setup Guide* to complete the setup of the camera.

Conventions Used in this Manual

- IMPORTANT: Precautions related to the camera's operation.
- NOTES: Additional topics that complement the basic operating procedures.
- : Reference page number or guide.
- The following terms are used in this manual.
  "Screen" refers to the screen of an external monitor connected to the camera.
  "Shooting screen" refers to the screen in which the shooting image and onscreen displays appear.
- Some screenshots have been altered to make them easier to read.
- Illustrations in the manual show the camera with a Canon EF 70-200mm f/2.8L IS II USM lens or Canon CN7x17 KAS S/E1 lens attached.

Using the Menu

Many of the camera's functions can be adjusted from the menu that opens after pressing the MENU button. For details about the available menu options and settings, refer to *Menu Options* (📖 35).



Joystick
Push the joystick up/down/left/right to move the selection frame in the menu. Then, press the joystick itself (in the manual, "press SET") to select the menu item indicated by the selection frame.

CANCEL button
Press to return to the previous menu/submenu level or to stop some operations that are in progress. On the shooting screen, press to hide all onscreen displays; press again to show all onscreen displays again.

MENU button
Press to open/close the menu.

Selecting an Option from the Menu

The following is a step-by-step explanation of how to select an option from the menu. In the procedures throughout the rest of this manual, opening and closing the menu is assumed and not included in the procedure.

1 Press the MENU button.
- The menu opens with the orange selection frame indicating the menu item that was selected the previous time the menu was closed (unless the camera was turned off).

2 Push the joystick up/down to select the desired submenu.

3 Push the joystick right or press SET.
- The selection frame will appear on a menu item in the submenu.
- Press the CANCEL button or push the joystick left to return to the previous submenu. For some submenus, you can alternatively select [<].

4 Push the joystick up/down to select the desired menu item.
- If a submenu contains many items, push the joystick up/down to scroll up/down and see other menu items.
- A [>] next to a menu item indicates another submenu. Repeat steps 3 and 4.

5 Push the joystick right or press SET.
- The selection frame will appear on a setting option.
- Press the CANCEL button to return to the previous submenu.

6 Push the joystick up/down to select the desired setting option and then press SET.
- Depending on the menu item, additional selections may be necessary.

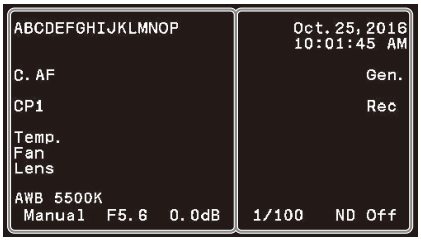
7 Press the MENU button to close the menu.
- Alternatively, if the top-level of the menu (with [Camera Setup], [Custom Picture], etc.) is displayed, you can select [CLOSE].

NOTES

- Unavailable items may appear grayed out.
- Pressing the MENU button at any time closes the menu (except for the [Other Functions] ❯ [Camera Name] setting screen).
- When an optional RC-V100 Remote Controller is connected to the camera, you can use the remote controller's up/down/left/right/SET buttons in the same way as the camera's joystick. Pressing the SET button is equivalent to pressing the joystick on the camera. Similarly, pressing the MENU or CANCEL button is equivalent to pressing the MENU or CANCEL button on the camera, respectively.

Showing Onscreen Displays

Refer to this section for an explanation of the various screen displays that appear on the shooting screen when an external monitor is connected to the camera's 3G/HD-SDI terminal or HDMI OUT terminal. You can use the custom display function (📖 34) to turn off most individual onscreen displays if they are not required. The "Custom Display" column indicates the setting in [Other Functions] ❯ [Custom Display] used to turn the display on/off. If "–" appears in that column for a display, it cannot be turned off.
The screen display layout will differ depending on the camera mode.



(An example of onscreen display in manual mode)

Left side and center of the screen

Display	Description	Custom Display
ABCDEFGHIJKLMNOP	Camera name (📖 40).	[Camera Name]
AF	Autofocus operation (one-shot AF, 📖 22).	–
CP1 to CP4, EOS, WDR, C.Log, Blue, Green, Crisp	Currently selected custom picture file (📖 29).	[Custom Picture]
Temp. (in red)	Temperature warning (📖 42).	[Temperature Warning]
Fan (in red)	Fan warning (📖 42).	–
Lens (in red)	Lens error warning (📖 42).	[Lens Error]
AWB, WB-A, WB-B, Dylt, Tung, Kelv 00000K, ±0	White balance (📖 19).	[White Balance]
Auto, Tv, Av, AGC, Manual	Camera mode (📖 11).	[Camera Mode]
F0.0, Clsd	Aperture value (📖 13). • Grayed out when the camera mode is set to [Tv]; not displayed when it is set to [Auto]. • [Clsd] (fully closed iris) appears only when a compatible EF Cinema lens (📖 *Setup Guide*) is attached to the camera.	[Iris]
00.0dB	Gain value (📖 16). • Grayed out when the camera mode is set to [Tv], [Av] or [AGC]; not displayed when it is set to [Auto].	[Gain]

Right side of the screen

Display	Description	Custom Display
Date/time	Date and time.	[Date/Time]
Rec	Recording command being output to an external recorder (📖 *Setup Guide*).	–
1/0000	Shutter speed (📖 17). • Grayed out when the camera mode is set to [Av]; not displayed when it is set to [Auto].	[Shutter Speed]
ND Off, ND 1/8, ND 1/64	ND filter setting (📖 18). • Grayed out when the camera mode is set to a mode other than [Manual] and the ND mode is set to [Automatic]. Not displayed when the camera mode is set to [Auto] and the ND mode is set to [Automatic].	[ND Filter/Infrared]
IR	Infrared mode (📖 26).	[ND Filter/Infrared]

ⓘ NOTES

- Press the CANCEL button to stop showing the camera's onscreen displays on the shooting screen; press the button again to show all onscreen displays again.
- For external monitors that support only 480P or 576P input, connect the camera using the HDMI OUT teminal.
- When the output signal is 480P or 576P, onscreen displays will not be superimposed on the video signal.

Video Configuration: System Frequency, Frame Rate and Resolution

You can set the video configuration by selecting the resolution (frame size) and frame rate. Available frame rate options will depend on the selected system frequency and resolution. See the table following the procedures for a summary.

NOTES

- Only the following combination is available for video output via a network.
  System frequency: 59.94 Hz
  Frame rate: 29.97P
  Resolution: 1920 x 1080

Available video configuration settings

Resolution	System frequency / Frame rate							
	59.94 Hz				50.00 Hz			
	59.94P	59.94i	29.97P	23.98P	50.00P	50.00i	25.00P	25.00PsF
1920x1080	●	●	●	●	●	●	●	●
1280x720	●	–	●	●	●	–	●	–

Selecting the System Frequency

Perform the following procedure to change the system frequency to either 59.94 Hz or 50.00 Hz.

1 Open the [System Frequency] submenu.
[Other Functions] ❯ [System Frequency]

2 Select the desired option and then press SET.

- If you changed the system frequency from the current setting, the camera will restart in the selected system frequency.
- If the image from the camera stopped being displayed on the external monitor, refer to the *Troubleshooting* section (📖 42).

[Other Functions]
[System Frequency]
[59.94Hz]

Selecting the Frame Rate

1 Open the [Frame Rate] submenu.
[Other Functions] ❯ [Frame Rate]

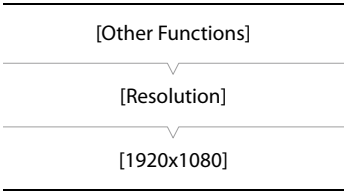
2 Select the desired option and then press SET.

[Other Functions]
[Frame Rate]
[29.97P]

Selecting the Resolution

1 Open the [Resolution] submenu.
[Other Functions] ❯ [Resolution]

2 Select the desired option and then press SET.



NOTES

- Depending on the selected resolution, the frame rate setting may be changed automatically. Set the frame rate again.

Setting the Camera Mode

The camera offers the following camera modes. With camera modes other than [Manual], the ND filter (📖 18) and white balance (📖 19) are adjusted automatically by default. You can change the menu settings to allow you to control them manually.

