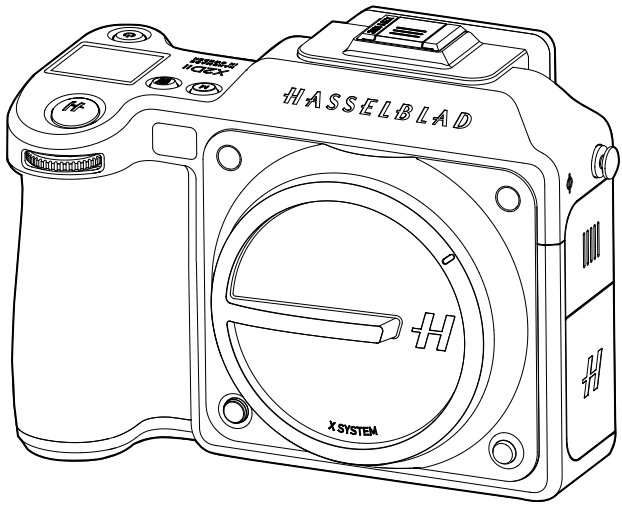
HASSELBLAD

# X2D II 100C

## User Manual

v1.0 2025.08



**Searching for Keywords**

Search for keywords such as “battery” and “install” to find a topic. If you are using Adobe Acrobat Reader to read this document, press Ctrl+F on Windows or Command+F on Mac to begin a search.

**Navigating to a Topic**

View a complete list of topics in the table of contents. Click on a topic to navigate to that section.

**Printing this Document**

This document supports high resolution printing.

# Using this Manual

## Legend

⚠ Important

Hints and Tips

Reference

## Video Tutorials

Go to the address below or scan the QR code to watch the tutorial videos.

https://www.hasselblad.com/learn/x2d-ii-100c-tutorials

# Contents

# Product Profile

# 1 Product Profile

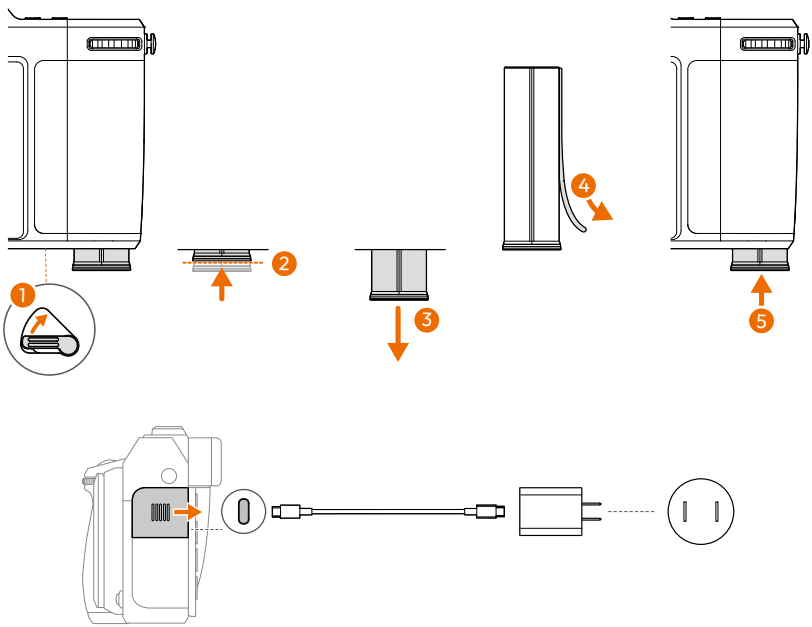
⚠
- In order to avoid damaging the camera sensor: DO NOT expose the camera to an environment with laser beams, such as a laser show or concert. DO NOT point the camera at intense light sources, such as a searchlight, LiDAR device, or the sun on a clear day for an extended period of time.

- The interface and functions of the camera screen and the mobile or computer software may change with firmware or software updates. The actual interface and available functions are subject to the version you are using.
- Unless otherwise specified, the descriptions in this manual use the camera default settings.

## 1.1 Preparation

### Charging the Battery

The product comes with the battery already inserted in the battery slot. Remove the protective film on the battery and fully charge before using for the first time.

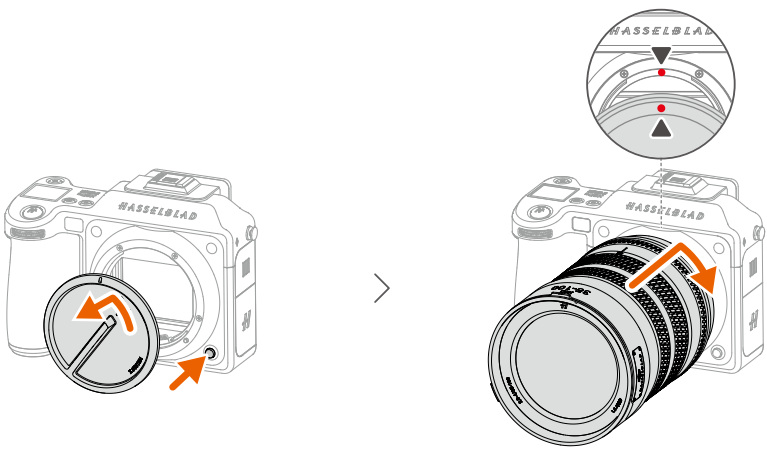


- It is recommended to use the official charger, X System Battery Charging Hub, or other FCC or CE certified USB PD charger to charge the battery.

- Charge the battery at a temperature between 5° to 40° C (41° to 104° F). The ideal charging temperature is 22° to 28° C (72° to 82° F). Charging at the ideal temperature can prolong battery life.
- The battery should be stored in a cool, ventilated, and dry environment without direct sunlight at a temperature from 20° to 30° C (68° to 86° F) and the battery level should be kept between 40-60%. A good storage environment can effectively extend the service life of the battery.
- Disposal: Dispose of the battery in a suitable recycling container only after fully discharging it. The battery contains hazardous chemicals. DO NOT place the battery in regular waste containers. Follow local laws and regulations regarding the disposal and recycling of batteries.

## Mounting the Lens

The instructions below uses an XCD lens as an example. A lens adapter is required when using other lenses.

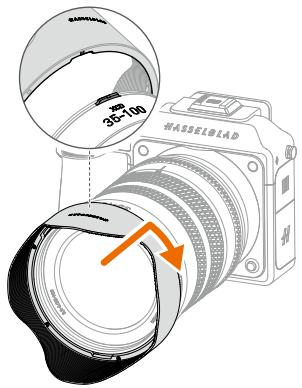



- To remove the lens, press the lens removal button while rotating the lens counterclockwise. Attach the lens protection caps on the detached lens to prevent damage.

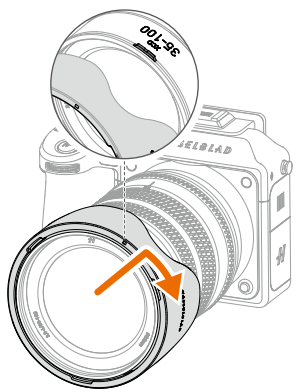
- Be careful when attaching or removing the lens to prevent damage to the metal terminals on the camera or lens.

- Do not insert fingers or any other objects into the camera body. This can cause damage to the equipment.
- Keep the devices clean and free of dirt and buildup. Attach the protection cover lid to the camera when the lens is detached. Otherwise, dust and dirt may be attracted to the sensor.

## Mounting the Lens Shade



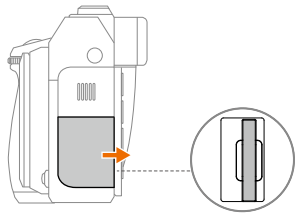

Mount the lens shade in reverse for additional protection during transport and storage.



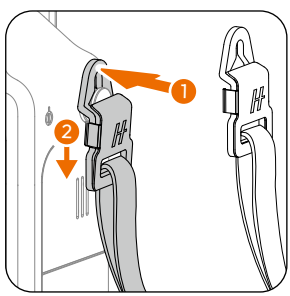
## Inserting the Memory Card

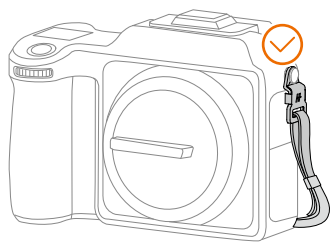
The camera is equipped with a built-in SSD. Users can expand the capacity further with a CFexpress Type B memory card.

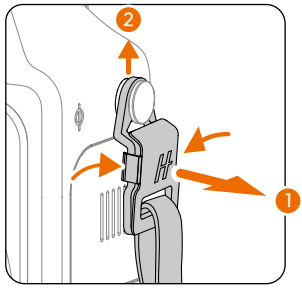


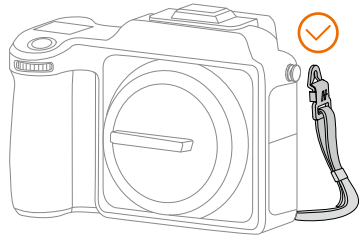
- Insert the memory card into the card slot gently. Pay attention to the facing direction of the memory card. If the card cannot be inserted properly, make sure it is facing the correct direction. Do not insert by force.
- To remove the memory card, open the card slot lid, press the memory card to release it, remove it, and close the card slot lid.
- Make sure that the memory card used is in good condition. DO NOT remove the memory card when the icon appears on the touch display or top display. Otherwise, the data may be lost and memory card may be damaged.
- After inserting the memory card for the first time, images captured will be stored on the memory card automatically. To store on the SSD, set the main storage to SSD in the camera storage settings.

## Attaching the Shoulder Strap



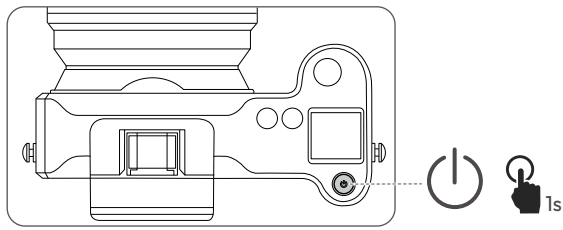





## Powering On/Off

Press and hold the ON/OFF button to power on or off the camera. Follow the on-screen instructions to complete the initial setup.




## Firmware Update

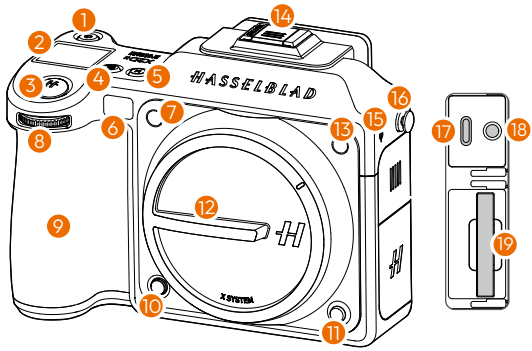
It is recommended to update the firmware before first use for optimal experience. Refer to Firmware Update for details.

## Registration

Visit the official website to register the product and access more after-sales service benefits.

https://www.hasselblad.com/my-hasselblad/my-products

## 1.2 Overview




1. **ON/OFF Button**

   Press and hold to power on or off the camera.

   After a few seconds (customisable) of inactivity, the camera will enter Standby Mode. Press the button once to enter or exit Standby Mode.

   When the camera is powered off, press once to check the battery level on the top display.

2. **Top Display**

3. **Shutter Release Button**

   Press half way to activate the camera from Standby Mode, or start autofocusing and exposure metering. Press all the way down to release the shutter. The chosen exposure procedure, for example, Self Timer, is also activated with this button.

