Bolt™

Inspiration strikes



VC-310C

COMPACT ON-CAMERA TTL FLASH

User's Manual





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Introduction

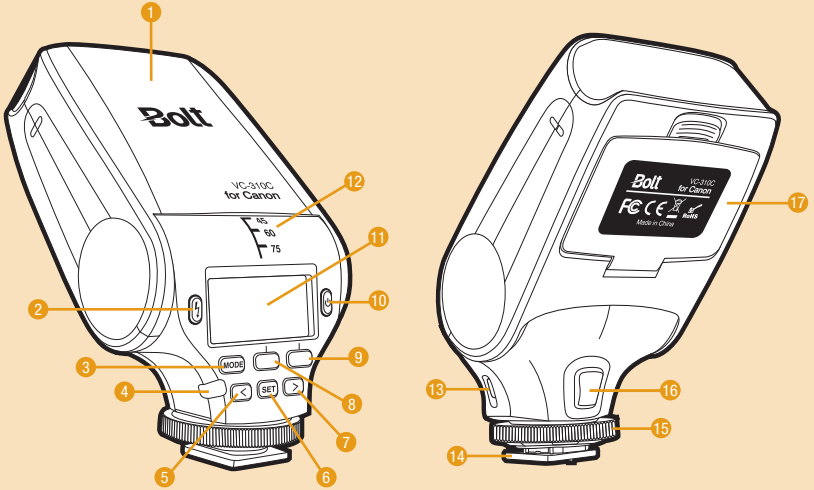
Thank you for choosing Bolt. The Bolt VC-310C is a compact, full-featured shoe-mount flash for your Canon camera. This advanced digital flash puts creative control in your hands with a broad range of automatic and manual features. It can be used as both an on-camera flash and a wireless slave flash. Among the benefits you'll enjoy:

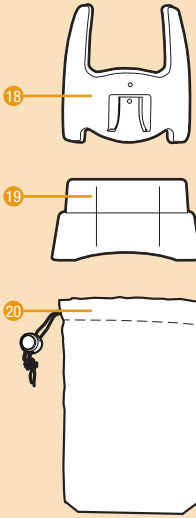
- Full compatibility with Canon's E-TTL metering system
- Wireless TTL control with multiple flash units and groups
- Eight manual flash levels: full to 1/128 power, plus fine-tuning by 1/3 increments
- Multi (stroboscopic) mode
- Tilt and swivel head: -7° down, 90° up, 90° right, and 60° left
- Backlit LCD
- Autofocus assist for low-light photography
- Rear-curtain sync
- Clip-on diffuser
- Automatic power-saving function
- Overheating protection
- Upgradeable firmware

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Overview

1. Flash head
2. Flash test button
3. Mode button
4. Flash ready indicator
5. Left arrow
6. Set button
7. Right arrow
8. F1 function button
9. F2 function button
10. Power button
11. LCD panel
12. Flash head position indicator (tilt)
13. Micro USB port
14. Mounting foot
15. Locking wheel
16. Optical sensor
17. Battery compartment with cover
18. Flash stand
19. Diffuser
20. Carrying pouch

Warnings

Before using your VC-310C, please read the following safety notices 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.
- To avoid overheating and damaging your flash unit, please wait for at least ten minutes after twenty-five continuous flashes at full power (see page 13).
- 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. Install the batteries in the proper orientation, according to the indicator in the battery chamber.
- Do not use or store the VC-310C in flammable conditions (such as environments containing flammable gases or liquid chemicals).

- Do not clean the VC-310C 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 VC-310C 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 VC-310C.
- For long-term storage, remove all batteries from the VC-310C.
- 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. Contacts may be cleaned with isopropyl alcohol on a cotton swab.
- Dispose of used batteries properly.
- All images are for illustrative purposes only.

Installing Batteries

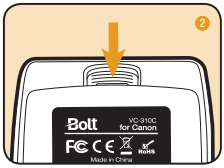
The VC-310C can be powered by two AA batteries of several types:

- Lithium (1.5 V)
- Nickel-metal hydride (NiMH) (1.2 V)
- Alkaline (1.5 V)

1. Turn the flash upside down.
2. Press the button on the battery compartment cover so the cover flips open.
3. Insert two AA batteries (not included) according to the diagrams inside the battery compartment.
4. Close the battery compartment cover until it clicks.

When the battery power is low, the battery indicator [ ] will flash on the LCD.