[Auto]: The camera controls the exposure by automatically adjusting the aperture, gain and shutter speed. This is the default mode so the camera mode will be set to [Auto] the first time you use the camera or after you reset all the camera's settings.

[Tv] (shutter priority AE): Set the shutter speed manually to match low light conditions or fast moving subjects. The camera will then automatically set the appropriate aperture and gain to obtain the best exposure.

[Av] (aperture priority AE): Set the aperture manually to control the depth of field. The camera will then automatically set the appropriate gain and shutter speed to obtain the best exposure.

[AGC] (automatic gain control): You can set the shutter speed and aperture manually. The camera will then automatically adjust the gain (the sensor's sensitivity) depending on the brightness of the subject.

[Manual]: You can adjust the aperture, gain, shutter speed, ND filter and white balance manually.

[Auto] mode

[Manual] mode

1 While the shooting screen is displayed, press SET.
   - If the camera mode is not selected (highlighted in orange on the screen), push the joystick left/right to highlight the current camera mode.
2 Push the joystick up/down to select the desired camera mode and then press SET.

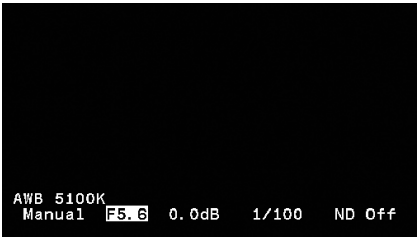
NOTES
- You can use the [Camera Setup] ◑ [AE Response] setting to change how quickly the aperture changes during automatic exposure (camera modes other than [Manual], or while using push auto iris with the camera mode set to [Manual]).
- You can use the [Camera Setup] ◑ [Auto Slow Shutter] setting to select whether the camera will use shutter speeds slower than the current frame rate when the camera mode is set to [Auto] or [Av].
- When the camera mode is set to a mode other than [Manual] and the brightness changes, exposure adjustment may not be smooth.

Adjusting Main Camera Functions with the Joystick

Using only the joystick, you can adjust the following main camera functions. Note that some of the functions cannot be adjusted manually when the camera mode is set to [Auto].

- Camera mode (11)
- Aperture (13)
- Gain (16)
- Shutter speed (17)
- ND filter (18)
- White balance (19)

This section will explain the basics of how to adjust the functions. For specific details, refer to each function's section.



1 Set the camera mode to a mode other than [Auto] (11).
2 Close the menu and then press SET.
   - One of the adjustable settings will be highlighted in orange on the screen.
   - The display will return to normal if no operation is performed for about 6 seconds.
3 Push the joystick left/right to select the function you want to adjust.
4 Push the joystick up/down to select the desired option and then press SET.
   - The desired option will be set and the display will return to normal.

NOTES

- The camera will automatically end the direct setting mode in the following cases.
  - If no operation was performed for more than 6 seconds.
  - If the MENU button or CANCEL button was pressed.

Adjusting the Aperture

The camera offers the following two ways to adjust the aperture but available aperture values will vary depending on the lens attached.

Manual aperture: Adjust the aperture value manually using the joystick. Available when the camera mode is set to [Av], [AGC] or [Manual].

Push Auto Iris: Momentary automatic aperture. Press a button to temporarily adjust the aperture automatically. Available only when the camera mode is set to [Manual].

The camera also allows you to compensate for the exposure obtained during automatic exposure as well as select the light metering mode.

Required settings on EF Cinema lenses

To adjust the aperture from the camera, you will need to enable automatic adjustment using the controls on the lens. Required settings vary depending on the lens. Refer to the following table and the instruction manual of the lens used.

Lens	Part used on the lens	Setting for automatic adjustment
CN7x17 KAS S/E1 CN20x50 IAS H/E1	Iris operation change-over switch	A
CN-E18-80mm T4.4 L IS KAS S	Iris auto/manual change-over switch	AUTO

Manual Aperture

1 Set the camera mode to [Av], [AGC] or [Manual] (📖 11).
   - When using a compatible EF Cinema lens, enable automatic adjustment on the lens.

2 Open the [Iris Increment] submenu.
   [Camera Setup] ❯ [Iris Increment]

3 Select [1/2 stop], [1/3 stop] or [Fine] (fine adjustment) and then press SET.

[Camera Setup]
▽
[Iris Increment]
▽
[1/2 stop]

4 Close the menu and then press SET.
   - One of the adjustable settings will be highlighted in orange on the screen.

5 Push the joystick left/right to select the current aperture value.

6 Push the joystick up/down to select the desired value and then press SET.
   - When [Iris Increment] is set to [Fine], the actual increments will be smaller than 1/3 stop but the onscreen display will show the closest 1/3-stop aperture value.

ⓘ NOTES

- **When using a compatible EF Cinema lens** (📖 *Setup Guide*)
  - As you close down the aperture, the aperture value will be displayed in gray (when the iris is almost fully closed) and then will change to [Clsd] (in white). Still, the iris may not be fully closed even when the onscreen display appears as [Clsd].
  - When you change the aperture value from a position of fully open or fully closed iris, multiple adjustment operations may be required to change the iris.

- When using an EF lens that can correct the aperture value according to the position of the zoom*, you can use the [Camera Setup] ❯ [Zoom-Iris Correct.] setting to activate this correction.
- When an optional RC-V100 Remote Controller is connected to the camera, you can adjust the aperture with the remote controller's IRIS dial. At default settings, turn the dial right to open up the aperture and left to close the aperture. Refer to the instruction manual of the RC-V100 for details on changing that setting.
- The aperture values set in the camera and displayed on the screen are approximate. Use them only as a reference.

* Some EF lenses and EF Cinema lenses are not compatible with this function.

Momentary Automatic Aperture - Push Auto Iris

You can have the camera temporarily take control and automatically adjust the aperture for an optimal exposure while you keep the button held down.

1 Set the camera mode to [Manual] (📖 11).

2 Set an assignable button to [Push Auto Iris].

[Other Functions] ❯ [Assignable Buttons] ❯ Desired button ([1] to [4 (Remote)]) ❯ [Push Auto Iris]

3 Press and hold the assignable button.

- The camera will automatically adjust the aperture to obtain optimal exposure.
- When you release the button, automatic aperture mode will end and the aperture value that was last set with push auto iris will be maintained in manual aperture.

ⓘ NOTES

- You can use the [Camera Setup] ❯ [AE Response] setting to change how quickly the aperture changes during automatic exposure (camera modes other than [Manual], or while using push auto iris with the camera mode set to [Manual]).
- When an optional RC-V100 Remote Controller is connected to the camera, you cannot use push auto iris while using the remote controller's FOCUS dial.

Exposure Compensation - AE Shift

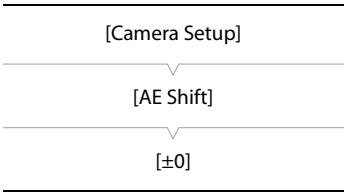
You can compensate the exposure obtained during automatic exposure (camera modes other than [Manual], or while using push auto iris with the camera mode set to [Manual]), in order to darken or lighten the image.

1 Open the [AE Shift] submenu.

[Camera Setup] ❯ [AE Shift]

2 Select an AE shift level and then press SET.

- When the camera mode is set to a mode other than [Manual], you can check the effects of the selected AE shift level on the screen.
- You can select a level from -2.0 EV to +2.0 EV (in 0.25-EV increments).



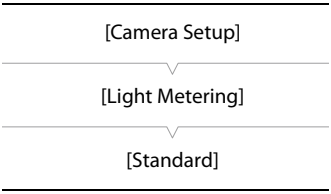
NOTES

- If you set an assignable button to [AE Shift +] or [AE Shift –] (📖 27), you can press the button to adjust the AE shift level.
- You cannot use push auto iris and adjust the AE shift level at the same time.

Light Metering Mode

Select the light metering mode to match the shooting conditions. Using the appropriate setting will produce a suitable exposure level during automatic exposure (camera modes other than [Manual], or while using push auto iris with the camera mode set to [Manual]).