4. **ISO/WB Button (custom)**

   The default function is to set ISO and white balance (WB). Press once to enter the ISO settings and press again to enter the WB settings.

5. **Exposure Mode Button (custom)**

6. **AF LiDAR**

   It assists autofocus when the environment is dark or the texture on the subject is not clear.

- The max ranging capability is 5 m. The actual ranging distance varies depending on the material of the subject surface and environmental conditions.
- Due to the structural obstruction of the lens and lens shade, LiDAR cannot cover the entire field of view.
- When using a teleconverter or extension tube other than the X Converter 1,7, the LiDAR focus assist function will not work.

- Keep the LiDAR protective glass clean and unobstructed to ensure the focus assist function works normally.

7. **Colour Temperature Photo Sensor**

   Assists measuring WB when WB is set to **Auto**.

8. **Front Scroll Wheel (custom clickable)**
9. **Camera Grip**
10. **Front Custom Button**

    The default function is to switch the focus mode.

11. **Lens Removal Button**
12. **Protective Cover Lid**
13. **AF Illuminator**

    Go to **Main Menu > Focus Settings** to enable **AF Assist Light**. The AF illuminator will light on automatically during autofocus according to ambient brightness and exposure parameters. The effective range is 4 m.

    In Self Timer mode, the AF illuminator will illuminate as a prompt during countdown and while shooting.

14. **Hot Shoe Lid**

    Users can mount a compatible device to the hot shoe, such as a flash, after removing the hot shoe lid.

15. **Focal Plane Mark**
16. **Strap Lugs**
17. **USB-C Port**

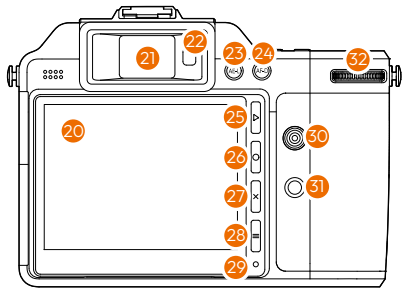
    For charging the battery and image transmission. USB 3.1 is supported.

18. **Shutter Control Port**

    Connect the Release Cord X to the port to control the shutter.

19. **CFexpress Card Slot**



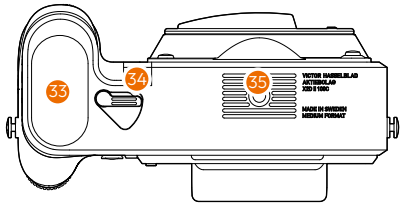

20. **Tilting Touch Display**
21. **Electronic Viewfinder (EVF)**
22. **EVF Sensor**
23. **AE Lock Button (AE-L)**
24. **AF Drive Button (AF-D)**
25. **Browse Button**
26. **Circle Button**

    The button has multiple functions that vary in different scenarios. In Live View or Browse Mode, press to switch between different display information.
27. **Delete Button**

    The button has multiple functions that vary in different scenarios. In Browse Mode, press to delete the selected image.
28. **Menu Button**
29. **Ambient Light Sensor**
30. **5D Joystick**

    Move the joystick to move the focus point. Press the joystick to zoom in or out on the image by default.
31. **Rear Custom Button**

    The default function is to enter the setting menu for focus point and subject detection.
32. **Rear Scroll Wheel (custom clickable)**




**33. Battery**

**34. Battery Release Lever**

Toggle the lever to release the battery and press the battery slightly to remove it.

**35. Tripod Thread 1/4″**

## 1.3 Datasheet

Visit the product page on the official website for Datasheet.

https://www.hasselblad.com/x2d-ii-100c

# Functions

# 2 Functions

## 2.1 Touch Display Operations

### Touch Controls

| Action | Function |
|---|---|
| Tap/Press | Select and confirm. |
| Double Tap | Zoom in to 100%. Double tap again to zoom out to full view. |
| Spread (move two fingers apart) | Zoom in when browsing images. |
| Pinch (move two fingers close) | Zoom out when browsing images. |
| Swipe Left | Switch the image or move the image left when browsing images. On Control Screen, switch to Main Menu. |
| Swipe Right | Switch the image or move the image right when browsing images. In Main Menu, switch to Control Screen. In sub menus, return to the previous menu. |

### Button and Scroll Wheel Controls

On Control Screen, Menu Screen, and in Browse Mode, use the buttons and scroll wheels on the camera body for selection, confirmation, and back operations.

| Camera Display | Buttons/Scroll Wheels | Function |
|---|---|---|
| Control Screen<br>Menu Screen | Front Scroll Wheel/<br>Rear Scroll Wheel | Press to select adjustable parameters on the screen or to confirm the selected option. Toggle to switch between parameters and options. |
| | 5D Joystick | Press to select adjustable parameters on the screen or to confirm the selected option. Move up/down/left/right to switch between parameters and options. |
| | Circle Button/AF Drive Button | After an adjustable parameter is activated on the screen, press to enter the option list or to confirm a selected option. When the parameter option is a switch, press to switch between on and off. |
| | Delete Button | After an adjustable parameter is activated on the screen, press to cancel the selection or return to the previous menu. |

| Camera Display | Buttons/Scroll Wheels | Function |
|---|---|---|
| Menu Screen | AE Lock Button<br>5D Joystick - Left | Return to the previous menu. |
| Browse Mode | Rear Scroll Wheel | Toggle left to return to the parent view. For example, enter the multiple images view, select folders or storage to browse. Toggle right to enter the subview. When viewing one image, toggle right to zoom in. When zooming in, toggle left to zoom out. |
| | Front Scroll Wheel<br>5D Joystick - Left/Right | Switch between captured images. |
| | 5D Joystick - Up/Down | When viewing one image, switch information display. |
| | 5D Joystick - Press | When viewing one image, press to zoom in or out. |
| | Delete Button | Delete the current image. |
| | AE Lock Button | Return to the parent view. For example, enter the multiple images view, select folders or storage to browse. When viewing one image and zooming in, press to zoom out. |
| | AF Drive Button | Enter the subview. When viewing one image, press to zoom in. |

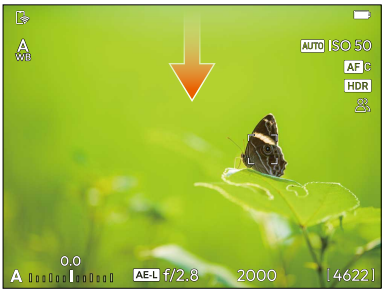
## 2.2 Touch Display Interface

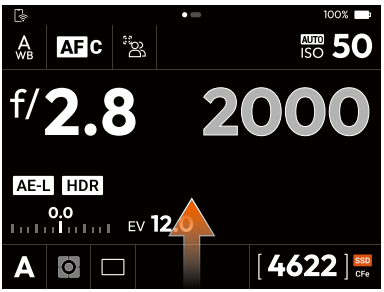
The touch display has Live View, Control Screen, Main Menu, and Browse Mode. Users can take photos, view the camera status, set parameters, and browse files in different views. This section will introduce Live View, Control Screen, and Browse Mode displays. For Main Menu displays, refer to the Settings section.

### Screen Switch

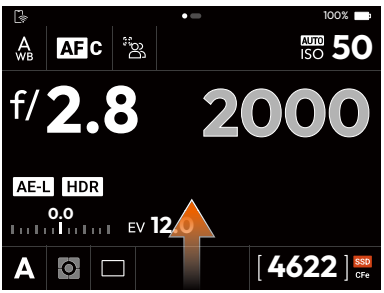
Switch between different screens using the gestures below.

Between Live View/Browse Mode and Control Screen: swipe down from the top and swipe up from the bottom.

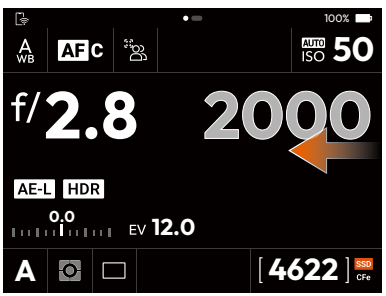


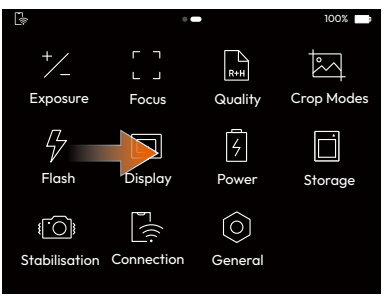





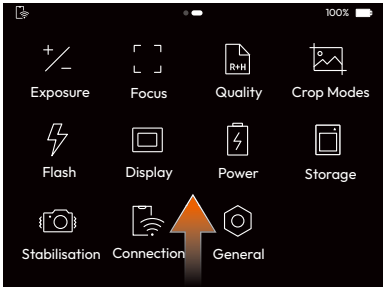


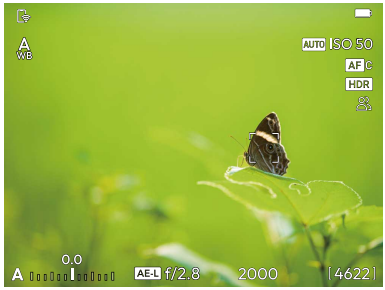

Between Control Screen and Main Menu: swipe left and swipe right.

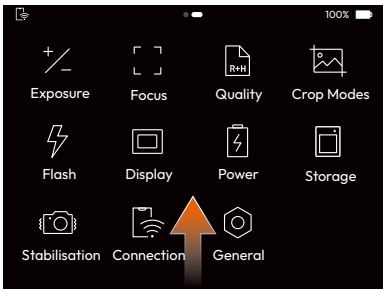


From Main Menu to Live View/Browse Mode: swipe up from the bottom.





## Live View

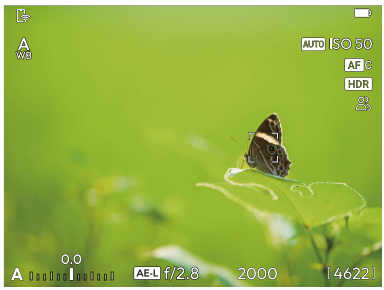
In any screen, half-press the shutter release button to enter Live View.

Check the camera status and parameters, adjust some certain parameters, and take photos. Live View shows the exposure information by default. Press the circle button on the camera to switch between different information display.

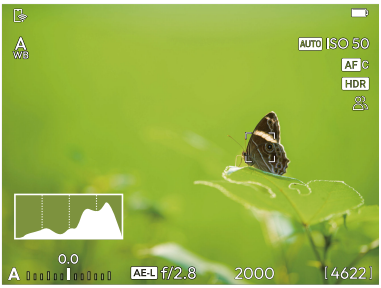
**Exposure Information Display**

Exposure information display includes information such as mode, shooting parameters, and storage status. Specific information varies according to parameter settings. This illustration is for reference only.

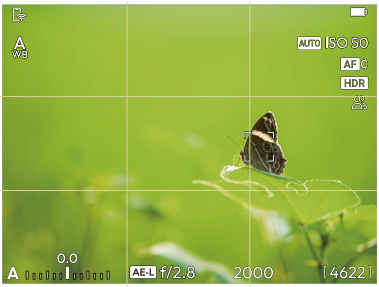
Tap the white balance (AWB) or ISO icon on the screen to adjust the corresponding parameter. Other parameters can be adjusted on Control Screen. Refer to Control Screen for details.