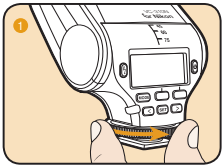
Important! Replace both batteries at the same time. Do not mix battery types or brands, or use old and new batteries together.



Mounting the Flash

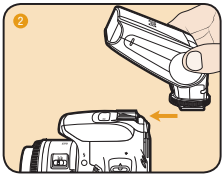
To mount the flash on your camera, make sure the VC-310C is turned off and follow these steps:

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 VC-310C 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 VC-310C on the included stand adapter:

You can mount the VC-310C on the included stand adapter in the same way you would mount it on your camera. This allows you to set the flash up on a flat surface or 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 Shot

To turn the flash on, press the power button. To turn the flash off, hold the power button for approximately two seconds.

Flash ready indicator: The flash ready indicator lets you know when the flash is ready to fire again. The indicator will blink red when charging and remain lit when the flash is ready to fire.

To fire a test flash, press the Test [ϟ] button.

Depending on your camera model, a flash icon may also appear in the viewfinder when the VC-310C is mounted on your camera.

Sleep mode: After approximately two minutes of inactivity, the flash will automatically enter sleep mode to conserve the battery life by turning off the LCD and flash ready light. To reactivate the VC-310C, press the power button on the flash unit 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, the LCD illuminates for approximately ten seconds before turning off to save battery life. Press any button on the flash to light up the display when you need to view the LCD in a low-light environment.

Overheating protection mode: If the operating temperature of the VC-310C is too high after several full-power flashes, the flash will enter the overheating protection mode. The thermal warning indicator [TP-HI] will appear on the LCD, and you should let the flash cool down for a period of 2–5 minutes.

Default setting: You can restore the flash to its original settings. To do this, first make sure the flash is off. Press and hold the Set and Power buttons for 3 seconds, then release.

LED preview and focusing: There are three LEDs built into the flash head that can be used as a preview light to illuminate the subject for reference, or as an autofocus assist light.

To use the LEDs as a preview light, press the power button while the flash is on. To turn the preview light off, press the power button again.

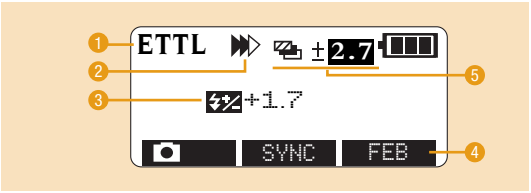
The LEDs will function as an autofocus assist light whenever you press the camera's shutter release halfway.

Extended Interface

Micro-B USB: This flash supports firmware upgrades through the micro USB port on the side of the flash. In order to ensure compatibility with future cameras, the VC-310C's firmware may be updated. This can be done to ensure proper communication with new cameras or to add new features.

Visit www.boltflashes.com/firmware to check if a new firmware version has been released. Follow the online instructions to upgrade.

Automatic E-TTL Flash Mode



Overview

1. E-TTL flash mode
2. Flash exposure compensation value
3. High-speed sync (HSS)
4. Function button options
5. Flash exposure bracketing

When the VC-310C is mounted on a compatible Canon E-TTL camera, it can set the appropriate flash level automatically, in conjunction with the camera's through-the-lens (TTL) metering system.

To use E-TTL 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 E-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. A flash icon will appear in the camera's viewfinder.
4. Press your camera's shutter release button to take the picture. With select camera models, the camera's aperture settings will appear on the flash LCD.

Using Flash Exposure Compensation

Flash exposure compensation allows you to 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 incrementally alter the VC-310C's flash output, just as you would change exposure with the exposure compensation function on your camera.

To apply flash exposure compensation, follow these steps:

1. Press the F2 function button so that the flash exposure compensation value is highlighted and appears on the LCD.

2. Use the left or right arrows to adjust the exposure compensation from -3 to +3 stops, in increments of one-third.
3. Press the Set button to confirm the value.

Flash Exposure Bracketing (FEB)

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

To apply flash exposure bracketing, follow these steps:

1. Press the F2 function button repeatedly until the FEB [ ] indicator appears at the top of the LCD.
2. Use the left or right arrows to set the FEB value.
3. Press the Set button to confirm.

Manual Flash Mode



Overview

1. Manual flash mode
2. Manual flash output
3. S1/S2 indicator

You can set the VC-310C'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 1/3 increments.

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 icon [M] and the flash output level appear on the LCD.
2. Set the exposure settings you want to use on your camera.

