Bolt™

Inspiration strikes

VX-760C
WIRELESS TTL FLASH

User's Manual

Introduction

Thank you for choosing the Bolt VX-760C Flash. This advanced digital flash unit puts creative control in your hands with a broad range of automatic and manual features. It can be used as both an on-camera flash and as a wireless master or slave flash. Among the benefits you'll enjoy:
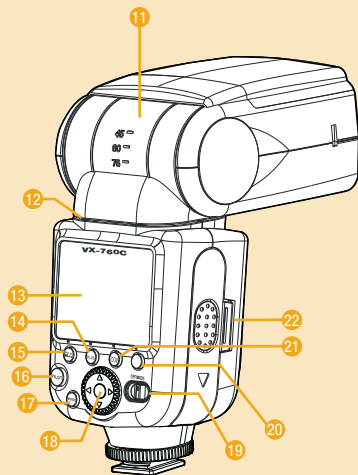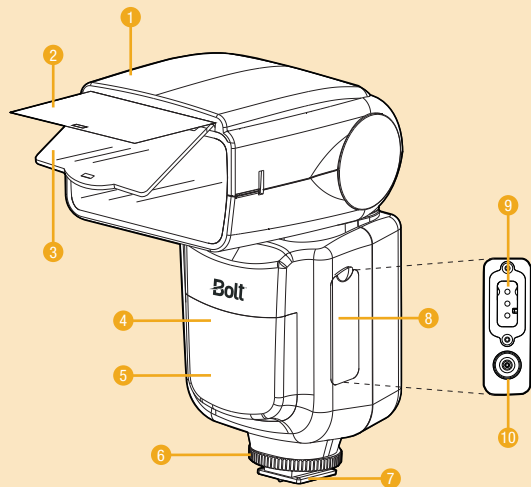
- Full compatibility with Canon's E-TTL and E-TTL II metering systems
- Wireless TTL control with multiple flash units and groups
- Flash exposure bracketing
- Multi (stroboscopic) mode
- Automatic and manual zoom from 24mm to 180mm
- Tilt and swivel head: -7° down, 90° up, 180° right, and 90° left
- Two-inch backlit LCD
- Eight manual flash levels: full to 1/128 power, plus fine-tuning by 1/3
- Autofocus assist for low-light photography
- Rear-curtain sync
- Built-in reflector and diffuser panels
- Automatic power-saving function

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TTL Ⓜ Zoom 24mm

+21/3

MULTI

AbC F- 2.8 Hz

23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 41 42 43
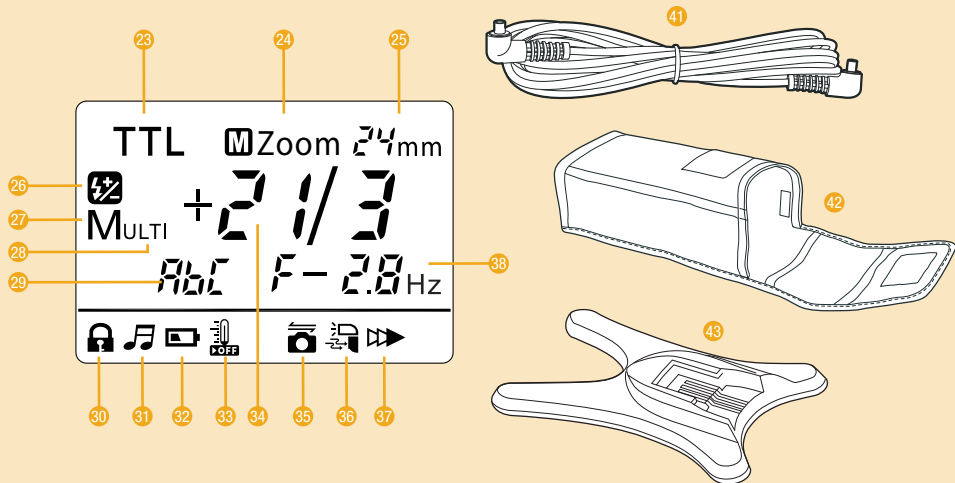
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Warnings

Before using your VX-760C, please read the following safety notices carefully and thoroughly to ensure safe use, and to help prevent damage to your flash or injury to yourself or others.

- Do not fire the flash at close range directly into the eyes of people or animals. This can cause damage to the retina and may even lead to blindness.
- To avoid overheating and damaging your flash unit, please wait for at least ten minutes after twenty-five continuous flashes at full power.
- Do not disassemble or attempt to repair this product yourself. There are high-voltage components inside that can produce a hazardous electric shock.
- Keep this product and its batteries out of the reach of children.
- Use only the power sources specified in this manual.
- Always switch the flash off before changing the batteries.
- Always install AA batteries of the same type, brand, and age. Do not combine different types or brands, or old and new batteries. This can cause the batteries to leak, overheat, or explode.
- Install the batteries in the proper orientation, according to the indicator in the battery chamber. Installing batteries in the reverse orientation may cause them to leak, overheat, or explode.