**Exposure Information + Histogram Overlay**
Tap and hold the histogram window, and then drag to move its position.

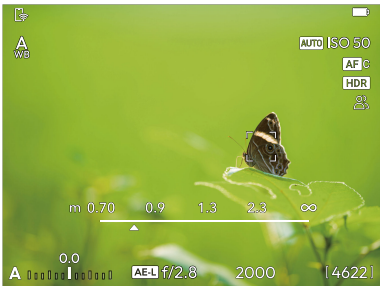



**Exposure Information + Grid Overlay**

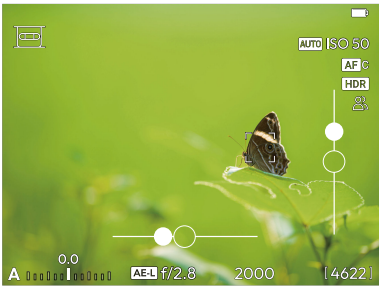



**Exposure Information + Distance Scale Overlay**
The arrow of the distance scale will move to the corresponding value when adjusting the focus distance.

Go to **Main Menu > General > Language & Unit** to select metre or foot as the unit to display on the scale.




**Exposure Information + Spirit Level Overlay**
Observe the tilt of the camera in the horizontal and vertical directions to help adjust the camera position. Tap the upper left corner to calibrate the spirit level. Refer to Spirit Level Calibration for details.



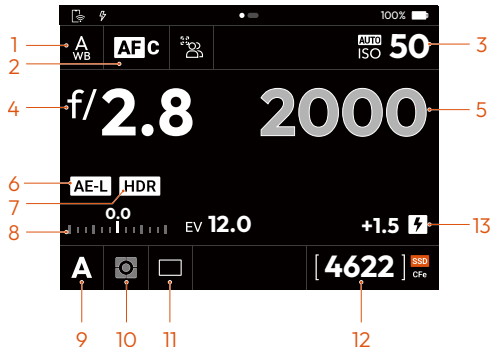

**None (image and focus area only)**

Go to **Main > General > Custom Overlays**, scroll to the bottom, tap **Combined** to customise multiple overlays displayed in Live View.

For example, when Exposure Info, Histogram, and Grid are checked in this settings page, and Combined is also checked in the Custom Overlays settings, users can switch to the combined overlays (Exposure Info + Histogram + Grid) in Live View.

## Control Screen

Swipe down from the top of the touch display or press the menu button on the camera to enter Control Screen. View the current parameter settings and adjust.




The illustration is for interface reference only. Functions may not be simultaneously supported under different settings.

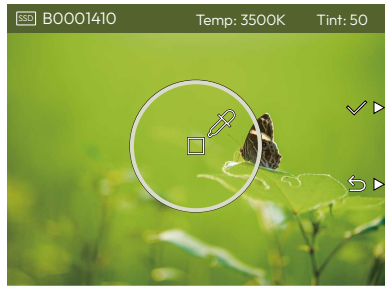
1. **White Balance (WB)**

   Tap to set the white balance mode. If the preset modes cannot meet the requirements in some scenarios, users can adjust the temperature and tint values in the list on the right. In this case, the Manual WB Mode is automatically selected, and the adjustment will not affect the values in the preset WB modes.

   When working with a flash in situations where the subject is lit with different colour temperatures, it is recommended to set the camera to Auto WB.

   **Picker**

   Use the picker in the white balance mode list to pick the colour temperature and tint from a captured RAW image.




a. Tap the picker icon in the white balance mode list.

b. The screen will show the last captured image with a white balance picker tool. The status bar on top will show the colour temperature and tint of the current metering area. Toggle the front scroll wheel or swipe on the touch display outside the circle of the picker tool to switch between images.

c. The square in the centre of the picker tool is the metering area for calculating the colour temperature and tint values. Adjust the position of the picker tool using the following methods to make sure that the metering area is in an area with neutral colour.

- Drag the circle of the picker tool on the screen.
- Move the 5D joystick to fine-tune the position of the picker tool in the corresponding direction.

d. The manual white balance icon and colour temperature value will be displayed on Control Screen after the values are applied. These values will be used for the following captured images.

2. **Focus Mode**

   If AF-S or AF-C is selected, you can tap the icon next to AF-S/AF-C to select the focus point mode and subject detection type. Refer to Focus Modes for details.

3. **ISO**

   Select ISO value. Users can also select ISO value in Live View.

4. **Aperture**

5. **Shutter Speed**

6. **AE Lock (AE-L)**

   This icon will appear when pressing the AE-L button to enable automatic exposure lock.

7. **HDR (High Dynamic Range)**

   When capturing images in JPG or HEIF format, if HDR is enabled, this icon will appear. Refer to HDR Function for details.

8. **Exposure Scale and EV**

Exposure scale is the same as in Live View. Automatic Exposure Mode (A, S, P) displays the current exposure compensation. Manual Exposure Mode displays the value of light metering. EV on the right side of the scale displays the current exposure value.

9. **Exposure Mode**

   Refer to Exposure Modes for details.

10. **Exposure Metering**

| | |
|---|---|
|  | Centre Weighted: Suitable for lighting conditions where the contrast is not quite "even". |
|  | Spot: This provides a very accurate measurement of specific tones. Also suitable for tonal comparison measurements. Spot area is marked in Live View and will follow any movement of the focus point. |
|  | Centre Spot: Emphasizes the central section of the focus point. This provides a balanced assessment and is a typical choice where the main subject is in the centre of the image. |
|  | Smart Metering: Measures light intelligently based on the shooting environment to determine the appropriate brightness and dynamic range. Only available when HDR is enabled. |

11. **Drive Mode**

    View or set the shooting parameters for each mode on the right of the mode list. Refer to Drive Modes for details.

12. **Remaining Frames, Storage Location, and Storage Status**

| | |
|---|---|
|  | Orange refers to the storage location in use. The primary slot and the backup secondary storage used will appear in orange. |
|  | A white border indicates extra storage that is set to overflow in the Storage settings. |
|  | When the CFexpress memory card is set to overflow but without any memory card inserted, the icon will display without a white border. |

Storage Status: Displays the data writing status and error statuses. Includes:

| | |
|---|---|
|  | Post-processing or writing data. This storage status icon will appear on the left of the remaining frames.<br>After capturing multiple images, a number will appear inside the icon, indicating the number of images being post-processed. |
|  | No memory card. This icon will appear when the secondary storage is set to backup but without any memory card inserted so that the camera cannot store images. |
|  | Memory card error. |

| | |
|---|---|
| | Slow read/write speed. |

13. **Flash Exposure Compensation**

    This icon will appear when a flash is mounted. Tap to set the flash exposure compensation.

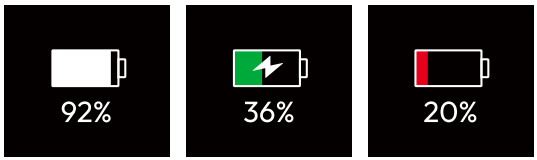
### Browse Mode

Press the browse button on the camera to enter Browse Mode. View captured images and related information, rate the images, and delete images. Refer to Image Browsing for details.

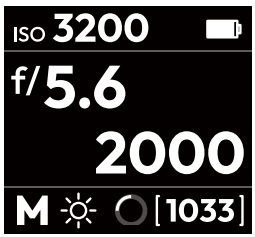
## 2.3 Top Display

The interface on the top display varies by the camera status and operating mode.

When the camera is powered off, press the ON/OFF button on the camera to show the battery level. When charging with the camera powered off, it displays the charging status.




When the camera is powered on, the top display will show the camera settings, parameter options, photographing progress, status prompts, and error information.



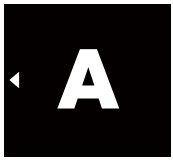

## 2.4 Exposure Modes

| | |
|---|---|
| M | Manual Exposure Mode |
| A | Aperture Priority Automatic Mode |
| S | Shutter Priority Automatic Mode |
| P | Program Automatic Mode |

| | |
|---|---|
| AUTO | Full Automatic Mode (ISO and WB are automatically set) |

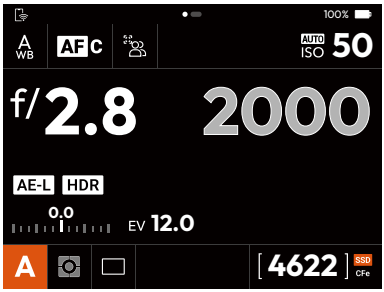
In Live View:

Press the exposure mode button, toggle the front or rear scroll wheel to switch between options, and press the exposure mode button again or press the scroll wheel to apply the selection. You can also use the 5D joystick to operate.


On Control Screen:

Tap the exposure mode icon on the lower left corner of the screen.




## Manual Exposure

Manual Exposure Mode provides total control of the shutter and aperture settings. Toggle the front and rear scroll wheels to manually determine the aperture and shutter speed.

The exposure scale is displayed in Live View.

The standard exposure setting is obtained when the value displayed over the exposure scale is 0.0 and positioned above the central index.

The value appearing elsewhere than above the central index indicates the deviation from the standard exposure.

As shown in the figure, a "+0.7" above the scale indicates a "0.7 EV overexposure" setting. Conversely, a "-2" indicates a "2 EV underexposure" setting.


- According to the exposure step interval setting, information for 1 step, 1/2 step, and 1/3 step aperture values will also be displayed on the touchscreen. For example, a setting between f/8 and f/11 will appear as f/9.5 if 1/2 step is selected.
- In M mode, if using Auto ISO, you can adjust exposure compensation by holding the ISO/WB button while toggling the rear scroll wheel.

## Automatic Exposure

### Aperture Priority (A)

Toggle the front scroll wheel to adjust the aperture. The shutter speed will be set automatically for optimal shooting performance. Users cannot change the shutter speed manually.

### Shutter Priority (S)

Toggle the front scroll wheel to adjust the shutter speed. The aperture will be set automatically for optimal shooting performance. Users cannot change the aperture manually.

### Program (P)

In this mode, the camera selects an aperture and shutter speed combination to suit various requirements and applications. The aperture and shutter speed have preset appropriate limitations according to the EV which is measured in a user-selected metering method. The aperture and shutter speed are displayed in grey indicating that users cannot change these settings. In P Mode, use the front scroll wheel to choose an appropriate aperture and shutter speed combination without changing the EV setting, and use the rear scroll wheel to adjust exposure compensation. The exposure scale and exposure compensation will be displayed in Live View or on Control Screen. Users can select whether to reset exposure compensation after shooting in the settings.

**Full Auto Mode ( AUTO )**

In this mode, ISO, aperture, and shutter speed are set by the camera automatically. No adjustments can be made except switching the focus mode. White balance is set to Auto, and the metering method is Centre Weighted (Smart Metering when HDR enabled). Single, Continuous, and Self Timer Drive Modes are supported.

## Auto Exposure Lock

In Live View, press the AE-L button to lock EV in Automatic Exposure Modes (A, S, P). In Manual Exposure Mode, press the button to lock the aperture and shutter speed combination. This allows users to shift the aperture and shutter speed combination using the scroll wheels without changing the exposure.

When the AE-L button is pressed, light metering is locked to the current EV setting. The AE-L icon appears to the left of the aperture value, indicating that the function is enabled. Press the button again to unlock.

In the locked setting, the aperture and shutter speed become interlocked. Users can choose a new aperture and shutter combination that still represents the same EV setting. For example, if the shutter speed is set to 1/125s and the aperture to f/8 with AE-L enabled, users can access new EV-equivalent combinations by toggling the front scroll wheel, such as 1/30s at f/16 or 1/500s at f/4.

In practice, position the metering area (for example, using spot metering) over an area equivalent to a mid-grey area and lock it with the AE-L button. Then recompose the picture with the metering area positioned over an area much brighter or darker while retaining the original exposure setting and choose a new combination of aperture and shutter speed settings.

