Aputure®

V-Control

USB Focus Controller

User Manual

Vivo Movie Solution

Index

Safety Notice

To prevent damage to your product or injury to yourself or to others, read the following safety precautions in their entirety before using this equipment. Keep these safety instructions where all those who use this equipment will read them.

☞ **Do not disassemble or modify**
Failure to observe this precaution could result in electric shock or product malfunction. Should the product break open as the result of a fall or other accident, remove the batteries.

☞ **Keep dry**
- Do not handle with wet hands or immerse in or expose to water or rain. Failure to observe this precaution could result in fire or electric shock.
- Do not use in the presence of flammable gas. Failure to observe this precaution could result in explosion or fire.

☞ **Keep out of reach of children**
This device contains small parts which may pose a choking hazard. Consult a physician immediately if a child swallows any part of this device.

☞ **Do not expose to high temperatures**
Do not leave the device in a closed vehicle under the sun or in other areas subject to extremely high temperatures. Failure to observe this precaution could result in fire or in damage to the casing or internal parts.

☞ **Observe precaution when handling batteries**
- Use only batteries listed in this manual. Do not mix old and new batteries or batteries of different types.
- Do not short or disassemble.
- Do not attempt to insert batteries upside down or backwards.
- Batteries are prone to leakage when fully discharged. To avoid damage to the product, be sure to remove the batteries when leaving the product unattended for prolonged periods or when no charge remains.
- Should liquid from the batteries come into contact with skin or clothing, rinse immediately with fresh water.

Foreword

Aputure® V-Control is the world's first mode-switching USB focus controller. One can shoot in either Still or Video mode, with full control of live-view, focusing, and exposure settings. Clearly labeled, versatile buttons give you a plethora of options. It'll change the way you record video and shoot stills.

1. Product Introduction

Aputure V-Control is a battery powered, handheld USB host device designed to control certain Canon DSLR cameras that use Canon's USB protocol. 7 versatile buttons and a center control wheel can be used to adjust a variety of settings. Firstly, it can control focus and save focal presets. Secondly, it can control live-view, including digital zooming, navigation, and saving focus zones. And finally, it can control exposure settings, including shutter, aperture, ISO, and exposure compensation.

Main Features

1. World's 1st mode-switching USB focus device
2. Total exposure control (shutter, aperture, ISO, EC)
3. Total live-view control
4. Compatible with many accessories
5. LCD display for adjustment settings
6. Multiple focus options in still mode
7. Four focus point presets in video mode
8. Two USB ports for ergonomic flexibility
9. Simple operation & easy portability

2. Components

(Front)

(Side)

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Controller

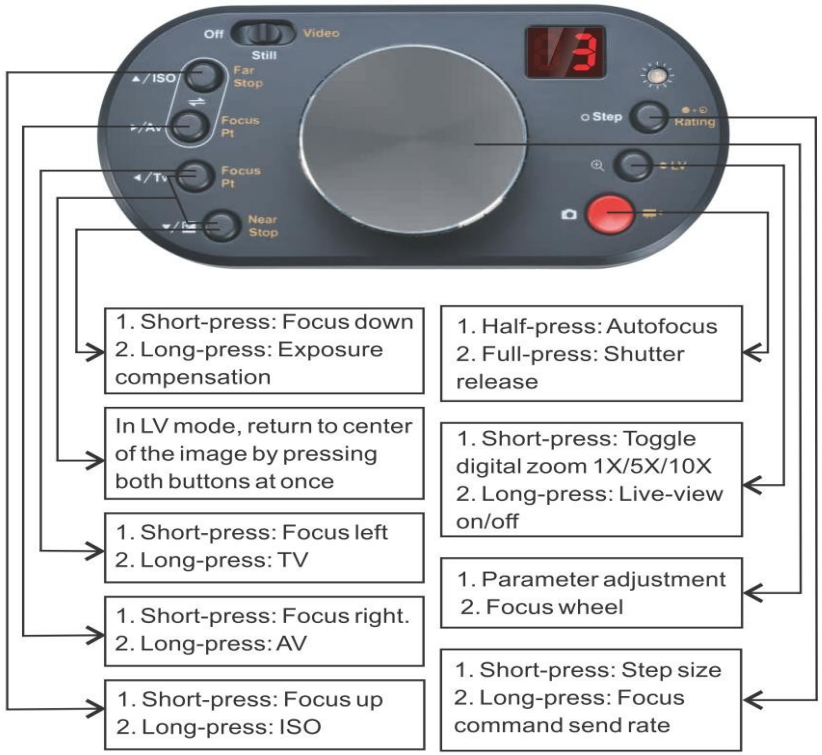
1. Mode Switch Button (Off/Still/Video)
2. Center Wheel
3. LCD Display (Left: command send rate; Right: focus step)
4. Indicator Bulb
5. Versatile Buttons
6. USB Port