- Do not use or store the VX-760C in flammable conditions (such as environments containing flammable gases or liquid chemicals). This can damage the flash, start a fire, or cause an electric shock.
- Do not clean the VX-760C with agents containing corrosive or flammable substances such as paint thinner, benzene, or nail polish remover.
- This product is not water resistant. Keep it away from rain, snow, humidity, and general moisture.
- Should the VX-760C sustain physical damage, do not touch any exposed interior metal parts. If touched, they may generate an electric shock or cause a malfunction. Promptly remove the batteries and take the product to an authorized service center for repair.
- If you detect excessive heat, smoke, or a burning smell coming from the flash, immediately stop operation and remove the batteries to prevent the product from igniting or melting. Take the product to an authorized service center for repair.
- Do not drop or otherwise cause a strong physical impact to the VX-760C, as this can cause a malfunction that may cause it to explode or ignite.
- Remove all batteries from the VX-760C before long-term storage in order to prevent the product from igniting or leaking corrosive liquids.
- Do not store or use this product at temperatures above 104°F (40°C).
- Keep the metal contacts in the battery compartment clean and free of corrosion and dirt. Do not touch them with your fingers. Corrosive elements on the contacts can damage the VX-760C and prevent it from functioning properly. Contacts may be cleaned with isopropyl alcohol on a cotton swab.

- Dispose of used batteries properly. Never heat them or throw them into a fire, as this can cause the batteries to leak corrosive liquids, generate heat, or explode.

Installing Batteries

The VX-760C can be powered by four AA batteries of several types:

- Lithium (1.5 V)
- Nickel-metal hydride (Ni-MH) (1.2 V)
- Alkaline (1.5 V)

Note: For the fastest recycle times and longest battery life, lithium or Ni-MH batteries are recommended.

To install batteries, make sure the VX-760C is turned off and follow these steps:
1. Press on the battery compartment cover and slide it in the direction of the arrow to open it.
2. Insert batteries in the orientations indicated by the illustrations inside the compartment.

3. Close the battery compartment cover by pressing and sliding it into place, in the opposite direction of the arrow on the cover.
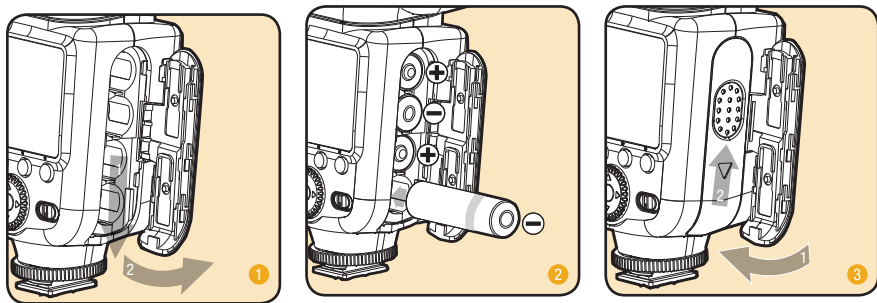
When the battery power is low, the low battery indicator (🔋) will appear on the LCD, the flash ready light will turn red for twenty seconds or longer, and the flash will continuously beep for approximately ten seconds.

Important! Replace all four batteries at the same time. Do not mix battery types or brands, or use old and new batteries together.

Mounting the Flash

To mount the flash on your camera, make sure the VX-760C is turned off and follow these steps:

1. Rotate the locking wheel counterclockwise to loosen it.
2. Slide the mounting foot all the way into your camera's hot shoe.
3. Rotate the locking wheel clockwise until secure.
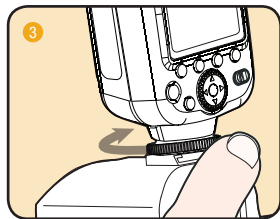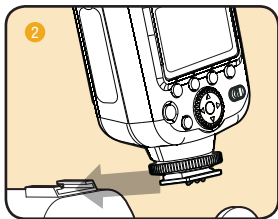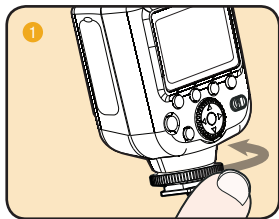
To dismount the flash from your camera, make sure the VX-760C is turned off and follow these steps:

1. Rotate the locking wheel counterclockwise to release the flash.
2. Slide the mounting foot out of your camera's hot shoe.

Mounting the VX-760C on the included stand:

You can mount the VX-760C on the included stand in the same way you would mount it on your camera. This allows you to set the flash up on a flat surface, or to attach it to a tripod head, light stand, or clamp that has a compatible 1/4"-20 screw mount.
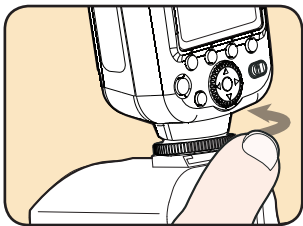
Turning on the Flash and Firing a Test

To turn the flash on, slide the power switch to the ON position.

Flash ready light: The flash ready light indicates the status of your flash:
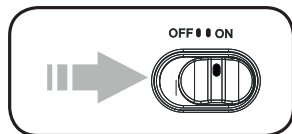
Color of flash ready light	Status of VX-760C	Operation
🟢 Green	Flash ready	Normal
🔴 Red	Recycling	Normal
🔴 Red for 20+ seconds	Battery low	Replace batteries

If the flash is mounted on your camera, a flash icon will also appear in the camera's viewfinder.

