

# FREEWAVE CAPTAIN

TTL TRIGGER

USER MANUAL



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## THANK YOU FOR CHOOSING VELLO.

The Vello FreeWave Captain wireless triggering system is a multi-purpose 2.4 GHz 4-channel digital radio TTL system that empowers users to remotely trigger flash and camera devices. You can enjoy the freedom of triggering from a distance up to 300 feet (100 meters).

The Vello FreeWave Captain is designed to give photographers an easy-to-use, high-quality TTL radio slave system. With the use of built-in TTL functionality, your camera and flash unit can automatically adjust your settings for the ideal exposure in various lighting scenarios. The wireless control capability eliminates the presence of cable clutter, making it ideal for studio or outdoor flash scenarios.

Remote camera triggering is another ability of the Vello FreeWave Captain. This is helpful when a subject, such as wildlife, may be difficult to approach. Additionally, the wireless function of the device removes the potential of camera shake, making it ideal for macro, close-up, and long-exposure photography.

The Vello FreeWave Captain's high-speed sync and second-curtain sync functions create easy-to-control lighting effects, making it simple to take creative and artistic images. The wireless system has a high-speed sync of up to 1/8000 second, allowing the user to capture images wirelessly in most shooting scenarios. Its small size and included pouch make the Vello FreeWave Captain simple to store and transport.

To fully understand and best use the functions and capabilities of your Vello FreeWave Captain, please take a moment to read through this user guide.

## FEATURES

**TTL functionality for Nikon (VCTTL-N) or Canon (VCTTL-C) units:** Designed to work seamlessly with your camera's i-TTL or E-TTL system.

**Adjustable TTL:** Fine-tune your TTL settings.

**4 separate radio channels:** Digitally coded 2.4 GHz signal, perfect for operating multiple devices wirelessly without having to worry about radio or flash interference.

**Multiple trigger options:** Wireless hot shoe, studio flash, and shutter release triggering.

**High-speed sync:** Offers a maximum sync speed of up to 1/8000 second, allowing the user to capture images wirelessly in most shooting scenarios.

**Second-curtain sync:** Allows you to create special effects and “after blur” images.

**Wake up:** Remotely wake up your flash unit (with compatible flashes).

**Battery level indicator:** Level of battery power.

**Backlit LCD panel:** Allow viewing / changing settings in low light.

**Key lock:** Ability to lock the settings against inadvertent changes.

**Sleep mode:** After 10 minutes of inactivity.

## COMPATIBLE DEVICES

The Vello FreeWave Captain receiver is available in models for both Nikon i-TTL and Canon E-TTL cameras. The Nikon and Canon models are each compatible with the respective company's TTL (through-the-lens) technology.

To make full use of the FreeWave Captain system, we recommend using TTL-capable hot-shoe speedlights from your camera's manufacturer.



## PRECAUTIONS

- Please read and follow these instructions and keep this manual in a safe place.
- There are no user-serviceable parts inside the devices. Do not attempt to disassemble or perform any unauthorized modification.
- Do not operate the transmitter or receiver in the presence of flammable gas or vapors.
- 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.
- Keep out of reach of children. This device contains small parts which may pose a choking hazard.
- Observe caution when handling batteries. Batteries may leak or explode if improperly handled. Use only the batteries listed in this manual. Make certain to align the battery with the correct polarity.
- 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.

- Handle the units with care.
- Do not use or leave the devices in conditions of extreme heat, severe cold, or high humidity.
- Turn off the power of the camera and studio flash before inserting or removing the remote.
- Dispose of used batteries, packaging, and old devices in accordance with appropriate local environmental regulations.
- Clean the unit with a soft, dry cloth.
- Make sure the item is intact and that there are no missing parts.
- All photos are for illustrative purposes only.

# BOX CONTENTS

## Transmitter and Receiver Set (VCTTL-C and VCTTL-N)

- Transmitter
- Receiver
- 4× AA batteries
- 3.5 mm to 3.5 mm studio flash cable
- 3.5 mm to 1/4" monoplug adapter
- Shutter release cables (see *page 9*)
- USB upgrade cable
- 2× lanyards
- Pouch case
- User manual

## Receiver Only (VCTTL-CR and VCTTL-NR)

- Receiver
- 2× AA batteries
- 3.5 mm to 3.5 mm studio flash cable
- 3.5 mm to 1/4" monoplug adapter
- 1× lanyard
- User manual



VCTTL-C/N

VCTTL-CR/NR



### Also Included with Canon Set (VCTTL-C)

- Shutter Remote 2.5 mm to Canon 2.5 mm Shutter Release Cable (RCC-C1)
- Shutter Remote 2.5 mm to Canon 3-Pin Camera Shutter Release Cable (RCC-C2)