1 Open the [Light Metering] submenu.
[Camera Setup] ❯ [Light Metering]
2 Select the desired option and then press SET.



Options

[Backlight]: Suitable when shooting backlit scenes.
[Standard]: Averages the light metered from the entire screen, giving more weight to the subject in the center.
[Spotlight]: Use this option when shooting a scene in which only a certain part of the picture is lit, for example, when the subject is lit by a spotlight.

NOTES

- When the camera mode is set to [Manual], changing the light metering mode will not affect the exposure. Adjust the exposure manually to a suitable level.

Gain

When the camera mode is set to [Manual], you can manually adjust the gain to change the brightness of the image. In other camera modes the camera will automatically adjust the gain. In such case, you can set an automatic gain control (AGC) limit to prevent the camera from using gain values above the preset limit.

Manual Adjustment

1 Set the camera mode to [Manual] (11).

2 Press SET.
- One of the adjustable settings will be highlighted in orange on the screen.

3 Push the joystick left/right to select the current gain value.

4 Push the joystick up/down to select the desired value and then press SET.
- You can select a value in the following range while checking the effect on the image.
  0.0 to 75.0 dB (in 3.0-dB increments)

NOTES

- When high gain levels are set, the picture may flicker slightly.
- When high gain levels are set, bright red, green or blue dots may appear on the screen. In such case, use a faster shutter speed (17) or select a lower gain value.
- When an optional RC-V100 Remote Controller is connected to the camera, you can adjust the gain value with the remote controller's ISO/GAIN ▲/▼ buttons.

Auto Gain Control (AGC) Limit

1 Set the camera mode to a mode other than [Manual] (11).

2 Open the [AGC Limit] submenu.
[Camera Setup] ❯ [AGC Limit]

3 Select the desired level and then press SET.
- You can select [Off (75dB)] for no limit (maximum gain as given in the parentheses) or a maximum gain level from 36 dB to 75 dB in 3-dB increments.

[Camera Setup]
▽
[AGC Limit]
▽
[Off (75dB)]

Shutter Speed

Set the shutter speed based on shooting conditions. For example, you may want to set slower shutter speeds for darker environments.

1 Set the camera mode to [Manual], [Tv] or [AGC] (📖 11).

2 Press SET.
- One of the adjustable settings will be highlighted in orange on the screen.

3 Push the joystick left/right to select the current shutter speed value.

4 Push the joystick up/down to select the desired value and then press SET.

Available Shutter Speeds

The available shutter speeds vary depending on the system frequency and frame rate used.

System frequency / Frame rate		
59.94 Hz		50.00 Hz
59.94P / 59.94i / 29.97P	23.98P	50.00P / 50.00i / 25.00P / 25.00PsF
1/4, 1/5, 1/6, 1/7, 1/8, 1/10, 1/12, 1/15, 1/17, 1/20, 1/24, 1/30, 1/34, 1/40, 1/48, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180, 1/210, 1/250, 1/300, 1/360, 1/420, 1/500, 1/600, 1/720, 1/840, 1/1000, 1/1200, 1/1400, 1/1700, 1/2000	1/3, 1/4, 1/5, 1/6, 1/7, 1/8, 1/10, 1/12, 1/15, 1/17, 1/20, 1/24, 1/30, 1/34, 1/40, 1/48, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180, 1/210, 1/250, 1/300, 1/360, 1/420, 1/500, 1/600, 1/720, 1/840, 1/1000, 1/1200, 1/1400, 1/1700, 1/2000	1/3, 1/4, 1/5, 1/6, 1/7, 1/8, 1/10, 1/12, 1/14, 1/16, 1/20, 1/25, 1/29, 1/33, 1/40, 1/50, 1/60, 1/75, 1/90, 1/100, 1/120, 1/150, 1/180, 1/210, 1/250, 1/300, 1/350, 1/400, 1/500, 1/600, 1/700, 1/800, 1/1000, 1/1200, 1/1400, 1/1600, 1/2000

NOTES

- When an optional RC-V100 Remote Controller is connected to the camera, you can change the shutter speed with the remote controller's SHUTTER ▲/▼ buttons.
- **About reducing flicker due to shooting under artificial light sources:**
  - When shooting under artificial light sources such as fluorescent, mercury or halogen lamps, the image may flicker depending on the shutter speed. In such case, you can use the [Camera Setup] ❯ [Flicker Reduction] setting to have the camera automatically detect and correct* flicker.
  - Alternatively, you may be able to avoid flicker by setting the shutter speed to a value matching the frequency of the local electrical system: 1/50** or 1/100 for 50 Hz systems, 1/60 or 1/120 for 60 Hz systems.

    * Depending on the shooting conditions, the camera may not be able to reduce the flicker.

    ** May not be available depending on the frame rate.

ND Filter

Using the ND filter allows you to open up the aperture to obtain a shallower depth of field even when shooting in bright surroundings. You can also use the ND filter to avoid the soft focus caused by diffraction when using small apertures.

1 If the camera mode is set to a mode other than [Manual], change the ND mode setting to adjust the ND filter manually.
[Camera Setup] ❯ [ND Mode] ❯ [Manual]

2 Close the menu and then press SET.
- One of the adjustable settings will be highlighted in orange on the screen.

3 Push the joystick left/right to select the current ND filter setting.

4 Push the joystick up/down to select the desired setting and then press SET.

Options

[ND Off]:	Select this option to not use the ND filter.
[ND 1/8]:	Reduces the amount of light by 3 stops (1/8 the amount of light).
[ND 1/64]:	Reduces the amount of light by 6 stops (1/64 the amount of light).

NOTES

- Depending on the scene, the color may change when turning the ND filter on/off. Setting a custom white balance (📖 20) may be effective in such case.
- When an optional RC-V100 Remote Controller is connected to the camera, you can select the ND filter setting with the remote controller's ND button. On the remote controller, the ND filter indicators illuminate depending on the selected setting (1 for [ND 1/8], 2 for [ND 1/64], 3 and 4 are not used).

White Balance

The camera uses an electronic white balance process to calibrate the picture and produce accurate colors under different lighting conditions. There are 4 methods of setting the white balance.

Auto white balance (AWB): The camera automatically adjusts the white balance to the optimal level.

Custom white balance: You can use a gray card or white object with no pattern to establish the white balance and save it to one of two custom white balance settings, [WB-A] or [WB-B]. When shooting under fluorescent lights, we recommend setting the custom white balance.

Preset white balance: Set the white balance to [Tung] (tungsten lighting) or [Dylt] (daylight). Preset white balance settings can be further fine-tuned within a range of -9 to +9.

Select color temperature: Set the while balance to [Kelv] (Kelvin) to select a color temperature between 2,000 K and 15,000 K (in 100 K increments).

NOTES

- The [Custom Picture] ❯ [Fine Tuning] ❯ [White Balance] settings in the custom picture file (📖 29) take precedence over the white balance set with these procedures.
- You can use the [Camera Setup] ❯ [Shockless WB] setting to make the transition look smoother when you change the white balance settings.
- When an optional RC-V100 Remote Controller is connected to the camera, you can adjust the white balance with the remote controller's AWB button, A button, B button, PRESET button and button.
- The color temperatures displayed on the screen are approximate. Use them only as a reference.

Auto White Balance (AWB)

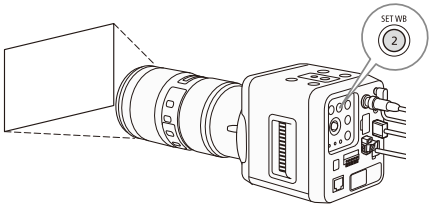
The camera constantly adjusts the white balance automatically to achieve an optimal level. The camera will adjust the white balance if the light source changes.

1 Press SET.
   - One of the adjustable settings will be highlighted in orange on the screen.
2 Push the joystick left/right to select the current white balance setting.
3 Push the joystick up/down to select [AWB] and then press SET.
   - The white balance will be adjusted automatically.