To fire a test flash, press the PILOT button.

Automatic power-saving function: After three minutes of inactivity, the flash will automatically enter power-saving mode to conserve battery life. The LCD and the flash ready light will turn off. To reactivate the VX-760C, press the PILOT button or press your camera's shutter-release button halfway. During long periods of inactivity, use the power switch to turn the flash off completely.

LCD illumination: When you turn the flash on or press any button, the LCD will be illuminated for about six seconds.

Audio monitor: The audio monitor feature causes the flash to emit one or more beeps to indicate the status of the flash:

Audio monitor	Status of VX-760C	Operation
One beep	Pressed button/fired flash	Normal
Two beeps	Flash ready	Normal
Long beep for 10+ seconds	Entering overheating protection mode	Turn the flash off for 10 minutes to let it cool off
Continuous beeping for approx. 10 seconds	Low battery warning	Replace batteries

To turn on the audio monitor, press the LOCK/AUDIO (🔒🎵) button repeatedly until the audio icon (🎵) blinks on the LCD, then press the MODE button to confirm. Repeat this step to disable the audio monitor. Note that the low battery warning will sound even if the audio monitor is off.

Lock mode: To prevent inadvertent operation of your flash, you can lock it by setting it to lock mode. To lock the device, press the LOCK/AUDIO (🔒🎵) button so the lock icon (🔒) blinks on the LCD, and press the MODE button to confirm. This will lock all of the buttons except for the power switch. To unlock the device, press and hold the LOCK/AUDIO (🔒🎵) button until the lock icon (🔒) disappears.

Important!

Make sure that slave mode is turned off when mounting the VX-760C on your camera. Turn it on only when using the flash as an off-camera wireless slave.

Overheating protection mode: If the operating temperature of the VX-760C is too high, or after 25 continuous flashes at 1/1 (full power), the flash will enter overheating protection mode. The thermal warning icon (🌡️) will appear on the LCD, the unit will emit a long beep for over ten seconds, and you will be unable to fire a flash. We suggest you turn the unit off for ten minutes to let it cool down.

Extended Interface

You can connect your VX-760C to an external power source or PC sync via the extended interface on the side of the flash.

External power source: An external power source, such as the Bolt Cyclone Battery Pack, can greatly increase the battery life of your flash and reduce the recycle time in between flashes.

Note: When using an external power source, the AA batteries must still be in the flash in order to operate.

PC Sync: You can synchronize your VX-760C with a camera by running a PC cord between your camera and the VX-760C's PC sync terminal. This lets you position the flash away from the camera, thus giving you more lighting options.

Note: The PC sync terminal on the VX-760C is only for synchronous signal input, and not output.

To access the extended interface, follow these steps:

1. Pull back the contact cover on the side of the flash.
2. Plug the cable into the corresponding socket or terminal.
   A. For an external power source, plug the power cable (Canon CZ-type, not included) into the external power source socket.
   B. For PC sync, plug the PC cord into the PC sync terminal.
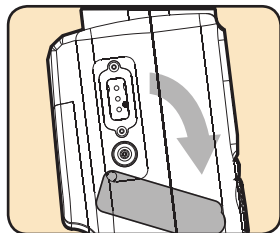
Note: When using both cables at the same time, first insert the PC cord and then insert the power cord. Very rarely, a thick-profiled PC cord will not fit at the same time as the power cable. In that case, use the supplied PC cord.

Using the Automatic TTL Flash Mode

When the VX-760C is mounted on a compatible camera, it can set the appropriate flash level automatically, in conjunction with the camera's through-the-lens (TTL) metering system. To use the automatic flash mode, mount the flash on the camera and follow these steps:

1. Turn the flash on and press the MODE button repeatedly to cycle through the flash modes until the TTL mode indicator appears on the LCD.
2. Make sure your camera is set to a programmed or automatic mode, or on a priority mode such as aperture priority.
3. Press the shutter-release button on your camera halfway to ensure that the camera is communicating with the flash. The camera's aperture settings will appear on the flash LCD, and a flash icon will appear in the camera's viewfinder.
4. Press your camera's shutter-release button to take the picture.

TTL ⓜ Zoom 24mm

F − 2.8
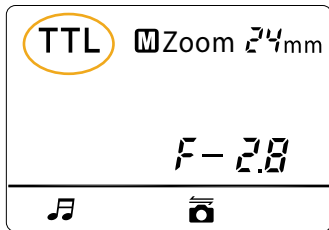
Locking Flash Exposure

In automatic TTL mode, you can lock the flash output level that is optimal for specific elements of your scene by using the flash exposure lock (FE Lock) on your camera. To lock flash exposure, follow these steps:

1. Set your camera to any Program or Manual mode.
2. Position the element of your scene that you want to be correctly exposed in the center of your viewfinder.
3. Press the FE Lock button on your camera. The flash will fire a test shot and lock its output level, and an asterisk (*) will appear next to the flash icon in the viewfinder.
4. Reframe your image as desired and take the picture.

For more information about the FE Lock feature, consult your camera's instruction manual.
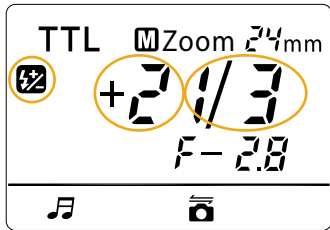
Using Flash Exposure Compensation

Flash exposure compensation lets you adjust and optimize your flash's automated setting by increasing or decreasing its light output without affecting the exposure as a whole.