3. Press the Set button to highlight the flash output level.
4. Press the right or left arrows to set the desired flash output level.
5. Press the Set button again to confirm settings.
6. Press your camera's shutter release button to take the picture.
7. Adjust your camera's exposure settings and the light output level of the flash as needed.

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

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

Diffusing the Flash

Use the included diffuser to soften the light from the flash.

To attach the diffuser, fit the diffuser onto the flash head and make sure it is secure.

Bouncing Your Flash

The VC-310C flash head can tilt down to -7° and up at 45°, 60°, 75°, and 90° angles to the lens. It can also swivel horizontally 90° to the right and 60° to the left.

Using flash to directly illuminate a subject often creates harsh, unnatural, and unattractive shadows. 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, wall, or reflector. The light will bounce off the larger surface before striking your subject to provide 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.

Multi (Stroboscopic) Mode



Overview

1. Multi flash mode
2. Multi power output
3. Time (number of flashes)
4. Flash frequency

The Multi (stroboscopic) mode fires the flash multiple times in quick succession during a single exposure. Stroboscopic lighting is often used to illustrate motion—this can create a unique effect in which moving objects appear multiple times in the frame. It is also useful when capturing fast-moving objects.

Important! Set your camera's shutter speed to one second or slower.

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

1. Press the Mode Selection button repeatedly until [MULTI] appears on the LCD.
2. Press the Set button to highlight the flash output power level, and adjust with the right and left arrows.

3. Press the Set button to confirm.
4. Press the F1 function button to change the Time. This will set the number flashes that fire per exposure. Use the right and left arrows to adjust the amount.
5. Press the F1 function button to confirm.
6. Press the F2 function button [Hz] to change the frequency, or the number of flashes per second. Use the right and left arrows to adjust.
7. To confirm your settings, press the F2 function button repeatedly until nothing is highlighted on the LCD.
8. Press the shutter button to fire a test shot. You should see several bursts of light.

Tip: To calculate the appropriate shutter speed, divide the number of flashes per frame by the frequency of the flash.

For example, if the number of flashes per frame is 10, and the frequency of the flash is 5 Hz, then the shutter speed should be 2 seconds or slower.

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

Note: See the *Stroboscopic Reference* chart on page 38 for the maximum number of flashes at various power/frequency combinations.

Second-Curtain Synchronization

When you photograph a moving subject with a flash and have 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. Rear-curtain or second-curtain sync synchronizes the flash to fire near the end of the exposure. Since second-curtain sync causes motion blur and light trails to appear behind moving subjects, it creates a more realistic impression of movement. 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.

The VC-310C supports second-curtain sync modes on camera's that offer this setting. Check with your camera's manual for instructions on how to operate the flash in this mode.

Note: In E-TTL mode, the VC-310C will fire a pre-flash followed by the primary flash.

Using Your VC-310C as a Wireless Master or Slave

The VC-310C 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, affording you a host of creative lighting possibilities.

Using the wireless optical system, you can trigger the flash from up to 49 feet (15.25 m) away. And you have the ability to use the flash as a master or slave with selectable communication channels (1, 2, 3 and 4), as well as 3 slave groups (A, B, and C). In addition, there is the capability to set specific exposure compensation or power level values.

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.

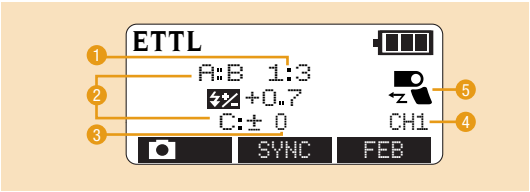
Master: The master sends information to the slave flashes and controls each of the slaves' power outputs, but will not add light to the final exposure. This can be the camera's built-in flash, a flash unit mounted on the camera, or a dedicated wireless controller. Only one master is allowed in a multiple-flash 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. Many slave flash units can be used at once.

Groups: With the VC-310C's wireless system, you can assign slave flash units to any one of three groups (A, B, or C) and set the operating mode and power for each group separately.

Channels: Master and slave flash units exchange data through channels. On the VC-310C, four channels (1, 2, 3, and 4) are available in the optical system. You can use this feature to prevent your slave units from being triggered by the master unit of another photographer working with the same type of system.