# 2.5 Focus Modes

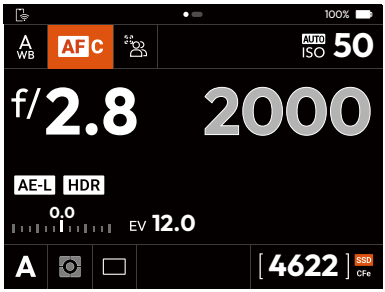
| | |
|---|---|
| AF-S | Autofocus Single |
| AF-C | Autofocus Continuous |
| MF | Manual Focus |

In Live View:

Press the front custom button on the camera to switch between different focus modes.

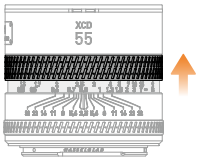

On Control Screen:

Tap the focus mode icon on the upper left corner of the screen. Toggle the front or rear scroll wheel to switch between options, and press the front custom button again or press the scroll wheel to apply the selection. You can also use the 5D joystick to operate.




Using the push-pull focus ring:

When a lens with the push-pull focus ring is used, push the focus ring to the front position to enter MF. Pull the focus ring to the rear position to go back to the focus mode before entering MF. Refer to the corresponding lens manual for more information.



## Autofocus

Activate autofocus by half-pressing the shutter release button or pressing the AF-D button.

Some H System lenses do not support AF. The camera will default to Manual Focus Mode for such lenses.

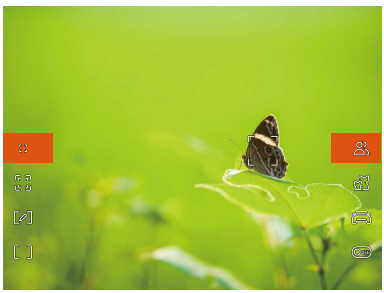
## Focus Point

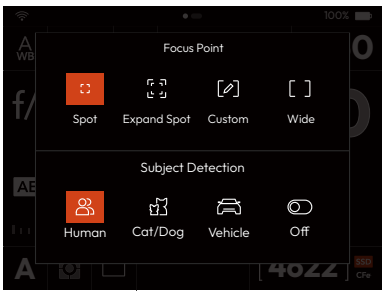
The following focus point modes are available in autofocus mode.

| | |
|---|---|
| | Spot: Precisely select the subject to focus on. |
| | Expanded Spot: Expands the focus area around the selected spot if focusing is not possible within the spot. |
| | Custom: You can adjust the size of the focus area manually. Suitable for multiple exposure photography where the subject moves in a small area and is a prominent foreground. |
| | Wide: Intelligently selects the subject within the effective focus area. Suitable for scenes with simple subject depth of field. |

* When using an H System lens, Custom and Wide modes are not supported. The display of the focus point may vary. Please refer to the actual display.

Press the rear custom button or tap the icon next to AF-S/AF-C on Control Screen to open the focus point and subject detection menu.






Tap the touch display or use the rear scroll wheel or 5D joystick to select the focus point mode. The focus point of the corresponding mode will appear in Live View. In Wide mode, the focus point will appear only when focus is correctly set.

When Custom mode is selected in Live View, a focus point with arrows will appear, allowing you to adjust the focus area size in the following ways.

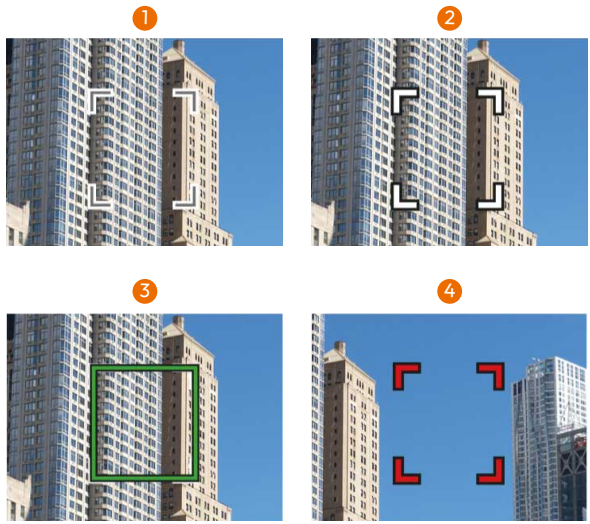
- Use the front scroll wheel to adjust the size horizontally, and the rear scroll wheel to adjust the size vertically.
- Pinch or spread your fingers on the touch display to enlarge or reduce the focus area.

* If using firmware later than 1.0.1.7, make sure that **Touch to Move AF Point** is enabled before use. Setting method: Go to **Main Menu > Focus**, scroll to the bottom, and then enable **Touch to Move AF Point**.

During shooting, tap the touch display or move the 5D joystick to move the focus point. Refer to Moving Focus Point for more information on operations.

Take Spot mode as an example to introduce the statuses of the focus point.

1. Grey, white outline: Autofocus is not activated.
2. White, black outline: Autofocus is ongoing.
3. Green: Autofocus performed and focus is correctly set.
4. Red: Autofocus failed to focus and focus is not correctly set.




## Autofocus Single (AF-S)

Half-press the shutter release button or press and hold the AF-D button to focus. Focusing will not restart if the camera or the subject moves.

## Autofocus Continuous (AF-C)

Half-press the shutter release button or press and hold the AF-D button to focus. If the camera or subject moves, the camera will focus continuously at the current position of the focus point.

- AF-C is not supported when using the electronic shutter.
- Only some lenses support AF-C. Refer to the datasheet on the official website.

## Subject Detection

In autofocus mode, detection for the following types of subject are supported.

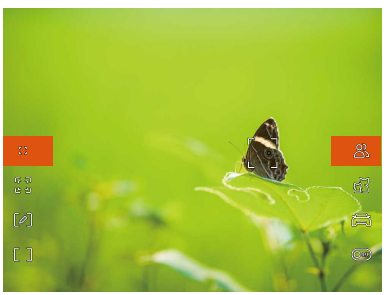
- Human
- Cat/Dog
- Vehicle

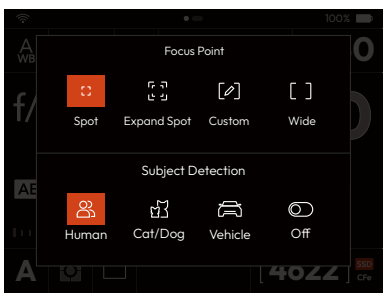
When the focus point mode is set to **Wide**, multiple subjects can be detected. Refer to Switching between Subjects for details.

The following descriptions use Human as the subject type.

1. Make sure that the focus mode is set to autofocus. Press the rear custom button or tap the icon next to AF-S/AF-C on Control Screen to open the focus point and subject detection menu.

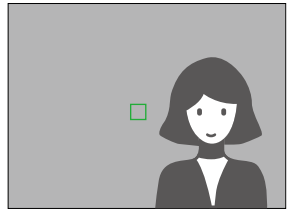
   When the focus point is set to a mode other than Wide, if the subject is not near the focus area, the camera cannot detect the subject.



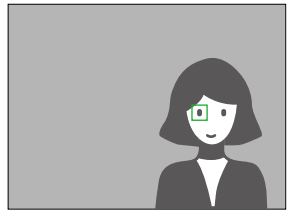



2. Tap the touch display or use the front scroll wheel or 5D joystick to select the subject detection type. The corresponding icon will appear in Live View under the ISO value.
3. When the camera detects a face near the AF point, the detection result area will display a grey frame. If an eye is detected, the grey frame will shift to the nearest eye.

4. Half-press the shutter release button or hold the AF-D button, and the AF point will shift to the detection result frame for focusing. A green box will be displayed for correct focus.
5. In AF-S mode: Once the focus is set correctly, if either the camera or the subject moves while keeping the shutter release button or AF-D button pressed, the focus point will remain at its current position. If the button is released, the focus point will return to its initial position before focusing.



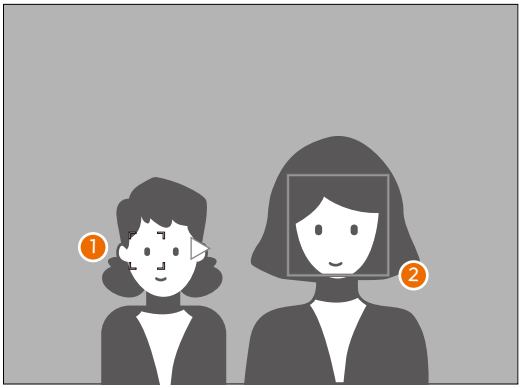
In AF-C mode: Once the focus is set correctly, if either the camera or the subject moves while keeping the shutter release button or AF-D button pressed, the focus point will track the detection result area, continuously focusing. If the subject is lost, the focus point will return to its initial position and refocus. If the button is released, the focus point will return to its initial position before focusing.



## Switching between Subjects

When the focus point mode is set to **Wide**, multiple results can be detected, marked with either a grey frame with a white outline or a simple grey frame.




1. Multiple results are detected. Only one of the detection results will display the grey frame (1), indicating that it will be focused on after pressing the shutter release button. Other detection results will display the grey frame (2).
2. Switch between the detection results using the following methods.
   - Move the 5D joystick to switch to other detection results according to the direction of the arrow around the grey frame.
   - Tap the detected result on the touch display to select it. Users can also swipe left or right on the touch display to switch between the detection results.
   - When using a lens with a control ring, set the lens control ring in the Custom Buttons settings and then switch between the detected results by rotating the control ring.
3. Make sure that the focus point is in the desired detection result area. Half-press the shutter release button to focus on the subject. The grey frames for other detection results will disappear.

## Tracking Scope

When the focus point mode is set to **Custom**, you can select the tracking scope for subject detection, which means the area where the subject can be detected.

Setting method: **Main Menu > Focus > Tracking Scope**.

When the focus point is set to other modes, the tracking scope is full screen and cannot be changed.

Setting the tracking scope to **Within Focus Point** can meet some special photography requirements. In AF-C mode, it allows you to wait for the subject to enter a specific area in

the frame. For example, wait in a specific position on the track to capture a racing car passing by.

### Arbitrary Tracking

In AF-C mode, when the focus point mode is set to **Expanded Spot**, arbitrary tracking can be enabled. Tracking of the subject is possible even if the subject is not a supported subject detection type. If subject detection is not off, the selected subject type will be prioritised for detection.

Setting method: **Main Menu > Focus > Arbitrary Tracking**.

## Manual Focus

Manual focus can be used at any time, even in Autofocus Mode. Users can also switch to Manual Focus Mode and use the focus ring manually on the lens only.

In MF, use the AF-D button for autofocus single.

Users can also activate autofocus by tapping on the touch display when Touch AF is enabled in the settings. Setting method:

Go to **Main Menu > Focus**, scroll to the bottom, and then enable **Touch AF in MF**.

- AF-D is disabled when Manual Focus Mode is selected with the push-pull focus ring on the lens in the front position.
- Double-tap the touch display, or press the 5D joystick or rear scroll wheel to zoom in on the image to check the focus area details. Perform the operation again to zoom out to full view. If **Peaking in Zoom** is enabled in the Focus settings, the focused area in the image will be displayed with the preset peaking colour.

Manual focus supports the following focus assists.

Go to **Main Menu > Focus > MF Assist**, and then select the desired assist.

#### Focus Peaking

If enabled, rotate the focus ring to adjust the focus manually and the focused area of the subject moves in depth as the focus moves.