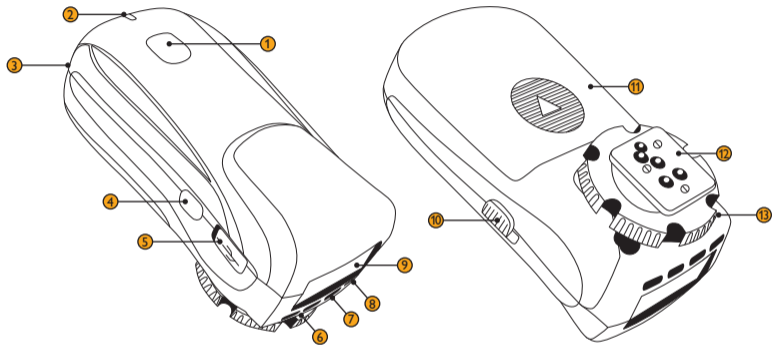
### Also Included With Nikon Set (VCTTL-N)

- Shutter Remote 2.5 mm to Nikon 10-Pin Camera Shutter Release Cable (RCC-N1)
- Shutter Remote 2.5 mm to Nikon DC2 Camera Shutter Release Cable (RCC-N2)
- Shutter Remote 2.5 mm to Nikon D70s/D80 Camera Shutter Release Cable (RCC-N3) *(Not Shown)*



# OVERVIEW

## Transmitter

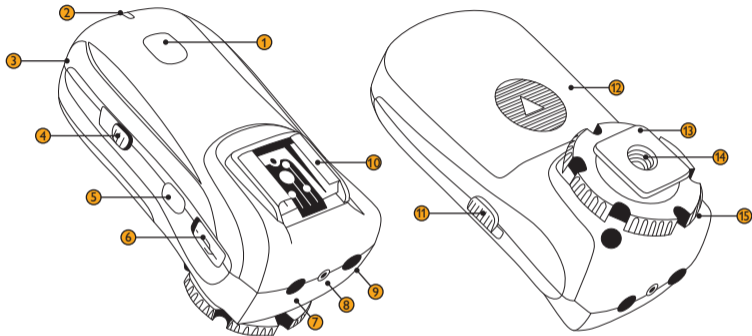


1. Shutter release test button
2. LED indicator
3. Lanyard loop
4. Flash test button
5. Mini-USB port

6. EV compensation buttons
7. Channel selector button
8. Function button
9. LCD screen
10. On/off switch

11. Battery compartment door
12. Hot-shoe foot
13. Tightening screw

## Receiver



- |                                |                                  |                                |
|--------------------------------|----------------------------------|--------------------------------|
| 1. Shutter release test button | 6. Mini-USB port                 | 11. On/off switch              |
| 2. LED indicator               | 7. 3.5 mm flash-trigger output   | 12. Battery compartment door   |
| 3. Lanyard loop                | 8. 2.5 mm shutter-release output | 13. Cold-shoe foot             |
| 4. Channel selector switch     | 9. DC5V power port               | 14. 1/4"-20 light-stand thread |
| 5. Flash test button           | 10. Hot-shoe mount               | 15. Tightening screw           |

## INSTALLING THE BATTERIES & TURNING ON THE DEVICE

The Vello FreeWave Captain transmitter and receiver each take two AA batteries. To install the batteries, simply remove the battery compartment door on the back of the unit. With the door removed, insert the batteries with the correct polarity as displayed within the compartment. Once secured, reinstall the battery compartment door.



To turn on the Vello FreeWave Captain transmitter or receiver, simply slide the on/off switch to the 'on' position. Reverse this step to turn the device off.



## SETTING THE CHANNELS

The Vello FreeWave Captain transmitter and receiver can communicate with your choice of four separate channels, thereby allowing the photographer to shoot without interference from other shooters.

To change the channel on the transmitter, turn on the device and press the channel selector [ CH ] button until the desired channel appears on the LCD screen.

To change the channel on the receiver, use the channel selector switch on the left side of the unit.

The channels on both the transmitter and receiver must be synchronized for the two devices to communicate.



## MOUNTING THE TRANSMITTER

To wirelessly trigger your flash device using the Vello FreeWave Captain, the transmitter must be mounted on the camera's hot shoe. With both devices turned off, slide the transmitter's hot-shoe foot into the camera's hot-shoe mount. Turn the transmitter's tightening ring to secure the device to the camera.