NOTES

- Custom white balance may provide better results in the following cases:
  - Changing lighting conditions
  - Close-ups
  - Subjects in a single color (sky, sea or forest)
  - Under mercury lamps and certain types of fluorescent and LED lights

Custom White Balance



1 Press SET.
   - One of the adjustable settings will be highlighted in orange on the screen.
2 Push the joystick left/right to select the current white balance setting.
3 Push the joystick up/down to select [WB-A] or [WB-B] and then press SET.
   - If a custom white balance has been stored previously, pressing the joystick will apply the stored custom white balance. You do not need to perform the rest of the procedure.
   - If a custom white balance has not yet been stored, the custom white balance display [WB-A] or [WB-B] and default value will flash slowly. Continue the procedure to establish the custom white balance.
4 Point the camera at a gray card or white object so that it fills the whole screen.
   - Use the same lighting conditions you plan to use when shooting.
5 Press the SET WB button.
   - [WB-A] or [WB-B] will flash quickly.
   - Make sure the gray card or white object fills the screen until the procedure is completed.
   - Once [WB-A] or [WB-B] stops flashing, the procedure is completed. The setting is retained even if you turn off the camera.

NOTES

- Readjust the custom white balance if the light source or ND filter setting changes.
- Very rarely and depending on the light source, [WB-A] or [WB-B] may keep flashing (it will change to a slow flashing). The result will still be better than with the auto white balance.

Color Temperature/Preset White Balance

1 Press SET.
   - One of the adjustable settings will be highlighted in orange on the screen.
2 Push the joystick left/right to select the current white balance setting.
3 Push the joystick up/down to select [Kelv] (color temperature setting), or [Dylt] or [Tung] (preset white balance).
   - To change the color temperature or to further adjust the preset white balance, continue to step 4. Otherwise, press SET (the rest of the procedure is not necessary).
4 Push the joystick right.
   - Alternatively, you can press the SET WB button.
   - **Color temperature:** On the screen, the default color temperature value (5,500 K) next to the white balance setting will be highlighted in orange.
     Preset white balance: On the screen, the adjustment value ±0 next to the white balance setting will be highlighted in orange.
5 Push the joystick up/down to change the color temperature or adjustment value and then press SET.

Adjusting the Focus

The camera offers the following ways to focus. See also the general notes at the end of this section (24).

Manual focus: Turn the focus ring on the lens to adjust the focus.

One-shot AF*: With the lens's focus mode switch set to AF, you will be able to focus manually but still have the option to press an assignable button set to [One-Shot AF] to let the camera focus automatically once.

* Not available when a manual focus lens or a CN20x50 IAS H/E1 lens is attached to the camera.

Focusing methods and required settings

Focusing method		Focus mode switch on an EF lens**
Manual focus	Focus ring	MF
	FOCUS dial on an optional RC-V100 Remote Controller connected to the camera	AF
One-shot AF	Assignable button set to [One-Shot AF]	AF

**For the necessary settings on compatible EF Cinema lenses, see the table below.

Required settings on EF Cinema lenses

To adjust the focus from the camera, you will need to change the focus mode using the controls on the lens. Required settings vary depending on the lens. Refer to the following table and the instruction manual of the lens used.

Lens	Part used on the lens	Setting for automatic adjustment	Setting for manual adjustment
CN7x17 KAS S/E1 CN20x50 IAS H/E1	Focus operation change-over knob	SERVO	MANU.
CN-E18-80mm T4.4 L IS KAS S	Autofocus/Manual Focus change-over switch	AF	MF

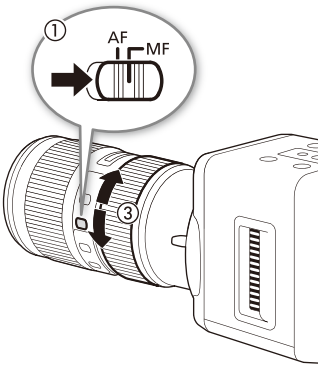
Manual Focus

Focus manually using the focus ring on the lens.

1 Set the focus mode switch on the lens to MF.

- On a compatible EF Cinema lens, enable manual adjustment on the lens (21, *Setup Guide*).

2 Turn the lens's focus ring to adjust the focus.



NOTES

- With some EF lenses, you may be able to operate the focus ring even when the focus mode switch is set to AF.
- When using the optional RC-V100 Remote Controller to adjust the focus, set the focus mode switch to AF (or the focus operation change-over knob to SERVO).
- When an optional RC-V100 Remote Controller is connected to the camera, you can adjust the focus with the remote controller's FOCUS dial. At default settings, turn the dial right to focus farther and left to focus nearer. Refer to the instruction manual of the RC-V100 for details on changing that setting.

- To be able to adjust the focus using an accessory connected to the lens, you will need to change the [Camera Setup] ❯ [Focus Control] setting to give priority to the lens.

One-Shot AF

With one-shot AF, you will focus manually in most situations but still have the option to press a button to have the camera focus automatically only one time.

1 Set the focus mode switch on the lens to AF.
   - On a compatible EF Cinema lens, enable automatic adjustment on the lens (📖 21, *Setup Guide*).

2 Set an assignable button to [One-Shot AF].
   [Other Functions] ❯ [Assignable Buttons] ❯ Desired button ([1] to [4 (Remote)]) ❯ [One-Shot AF]

3 Press and hold the assignable button.
   - While the camera is trying to focus on a subject, [AF] will flash quickly on the left of the screen. When the correct focus has been achieved, it will stop flashing and stay on.
   - When one-shot AF is not available or the camera cannot focus on a subject, [AF] will flash in red on the screen.
   - [AF] will disappear when you release the assignable button.

ⓘ NOTES

- One-shot AF is not available for the following shutter speed settings.
  - 1/4, 1/5, 1/6 (at a system frequency of 59.94 Hz with a frame rate other than 23.98P)
  - 1/3, 1/4, 1/5 (at a system frequency of 59.94 Hz with a frame rate of 23.98P)
  - 1/3, 1/4, 1/5 (at a system frequency of 50.00 Hz)

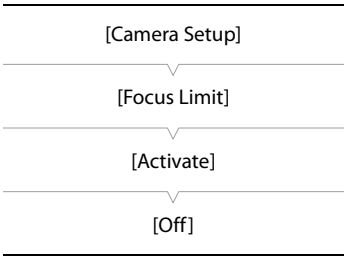
Focus Limit: Setting the Distance Range for Autofocus

You can set a "focus limit" range for the attached lens, which will cause the camera to try to autofocus (with one-shot AF) on subjects only within that range, thereby possibly reducing autofocusing time. You can set the far end and near end of the range, as necessary, by selecting a desired focus position.

1 Set the focus mode switch on the lens to AF.
   - On a compatible EF Cinema lens, enable automatic adjustment on the lens (📖 21, *Setup Guide*).

2 Open the [Activate] submenu to activate the focus limit.
   [Camera Setup] ❯ [Focus Limit] ❯ [Activate]

3 Select [On] and then press SET.

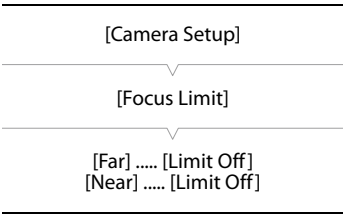


To set the far end of the range

4 Adjust the focus to the desired position for the far end of the range.

5 Open the [Far] focus limit submenu.
[Camera Setup] ❯ [Focus Limit] ❯ [Far]
- When a focus limit has not been set, [Limit Off] will appear on the [Focus Limit] submenu screen. When it has been set, [Limit On] will appear.

6 Select [Set] and then press SET.
- Select [Reset] instead to clear the focus position currently set for the far end.
- Select [Cancel] instead to cancel the operation.



To set the near end of the range

4 Adjust the focus to the desired position for the near end of the range.

5 Open the [Near] focus limit submenu.
[Camera Setup] ❯ [Focus Limit] ❯ [Near]
- When a focus limit has not been set, [Limit Off] will appear on the [Focus Limit] submenu screen. When it has been set, [Limit On] will appear.

6 Select [Set] and then press SET.
- Select [Reset] instead to clear the focus position currently set for the near end.
- Select [Cancel] instead to cancel the operation.