Using Your VC-310C as a Wireless TTL Master



Overview

1. A:B ratio
2. Groups
3. Group C exposure compensation
4. Channel
5. Flash control mode

To set the VC-310C as a TTL master, follow these steps:

1. Make sure the flash mode is set to E-TTL.
2. Press and hold the Mode button for 3 seconds until the flash control mode is highlighted.
3. Press the right arrow repeatedly until the Master [ ] icon appears on the right hand side of the LCD.

Setting up the groups (A/B) and channels (1–4):

You can set up to three different wireless slave groups. Groups A and B are set as a ratio of each other.

1. Press the F1 function button [GROUP] so groups A and B appear on the LCD. Now you can set the ratio between these groups from 8:1 through 1:8.

2. Press the Set repeatedly until the group A:B ratio value is highlighted.
3. Use the left and right arrows to adjust the A:B ratio by 1/2-stop increments.
4. Press the Set button to confirm your settings and highlight the master channel settings.
5. Use the left and right arrows to select the desired channel (1–4) for the master and groups.
6. Press the Set button to confirm these settings.

Setting up group C: Group C is the same power output as group B, and it is adjusted by exposure compensation.

1. In the TTL master and slave group setup, press the F1 function button repeatedly until group C appears on the LCD.
2. Press the Set button repeatedly until the group C compensation value is highlighted.
3. Use the right and left arrows to adjust the compensation value (±3).
4. Press the Set button repeatedly to your confirm settings, until there is nothing highlighted on the LCD.

Important! These settings will be saved when you power the unit off and on.

When using multiple slave 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 VC-310C units, you might want to set one as a main light 1A, the second as a fill light 1B, and the third as a hair light 1C. With this setup, you have the option of setting each group to a different output level via the master flash.

Using Your VC-310C as a Wireless TTL Slave



Overview

1. Group
2. Channel
3. TTL slave indicator

To set the VC-310C flash unit as a wireless TTL slave, follow these steps:

1. Make sure the flash is on and set to E-TTL mode.
2. Press and hold the Mode button until the standard flash control [ ] indicator is highlighted.
3. Press the right arrow repeatedly until the TTL slave mode [ ] indicator appears on the LCD.
4. Press the Set button to confirm.
5. Press the F1 function button repeatedly to cycle through the three groups until you set the desired group for your slave flash unit.
6. Press the F2 function button repeatedly to cycle through the four channels available between the master and groups.
7. Press the Set button to confirm your settings.

To exit slave mode, press and hold the Mode button until the flash control mode indicator appears on the LCD. Use the right arrow to cycle through the flash control modes until the standard flash control indicator appears on the LCD.

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

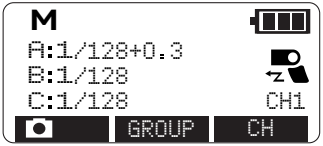
When using multiple slave flash units, select the same group and channel for all units being used in a particular light position. For example, if you are using three VC-310C units, you might want to set one as a main light 1A, the second as a fill light 1B, and the third as a hair light 1C. With this setup, you have the option of setting each group to a different output level via the master flash.

Using the VC-310C as a Wireless Manual Master

The VC-310C can be used as a manual master, allowing you to set the output level individually for each of the three slave flash groups.

To use the VC-310C as a wireless manual master, follow these steps:

1. Press the Mode button repeatedly until the manual mode indicator [M] appears in the upper left hand corner of the LCD.



2. Press and hold the Mode button for 3 seconds until the flash controller indicator appears on the display.
3. Press the right arrow repeatedly until the Master [ ] icon appears on the LCD. The default view displays group A's output power.
4. Press the F1 function button (GROUP) to cycle through groups A, B, and C.
5. Press the Set button repeatedly to cycle through each group's output level as well as the master channel setting.
6. Use the left and right arrows to adjust each group's output power and the desired master channel.
7. Press the Set button to confirm your settings.

Manual Optical Slave Modes S1/S2

Using the manual optical slave feature, the VC-310C can be set to fire whenever it detects a light signal from any flash. This works optically—when the VC-310C "sees" another flash firing, it will instantaneously fire along with it. In order to ensure that the VC-310C fires at the correct time, there are two different slave modes available: S1 and S2.

In S1 mode, the slave will fire on the first or any burst of light. Use this mode when the master is set to manual.

In S2 mode, the slave will ignore any pre-flash and will fire on the second burst of light.

Note: Pre-flash is used to help the camera meter and/or focus.