## MOUNTING THE RECEIVER

*Note: Make sure your flash and FreeWave Captain are turned off before mounting.*

Mount the receiver to your tripod or stand via one of the two provided mounting options:

1. Threaded socket for a standard 1/4" screw mount.
2. Accessory shoe (cold shoe) foot.

### **Mounting a Hot-Shoe Flash**

To mount your hot-shoe flash to the receiver, slide the foot of the hot-shoe flash into the receiver's hot-shoe mount. Secure the flash to the hot-shoe mount.



## CONNECTING TO A STUDIO FLASH

With all devices turned off, plug the 3.5 mm studio flash cable into the receiver's flash [ ⚡ ] port. Plug the other end into your studio flash. If your flash does not accept a 3.5 mm cable, attach the 1/4" monoplug adapter to the cable and insert that into the studio flash's input.

*Note: For studio flashes with household plugs, a 3.5 mm to household adapter is available separately.*





# FLASH TRIGGER FUNCTIONS

## TTL EV Control

The Vello FreeWave Captain's transmitter provides the user with the ability to manually adjust the TTL reading of a TTL-capable flash. This function can adjust the TTL reading in 1/3 stops between -3 and +3. To use this function, simply push the + or - EV buttons on the bottom of the transmitter.

Tip: Each photographer has their own vision of proper image exposure. The EV settings allow the photographer to adjust the TTL exposure to reflect their own specific vision.

*Note: Remote flash units attached the Vello FreeWave Captain receiver need to be set to TTL EV 0 for proper TTL exposure control by the Vello FreeWave Captain transmitter. Separate EV adjustments to individual remote flashes will result in improper TTL exposure.*

*Note: The Vello FreeWave Captain is optimized for Nikon and Canon TTL flashes. Not all third-party flashes may be compatible.*


## Camera-Specific Information

For more information about your specific camera visit our page here:  
[www.vellogear.com/Camera\\_Specific\\_Compatibilities/](http://www.vellogear.com/Camera_Specific_Compatibilities/)

# CANON-SPECIFIC FUNCTIONS


## High-Speed Sync (HSS) Control

High-speed sync (HSS) allows your camera to set the shutter speed faster than what flash would normally be able to fire in sync with. HSS mode instructs the flash to fire multiple short pulses of light to match the shutter's speed. To the camera, this will appear as one continuous flash. Because of the short duration of the light, the flash needs to be positioned closer to the subject.

To activate high-speed sync mode, set your transmitter to HSS mode by pushing the function [  ] button until HSS appears on the Vello FreeWave Captain's LCD display.

## Second-Curtain Sync (SCS) Control

Second-curtain sync (SCS) fires a flash at the end of an exposure (rather than at the beginning) to create the illusion of motion in an image. This creates an image that blurs the motion of the subject from its position at the beginning of the exposure and then fully illuminates and captures its position at the end of the exposure.


To activate, set your transmitter to SCS mode by pressing the function [  ] button until SCS appears on the Vello FreeWave Captain's LCD display.

Note: Canon wireless flash functions need to be disabled in your cameras menu setting to use SCS.






## AF Illumination Control

On a Canon camera, the AF illumination light is controlled by adjusting the settings within your camera body. See your Canon instruction manual for your camera model.

## Wake Up





To remotely wake up a flash unit, half-press the flash test [  / Test ] button.



## Key Lock

Press and hold the function [  /  ] button for 2 seconds to initiate the key-lock function. A lock icon [  ] will appear on the screen and no setting changes can be made to the unit while this mode is initiated. Press and hold the function [  /  ] button for 2 seconds to disable the key-lock function.

## Canon M2 Mode

The M2 Mode is for select Canon models that use a newer sync protocol. If your Canon camera does not work in the default mode, then switch the transmitter to the M2 mode to see if it's compatible.

Press and hold the EV + and Function [  /  ] button together to enter M2 mode. The transmitter will default to High Speed Sync and appear on the LCD as HSS M2. To exit HSS and enter M2 mode, press the Function button [  /  ] again.

Press and hold the EV + and Function [  /  ] buttons together to disable M2 mode.

*Note: In M2 mode, second-curtain sync is not supported.*

# NIKON-SPECIFIC FUNCTIONS

## High-Speed Sync (HSS) Control

High-speed sync (HSS) allows your camera to set the shutter speed faster than a flash would normally be able to fire in sync with. HSS mode instructs the flash to fire multiple short pulses of light to match the shutter's speed. To the camera, this will appear as one continuous flash. Because of the short duration of the light, the flash needs to be positioned closer to the subject.

To activate high-speed sync mode on Nikon cameras, set your camera to a shutter speed above 1/250.