NOTES
- Focus limit settings will be lost when you turn off the camera or replace the lens. In such case, set the focus limit again.
- If the limits for the near end and far end conflict, the one most recently set will take precedence and the other will be cleared. For example, if you set a limit for the far end and then you set one for the near end that is farther, the limit for the far end will be cleared.
- When you activate one-shot AF after setting a focus limit, if no subject can be focused on within the range, the focus will return close to the position where it was prior to activating one-shot AF.
- If you operate the zoom after setting a focus limit, the position of the focus limit will change. Set the focus limit again.

General Notes regarding Focus Functions

NOTES

- If you operate the zoom after focusing, the focus on the subject may be lost.
- When adjusting the focus, be careful not to touch the front of the lens or moving parts on the lens except for the focus ring.
- **About the autofocus (AF) functions:**
  - Autofocus may not work well when high gain levels are set.
  - Autofocus may not work well when [Custom Picture] ❯ [Fine Tuning] ❯ [Gamma] is set to [Wide DR] or [Canon Log].
  - The point where the camera focuses may change slightly depending on shooting conditions, such as subject, brightness and zoom position. Check the focus before resuming shooting.
- The focus position may shift in an environment with large temperature changes. Set the focus again and check whether the focus is correct.
- Autofocus may take longer in the following cases.
  - When the frame rate is set to 29.97P, 25.00P, 25.00PsF or 23.98P.
  - With some EF lenses, the camera may take longer to focus automatically or may not be able to focus correctly. Visit your local Canon website for the latest information.
- Autofocus may not work well on the following subjects or in the following cases. In such case, focus manually.
  - Reflective surfaces
  - Subjects with low contrast or without vertical lines
  - Fast moving subjects
  - Through dirty or wet windows
  - Low-light scenes

Aspect Markers

The camera offers the following onscreen markers that indicate commonly-used aspect ratios: 4:3, 4:3 Super 35mm, 1.66:1, 1.85:1 and 2.39:1. Use the aspect markers to make sure the subject is correctly framed and within the appropriate safe area.

Aspect marker 2.39:1, gray (default)

Aspect marker 4:3, white

1 Open the [Activate] submenu to activate the aspect markers.
[Other Functions] ❯ [Aspect Marker] ❯ [Activate]

2 Select [On] and then press SET.
- To check the aspect marker on the shooting screen, press the MENU button to close the menu. If necessary, press the MENU button again to return to the menu and change the aspect marker's settings.

[Other Functions]
[Aspect Marker]
[Activate]
[Off]

To change the aspect marker's settings

1 Open the [Color] submenu to select the aspect marker's color.
[Other Functions] ❯ [Aspect Marker] ❯ [Color]

2 Select [Black], [Gray] or [White] and then press SET.

3 Open the [Ratio] submenu to select the aspect ratio.
[Other Functions] ❯ [Aspect Marker] ❯ [Ratio]

4 Select the desired aspect ratio and then press SET.

[Other Functions]
[Aspect Marker]
[Color] ..... [Gray]
[Ratio] ..... [2.39:1]

NOTES

- If you set an assignable button to [Aspect Marker] (📖 27), you can press the button to turn the aspect marker on and off.

Infrared Mode

Using the infrared mode, the camera becomes more sensitive to infrared light, allowing you to shoot in dark locations. During infrared mode, only some functions are available for adjustment.

1 Open the [Infrared] submenu.
[Camera Setup] ❯ [Infrared]

2 Select [On] and then press SET.
- [IR] will appear on the lower right corner of the screen.

[Camera Setup]
▽
[Infrared]
▽
[Off]

Functions available during infrared mode

Refer to the following table for a summary of functions available for adjustment.

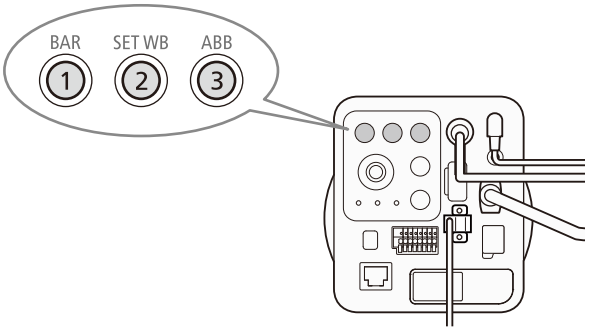
Function	Status
Aperture	Available when the camera mode is set to [Av], [AGC] or [Manual].
Gain	Available when the camera mode is set to [Manual].
Shutter speed	Available when the camera mode is set to [Tv], [AGC] or [Manual].
Focus	Available in all camera modes.
White balance	Available only by using the [Custom Picture] ❯ [Fine Tuning] ❯ [White Balance] setting when a custom picture file is selected.
ND filter	Cannot be changed (turned off).
Light metering	Cannot be changed (set to [Standard]).

NOTES

- Depending on the light source, autofocus may not work well during infrared mode.

Assignable Buttons

The camera offers three assignable buttons to which you can assign various functions. Assign often-used functions to personalize the camera to your needs and preferences. When an optional RC-V100 Remote Controller is connected to the camera, you can use a fourth assignable button. The names of the buttons printed on the camera also indicate the buttons' default settings.



Changing the Assigned Function

1 Open the [Assignable Buttons] submenu.
[Other Functions] ❯ [Assignable Buttons]

2 Select the button to change and then press SET.
- A list of available functions appears.

3 Select the desired function and then press SET.
- The selected function will be assigned to the selected button.

[Other Functions]

[Assignable Buttons]

[1 Color Bars]
[2 Set WB]
[3 ABB]
[4 (Remote) Infrared]*

* Assignable button 4 is located on the optional RC-V100 Remote Controller but the button's function can be assigned without connecting the RC-V100 to the camera.

Using an Assignable Button

After you assign a function to one of the buttons, press the button to activate the function. For some functions, you may need to perform other procedures. Refer to the function's reference page below, as necessary.

Assignable Functions

Function name	Description	🕮
[One-Shot AF]*	The camera focuses automatically one time only (one-shot AF function) while the button is held pressed down.	22
[Push Auto Iris]*	The camera automatically adjusts the aperture only while the button is held pressed down.	14
[ABB]	Starts the procedure for automatic black balance adjustment.	**
[AE Shift +]	Compensates the exposure making the image brighter.	14
[AE Shift –]	Compensates the exposure making the image darker.	
[Color Bars]	Turns color bars on/off.	37
[Aspect Marker]	Turns the onscreen aspect marker on/off.	25
[Set WB]*	Registers a custom white balance setting or selects the adjustment value for a preset white balance setting/color temperature setting.	20
[Tele-converter]	Activates the digital tele-converter in the following sequence: 2x → 3x → 4x → Off	36
[Infrared]	Turns infrared mode on/off.	26
[External Rec]*	Outputs a recording command to an external recorder to start or stop recording.	**
[Custom Picture]	Opens the [Custom Picture] submenu.	29
[Camera Mode]	Changes the camera mode.	11

* Function can be used only by assigning it to a button.
** For details, refer to *Setup Guide*.

Custom Picture Settings

The camera lets you change several settings (31) that control various aspects of the image produced. As a set, all these settings are treated as a single custom picture file. After adjusting the desired settings to your preference, you can save up to 4 custom picture files in the camera and load them later to apply exactly the same settings. Alternatively, you can use one of the preset custom picture files.

Selecting Custom Picture Files

Select a custom picture file to apply its settings while shooting or to edit it.

[Custom Picture]
▽
[Select File]
▽
[Crisp Img]

1 Open the custom picture file's [Select File] screen.
[Custom Picture] ❯ [Select File]

2 Push the joystick up/down to select the desired file and then press SET.

- Select one of the custom picture files saved in the camera ([CP1] to [CP4], [EOS Std.], [Wide DR], [Canon Log], [Blue Scr], [Green Scr], [Crisp Img]).
- When you close the menu, the selected custom picture file's settings will be applied.

Preset Custom Picture Files

The following preset custom picture files are protected and cannot be edited.