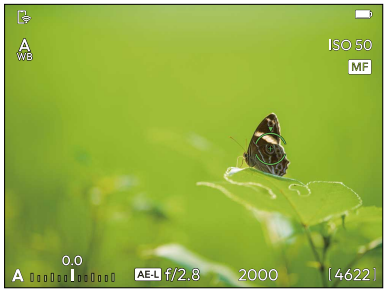
#### Auto Zoom

If enabled, the camera will automatically zoom in to 100% from where the focus point is located when rotating the focus ring. It will return to full view after a few seconds of inactivity.

### Focus Indicator

If enabled, the focus indicator can indicate the relationship between the focus and subject and show the direction to rotate the focus ring.


## Moving Focus Point

During shooting, you can move the focus point manually.

### Using the Touch Display

Tap the touch display or swipe on the touch display.

* If using firmware later than 1.0.1.7, make sure that **Touch to Move AF Point** is enabled before use. Setting method: Go to **Main Menu > Focus**, scroll to the bottom, and then enable **Touch to Move AF Point**.

If EVF is used, the touch display can be used as a touchpad to move the focus point. Refer to Electronic Viewfinder (EVF) for more information.

### Using the 5D Joystick

Move the joystick to move the focus point in the corresponding direction.

### Using the Buttons/Wheels

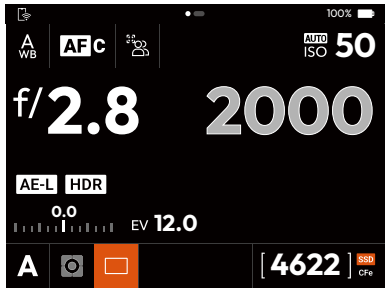
In Live View on the touch display or EVF, press and hold the front custom button, and the focus point will become a box with arrows. Then you can move the focus point.

- Toggle the front scroll wheel to move the focus point left and right and the rear scroll wheel to move upward and downward.
- Press the delete button on the camera to reset the focus point to the centre of the screen.

After adjustment, press the front custom button once to exit.

# 2.6 Drive Modes

On Control Screen, tap the drive mode icon at the bottom of the screen.




If parameters are displayed to the right of the mode list after selecting a mode, tap any of the parameters to adjust.

- If Initial Delay is set, the camera will start a countdown before shooting the first image. Shooting will start after the preset delay ends.
- During shooting, the touch display, top display, and EVF will show shooting information. To exit before shooting is complete, press the delete button.

## Single

In this mode, the camera will make one exposure only regardless of how long the shutter release button is pressed.

## Continuous

The camera will make exposures as long as the shutter release button is pressed.

This drive mode is disabled when the camera is connected to the Phocus software on the computer.

## Self Timer

After the shutter release button is fully pressed, the touch display, EVF, and top display will show the countdown screen. The camera will take photos automatically after the preset countdown ends. Press the delete button on the camera body to exit during the countdown.

This drive mode is disabled when the camera is connected to the Phocus software on the computer.

## Interval

The camera will make a pre-determined number of exposures with a preset interval time.

- Live View is disabled after exposure starts. If Preview is enabled in the Display settings, users can preview the previously shot image while shooting. The shooting information will display over the preview screen.
- When using some specific parameters, the camera will turn off the display to save battery 5 seconds after the shooting starts. The display will light up automatically before the next image is shot. Users can also wake up the display by pressing the ON/OFF button.
- This drive mode is disabled when the camera is connected to the Phocus software on the computer. In this case, use the capture sequencer in the software.

## Exposure Bracketing

The camera will automatically make a pre-determined number of exposures with a preset exposure adjustment difference between each frame.

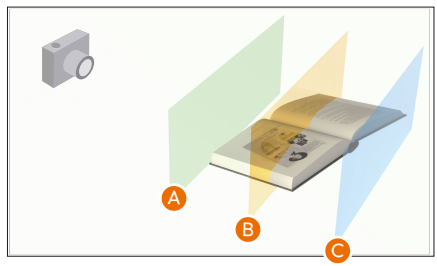
- Live View and Image Browsing are disabled after exposure starts.
- Light metering, focusing, and Auto WB is performed before the first exposure and applied to all images in sequence.
- When using some specific parameters, the camera will turn off the display to save battery 5 seconds after the shooting starts. The display will light up automatically before the next image is shot. Users can also wake up the display by pressing the ON/OFF button.
- This drive mode is disabled when the camera is connected to the Phocus software on the computer. In this case, use the capture sequencer in the software.

## Focus Bracketing

Set the step size, number of frames, and sequence first before starting focus bracketing. After pressing the shutter release button, the camera will automatically calculate the focus shift and take a preset number of images. The images will be stored as separate files and users can edit them manually or use a third-party software (e.g., Helicon Focus) to merge them together into a final stacked image.

- For high-quality work, users should normally select Small or Medium step size. For less critical work, users can also use Large or Extra Large. Large or Extra Large can also be used in certain situations when the type of subject allows. Refer to Step Size Explanation for more details.
- To find what works best for your situation, it is recommended to perform multiple tests.

Sequence: The order to change the focus position for each frame.




- Towards Infinity

  Focus should be set at a point (A) that is closer to the camera than the main subject. When the sequence has started, focus will be shifted towards infinity.
- Towards Near Limit

  Set focus at a point (C) behind the main subject. During the sequence, the camera will shift focus closer and closer to the camera.
- Symmetric

  Focus should be set on the main subject (B). When the sequence has started, the camera will first take an image, then move focus to a focus point closer to the near limit, and take all of the images in the sequence, shifting focus towards infinity.

- Use firmware version 0.1.26 or later for XCD 45P lenses and 0.6.0 or later for other XCD lenses with the Focus Bracketing function.
- HC/HCD lenses cannot be used for Focus Bracketing.
- When using a lens with the push-pull focus ring, make sure to pull the focus ring to the rear of the lens. Otherwise, focus bracketing cannot start.

- Light metering, focusing, and Auto WB is performed before the first exposure and applied to all images in sequence.
- Live View is disabled after exposure starts. If Preview is enabled in the Display settings, users can preview the previously shot image while shooting. The shooting information will display over the preview screen.
- When using some specific parameters, the camera will turn off the display to save battery 5 seconds after the shooting starts. The display will light up automatically before the next image is shot. Users can also wake up the display by pressing the ON/OFF button.
- When the camera is connected to the Phocus software on the computer, the focus bracketing settings in the software and the camera settings may be different. Use the settings and photography effects in the software as the basis.

## 2.7 HDR Function

When capturing JPG or HEIF images, enable the HDR function to achieve higher brightness and contrast in the images. Setting method:

Go to **Main Menu > Quality**. Ensure the selected image format includes JPG or HEIF, and then enable **HDR**.

The HDR icon will appear in Live View and on Control Screen. The metering mode will be set to **Smart Metering** automatically. Users cannot change the setting. After shooting, view the HDR effect images in Browse Mode.

- In the following scenarios, the HDR function will be disabled automatically, and the button in the settings menu will be greyed out and cannot be enabled:
  - When the exposure mode is set to Manual.
  - When the drive mode is set to Continuous, Exposure Bracketing, or Focus Bracketing.
  - When connecting a Nikon compatible flash.
- Phocus Mobile 2 and Phocus for Mac support the HDR function. The mobile devices and computers in use must meet certain requirements. Refer to the datasheet on the official website.
- For RAW images, download them to Phocus Mobile 2 or Phocus for Mac, enable editing for HDR, and the RAW images will be displayed in HDR mode.

## 2.8 Image Stabilisation

The camera features in-body image stabilisation (IBIS) to assist in capturing crisp handheld shots.

Enable or disable image stabilisation in **Main Menu > Image Stabilisation** settings. will appear on the left side in Live View when disabled.

Users can set the specific stabilisation mode when image stabilisation is enabled.

**Normal**: Stabilisation in horizontal and vertical directions will be available. There is no icon displayed in Live View when selected.

**Sport**: Suitable for scenarios where you need to move the camera to capture moving subjects. The camera automatically detects its movement direction and provides stabilisation perpendicular to the direction. will appear on the left side in Live View when selected.

**Horizontal**: Stabilisation in the horizontal direction will only be available. It is recommended to move the camera in the vertical direction to capture images. will appear on the left side in Live View when selected.

**Vertical**: Stabilisation in the vertical direction will only be available. It is recommended to move the camera in the horizontal direction to capture images. will appear on the left side in Live View when selected.

The stabilisation feature supports Earth rotation compensation to enhance stabilisation performance. It is recommended to connect the camera to the Phocus Mobile 2 app every 4 hours or when there is a significant change in geographical location to synchronise location information automatically.

- In high latitude areas or regions with strong magnetic fields, the Earth rotation compensation feature may fail.
- Disable image stabilisation when using a tripod. Otherwise, the image quality will be adversely affected.
- Image stabilisation is not supported when using some of the H System lenses. Make sure to disable image stabilisation to avoid a decrease in image quality when a hint for not supported lens appears in the settings screen.

- After prolonged use, leave the camera on a stable surface for a while for better stabilisation performance.
- Set the focal length of the lens when using a lens other than XCD and HC/HCD lenses. Make sure to set the focal length correctly. Otherwise, stabilisation performance will be adversely affected.

# 2.9 Storage Space

The camera has a built-in SSD to store images. A CFexpress Type B memory card is supported to expand storage. Connect the camera to a computer to use the SSD or memory card as mass storage for data read/write.

## Selecting Storage Location

Go to **Main Menu > Storage**, and then select **SSD** or **CFe** for the Primary Slot. The other location will be used as secondary storage.

For secondary storage, if **Overflow** is selected, the camera will store images in the secondary storage when the preset primary storage is full. If Backup is selected, the camera will store images to both the primary and secondary storage simultaneously.

Check the SSD or memory card storage status on the Control Screen or the top display.

## Using as Mass Storage

1. Power on the camera. Connect the camera to a computer using a USB-C cable of USB 3.0 or above.
2. Tap **Mass Storage** in the pop-up dialogue on the camera touch display. will be shown on the touch display while will be shown on the top display.
3. View the camera storage space on the computer and data read/write is available.

After the camera is connected to the computer, if **Skip** is selected on the touch display, the storage space will not be connected to the computer. Reconnect the camera to the computer and select the correct option.

## Formatting

- Formatting will erase all the contents in the storage space. Operate with caution.
- It is recommended to format the memory card on the camera before using it for the first time.

In the Storage settings, scroll to the bottom and select **Format SSD** or **Format CFe**. Follow the on-screen instructions.

## 2.10 Electronic Viewfinder (EVF)

Make sure that EVF-Rear Screen is selected to **Auto** or **EVF Only** in the Display settings in Main Menu. EVF will be activated when approaching the EVF. Like the touch display, the EVF also has Live View, Control Screen, Main Menu, and Browse Mode. Users can take photos, view the camera status, set parameters, and browse files on different screens. Use the buttons on the camera body to switch between screens rather than swiping on the touch display.

When using EVF, the touch display can be used as a touchpad. Gestures on the touchpad are available to move the focus point and zoom in or out on the images.

### Dioptre Adjustment

The EVF supports electric diopter adjustment. Try adjusting the dioptre in the settings when the EVF display is not clear.

Tap **Main Menu > Display > EVF Dioptre** to enter adjustment. Look through the EVF and toggle the front and rear scroll wheels to adjust the dioptre to an appropriate setting. Press the scroll wheel or tap **Exit** on the touch display to complete the adjustment.

### Touchpad Operations

When using the touchpad in Live View, only operations in the preset area on the touchpad will work. The descriptions below introduce touchpad area settings and operations in Live View.

#### Setting Touchpad Area

The area depends on which eye is used when looking through the EVF. For example, if the right eye is used, it is recommended to set it as **Right**. This will use the right half of the touch display as a touchpad.