To use the VC-310C as a manual optical slave, follow these steps:

1. In Manual mode, press and hold the Mode button until the flash control [ ] indicator appears on the LCD.
2. Press the right arrow repeatedly until [S1] or [S2] shows up on the display. Press the Set button to confirm.
3. Press the Set button to highlight the output level.
4. Press the left and right arrows to adjust the output level from 1/1 to 1/128.
5. Press the Set button to confirm.

Note: Some cameras, when set to red-eye reduction, will emit a series of quick flashes lasting a second or more. This may not work properly with any slave mode. We suggest you avoid using red-eye reduction when the VC-310C acts as a slave.

Positioning the Slave and Remote Flash Units

You can create various professional lighting setups 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) for outdoor use, and up to 49 feet (15 m) when using the flash indoors. These ranges may vary, depending on the ambient light for the optical communication.
- The flash head should not be aimed directly into the camera lens.
- The wireless optical TTL sensor is located on the front of the VC-310C. 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 optical sensors may 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.

Using the VC-310C as a Master in the Wireless Multi

(Stroboscopic) Mode

The VC-310C can be used as a wireless TTL master controller in the Multi (stroboscopic) mode. In wireless stroboscopic mode, the slaves will be set by the master for frequency, number of flashes, and independent group flash power setting, but the master will not add light to the final photo exposure.

To set your VC-310C as a wireless stroboscopic master, follow these steps:

1. Turn the flash and camera on. Make sure the camera is set to manual mode or shutter priority mode, and the shutter speed is set to 1 second or slower.
2. Set the VC-310C to stroboscopic mode by pressing the Mode button repeatedly until [Multi] appears in the upper left corner of the display.
3. Press and hold the Mode button to until the flash control [ ] icon appears on the LCD.
4. Press the right arrow repeatedly until the Master [ ] icon appears on the LCD.
5. Press the Set button to confirm.

Set the frequency and number of flashes:

1. Press the F2 function button [Hz] to highlight the stroboscopic frequency.
2. Press the left or right arrows to change the frequency.
3. Press the F2 function button [Hz] again to confirm frequency and highlight the Stroboscopic count number.
4. Press the left or right arrows to set the Stroboscopic count number.
5. Press the Set button to confirm your settings.

Access the slave groups and slave group settings:

1. Press the F1 function button to cycle through group settings A, AB, and ABC. The default view in this mode displays the power output level of group A.
2. Press the Set button to cycle through the power output levels for each group, followed by the channel setting. Use the left and right arrows to adjust.
3. After setting the channel, press the Set button to confirm. There should be nothing highlighted on the display.

Specifications

Type	On-camera and wireless TTL automatic and manual flash
Compatible cameras	Canon cameras with Canon E-TTL flash system support
Guide numbe (at 50 mm focal length, ISO 100)	GN 32
Flash recycle time	Approx. 5 seconds (AA NiMH)
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 range	Optical up to 33′ (10 m) outdoor and 49′ (15 m) indoor.
Wireless channels	4
Controllable wireless slave groups	3
Power source	2 AA lithium, NiMH, or alkaline batteries
Tilt positions	-7°, 0°, 45°, 60°, 75°, and 90°
Swivel range	Right 0°–90°, Left 0°–60°
	4.47″ × 2.53″ × 1.38″ (11.4 × 6.4 × 3.5 cm)
Weight	5.29 oz. (150 g) without batteries

Troubleshooting

Problem	Solution
The flash is stuck in the camera hot shoe.	Make sure that the locking wheel is released (page 11).
The flash is turned on but won't fire.	• Make sure that fresh batteries are installed and in the proper orientation (page 10). • Make sure the flash is securely attached to the camera (Page 11). 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 2–5 minutes to let it cool down (page 13).
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 32). • The ambient light may be too high (page 32).
The edges of the images look dark.	Make sure that the flash output power setting corresponds to the focal length of your lens.
The bottoms of the images look dark.	Your camera's shutter speed is higher than the flash's maximum sync speed in manual mode.

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.
2. This device must accept any interference received, including interference that may cause undesired operation.

Stroboscopic Reference

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

Flash Output/Hz	1/4	1/8	1/16	1/32	1/64	1/128
1	3	14	30	60	90	90
2	3	14	30	60	90	90
3	3	12	30	60	90	90
4	3	10	20	50	80	80
5	3	8	20	40	70	70
6	3	6	20	32	56	56
7	3	6	20	28	44	44
8	3	5	10	24	36	36
9	3	5	10	22	32	32
10	2	4	8	20	28	28
20-100	2	4	8	12	24	24

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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