[EOS Std.]:	Reproduces the image quality and look (vivid, sharp and crisp) of an EOS digital SLR camera with its picture style set to [Standard].
[Wide DR]:	Applies a gamma curve with a very wide dynamic range and an appropriate color matrix that nevertheless do not require post-production processing.
[Canon Log]:	Uses the Canon Log gamma and color matrix for an outstanding dynamic range and an image suitable for processing in post-production.
[Blue Scr], [Green Scr]:	Settings that optimize the color correction for chroma key systems (blue screen or green screen, respectively) that use LED lights and retro-reflective backdrops. They can also be used for chroma key shooting with common blue or green backdrops.
[Crisp Img]:	Under sufficient light conditions, video becomes clear with high sharpness applied. Under low-light conditions, the data size can be reduced by setting the noise reduction to a high level. Setting suitable for transmitting the video over the network.

NOTES

- **About changing custom picture related settings using the optional RC-V100 Remote Controller**
  - You can press the remote controller's CUSTOM PICT. button to open the [Custom Picture] submenu.
  - Adjusting custom picture related settings using the remote controller will change the settings registered under the currently selected custom picture file.
  - If a preset custom picture file is selected, custom picture settings cannot be changed using the remote controller.
- If you set an assignable button to [Custom Picture] (27), you can press the button to open the [Custom Picture] submenu.

Editing a Custom Picture File's Settings

1 After selecting an editable file ([CP1] to [CP4]), select [Fine Tuning] and then press SET.

2 Select a setting and then press SET.

3 Change the setting to the desired level and then press SET.

- Refer to *Available Custom Picture Settings* (📖 31) for details on the various settings.
- Repeat steps 2 and 3 for other settings, as necessary.

4 Press the MENU button to close the custom picture menu and apply the new custom picture settings.

Resetting the Current File's Settings to Default Values

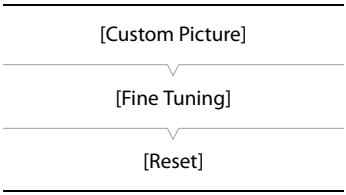
1 After selecting an editable file ([CP1] to [CP4]), open the [Reset] submenu.

[Fine Tuning] ❯ [Reset]

2 Select the desired default values and then press SET.

- Select [Neutral] to reset to neutral default values (equivalent to not using custom picture settings at all) or one of the preset settings ([EOS Std.], [Wide DR], [Canon Log], [Blue Scr], [Green Scr], or [Crisp Img]) if you want to replicate these preset settings, for example as a starting point to edit them further.

3 Select [OK] and then press SET.



Available Custom Picture Settings

[Gamma]

The gamma curve changes the overall look of the image. (Default: [Normal 1])

[Normal 1]: Standard picture for playback on TV monitors.

[Normal 2]: Setting suitable for playback on TV monitors. Produces brighter highlights (bright areas of the image) than with the [Normal 1] setting.

[Normal 3]: Setting suitable for playback on TV monitors. Produces a more faithful black gradation in the shadows (dark areas of the image) than with the [Normal 2] setting.

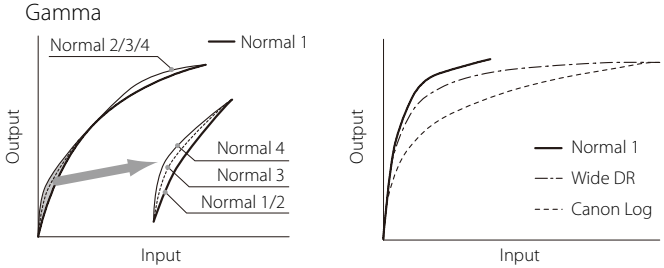
[Normal 4]: Setting suitable for playback on TV monitors. Produces even better black gradation in the shadows (dark areas of the image) than with the [Normal 3] setting.

[EOS Std.]: This gamma curve approximates the look of an EOS digital SLR camera when the picture style is set to [Standard]. Produces higher contrast than with the [Normal 1] setting.

[Wide DR]: Gamma curve with a very wide dynamic range. Optimized for playback on TV monitors.

[Canon Log]: Logarithmic gamma curve that obtains an impressive dynamic range and makes the most of the image sensor characteristics. Requires image processing in post-production.

[Crisp Img]: Setting suitable for playback on PC monitors. Minimizes over- or under-exposed areas.



[Black] ❯ [Master Pedestal]

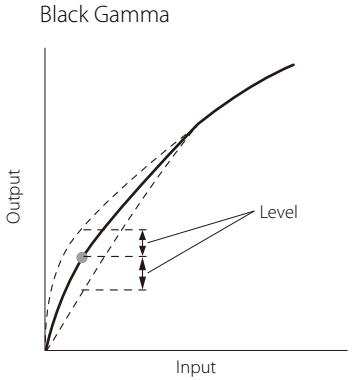
The master pedestal increases or decreases the black level. Higher settings will make dark areas brighter but decrease contrast. This setting can be adjusted from –50 to +50. (Default: ±0)

[Black] ❯ [Master Black Red], [Master Black Blue]

These settings correct the color cast in blacks. Each can be adjusted from –50 to +50. (Default: ±0)

[Black Gamma]

Raises or lowers the lower part of the gamma curve (dark areas of the image). When [Gamma] is set to [Wide DR] or [Canon Log], this setting has no effect on the picture. This setting can be adjusted from –50 to +50. (Default: ±0)



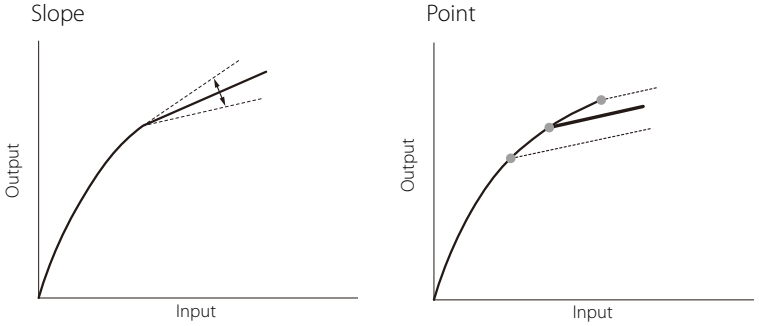
[Knee]

Controls the upper part of the gamma curve (highlights of the image). By compressing the highlights, you can prevent parts of the image from being overexposed. When [Gamma] is set to [EOS Std.], [Wide DR], [Canon Log], or [Crisp Img], this setting has no effect on the picture.

[Activate]: Activates/deactivates the setting. (Default: [On])

[Slope]: Determines the slope of the gamma curve above the knee point. This setting can be adjusted from –35 to +50. (Default: ±0)

[Point]: Sets the knee point of the gamma curve. This setting can be adjusted from 50 to 109. (Default: 95)



[Sharpness]

Sets the sharpness level. This setting can be adjusted from –10 to +50. (Default: ±0)

[Noise Reduction]

Reduces the amount of noise that appears in the image. Select a level from 1 (lowest level) to 12 (highest level), or select [Off] to turn the noise reduction off. (Default: [Off])

[Chroma Key Corr.]

Corrects the blue or green areas of the image to optimize them for a chroma key production.

[Color]: Selects whether to correct blue areas or green areas in the image. The available options are [Off], [Blue] and [Green]. (Default: [Off])

[Hue]: Adjusts the hue for the color to be detected. This setting can be adjusted from 0 to 31. (Default: 0)

[Chroma]: Adjusts the color saturation for the color to be detected. This setting can be adjusted from 0 to 31. (Default: 0)

[Area]: Adjusts the color range for the color to be detected. This setting can be adjusted from 0 to 2. (Default: 0)

[Y Level]: Adjusts the brightness for the color to be detected. This setting can be adjusted from –15 to 0. (Default: 0)

[White Balance]

Adjusts the amount of white balance throughout the whole image.