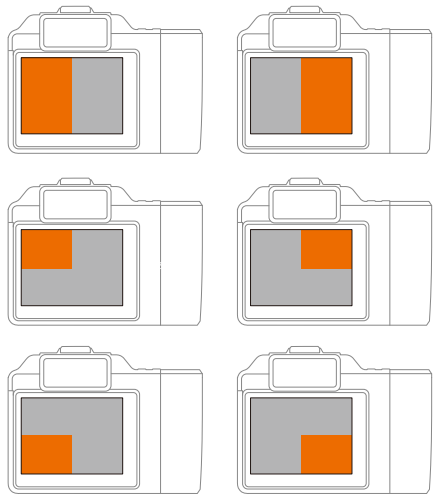
Setting method:

Go to **Main Menu > General > Touch**, and then select the touchpad area and sensitivity.

The touchpad area can be set to:

- Left
- Right
- Top-Left
- Top-Right
- Bottom-Left
- Bottom-Right



### Moving Focus Point

Swipe on the preset touchpad area and observe the movement of the focus point in EVF. Make sure that **Move AF Point for EVF** is enabled before use. Setting method:

Go to **Main Men > Focus**, scroll to the bottom, and enable **Move AF Point for EVF**.

### Zooming In/Out

Double-tap the preset touchpad area to zoom in to 100%. Double-tap again to zoom out to the full view.

## 2.11 Image Browsing

Browse and manage images on the touch display or in EVF. The following descriptions use the touch display as an example. Unless otherwise specified, EVF has the same operations.

Press the browse button on the camera body to enter Browse Mode.

In Browse Mode, half-press the shutter release button to return to Live View.

When Preview is enabled in the settings, the camera will enter Browse Mode after shooting is finished. Setting method:

Go to **Main Menu > Display**, scroll to the bottom, select the preview time, and enable **Rear Screen** or **EVF** in the Preview section.

Browse Mode includes four menu levels:

- Standard Preview
- Multiple Images View (9 View/25 View)
- Folder Browsing
- Storage Location

The camera enters Standard Preview Mode by default. Press the AE-L button or toggle the rear scroll wheel to the left to enter the upper level. Press the AF-D button or toggle the rear scroll wheel to the right to enter the lower level. In Multiple Images View, pinch or spread two fingers to switch between 9 View and 25 View.


In Standard Preview Mode:

- If HDR was enabled during image capture, the Browse Mode will display the HDR effect. Tap and hold the HDR icon on the screen to view the effect with HDR off.
- Use the front scroll wheel or swipe on the touch display to switch the image to browse.
- Spread or pinch on the touch display to zoom in or out. Double-tap the touch display to zoom in to 100% or zoom out to full view.
- Press the circle button to switch the information overlay. The overlays include Capture Details Mode, Separate Histogram RGB Mode, and Luminance Histogram Mode.
- Press the delete button to delete the image currently displayed.

- The display of RGB histogram and luminance histogram for HDR images includes histograms for both standard dynamic range (SDR) and high dynamic range (HDR).
  * Update firmware to the latest version. Otherwise, the function may not be available.
- When browsing images in EVF, users are unable to swipe, spread, or pinch on the touchpad. Users can double-tap on the touchpad to zoom in or out on the image.

## Deleting Images in Batches

In Multiple Images View, tap and hold the image on the screen or press the delete button on the camera body to enter batch delete mode, select multiple images, and delete.

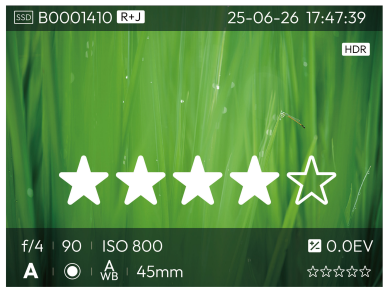
## Creating Folders

Go to storage location from Browse Mode and select SSD or CFexpress for browsing. Tap to create a folder.

Folders can only be created in the storage set as the primary slot.

## Image Rating

Images can be rated from 1 to 5 stars when browsing in Standard Preview Mode. The rating is written to the metadata of the image file.

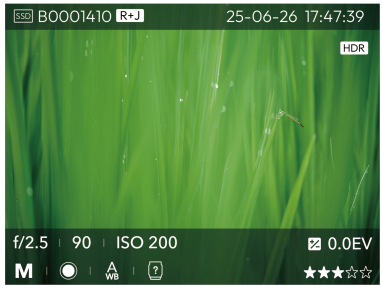



1. Press the circle button until image details are displayed.
2. Tap the star icon at the bottom right to enter Rating Mode. Tap 1 to 5 stars to rate.
3. Press the browse button to save ratings and return to Standard Preview Mode.

## Lens Data Selection

For images captured by unrecognised lenses, users can select lens data for the image in Standard Preview Mode. The data is written to the metadata of the image file.

1. Press the circle button until image details are displayed.
2. Tap in the detailed information and select parameters, such as lens, aperture, and distance in the pop-up menu. The available lenses in the list include the lens models selected in the settings only. This can be configured in **Main Menu > General > My Lens**.
3. Press the browse button to return to Standard Preview Mode.



# Settings

# 3 Settings

## 3.1 Main Menu

In Live View, press the menu button twice to enter the main menu.

On Control Screen, press the menu button once or swipe left on the screen to enter the main menu.

The main menu includes frequently used settings related to the camera and shooting, as well as general settings. This chapter will focus on settings related to shooting.

Tap on the screen to enter the settings menu. Swipe right in a sub-menu to return to the previous screen. Users can also use the buttons and scroll wheels on the camera body to set parameters. Refer to Button and Scroll Wheel Controls for details.

- The adjustable parameters vary depending on the exposure mode and lens in use. Parameters that cannot be adjusted will be displayed in a grey colour.
- During image processing after shooting, some of the settings are unavailable.

## 3.2 Exposure Settings

### Shutter Function

#### Electronic Shutter

When electronic shutter is enabled, the camera will disable the lens shutter and use an electronic shutter in the sensor instead. Electronic shutter is indicated with an E symbol in front of the shutter speed in Live View and on Control Screen.

Note the following limitations with electronic shutter:

- The electronic shutter may not capture a subject clearly with fast movements or when shooting handheld. It is recommended to capture a stationary subject or using a tripod.
- It is recommended to use the mechanical shutter to ensure image quality when ISO 6400 or above is set.
- Shutter speed range is 68 min to 1/6000s.
- Flash is disabled.
- True exposure is disabled.
- AF-C is disabled.

### Shutter Speed Limit

The shutter speed limit can be set either directly or as a function of focal length.

For example, when a 45mm lens is in use and the Shutter Speed Limit setting is 2f, the shutter speed limit will be 1/90s.

In Auto ISO/P/Full Auto Mode, the shutter speed will be as close to the set value as possible to ensure the success rate of handheld shooting.

⚠ The shutter speed limit can still be exceeded in some cases. For example, if using A Mode and the maximum ISO limit is already reached and there is not enough light, the shutter speed limit will be exceed as a last resort to get a proper exposure.

## Auto ISO Limits

Set the maximum and minimum ISO values for when Auto ISO is set.

After configuration, when ISO is set to Auto in M, A, S, or P Exposure Mode, the ISO is set automatically by the camera. It is unable to exceed these maximum and minimum limits.

## Exposure Simulation

In Live View on the touch display or in EVF, the display will simulate the final image exposure.

Select **A/S/P/Auto** or **A/S/P/Auto/M** to enable the function in the corresponding exposure mode.

- Exposure Simulation will not display a correct result when using the camera with a flash. For example, when shooting with a flashlight indoors, normally, Exposure Simulation displays an image that is too dark in Live View due to weak light conditions. It is recommended to disable Exposure Simulation in Manual Exposure Mode before shooting with a flash.
- When autofocus is enabled and is analysing the subject, Exposure Simulation is deactivated to let the autofocus system operate in optimal conditions. When the autofocus process is completed, Exposure Simulation is automatically activated again.
- When using Exposure Simulation with the exposure settings set to very high overexposure or very low underexposure for the actual light conditions, Live View will display a very light or very dark image. In these cases, check the exposure scale on the bottom left in Live View while adjusting the exposure settings to maintain desired exposure.

# Configuration

## Show B/T Mode

If enabled, B and T will appear next to 1.0s in the shutter speed list in Manual Exposure Mode.

To capture images when B Mode is selected, press and hold the shutter release button until exposure ends.

To capture images when T Mode is selected, press the shutter release button once to start capture and release, and press the shutter release button again or Exit when exposure ends.

## Max Aperture

Using the XCD 90 lens as an example, the **Normal** setting can cause a polygonal look for the out-of-focus areas, while the **Full** setting will create a smoother and round look for the out-of-focus areas with all the leaves fully open.


Normal


Full

## 3.3 Focus Settings

### Reset Focus Point

Set whether to reset the focus point to the centre of the screen after each exposure.

Select **Never** if it is required to fix the focus point in a certain location.

### Arbitrary Tracking

In AF-C mode, when the focus point mode is set to **Expanded Spot**, arbitrary tracking can be enabled. Refer to Arbitrary Tracking for details.

### Tracking Scope

In autofocus mode, when the focus point mode is set to **Custom**, tracking of the subject can be set within the focus point or across the full screen. Refer to Tracking Scope for details.

## 3.4 Quality Settings

### Bit Depth

When the image format is selected to the option including RAW, select the colour depth of the images between 14 bit and 16 bit.

Using 16 bit, the camera can acquire most information for the image and restore more details with less noise, which is convenient for users to perform post-processing and creation.

Using 14 bit, users can experience faster capture and decreased blackout time between shots.

Files for both two settings have the same size in storage.

In Continuous drive mode, the bit depth is set to 14 bit by default, and 16 bit cannot be used.

### HDR

When the image format is selected to the option including JPG or HEIF, HDR can be enabled. Refer to HDR Function for details.

## 3.5 Crop Mode Settings

### Crop Modes

Select the mode of cropping for Live View and captured images. Options for the crop mode settings are the checked modes in the My Crop Modes section on the screen.

- For images captured with a crop mask in the 3FR format, the crop mask can be modified or removed in the Phocus software.
- A customisable button or scroll wheel can be used to switch the crop mode in Live View quickly when the button or scroll wheel is set to **Crop Mode Next** or **Crop Mode Previous**. Press and hold the button or scroll wheel to return to **No Crop**.

### My Crop Modes

Check the boxes for different crop modes so that the modes can be shown in the options for the crop mode settings.

## 3.6 Flash Settings

### Sync

Set to trigger the flash at the beginning or end of the exposure.

Normal: To trigger at the beginning of the exposure.

Rear: To trigger at the end of the exposure.

### Exposure Lock until Flash Ready

Set whether to block a capture if the flash is not ready. If enabled, the capture will be blocked. While disabled, the capture will be allowed.

## 3.7 Display Settings

### EVF-Rear Screen

Set to use the rear touch display or EVF for display.

Default is **Auto**: The touch display will be used for display when not approaching the eye sensor. The EVF will be activated when an eye approaches the eye sensor.

# 3.8 General Settings

## Custom Buttons

The following buttons, scroll wheels, and the control ring can be customised.

- Front Scroll Wheel
- Front Custom Button
- Exposure Mode Button
- ISO/WB Button
- Real Scroll Wheel
- 5D Joystick
- Rear Custom Button
- Lens Control Ring

Tap to reset the functions for all the custom buttons to the factory settings.

## Custom Profiles

Preset parameters for the camera and save them in different custom profiles. Users can enter the preset mode quickly and use the preset parameters for shooting to improve efficiency by using this function.