In automatic TTL mode, you can use flash exposure compensation to adjust the VX-760C's flash output incrementally, just as you would adjust exposure with the exposure compensation function on your camera.

To apply flash exposure compensation, use the left and right navigation buttons to adjust by full stops, and the up and down navigation buttons to fine-tune in increments of one-third. The flash exposure compensation indicator will appear on the LCD.

Note: When decreasing flash exposure compensation in increments of one-third from a whole stop, you will need to decrease it by one whole stop, and then increase by two-thirds. For example, when fine-tuning from +2 to +1⅔, you will need to adjust the value to +1, and then fine-tune to +1⅔. When working with negative numbers, e.g., when fine-tuning from -1 to -1⅓, you will need to adjust the value to -2, and then fine-tune to -1⅓.

Using Flash Exposure Bracketing

Flash exposure bracketing (FEB) lets you take three continuous pictures while automatically changing the flash exposure compensation between -3 and +3, once above and once below the set flash exposure. FEB is useful for shooting in situations in which it is difficult to determine the appropriate flash exposure.

The FEB value indicates the interval by which the flash exposure compensation changes, and the flash exposure compensation value indicates the flash output of the first shot. For example, if your FEB value is 1, and your flash exposure compensation value is +2, then your first shot will be at +2, the second shot will be at +3, and the third shot will be at +1.

To enable flash exposure bracketing, follow these steps:

1. Make sure that the flash is set to TTL mode, and that the camera is set to single-shooting mode and not continuous shooting or self-timer modes.

2. Press the SUB button repeatedly until the FEB icon blinks. Use the left and right navigation buttons to adjust the FEB value, and the up and down navigation buttons to fine-tune. Press the SUB button again to confirm your selection.
3. Use the left and right navigation buttons to set the flash exposure compensation, and the up and down navigation buttons to fine-tune.

To turn off flash exposure compensation, set the FEB value to 0 and press the SUB button to confirm your selection.

Note: The LCD will display 1b after the first shot, and 2b after the second shot. As always, the flash exposure compensation will appear on the LCD before each shot. Flash exposure bracketing turns off automatically after you fire three shots.

Important! Make sure your flash is recycled and ready before taking each shot.
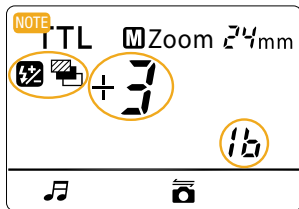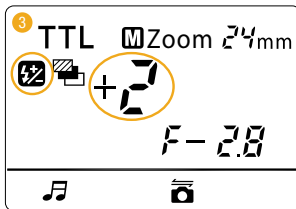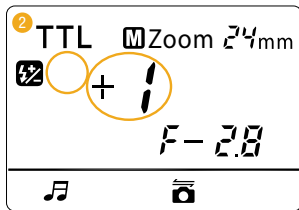
Using the Manual Flash Mode

You can set the VX-760C's flash output level manually, for greater creative control over your images. The 1/1 setting is the full-power flash, and each successive setting halves the light output, all the way down to 1/128. You can also fine-tune the flash output in increments of one-third.

To use the manual mode, turn the flash and camera on and follow these steps:

1. Press the MODE button repeatedly to cycle through the flash modes until the manual mode indicator and the flash output level appear on the LCD. Use the left and right navigation buttons to set the flash output, and the up and down navigation buttons to fine-tune.
2. Set the exposure settings you want to use on your camera.
3. Press your camera's shutter-release button to take the picture.
4. Adjust your camera's exposure settings and the light output level of the flash as needed.
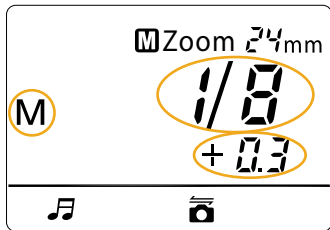
Note: When decreasing the flash output in increments of one-third from one setting to a lower setting + 0.3 or 0.7, you will need to decrease it to the next lowest setting, and then fine-tune it up. For example, when decreasing from 1/4 to 1/8 + 0.7, you will need to decrease to 1/8, and then increase to 1/8 + 0.7.

When setting exposure settings on your camera, the highest shutter speed available will be your camera's flash sync speed.

Tip: For best results, use a handheld light meter when shooting in manual flash mode

Controlling Flash Coverage (Zoom)

The VX-760C's angle of coverage can be adjusted, or zoomed, to match the focal length of your lens, so that your image is evenly illuminated from edge to edge.

When the flash zoom setting is adjusted, the reflectors inside the flash head shift position in order to widen or narrow the angle of coverage.

Automatic zoom control: In automatic zoom mode, when you zoom in with your camera lens, the flash will automatically adjust to match the lens focal length, and the LCD will display the closest zoom setting. The available range is between 24mm and 180mm.

To enable automatic zoom control, press the ZOOM button, and then press the down navigation button so the manual zoom mode indicator on the LCD disappears. Press the ZOOM button again to confirm your selection. Press the shutter-release button on your camera halfway to initiate communication between the camera and the flash, and the flash zoom setting will change automatically.