Accessories

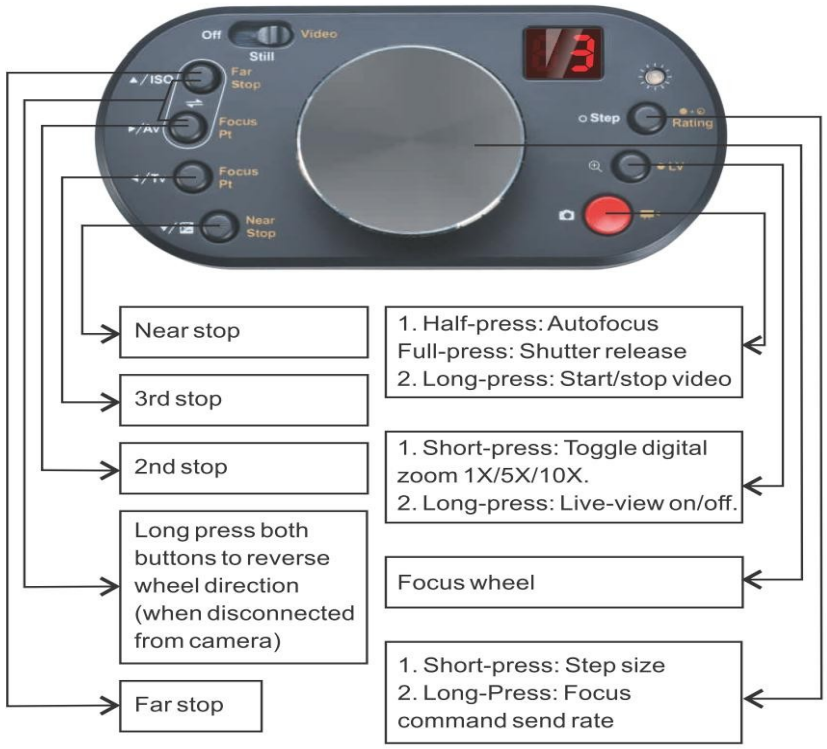
7. Dual Pipe Rig Mount
8. Single Pipe Rig Mount
9. USB Cable
10. Hang rope
11. Leather Case

3. Button Information

Still Mode



Video Mode



4. Getting Started and Basic Operation

1. Aputure V-Control only works with DSLRs that use Canon's USB protocol, including Canon EOS ID Mark IV, 5D Mark III, 5D Mark II, 7D, 60D, 600D/T3i/ Kiss X5, 550D/T2i/Kiss X4, 500D/T1i/Kiss X3, 1100D/T3/KissX50, and so on.
2. An autofocus lens must be mounted on the camera if you intend to use the V-Control's focus function. Manual focus lenses will also work, but you lose the ability to control focus or use the focus point functions.

Battery Installation

1. Open the battery cover in the opposite direction of the arrow.
2. Insert the batteries according to the + and - symbols as shown in the battery compartment.
3. Close the battery cover in the direction of the arrow.

Attaching V-Control

Connect the camera and V-Control by the USB cable as shown below. If V-Control is connected by 2 USB cables, only one USB cable will work.

Button Testing

A diagnostic mode is built into the disconnected state of V-Control. Short pressing any switch by itself or turning the focus wheel will cause the LED to blink green. Long- pressing any switch will cause the LED to turn red.

Reversing Wheel Direction

The center control wheel's rotational direction can be reversed. You can adjust focus or settings in the direction of your choice.
1. The wheel's direction can only be modified while V-Control is turned on and the camera is disconnected or turned off.
2. To reverse direction, press and hold buttons <▲> and <▶>. The LED will begin blinking green and red, then stop.
3. When the LED is green for 2 seconds, the wheel's rotational direction is reversed.