[R Gain]: Adjust the intensity of red tones. This setting can be adjusted from –50 to +50. (Default: ±0)

[B Gain]: Adjust the intensity of blue tones. This setting can be adjusted from –50 to +50. (Default: ±0)

NOTES

- When an optional RC-V100 Remote Controller is connected to the camera, the following custom picture settings can be changed using the buttons and dials on the remote controller.
  - [Black] ❯ [Master Pedestal], [Master Black Red], [Master Black Blue]
  - [Black Gamma]
  - [Knee] ❯ [Slope], [Point]
  - [Sharpness]
  - [White Balance] ❯ [R Gain], [B Gain]

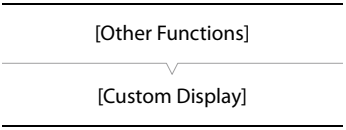
Customizing Onscreen Displays

Custom displays allow you to choose whether individual onscreen displays will appear on the shooting screen. For details on which onscreen displays can be customized, refer to *Showing Onscreen Displays* (7).

1 **Open the [Custom Display] submenu.**
[Other Functions] ❯ [Custom Display]

2 **Select the desired onscreen display.**

3 **Change the setting option and then press SET.**
- For most settings, select [On] to display the selected onscreen element, or [Off] to hide it.
- The [Date/Time] setting allows you display the date and/or time on the shooting screen.



3 Additional Information

Menu Options

For details about how to select an item, refer to *Using the Menu* (📖 5). Setting options in boldface indicate default values.
Depending on the camera's settings, some menu items may not be available. Such menu items do not appear or appear grayed out in menu screens.

To skip directly to the page of a specific menu:

[Camera Setup] menu 📖 35
[Custom Picture] menu 📖 37
[Audio/Video Setup] menu 📖 38
[Other Functions] menu 📖 38

[Camera Setup] menu

Menu item	Submenu / Setting options
[Light Metering]	[Backlight], **[Standard]**, [Spotlight] Selects the light metering mode (📖 15). [Backlight]: Suitable when shooting backlit scenes. [Standard]: Averages the light metered from the entire screen, giving more weight to the subject in the center. [Spotlight]: Use this option when shooting a scene in which only a certain part of the picture is lit, for example, when the subject is lit by a spotlight.
[AE Shift]	[+2.0], [+1.75], [+1.5], [+1.25], [+1.0], [+0.75], [+0.5], [+0.25], **[±0]**, [-0.25], [-0.5], [-0.75], [-1.0], [-1.25], [-1.5], [-1.75], [-2.0] You can compensate the exposure obtained automatically (camera modes other than [Manual], or while using push auto iris with the camera mode set to [Manual]), in order to darken or lighten the image (📖 14).
[AE Response]	[High], **[Normal]**, [Low] Determines how quickly the aperture changes during auto exposure (camera modes other than [Manual], or while using push auto iris with the camera mode set to [Manual]).
[AGC Limit]	**[Off (75dB)]** to [36dB] (in 3-dB increments) You can set an automatic gain control (AGC) limit to prevent the camera from using gain values higher than the preset limit when the camera mode is set to a mode other than [Manual] (📖 16).
[Auto Slow Shutter]	**[On]**, [Off] Determines the shutter speed used when the camera mode is set to [Auto] or [Av]. When this setting is set to [Off], the camera will not use shutter speeds slower than the frame rate currently used.
[Flicker Reduction]	[Automatic], **[Off]** Allows the camera to automatically detect and correct flicker caused by artificial light sources.

Menu item	Submenu / Setting options	
[Shockless WB]	[On], **[Off]**	
	When this setting is set to [On], makes the transition look smoother when the white balance is changed.	
[Iris Increment]	**[1/2 stop]**, [1/3 stop], [Fine]	
	Determines the aperture value increment used when adjusting the aperture. When this setting is set to [Fine], the increments will be smaller than 1/3 stop.	
[Zoom-Iris Correct.]	**[On]**, [Off]	
	If you are using a compatible lens*, when this setting is set to [On], the camera will adjust the aperture as needed to keep the selected aperture value while zooming. Because of this adjustment, the brightness of the image might change slightly or you may hear the operation sound. When this setting is set to [Off], the aperture will close gradually (the image will turn darker) as you zoom but you will not hear the aperture's operation sound. * Some EF lenses and EF Cinema lenses are not compatible with this function.	
[Focus Limit]	[Activate]	[On], **[Off]**
	Turns the focus limit on/off (📖 22).	
	[Far]	[Set], [Reset], **[Cancel]**
	Allows you to set the far end of the focus limit for the attached lens (📖 22). When a focus limit has not been set, [Limit Off] will appear on the submenu screen. **[Set]**: Saves the current focus position for the far end of the focus limit. **[Reset]**: Clears the currently set focus position. **[Cancel]**: Cancels the operation.	
	[Near]	[Set], [Reset], **[Cancel]**
	Allows you to set the near end of the focus limit for the attached lens (📖 22). When a focus limit has not been set, [Limit Off] will appear on the submenu screen. **[Set]**: Saves the current focus position for the near end of the focus limit. **[Reset]**: Clears the currently set focus position. **[Cancel]**: Cancels the operation.	
[Focus Control]	**[Camera]**, [Lens]	
	Determines the signal path used to adjust the focus. **[Camera]**: Default setting for most cases. **[Lens]**: You can adjust the focus using an accessory connected to the lens but you will not be able to use the camera's autofocus functions or an optional RC-V100 Remote Controller connected to the camera to adjust the focus.	
[Tele-converter]	[4x], [3x], [2x], **[Off]**	
	Allows you to digitally increase the focal length of the camera by approximately the selected factor. Note that the image is digitally processed so the image will deteriorate throughout the zoom range.	

Menu item	Submenu / Setting options
[EF-S Lens]	[On], **[Off]** When this setting is set to [On], reduces the peripheral illumination fall-off or vignetting that may occur when using an EF-S lens or EF Cinema lens with this camera. However, the image is digitally enlarged by a factor of approx. 1.55 so the image will deteriorate.
[ABB]	**[Cancel]**, [OK] Starts the procedure to adjust the black balance automatically (📖 *Setup Guide*).
[Color Bars]	[Activate] — [On], **[Off]** Turns color bars on/off. ⓘ NOTES • If set to [On], video output via a network will not be available. [Type] — **[SMPTE]**, [ARIB] (when the system frequency is 59.94 Hz); **[EBU]**, [SMPTE] (when the system frequency is 50.00 Hz) Selects the type of color bars. Selectable types will differ depending on the system frequency.
[Infrared]	[On], **[Off]** Turns infrared mode on/off (📖 26).
[ND Mode]	**[Automatic]**, [Manual] Determines how the ND filter is adjusted when the camera mode is set to a mode other than [Manual]. [Automatic]: The ND filter is adjusted automatically by the camera. [Manual]: The ND filter can be adjusted manually (📖 18).
[Periph.Illum.Corr.]	[On], **[Off]** When this setting is set to [On] and the camera has correction data for the attached lens, it compensates for the darkening of the image's corners (peripheral illumination drop) due to the lens's characteristics. If correction data for the lens is not available, the setting will appear grayed out. Note that depending on the shooting conditions, noise may appear in the periphery of the image as a result of the correction. Also, the level of correction will be lower the higher the gain level used. To apply the peripheral illumination correction when using an EF-S lens or EF Cinema lens, be sure to set both this setting and also the [Camera Setup] ❯ [EF-S Lens] setting to [On].

[Custom Picture] menu

Menu item	Submenu / Setting options
[Select File]	[Off], [CP1] to [CP4], [EOS Std.], [Wide DR], [Canon Log], [Blue Scr], [Green Scr], **[Crisp Img]** Selects a custom picture file to apply its settings while shooting or to edit it.
[Fine Tuning]	See the detailed explanations on pages 31 to 33.