Note: Older cameras that do not offer digital data transmission with the flash do not support the automatic flash zoom control. The manual zoom control must then be used.

Manual zoom control: To manually select a setting that corresponds to the focal length of your lens, press the ZOOM button, and then use the left and right navigation buttons to adjust the focal length settings. Press the up navigation button to skip directly to 180mm, or press the down navigation button to return to auto zoom control. Press the ZOOM button again to confirm your selection.

The available manual zoom positions are 24, 28, 35, 50, 70, 85, 105, 120, 135, and 180mm.

Tip: Manual zoom can also be used to achieve special effects, such as using the 180mm setting with a wide-angle lens to produce a vignette.
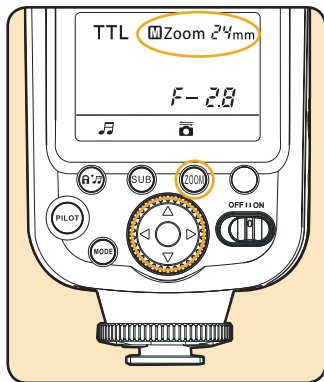
Using the flash with wide-angle lenses: When you have a lens wider than 24mm mounted on your camera, you can use the built-in diffuser panel to give the flash an angle of coverage equivalent to that of an 18mm lens.

To use the diffuser:

1. Pull the diffuser and reflector panels out of their slot in the flash head.
2. Push the reflector back in and let the diffuser lay flat against the flash lens.
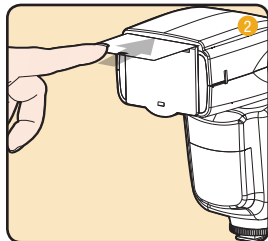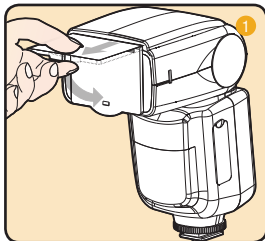
The diffuser also softens the light, providing an alternative when no surface is available for bouncing the flash (see *Bouncing Your Flash* on page 31).

Using the Autofocus-Assist Light

Camera autofocus systems can have difficulty locking onto a subject in dim light. When the ambient light level is low, the VX-760C will emit a red autofocus-assist beam when you press your camera's shutter-release button halfway in order to autofocus. The camera will then be able to autofocus by locking onto the projected light.

Note: The autofocus-assist light is available only when your camera's autofocus system is set to One Shot or AI Focus. It is not available when AI Servo is selected.
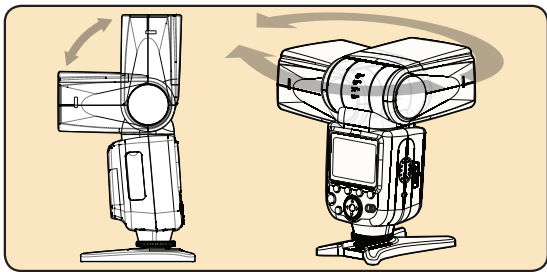
Bouncing Your Flash

The VX-760C flash head can tilt down to -7°, and up at 45°, 60°, 75°, and 90° angles to the lens. It can also swivel horizontally 180° to the right and 90° to the left.

Using flash to directly illuminate a subject often creates harsh, unnatural, and unattractive shadows. To avoid this, the flash can be tilted or swiveled, allowing you to aim your flash at a large white or neutral-colored surface, such as a ceiling, a wall, or a reflector. The light will bounce off the larger surface before striking your subject, providing softer, more natural illumination. In addition, the flash can tilt down by seven degrees in order to fully illuminate your subject when shooting close-up photography.

When bouncing your flash, you may need to adjust your exposure settings, since there will be less light falling on your subject. The farther away the bounce surface and your subject are, the less illumination there will be.

Tip: Bouncing your flash off colored surfaces can create a color cast in your images. Bouncing off a white or neutral-colored surface will not alter the color of the light, while bouncing off a gold-toned surface can give portraits a warmer look. Other colors, while usually not desirable, can be used for creative effects.

Creating catchlights: Catchlights are the reflections that appear in people's eyes in photographs. Without catchlights, eyes can have a dull, lifeless look. To create catchlights in your subjects' eyes when bouncing your flash, follow these steps:

1. Pull the built-in reflector and diffuser panels all the way out of their slot in the flash head. Push the diffuser back in while leaving the reflector extended.
2. Position the flash head at the 90° angle (pointing straight up) to bounce your flash off the ceiling or an overhead reflector.
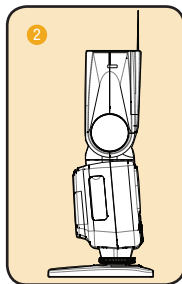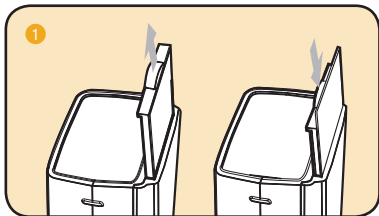
Red-Eye Reduction

The VX-760C supports red-eye reduction on cameras that offer the setting. Consult your camera's instruction manual to find out how to activate it.