Note:
Wheel rotational direction and button functions are saved automatically, so there is no need to reset them each time you turn on V-Control.

Adjusting Focus Step Size & Focus Command Send Rate

Focus Step Size

Canon's USB implementation allows for three different step sizes when sending a focus command to the camera. Short-pressing <Step> cycles through the three different sizes. 1, 2, or 3 will show on the right part of LCD to indicate small, medium and large step sizes. The bigger the focus step, the quicker the focus moves.

Note:
1. Focus step size is saved automatically. There's no need to reset each time you turn on V-Control.
2. Do not change the focus step size after focus points have been saved, or you will lose focus point accuracy.

Focus Command Send Rate

1. Focus command send rate is one of the most important settings on V-Control. It determines how quickly focus is adjusted, and allows accurate and repeatable saved focus points.
2. When V-Control is in Still or Video mode, long-press <Rating> and rotate the wheel to adjust the focus command send rate. The left part of the LCD will indicate rate by showing 1 to 9.

Note:
1. The focus command send rate is saved automatically, so there is no need to reset each time you turn on V-Control.
2. V-Control works best when the focus command send rate is between 4-6.
3. Do not change the focus command send rate after focus points have been saved, or you will lose focus point accuracy.

5. Functions

Live-View On/Off

Long-press <LV> to start or stop live-view display.

Note:
7D and 500D/T1i/Kiss X3 ignore live-view “on” commands while in video recording mode.You'll need to manually activate live-view on the camera.

Digital Zoom

If live view is enabled, short-pressing <⊕> cycles through 1x/5x/10x digital zoom, which can be used to aid focusing.

Note:
Digital zoom does not work while recording is activated.

Focus Control

Focus can be adjusted by using the center control wheel when live-view is turned on. By default, turning the wheel clockwise will move focus closer. Turning the wheel counter-clockwise will move focus towards infinity. This matches the focus ring rotation of Canon EF and EF-S lenses. It is also possible to reverse the wheel's direction, which is described in page 8.

Note:
Some lenses suffer from focus point shift. For example, each increment towards infinity focus may rotate the focus ring 15 degrees, while each increment towards near focus may rotate the focus ring 10 degrees. This difference makes it all but impossible to use focus points reliably. Only some lenses suffer from this attribute, so test for this by saving two focus points and repeatedly transitioning between them.

6. Controller Operation

Still Mode

Still mode is for taking photographs.
1. Switch V-Control to Still mode.
2. Long press <LV> to enter live-view.
3. Choose the focus area by short-pressing < ▲▼◀▶ >. Return the focus area to the center of the image by pressing < ◀▼ > together.

Note:
Don't use both camera's and V-Control's buttons at the same time when moving the focus area.

4. Exposure Adjustments
Long-press ISO/AV/TV/ and rotate the center wheel to adjust settings such as ISO, aperture, shutter speed, and exposure compensation.Stop when the new parameter has been shown on the camera.

Note:
1. Adjust ISO,AV,TV when the camera is in M/AV/TV/P mode.
2. Adjust when the camera is in AV/TV/P mode.

5. Autofocus and Image Capture
Half press the red button to autofocus, and the LED will turn from red to green. Hold down to fire the shutter.

Note:
The lens on the camera should be set to autofocus.

Video Mode

Video mode is for recording videos/movies.
1. Switch V-Control to Video mode. Set the camera to Video mode.
2. Long-press <LV> to enter live-view.
3. Using Focus Points
Save, delete or return to focus points by pressing < ▲▼◀▶ >. Limit the the focus point by pressing < ▲▼ >. The farthest stop is set by <▲>, and the nearest stop is set by <▼>. Once these focus points have been set, the other 2 focus points can only be set between them.

4. Save/Delete/Switch Focus Points
1) Rotate the center wheel to choose focus points
2) Saving Focus Points
Long-press < ▲▼◀▶ > to save the current point; LED will blink green once.
3) Delete Focus Points
Long-press the buttons again to delete the current position,and it blinks green twice.
4) Switching Focus Points
Short-press < ▲▼◀▶ >, and focus will switch to the corresponding position. If no focus points have been saved, the operation will fail.