## Second-Curtain Sync (SCS) Control

Second-curtain sync (SCS) fires a flash at the end of an exposure (rather than at the beginning) to create the illusion of motion in an image. This creates an image that blurs the motion of the subject from its position at the beginning of the exposure and then fully illuminates and captures its position at the end of the exposure.

To set your Nikon camera to SCS mode, follow the instructions in your camera's manual.

## AF Illumination Control

To be able to control AF illumination with the Vello FreeWave Captain, turn off AF illumination in your camera according to the instructions in your camera's manual.

The AF illumination light emitted by the Nikon Flash can be controlled via the transmitter's AF function. To turn off this function, push the function [ AF-ILL ] button.

With your camera's AF illumination set to OFF, the Vello FreeWave Captain will allow you to turn the AF illumination of your flash on or off without going through the camera menu.


## Wake Up

To remotely wake up a flash unit, half-press the flash test [ ⚡/Test ] button.

## Key Lock

Press and hold the function [ AF-ILL ] button for 2 seconds to initiate the key-lock function. A lock icon [ 🔒 ] will appear on the screen and no setting changes can be made to the unit while this mode is initiated. Press and hold the function [ AF-ILL ] button for 2 seconds to disable the key-lock function.

## TRIGGERING THE FLASH

1. With all devices turned off, connect and secure the transmitter to the camera by securing it to your camera's hot-shoe mount.
2. Mount and secure the receiver to your remote flash unit.
3. Turn on the camera, flash, transmitter, and receiver.
4. Synchronize the channel selection on the transmitter and receiver.
5. Press the flash test [  /Test ] button on the transmitter or receiver to verify flash firing.
6. With your camera set to the desired mode and settings, half-press the shutter release on the camera to autofocus the camera.
7. Fully press the shutter release on the camera to activate the camera's shutter and flash simultaneously. A green light will appear on the transmitter when the signal is sent, and a red light will appear on the receiver when the signal is received.




# USING AS A REMOTE SHUTTER RELEASE

## Mounting the Receiver On-Camera

To mount the receiver to your camera, slide the device into the camera's hot-shoe mount. Turn the receiver's tightening ring to secure it to the camera.

## Connecting the Receiver to Your Camera




A wired connection is required to connect the receiver to your camera. With all of the devices off, connect the shutter release cable to your receiver by inserting the 2.5 mm end into the receiver's shutter release [  ] port. Insert the other end into the camera's shutter release port.



*Note: To use the FreeWave Captain in remote shutter release function with a flash, mount your receiver onto a bracket or light stand. Connect the receiver to the camera via the shutter release cable and mount your flash onto your camera's hot shoe.*






## TRIGGERING THE CAMERA | SINGLE-SHOT MODE

1. With all devices turned off, connect and secure the receiver to the camera by plugging the 2.5 mm shutter release cable into the camera's shutter remote port and the other end into the receiver's shutter release [  ] output.
2. Turn on the camera, transmitter, and receiver.
3. Synchronize the channel selection on the transmitter and receiver.
4. Set your camera to single-shot mode.
5. Half-press the shutter release test [  /Test ] button on the transmitter to autofocus the camera.
6. Fully press the shutter release test [  /Test ] button on the transmitter to activate the camera's shutter. A green light will appear on the transmitter when the signal is sent, and a red light will appear on the receiver when the signal is received.








## TRIGGERING THE CAMERA | CONTINUOUS-SHOT MODE

1. With all devices turned off, connect and secure the receiver to the camera by plugging the 2.5 mm shutter release cable into the camera's shutter remote port and the other end into the receiver's shutter release [  ] output.
2. Turn on the camera, transmitter, and receiver.
3. Synchronize the channel selection on the transmitter and receiver.
4. Set your camera to continuous shot mode.
5. Half-press the shutter release test [  /Test ] button on the transmitter to autofocus the camera.
6. Fully press and hold the shutter release test [  /Test ] button on the transmitter to activate the camera's shutter. Release the button to stop the shutter. A green light will appear on the transmitter when the signal is sent, and a red light will appear on the receiver when the signal is received.






## TRIGGERING THE CAMERA | BULB MODE

1. With all devices turned off, connect and secure the receiver to the camera by plugging the 2.5 mm shutter release cable into the camera's shutter remote port and the other end into the receiver's shutter release [  ] output.
2. Turn on the camera, transmitter, and receiver.
3. Synchronize the channel selection on the transmitter and receiver.
4. Set your camera to bulb mode.
5. Half-press the shutter release test [  /Test ] button on the transmitter to autofocus the camera.
6. Fully press and hold the shutter release test [  /Test ] button on the transmitter to open the camera's shutter. A green light will appear on the transmitter when the signal is sent, and a red light will appear on the receiver when the signal is received.
7. Release the button to close the shutter.