Using Rear- or Second-Curtain Synchronization

When you photograph a moving subject with a flash and a slow shutter speed (1/30 second or longer), the flash will freeze the moving subject and the long exposure will cause motion blur and light trails to appear in the image, especially in low light.

This slow-sync flash technique, also known as "dragging the shutter," can be applied in two different ways. The first, which is called front-curtain or first-curtain flash sync, synchronizes the flash with the camera's shutter release so that the flash fires at the beginning of the period when the shutter opens. This causes motion blur and light trails to appear in front of moving subjects.

The second method, which is called rear-curtain or second-curtain sync, synchronizes the flash to fire near

the end of the exposure. Since rear-curtain sync causes motion blur and light trails to appear behind moving subjects, it creates a more realistic impression of movement and is most often preferable to front-curtain sync. When rear-curtain sync is activated, the rear-curtain sync icon (▷▶) appears on the LCD.

The VX-760C supports rear-curtain sync modes on cameras that offer the setting. To select rear-curtain sync, follow these steps:

1. Make sure your flash is in TTL or manual mode.
2. Press the SUB button to make the rear-curtain sync icon (▷▶) blink.
3. Press the MODE button to select it.

To disable rear-curtain sync, repeat steps 2 and 3.

Use your camera's shutter-priority or manual mode to control the amount of blurring and light trails you capture by varying the shutter speed. For more information on rear-curtain sync, consult your camera's instruction manual.

Note: In E-TTL mode, the VX-760C will fire a preflash followed by the primary flash.
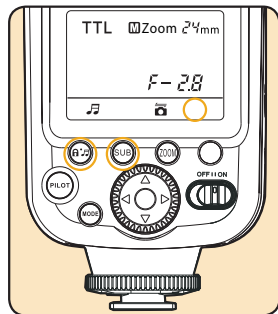
Using the Multi (Stroboscopic) Mode

The multi (stroboscopic) mode fires the flash multiple times in quick succession during a single exposure. Stroboscopic lighting is often used to illustrate motion—when shooting in a dark environment, this can create a unique effect in which moving objects appear multiple times in the frame. It is also useful when capturing extremely fast objects, because the flash can pulsate faster than the camera lens can open and close.

To enable the multi mode, turn on the flash and camera and follow these steps:

1. Press the MODE button repeatedly to cycle through the flash modes until the multi mode and flash output level indicators appear on the LCD. Use the left and right navigation buttons to set the flash output.
2. Set the number of flashes by pressing the SUB button so the stroboscopic count number blinks. Use the left and right navigation buttons to adjust the number of flashes, or the up and down navigation buttons for the minimum and
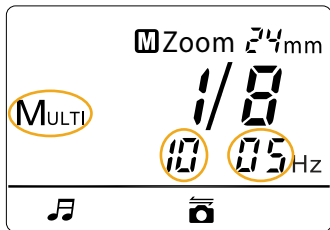
maximum number of flashes. When the desired stroboscopic count number appears on the LCD, press the MODE button to select it.

3. Set the firing frequency by pressing the SUB button repeatedly until the stroboscopic frequency number blinks. The frequency, measured in hertz (Hz), indicates the number of flashes per second. Use the left and right navigation buttons to adjust the frequency, or the up and down navigation buttons for the minimum and maximum frequencies. When the desired stroboscopic frequency number appears on the LCD, press the MODE button to select it.

4. To determine the appropriate shutter speed, divide the stroboscopic count number (the number of flashes per frame) by the stroboscopic frequency number (the frequency of the flash).

For example: If the number of flashes per frame is 10, and frequency of the flash is 5 Hz, then

$$\frac{10 \text{ flashes per frame}}{5 \text{ HZ}} = 2,$$

so the shutter speed should be 2 seconds or slower.

Note: See *Stroboscopic Reference Chart* on page 49 for the maximum number of flashes at any given power/ frequency combination.

Using Your VX-760C as a Wireless Master or Slave

The VX-760C is equipped with advanced wireless flash functions, allowing you to fire the flash remotely while maintaining full TTL or manual control. In addition, the flash can be set to multiple channels and groups, giving you a host of creative lighting possibilities.

Important terms: Here are the terms you'll need to be familiar with in order to learn how to work with multiple wireless flash units:

Master: This can be the camera's built-in flash, a flash unit mounted on the camera, or a dedicated wireless controller. The master controls how the slave flashes operate in wireless TTL mode. Only one master flash is allowed in a multiple-flash photography setting. Note that not all cameras and flashes offer master capability.

Slave or remote flash: Flash units that are not directly connected to the camera and are controlled via the master flash or a controller are called slave or remote units. There is no limitation on the number of slave flash units that can be used at once.

Groups: With the VX-760C's wireless system, you can assign slave flash units to any one of three groups (A, B, or C) and set the mode and power for each group.

Channels: Master and slave flash units exchange data through channels. On the VX-760C, four channels (1, 2, 3, and 4) are available. You can use this option to prevent your slave units from being triggered by the master unit of another photographer working with the same type of system nearby.

Setting the master mode: To set the VX-760C flash unit to function as a TTL or manual master, follow these steps:

1. Press the MODE button repeatedly to cycle through the flash modes until the TTL or manual mode indicator appears on the LCD.
   A. For TTL mode, use the left and right navigation buttons to adjust the flash compensation value, and the up and down buttons to fine-tune.
   B. In manual mode, use the left and right navigation buttons to set the power level, and the up and down buttons to fine-tune.