Note:
1. Focus points can only be saved or cleared when live view is turned on and you are not recording video.
2. Follow the orders to save the focus points.
3. Saving/switching the focus points depends on the command send rate. Ex: V-Control needs the correct command send rate to arrive at the saved focus point. If the rate is too high, it will impede focus precision. If the far and near point haven't been set, and you rotate the center wheel beyond the range, the saved focus points will not work.
4. If you have saved focus points, the following may cause you to lose your focus point accuracy:
- Turning the focus ring on the lens by hand.
- Changing the focus step size or focus command send rate.
- Setting the focus command send rate too fast.
- Changing the focal length of the lens (if using a zoom).
- Initiating autofocus.
- Continuing to turn the wheel or holding a directional focus button after the focus reaches the end of the focus range.
- Using a lens model with varying focus increments, resulting in focus point shift.

5. Start & Stop
Long press the red button to start or stop recording the video.You can also record the video by pressing record on the camera.

Note:
Some cameras can't focus by half pressing the shutter. Please refer to your camera manual to determine whether yours can or cannot.

6. Shoot in Video Mode
1) When video is not recording, half press the red button to autofocus, and LED will turn from red to green. Hold down to fire the shutter.
2) When video is recording, you can also half press the red button and hold down to shutter, while it won't autofocus. This won't affect video.

Note:
When video is recording, V-Control may not control certain Canon cameras due to the cameras' properities.

State Indicator

State		Operation		Indicator LED
Connected	Video Mode	No operation		Light red
		Save focus point		Blink green once
		Delete focus point		Blink green twice
	Still Mode	No operation		Light green
Disconnected		Test buttons	Short press any button/ Rotate wheel	Light green
			Long press any button	Light red
		Reverse wheel direction		Blink red and green
		Switch modes	Switch from Off to Video	Blink red three times
			Switch from Off to Still	Blink green three times
		Button is stuck		Light red
		Low battery power		Blink red

7. Specifications

Power Supply: DC 3.0V(AA 1.5V X2)
Current: ⩽ 50MA
Dimensions: 114.5(L)X57.5(W)X49.2(H)MM
Standby Time: 80hours
Working Time: 40hours

8. Important Notice

1. Turning the center focus wheel after a lens has reached the end of its focus range may cause excessive wear on the autofocus motor. To prevent this, do not rotate the wheel any more when you've reached the limit of the lens.
2. Don't switch modes too frequently in order to prevent focusing problems.

9. Troubleshooting

1. Controller does not turn on.
- Make sure the batteries have power.
- Make sure the Mode switch is set to "Still" or "Video" mode.

2. Controller does not recognize when camera is connected.
- Make sure camera is compatible with V-Control. (refer to page 7 for compatible models).
- Check that USB cable is securely plugged into both V-Control and camera.
- Make sure the batteries have power and the mode switch is set appropriately.

3. Camera displays error or is unresponsive.
- Make sure the batteries have power and secure the mode switch is set right.

- Disconnect the camera from the V-Control and turn both off. Pull the battery from the camera and wait 10 seconds, then replace. Reconnect the camera to the V-Control, then turn the camera on, followed by the V-Control.

4. LED continuously blinks green or red when V-Control is turned on.
One of the switches is stuck. Press/release each one to find the stuck switch.

5. Button presses seem difficult.
Executing specific functions that require you to hold a button don't always work. This indicates a stuck or defective button insert. Once you have found the defective button, please contact the manufacturer.

6. Focus points are not accurate.

- Make sure the focus command send rate is not too fast. Changing the command send rate, focus step size, or focal length after saving focus points can affect accuracy.
- Some lenses have slightly different increments if the focus moves from near to infinity versus infinity to near.
- It will not be accurate regardless of V-Control settings. This is a limitation of the specific lens.

7. Focus occasionally pauses or moves unevenly.
Make sure the focus command send rate is not too fast for the specific combination of lens, focus step size, and focal length. If the command send rate is too fast, some focus commands are dropped because the camera is busy executing the previous command. This gap before the next command is received causes the focus to move unevenly. You should keep the focus command send rate between 4 and 6 commands per second.