## TRIGGERING THE CAMERA | SELF-TIMER MODE

1. With all devices turned off, connect and secure the receiver to the camera by plugging the 2.5 mm shutter release cable into the camera's shutter remote port and the other end into the receiver's shutter release [  ] output.
2. Turn on the camera, transmitter, and receiver.
3. With your camera's shutter speed set to higher speed than bulb, set your camera to self-timer mode.
4. Synchronize the channel selection on the transmitter and receiver.
5. Half-press the shutter release test [  /Test ] button on the transmitter to auto-focus the camera.
6. Fully press the shutter release test [  /Test ] button on the transmitter to activate the shutter in self-timer mode. A green light will appear on the transmitter when the signal is sent, and a red light will appear on the receiver when the signal is received.

*NOTE: When used as a remote shutter release, the Vello FreeWave Captain will not fire a separately mounted remote flash in sync with the camera, even when they are on the same channel.*

## COMPATIBILITY

The Vello FreeWave Captain shares a radio signal frequency with the Vello Flash Trigger LR on the first four channels. Pairing these units is ideal for those looking for an economic option to expand their lighting setups.

## USB UPGRADES

Updates for the Vello FreeWave Captain will be available on the Vello website, at [www.vellogear.com](http://www.vellogear.com). To update your devices, download the update to your computer and connect the transmitter and receiver to it using the included USB to mini-USB cable.

## FCC COMPLIANCE

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## SPECIFICATIONS

	Transmitter	Receiver
<b>Frequency</b>	2.4 GHz	2.4 GHz
<b>Channels</b>	4 channels	4 channels
<b>Operating Range</b>	Up to 300' (100 m)	Up to 300' (100 m)
<b>Sync Speed</b>	1/8000 maximum	1/8000 maximum
<b>Connections</b>	Hot-shoe foot, USB port	Hot-shoe mount, USB port, 3.5 mm flash sync port, 2.5 mm shutter release port, 5 V DC power input, USB Port
<b>Power Source</b>	2× AA batteries	2× AA batteries or optional AC adapter
<b>Dimensions</b>	3.63" × 1.87" × 1.72" (9.21 × 4.75 × 4.37 cm)	3.66" × 1.85" × 1.8" (9.3 × 4.71 × 4.56 cm)
<b>Weight (with batteries)</b>	4.7 oz. (134 g)	4.7 oz. (133 g)

## TROUBLESHOOTING

Check that channels on all communicating devices are identical. When turning on the unit, it is important to review and, if necessary, reset the group selection.

If first choice of channel does not work, try a different channel until you find one that works.

Ensure that all cables are installed correctly.

Make sure that the power source for each device is properly installed and carrying a sufficient charge. Weak batteries can reduce the distance over which a transmission works.

If you are triggering with a wired connection, make sure the device is connected using the correct cable and make sure the cable is connected to the correct input or output.

Make sure that a communication confirmation appears on the LCD screen when sending a signal.

Verify that flash and camera equipment are operating properly.

Check for a stuck Test button on all units, including flash devices.

Make sure the devices are within the maximum operating distance of 300 feet (100 meters).

# ONE-YEAR LIMITED WARRANTY

This Vello product is warranted to the original purchaser to be free from defects in materials and workmanship under normal consumer use for a period of one (1) year from the original purchase date or thirty (30) days after replacement, whichever occurs later. The warranty provider's responsibility with respect to this limited warranty shall be limited solely to repair or replacement, at the provider's discretion, of any product that fails during normal use of this product in its intended manner and in its intended environment. Inoperability of the product or part(s) shall be determined by the warranty provider. If the product has been discontinued, the warranty provider reserves the right to replace it with a model of equivalent quality and function.

This warranty does not cover damage or defect caused by misuse, neglect, accident, alteration, abuse, improper installation or maintenance. EXCEPT AS PROVIDED HEREIN, THE WARRANTY PROVIDER MAKES NEITHER ANY EXPRESS WARRANTIES NOR ANY IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. This warranty provides you with specific legal rights, and you may also have additional rights that vary from state to state.

To obtain warranty coverage, contact the Vello Customer Service Department to obtain a return merchandise authorization ("RMA") number, and return the defective product to Vello along with the RMA number and proof of purchase. Shipment of the defective product is at the purchaser's own risk and expense.

For more information or to arrange service, visit [www.vellogear.com](http://www.vellogear.com) or call Customer Service at 212-594-2353.

Product warranty provided by the Gradus Group.  
[www.gradusgroup.com](http://www.gradusgroup.com)



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