2. Press and hold the SUB button until the wireless flash mode icon and the group and channel settings appear on the LCD.

3. Set the group by pressing the SUB button until the wireless flash mode icon and the group setting blink. Use the left and right navigation buttons to select ALL, AB, or ABC, and press the MODE button to confirm your selection.

   A. ALL fires all three groups at the same power level.

   B. AB (A:B) sets the power level for groups A and B to fire at a ratio, e.g., 2:1 or 3:1. Group C is off.

   C. ABC (A:B+C) sets the power level for groups A and B to fire at a ratio, as in option B. The power level for group C will be flash compensation above or below the power level of group B.

      Note: The ratios for A:B and A:B+C are controlled through the camera's menu. To find out how to set the ratios, consult your camera's instruction manual.

4. Set the channel by pressing the SUB button repeatedly until the channel number blinks. Use the left and right navigation buttons to cycle through channel numbers 1–4. When the desired channel number appears on the LCD, press the MODE button to select it.
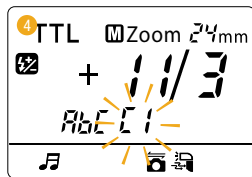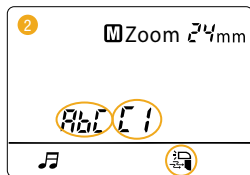
Setting the slave mode: To set the VX-760C flash unit to function as an automatic slave, follow these steps:

1. Make sure the master flash or controller on your camera is on and set to automatic TTL or wireless manual mode.
2. Press and hold the MODE button until the wireless flash mode icon (🖾) and the channel and group settings appear on the LCD.
3. Set the channel by pressing the SUB button to make the channel number blink. Use the left and right navigation buttons to cycle through channel numbers 1–4. When the desired channel number appears on the LCD, press the SUB button again to select it. The group indicator will now blink.
4. Use the left and right navigation buttons to cycle through groups A–C. When the desired group appears on the LCD, press the MODE button to select it.
5. If desired, adjust the zoom position by pressing the ZOOM button (see *Controlling Flash Coverage* on page 27).
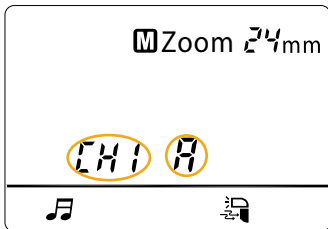
Note: The wireless ready indicator light will blink in slave mode.

To cancel slave mode, press and hold the MODE button until the TTL mode indicator appears on the LCD.

Important! When using a single flash, set it to the same group and channel as the master.

When using multiple flash units, select the same group and channel for all units being used in a particular light position. For example, if you are using three VX-760C units, you might want to set one as a main light on 1A, set the second as a fill light on 1B, and set the third as a hair light on 1C. With this setup, you have the option of setting each group to a different slave mode via the master flash. If desired, you can set the main on 1A to TTL mode, the fill light on 1B as a ratio of 1A, and you may elect to disable the hair light on 1C.

Using Wireless Multi (Stroboscopic) Mode

The VX-760C can be used as a wireless TTL master unit in multi (stroboscopic) mode. In wireless multi mode, the slaves can have different flash outputs, and the flash frequency and number of flashes will be the same for the master and slave units.

To set your VX-760C as wireless stroboscopic master, follow these steps:

1. Turn the flash on and press the MODE button repeatedly to cycle through the flash modes until MULTI appears on the LCD.
2. To set the VX-760C as the master, press and hold the SUB button until the wireless flash icon and the group and channel settings appear on the LCD. The channel number appears with a C next to it and blinks alternately with the stroboscopic count number.
3. Use the left and right navigation buttons to adjust the flash output.
4. Set the number of flashes by pressing the SUB button so the stroboscopic count number blinks. Use the left and right navigation buttons to adjust the number of flashes, or the up and down navigation buttons for the minimum and maximum number of flashes. When the desired stroboscopic count number appears on the LCD, press the MODE button to select it.
5. Set the firing frequency by pressing the SUB button repeatedly until the stroboscopic frequency number blinks. Use the left and right navigation buttons to adjust the frequency, or the up and down navigation buttons for the minimum and maximum frequencies. When the desired stroboscopic frequency number appears on the LCD, press the MODE button to select it.
6. Set the group by pressing the SUB button until the wireless flash icon and the group and channel settings blink. Use the left and right navigation buttons to select ALL, AB, or ABC, and press the MODE button to

confirm your selection. See *Using Your VX-760C as a Wireless Master or Slave* on page 39 for details on group and channel settings.

7. Set the channel by pressing the SUB button repeatedly until the channel number blinks. Use the left and right navigation buttons to cycle through channel numbers 1–4. When the desired channel number appears on the LCD, press the MODE button to select it.