After parameter configuration, tap the number of the desired profile and tap Save to save the settings to the selected custom profile.

To use the profile, tap the corresponding profile and tap Load to apply the settings in the profile.


Some camera settings, such as EVF dioptre, top display brightness, and language, will not be saved to the custom profile.

# Spirit Level Calibration

The camera is equipped with an accelerometer to measure the tilt of the camera relative to the horizontal axis and vertical axis. Spirit level calibration can assist in checking the tilt angle of the camera.

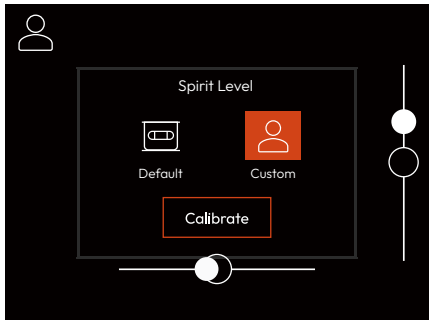
In Live View, users can also enter spirit level calibration. Press the circle button on the camera body to switch the display until Exposure Information + Spirit Level appears.

### Calibration Modes

There are two modes for the spirit level, Default and Custom. Tap the icon on the upper left corner to select. Default Mode uses the standard factory settings. In Custom Mode, users can set the standard.

### Setting Custom Mode

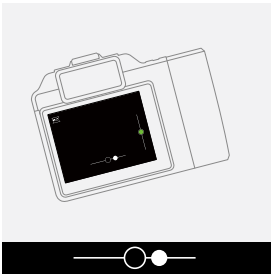
1. Tap the icon on the upper left corner and tap **Custom** in the pop-up dialogue.
2. Adjust the camera horizontally and vertically to the desired position and tap **Calibrate**.
3. The two white circles are now moved to the centre position and turn green, indicating that the new spirit level standard is set.



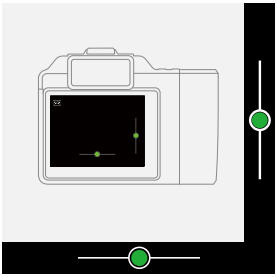

### Calibration Instructions

Tap the icon on the upper left corner and tap **Default** or **Custom** in the pop-up dialogue.

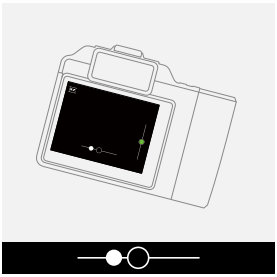
Adjust the tilt of the camera left/right and up/down until the solid white circle is in the centre and turns green.



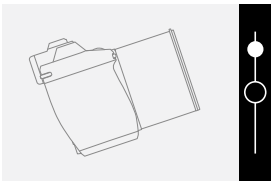
Camera tilted to the left.



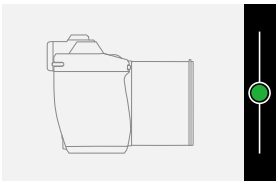
Camera aligned horizontally and vertically.



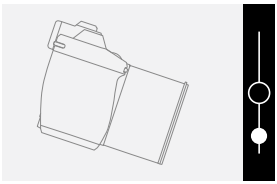
Camera tilted to the right.



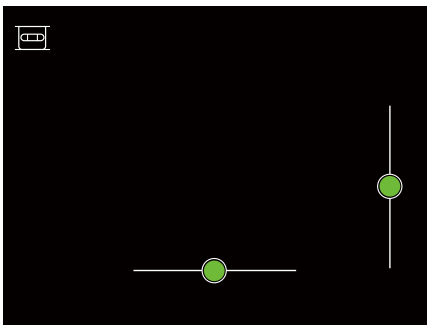
Camera tilted up.



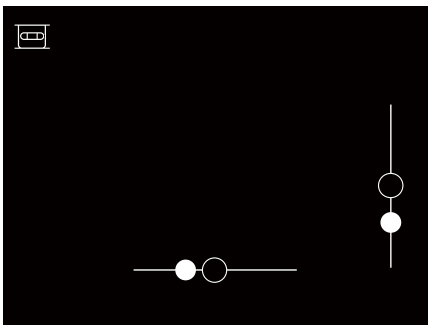
Camera aligned vertically.



Camera tilted down.



Spirit Level when camera is aligned.



Spirit Level when camera is tilted a little to the right and more down.

## Service

### Firmware Update

Check the firmware version of the camera and lens.

Update the firmware on this page when new firmware is released. Refer to Firmware Update for details.

### Default Settings

Tap **Reset all Settings** to restore factory default settings. You can also select the following additional options.

Reset Profiles: When resetting the camera settings, the custom profiles will also be reset.

Reset First Time Guide: When resetting the camera settings, the first time guide will also be reset.

### File Counter

Tap to reset. The next captured images will be numbered B0000001.

- After resetting the file counter, if there are images present on the currently used storage, a new folder will be created in the storage in use and set as the default storage folder to avoid images using the same number. The pop-up window after reset will display the name of the new folder. All the images captured after this will be stored in the new folder.
- When the secondary storage is set for backup in the Storage settings, a new folder, if required during reset, will be created in both the built-in SSD and memory card.

### Log Data

The log data is the internal data of the camera for repair that can be used by Hasselblad technical support. Users can save or delete the log data using the buttons on the touch display.

Save to Card: Tap to save the current log data to the memory card or camera SSD if a memory card is not used. DO NOT remove the memory card or power off the camera when saving the log.

Delete from Camera: Tap to delete the saved log data from the camera.

### Sensor Calibration

Calibrate to get the optimal output from the sensor when using the XCD lens.

Make sure that the battery level is more than 80%. Tap **Calibrate**, follow the onscreen instructions, and wait for the calibration to be completed.

# Phocus Mobile 2 and Phocus

# 4 Phocus Mobile 2 and Phocus

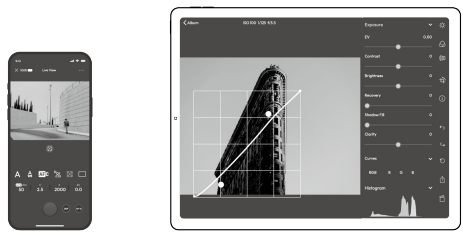
The Phocus Mobile 2 app and Phocus software both use Hasselblad Natural Colour Solution (HNCS) to deliver correct colours. When the camera is connected to a computer with a USB cable or an iPad/iPhone with Wi-Fi, tethered shooting is available in the corresponding software.

Visit the link below to download the software.

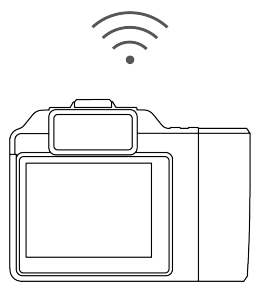

https://www.hasselblad.com/my-hasselblad/x2d-ii-qr

# 4.1 Phocus Mobile 2 App

## Connecting the Camera



iPhone iPad



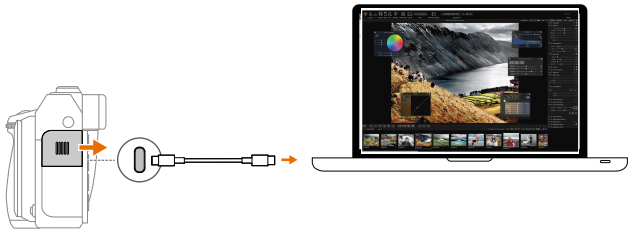
1. Power on the camera. Go to **Main Menu > Connect**.
2. Make sure that the airplane mode is off. Select the applicable Wi-Fi band.
3. Run the Phocus Mobile 2 app on your mobile device, connect to a new camera or select a paired camera, and follow the instructions in the app.

- Options for the Wi-Fi band vary by country or region. Refer to local laws and regulations.
- The shortest display off timer will be set to 60 seconds temporarily when Wi-Fi is in use.

## Remote Activation

For cameras already paired with the app, when **Remote Activation** is enabled in Connection settings, you can still connect to the camera in the app to view and download images with the camera powered-off.

## 4.2 Phocus Software



Connect the USB-C port on the camera to a computer using a USB-C cable of USB 3.0 or above. Users can control the camera remotely in Phocus, such as aperture adjustment or exposure time control.

When initiating a shot from the software, the computer sends a signal to the camera to trigger the shutter and the flash if it is in use. The camera sends the image over the USB connection to the computer, where it is displayed in real-time. The image is saved as a 16-bit 3F file in the currently selected folder on the computer hard disk for post-processing, such as colour and exposure adjustment.

Visit the official Hasselblad website for more information.

https://www.hasselblad.com/phocus

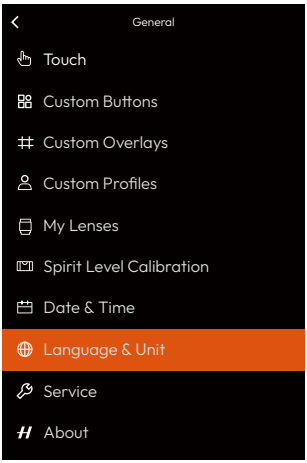
When connected to a computer, the following applies:

- After connecting to the computer, make sure to tap **Skip** in the pop-up dialogue on the camera touch display to use tethered shooting.
- The destination medium and location are controlled by the software. The images cannot be saved to the camera.
- All exposure settings, including ISO, aperture, and shutter speed, are controlled from the software if users choose to expose from the software.

# Appendix

# 5 Appendix

## 5.1 Change From Foreign Language




1. Power on the camera and press the menu button twice to enter Main Menu.
2. Tap the general settings icon .
3. Scroll on the screen to find the globe icon .
4. Tap to enter the language setting page and tap to select the desired language from the list.

## 5.2 Firmware Update

### Using Phocus Mobile 2

Run Phocus Mobile 2 and connect the camera. The app will display a notification when new firmware is available. Follow the instructions in the app to update. An internet connection is required.

During the camera firmware installation, the app will disconnect from the camera. Wait for the camera to complete the firmware installation and then reconnect manually.

### Using Firmware Package

1. Visit the official Hasselblad website www.hasselblad.com to download the latest firmware.
2. Store the firmware in the root directory of the camera SSD or CFexpress memory card.

- If using the camera SSD, make sure to tap **Mass Storage** in the dialogue on the touch display after the camera is connected to the computer, and then store the firmware to the camera.
- If using a memory card, make sure the memory card is inserted properly into the camera.

3. Power on the camera, go to **Main Menu > General > Service**, and tap **Check for Update**.
4. Select the firmware file. Make sure that the name and version number of the firmware selected are the same as the downloaded version.
5. Tap **Update**, and the update dialogue appears. Select **Update** in the dialogue to start the firmware update.
6. The camera will update firmware automatically. It will take several minutes for the update to complete. It is normal to have a brief blackout during the period. Please wait patiently. DO NOT power off the camera or remove the memory card if in use during an update.
7. The camera will show information for a successful update after completed.
8. In the Service screen, check and confirm that the firmware is the latest version.

## 5.3 Error Messages

If any error message is displayed

1. Remove the components from the camera.
2. Attach the components to the camera again.

If the error message is still displayed

1. Remove the battery.
2. Remove any connected USB cable.
3. Wait for 10 seconds.
4. Reinstall the battery.

If the error message is still displayed

1. Write down the error message.
2. Contact your closest authorized Hasselblad dealer.

## 5.4 Clean the Sensor Filter

Follow the instructions below:

1. Power off the camera and remove any device or cable, if connected.
2. Press and hold the lens release button. Rotate the lens counterclockwise to remove it.
3. Carefully clean the outside surface of the IR filter by using clean compressed air.