[Audio/Video Setup] menu

Menu item	Submenu / Setting options	
[MIC Power]	[On], **[Off]**	
	When this setting is set to [On], the camera supplies power to a plug-in power microphone connected to the MIC terminal (📖 *Setup Guide*). IMPORTANT • Supplying power to a microphone without plug-in power functionality may damage the microphone.	
[1kHz Tone]	[-12dB], [-18dB], [-20dB], **[Off]**	
	Outputs a 1-kHz audio reference signal from the 3G/HD-SDI terminal and HDMI OUT terminal.	
[3G-SDI Mapping]	[Level A], **[Level B]**	
	Allows you to select a 3G-SDI mapping level, as defined by the SMPTE ST 425-1 standard, for the video output signal of the 3G/HD-SDI terminal.	
[Rec Command]	[Activate]	**[On]**, [Off]
	When this setting is set to [On], you can use an assignable button set to [External Rec] or an optional RC-V100 Remote Controller to output a recording command to an external recorder connected to the camera to start or stop recording (📖 *Setup Guide*).	
	[Remove OSD]	[On], **[Off]**
	When this setting is set to [On], the camera's onscreen displays will be turned off automatically while a recording command is being output.	

[Other Functions] menu

Menu item	Submenu / Setting options	
[Reset]	NOTES • For details about how to initialize the camera using RESET/REBOOT switch, refer to *Setup Guide*.	
	[All Settings]	**[Cancel]**, [OK]
	Resets all the camera's settings to default settings, except for a part of network settings, date/time, and hour meters (📖 40).	
	[Camera Settings]	**[Cancel]**, [OK]
	Resets the white balance, iris, gain, shutter speed, ND filter, custom picture, focus limit and other shooting-related settings to default settings.	

Menu item	Submenu / Setting options	
[Time Zone]	List of world time zones. **[UTC+09:00 Tokyo]**	
	Sets the time zone for the camera's clock. NOTES • While a recording command is being output to an external recorder (📖 *Setup Guide*), you cannot change the time zone.	
[Set Clock]	[Date/Time]	–
	Sets the date and time for the camera's clock. NOTES • While a recording command is being output to an external recorder (📖 *Setup Guide*), you cannot change the date/time.	
	[Date Format]	[YMD], [YMD/24H], **[MDY]**, [MDY/24H], [DMY], [DMY/24H]
	Sets the date format and time format for the camera's clock.	
[Assignable Buttons]	[1] to [4 (Remote)]	[(NONE)], [One-Shot AF], [Push Auto Iris], **[ABB] ([3])**, [AE Shift +], [AE Shift -], **[Color Bars] ([1])**, [Aspect Marker], **[Set WB] ([2])**, [Tele-converter], **[Infrared] ([4 (Remote)])**, [External Rec], [Custom Picture], [Camera Mode]
	Allows you to assign a function to an assignable button. The number in parentheses above indicates the assignable button to which the default setting in bold next to it is assigned (📖 27). Assignable button 4 is located on the optional RC-V100 Remote Controller but the button's function can be assigned without connecting the RC-V100 to the camera.	
[Power LED]	**[On]**, [Off]	
	Allows you to set whether the POWER indicator illuminates while the camera is on.	
[Fan Speed]	**[Automatic]**, [High], [Middle], [Low]	
	Sets the cooling fan's speed. If you select [Automatic], the camera will adjust the speed of the cooling fan based on the camera's internal temperature.	
[System Frequency]	**[59.94Hz]**, [50.00Hz]	
	Sets the camera's system frequency (📖 9).	
[Frame Rate]	[59.94P], [59.94i], **[29.97P]**, [23.98P] (when the system frequency is 59.94 Hz) [50.00P], [50.00i], **[25.00P]**, [25.00PsF] (when the system frequency is 50.00 Hz)	
	Sets the camera's frame rate (📖 9). The 3G-SDI signal can be output only when the frame rate is 59.94P or 50.00P.	
[Resolution]	**[1920x1080]**, [1280x720]	
	Sets the camera's resolution (📖 10).	
[Scan Reverse]	[Both], [Vertical], [Horizontal], **[Off]**	
	Inverts the image horizontally and/or vertically.	

Menu item	Submenu / Setting options	
[Aspect Marker]	[Activate]	[On], **[Off]**
	Turns the onscreen aspect marker on/off (📖 25).	
	[Color]	[Black], **[Gray]**, [White]
	Determines the color of the aspect marker.	
	[Ratio]	[4:3], [4:3 S35mm], [1.66:1], [1.85:1], **[2.39:1]**
	Determines the aspect ratio indicated by the aspect marker.	
[Custom Display]	[Camera Name]	**[On]**, [Off]
	[Date/Time]	[Date/Time], [Time], [Date], **[Off]**
	[White Balance]	**[On]**, [Off]
	[Camera Mode]	**[On]**, [Off]
	[Iris]	**[On]**, [Off]
	[Gain]	**[On]**, [Off]
	[Shutter Speed]	**[On]**, [Off]
	[ND Filter/Infrared]	**[On]**, [Off]
	[Custom Picture]	**[On]**, [Off]
	[Lens Error]	**[On]**, [Off]
	[Temperature Warning]	**[On]**, [Off]
	These settings allow you to customize the shooting screen by turning on/off individual onscreen displays (📖 34). For details about the onscreen displays that each setting controls, refer to *Showing Onscreen Displays* (📖 7). [Date/Time]: Allows you display the date and/or time on the shooting screen.	
[Camera Name]	[ ] (space), [A] to [Z], [a] to [z], numbers, special characters, [Set]	
	Allows you to enter a name (up to 16 characters) to identify the camera. The camera name will appear on the screen by default. Push the joystick up/down to select the desired character and then press SET to move to the next field. You can press MENU to delete a character. When finished, select [Set] and then press SET. ⓘ NOTES • The camera name to be specified here is different from that you specify in the setting via the network.	
[Reset Hour Meter]	**[Cancel]**, [OK]	
	The camera has two "hour meters" – the first keeps track of total operation time and the second keeps track of operation time since the last time the second hour meter was reset with this setting.	

Menu item	Submenu / Setting options
[Firmware] (Imaging Unit)	– You can verify the current firmware version of the camera's imaging unit. This menu option is usually unavailable. NOTES • The camera's firmware version can be checked on the Setting Page via the network.

4 Others

Troubleshooting

If you have a problem with your camera, refer to this section. Consult your dealer or a Canon Service Center if the problem persists.

Nothing is displayed on the external monitor.
You may have set a system frequency or frame rate incorrectly.
The [Basic] ❯ [System] ❯ [System Settings] ❯ [3G/HD-SDI Terminals] or [HDMI OUT Terminals] setting may be set to [Disable] on the Setting Page.
- Change the setting from the Setting Page via the network. For details, refer to *Network Operation Guide*.
- By resetting the camera settings with the RESET/REBOOT switches, you can restore the camera's factory default settings (system frequency 59.94 Hz, frame rate 29.97P, and resolution 1920 x 1080). Please be aware, however, that all settings will be reset. For details, refer to *Setup Guide*.

The camera cannot be operated with the buttons or via a remote controller.
The [Basic] ❯ [System] ❯ [System Settings] ❯ [Buttons/Remote Controller] setting may be set to [Disable] on the Setting Page.
- Change the above setting to [Enable] on the Setting Page. For details, refer to *Network Operation Guide*.

Onscreen Warning Displays and Messages

Refer to this section if a warning display or message appears on the screen. Should the camera fail to operate correctly, consult a Canon Service Center.

[Temp.] appears in red on the screen.
- The camera's internal temperature has risen to a predetermined level. Set [Other Functions] ❯ [Fan Speed] to [Automatic] or [High]. If [Temp.] continues to appear on the screen after a period of time, turn off the camera and wait until the temperature has decreased. If that does not solve the problem, consult a Canon Service Center.

[Fan] appears in red on the screen.
- The cooling fan may not be working properly. Consult a Canon Service Center.

[Lens] appears in red on the screen.
- There was a communication error between the camera and the lens. Turn the camera off and then on again. Alternatively, turn off the camera, remove the lens, and clean the lens's contact. Next, reattach the lens. If that does not solve the problem, consult a Canon Service Center.

[ABB error] appears on the screen.
- An error occurred while the camera was automatically adjusting the black balance. Make sure that the body cap or a compatible EF Cinema lens (📖 *Setup Guide*) is firmly attached to the camera blocking light from entering the camera. Next, perform the operation again. If that does not solve the problem, consult a Canon Service Center.

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