8. Set your camera's shutter speed. See *Using the Multi (Stroboscopic) Mode* on page 36 for how to calculate shutter speed.
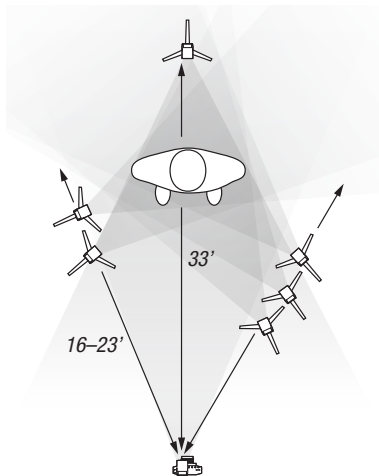
Positioning Slave Flash Units

You can create a professional lighting setup by positioning slave units individually or in groups to function as main, fill, accent, and other lights. Metering your scene with a handheld light meter and setting your light ratios to achieve specific looks will give you a professional level of creative control.

When positioning wireless slaves to light a subject, keep in mind the following:

- The effective communication range between master and slave flash units is approximately 33 feet (10 m) in the front position, and approximately 23 feet (7 m) on both sides. These ranges may vary, depending on the ambient light.
- The flash head should not be aimed directly into the camera lens.
- The wireless TTL sensor is located on the front of the VX-760C. Make sure that the sensor is facing the master flash and that there are no obstructions between the two units.
- When photographing outdoors or in bright ambient light, the sensors can be overwhelmed by ambient light, which will lower their sensitivity.
- To avoid creating interference between flash units, using more than three in a single group is not recommended.

33'

16–23'

Troubleshooting

Problem	Solution
The flash is stuck in the camera hot shoe.	Make sure that the mounting foot lock is released. (Page 15)
The flash is turned on but won't fire.	• Make sure that fresh batteries are installed and in the proper orientation. (Page 12) • Make sure the flash is securely attached to the camera. (Page 14) • Make sure that the electrical contacts on the foot of the flash are not dirty. Clean them and try again. • The flash has entered overheating protection mode. Turn the unit off for ten minutes to let it cool down. (Page 18)
The flash buttons don't respond.	The control buttons are locked. (Page 18)
There's a whining sound coming from the flash.	This is normal and does not indicate a malfunction. When the flash heats up from continuous use, vibrations inside the unit may cause this sound. It will dissipate as the unit cools.

Problem	Solution
The flash is set up as a wireless slave, but the light is not noticeable in the picture.	• Make sure that the master flash is within the transmission range, and that the wireless sensor on the slave is pointing toward the master flash. Remove any obstructions in the line of sight between the two. (Page 45) • The ambient light may be too high. (Page 45)
The edges of the images look dark.	• Make sure that the flash zoom setting corresponds to the focal length of your lens. (Page 27) • Your lens is wider than 24mm. Use the built-in wide-angle diffuser. (Page 30)
The bottom of the images look dark.	• To fully illuminate your subject when shooting close-up photography, tilt the flash down to the -7° position. (Page 32) • Your camera's shutter speed is higher than its max sync speed in manual mode. Use a slower shutter. (Page 27)

Specifications

Type: On-camera and wireless TTL automatic and manual flash

Compatible cameras: Canon cameras with E-TTL and E-TTL II flash system support

Guide number (at 50mm focal length, ISO 100): GN 50

Flash coverage: 24–180mm (18–180mm with diffuser panel)

Flash duration: 1/800–1/20000 second

Flash recycle time: 0.3–3 seconds (AA Ni-MH)

Manual mode power output: 1/1, 1/2, 1/4, 1/8, 1/16, 1/32, 1/64, 1/128, fine-tuning in increments of 1/3

Wireless transmission method: Optical pulse

Wireless transmission range: Up to approximately 33 feet (10 m)

Wireless channels: 4

Controllable wireless slave groups: 3

Power source: 4 AA lithium, Ni-MH, or alkaline batteries; optional external power source

Tilt positions: -7°, 0°, 45°, 60°, 75°, 90°

Swivel range: Right 0°–180°, Left 0°–90°

Dimensions: 3.0 × 5.7 × 4.7 in. (78.0 × 146.0 × 118.5 mm)

Weight: 14.4 oz. (408 g) without batteries

Stroboscopic Reference Chart

This chart shows the maximum number of flashes possible for any given frequency/flash output combination.

Frequency (Hz)	Flash output level					
	1/4	1/8	1/16	1/32	1/64	1/128
1, 2, 3	7	14	30	60	90	90
4	6	12	20	50	80	80
5	5	10	20	40	70	70
6	4	8	20	32	56	56
7	3	6	20	28	44	44
8	2	6	20	24	36	36
9	2	5	10	22	32	32
10	2	5	10	20	28	28
11-199	2	4	8	12	25	25

FCC notices for customers in the U.S.A.

Tested to comply with FCC Standards for home or office use.

FCC Statement

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.

CAUTION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference, which can be determined by turning the equipment off and on, the user is encouraged to try to correct to the interference by one or more of the following measures: re-orient or re-locate the receiving antenna; increase the separation between the equipment and receiver; connect the equipment into an outlet on a circuit different from that to which the receiver is connected; or consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void the user's authority to operate the equipment.

ICES notices for customers in Canada:

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

One-Year Limited Warranty

This BOLT 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 BOLT Customer Service Department to obtain a return merchandise authorization ("RMA") number, and return the defective product to BOLT 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.boltflashes.com or call Customer Service at 212-594-2353.

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