Take several shots of multiple images to test, and then check each image carefully. Contact the Hasselblad authorised service centre if there are any spots on the images.

⚠
- Be careful when attaching/removing the components to/from the camera. This will help prevent damage to the data bus connections.
- After removing the lens, keep foreign objects away from the camera opening.
- If using canned compressed air to clean the glass of the IR filter, read the instructions carefully before use. This will help prevent damage to the filter.
- DO NOT remove the glass IR filter from the front of the sensor. This will cause damage to the equipment. Contact the Hasselblad authorised service centre if needed.

## 5.5 Clean the Lens Glass Surface

**Remove Dust**

Remove the dust with an air blower or a very soft lens brush.

**Remove Smear**

If there is smear on the lens glass, do as follows:

- If you are not sure how to remove the smear, contact the Hasselblad authorised service centre.
- Clean the lens glass with a high quality lens cleaning solution on a tissue.

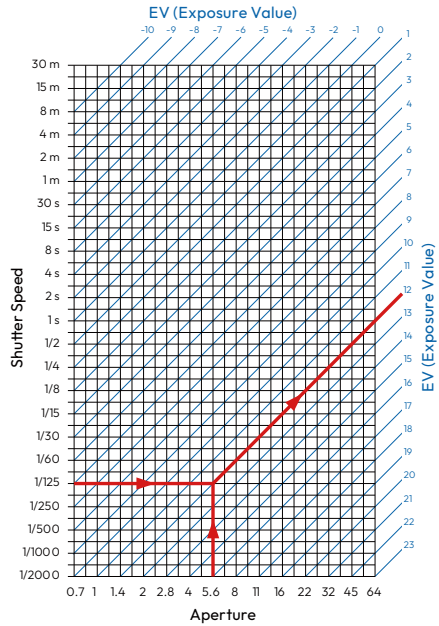
## 5.6 EV Value Explanation

The EV value (Exposure Value) represents a combination of aperture and shutter speed where all combinations giving the same exposure will have the same EV value.

For example:

f/5,6 - 1/125s and f/4 - 1/250s has the same EV value = 12.




If the users press AE-L in manual exposure mode and rotate either or both scroll wheels, aperture and shutter speed will change, but the EV value will remain the same.

A change of the EV value by one is the same as changing aperture or shutter speed by one stop.

For example:

f/5.6 - 1/125s: EV 12

f/8 - 1/125s: EV 13

f/5.6 - 1/250s: EV 13

It is important to understand that although two images that were made using the same EV value but with different combinations of aperture and shutter speed will have the same exposure but will not be identical due to different depth-of-field and movement stopping time.

As the EV value is related to the lighting conditions, it can in many cases be an easy way to quickly set the correct exposure. As a start users can use the following guidelines.

| Scene | EV Value @ISO 100 |
|---|---|
| Light sand or snow with clear shadows | 16 |
| Outdoor scene in direct sunlight | 15 |
| Outdoor scene, cloudy no shadows | 13 |
| Outdoor scene in shadows, clear sunlight | 12 |

| Scene | EV Value @ISO 100 |
|---|---|
| Sunset | 12 |
| Night scenes in city lights | 7-8 |
| Indoor, home | 5-7 |

The table shows EV values for ISO 100. If using another ISO setting the EV value should be modified as follows:

ISO 200: EV +1

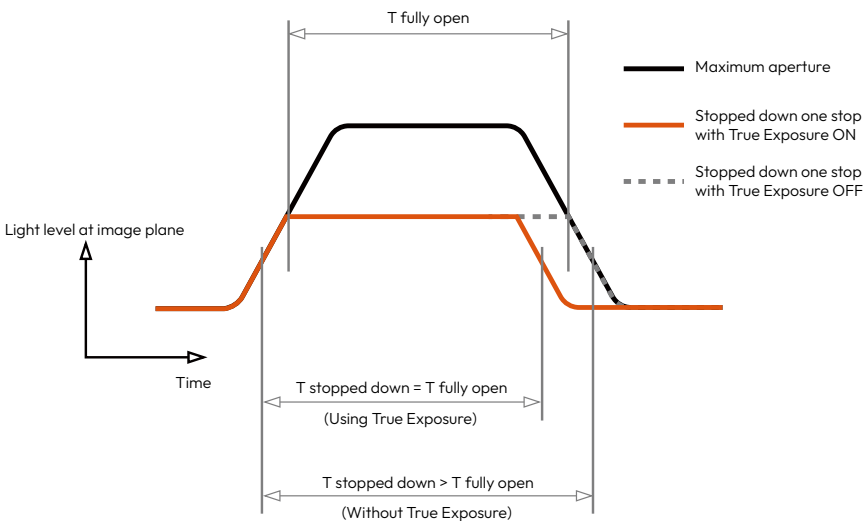
ISO 400: EV +2

ISO 800: EV +3

and so forth.

More information here: https://en.wikipedia.org/wiki/Exposure_value

## 5.7 True Exposure Explanation




True Exposure is an XCD and HC/HCD lens function that allows the shutter speed to remain unaffected when stopping down. This effect is perhaps not so commonly understood as it is restricted specifically to integral lens shutters as opposed to focal plane shutters.

When a lens is stopped down, the effective shutter speed becomes longer, consequently affecting the set exposure. At slow shutter speeds the effect is minimal but at faster speeds, e.g. 1/500s, the effect becomes clearly visible. Automatic compensatory measures in speed

setting adjustments are employed. As compensation can only be put into effect where speeds can be adjusted, this prevents the possibility of adjusting the fastest speed. To counter this, compensatory adjustments are therefore made to the aperture instead to retain the set exposure.

This compensation is not always required and when using flash/strobe as the main light source it is actually undesirable because compensation will result in underexposure. Therefore, when using flash/strobe as the main light source, disable true exposure in **Main Menu > Exposure** settings.

## 5.8 Step Size Explanation

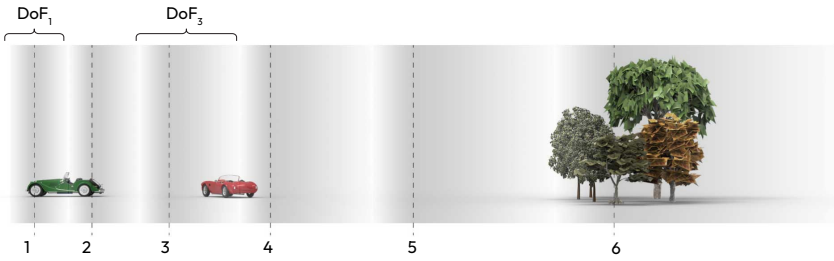
The step size is related to the depth of field (DoF) produced by the camera at a given aperture. This means that the actual focus shift in the subject will be larger with a higher aperture number. For example, f/4 will give a smaller step than f/11. However, before each exposure, the camera will automatically calculate the actual step size using the current focus position, focal length of the lens, aperture and pixel dimensions of the sensor.

In the subject, the DoF will grow as the focus point is moved away from the camera. The distribution of the DoF around the focus point will also be more uneven. The DoF on the far side of the focus point will grow more than the DoF in front of the focus point.

As the camera will automatically make all the calculations for users, the only thing that really needs consideration is how many images to make in the sequence. In most cases, it is recommended to set a number that is too high rather than too low. The camera will automatically stop when the lens cannot be focused further or closer.

To the right is a typical subject where focus bracketing could be used.
With the step size set to Medium, there will be no unsharp areas between each image. Please note that DoF is relative and how it is perceived greatly depends on the viewing magnification of the final result. The circle of confusion (CoC) is used to determine the depth of field, see also https://en.wikipedia.org/wiki/Circle_of_confusion.

The image below shows how the DoF will change between captures and also how the focus step in the subject will automatically increase as the DoF is increased.




The table to the right shows the actual Circle of Confusion (CoC) used for the different step sizes. PP is the Pixel Pitch of the sensor which is the distance between two adjacent pixels.

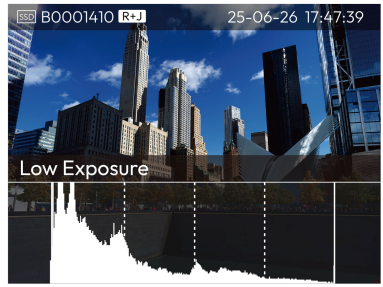
| Step Size | CoC |
|---|---|
| Extra Small | 1 × PP = 3.76 µm |
| Small | 4/3 × PP = 5.01 µm |
| Medium | 2 × PP = 7.52 µm |
| Large | 4 × PP = 15.04 µm |
| Extra Large | 6 × PP = 22.56 µm |

## 5.9 Luminance Histogram Exposure Explanation

The histogram provides a graph that indicates the total number of pixels at each brightness level, with brightness in range from black on the left to white on the right. Study the histogram examples and the explanations below.

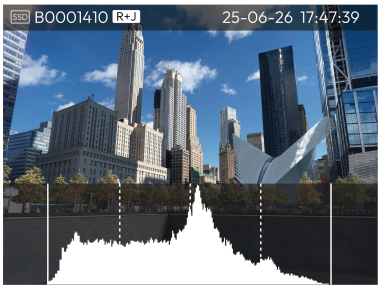
**Underexposure**

Histogram display concentrated on the left with few pixels elsewhere indicates a likely underexposure. Many details will be lost in the shadows.



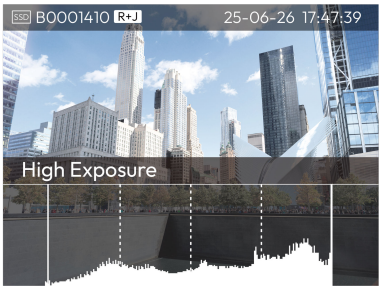
**Even Exposure**

Histogram display spread across the full range indicates a likely good exposure. There may still be a few pixels at the extremes, indicating a few spectral highlights and saturated shadows, but this is often normal in a good exposure.




**Overexposure**

Histogram display concentrated on the right with few pixels elsewhere indicates a likely overexposure. Many details will be lost in the highlights.




## 5.10 Accessories

**Release Cord X**

**X Extension Tube (9mm)**

### XH Lens Adapter

⚠ Only certain functions of the camera are available when using an H System lens.

### XH Converter 0,8

⚠
- Only certain functions of the camera are supported when using an H System lens.
- Lenses with firmware 18.0.0 to 19.0.3 must be updated to 19.1.0 or later. Lenses with firmware older than 18.0.0 will have manual focus only. HC120 and HC120-II lenses with firmware 18.0.0 or older are not supported.
- HCD lenses were originally designed for a smaller format than HC lenses. Therefore some reduction of performance in extreme corners can occur.

### XV Lens Adapter

⚠
- This requires the electronic shutter function of the camera to be activated.
- Lens corrections for V System lenses are available with Phocus version 3.4 or later. Note that they have to be manually selected.

### Tripod Mount Ring 75mm

### XPan Lens Adapter


⚠ XPan Lenses had no built-in shutter. Consequently, they can only be used when the electronic shutter of the camera is activated.

### Charging Hub

### Optional HC Lens Accessories

H 13, 26, and 52 Extension Tubes

Converter H 1.7x


Tilt/Shift Adapter HTS 1.5x


⚠ When using X2D II 100C, metadata for Tilt and Shift amount is not added to the image file. Automatic lens corrections will not be applied in the Phocus software.

**Optional Accessories**

Pro Shade V/H 60–95

Pro Shade Adapters

UV Filters

CPL Filters

Tripod Quick Coupling H

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