

Bolt™

Inspiration strikes



VD-410
MANUAL FLASH
User's Manual



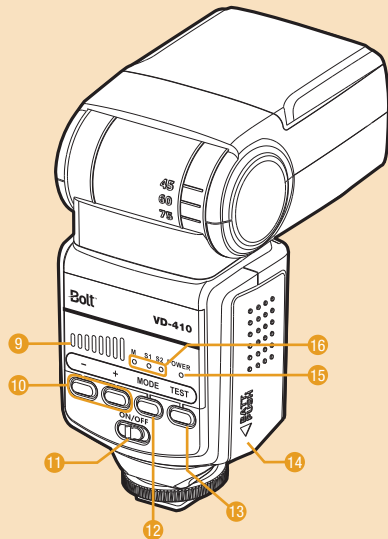
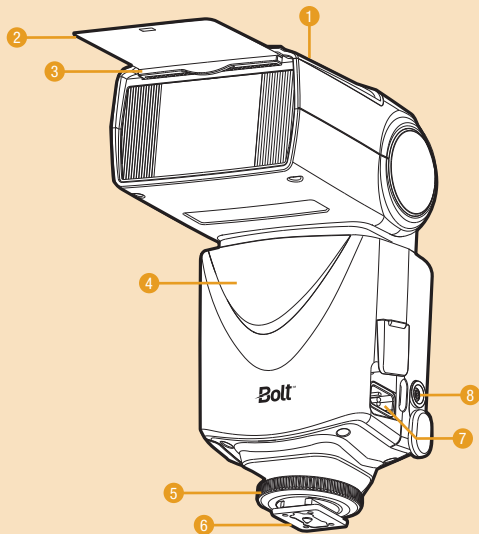
Introduction

Thank you for choosing the Bolt VD-410 Manual Flash. This flash unit puts creative control in your hands with manually adjustable power output settings. It can be used as both an on-camera flash and as a wireless optical slave. Among the benefits you'll enjoy:

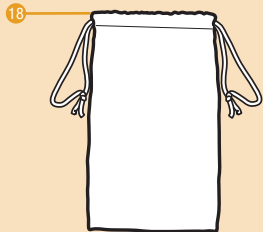
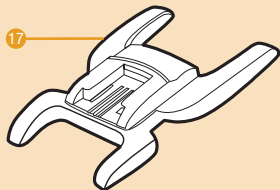
- Eight manual flash levels: 1/1 to 1/128 power
- Wireless optical slave mode
- Tilting angle: 90° up
- Rotational angle: 180° to the left, 90° to the right
- PC sync connectivity
- Battery pack connectivity
- Built-in reflector and diffuser panels
- Automatic power-saving function
- Automatic overheating protection

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Overview



- | | |
|------------------------------------|-------------------------------|
| 1. Flash head | 12. Mode select button |
| 2. Reflection panel | 13. Test button |
| 3. Diffuser panel | 14. Battery compartment cover |
| 4. Wireless optical sensor | 15. Power/ready indicator |
| 5. Hot shoe locking wheel | 16. Mode indicators |
| 6. Mounting foot | 17. Stand/tripod mount |
| 7. External power socket | 18. Carrying pouch |
| 8. PC sync socket | |
| 9. Output level indicator | |
| 10. Flash power level button (+/-) | |
| 11. On/Off switch | |

Warnings

Before using your VD-410, please read the following safety notices carefully and thoroughly to ensure safe use and 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, wait at least 10 minutes after 20 continuous flashes at full power.
- Do not disassemble or attempt to repair this product yourself. The high-voltage components inside can produce a hazardous electric shock.
- Keep this product and its batteries out of 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 could cause batteries to leak, overheat, or explode.
- Install batteries in the proper orientation, according to the indicator in the battery chamber. Installing batteries in the reverse orientation could cause them to leak, overheat, or explode.
- Do not use or store the VD-410 in flammable conditions (such as environments containing flammable gases or liquid chemicals). This could damage the flash, start a fire, or cause an electric shock.

- Do not clean the VD-410 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 VD-410 get damaged, 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 VD-410, as this could cause a malfunction that may cause it to explode or ignite.
- Remove all batteries from the VD-410 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 VD-410 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 could cause the batteries to leak corrosive liquids, generate heat, or explode.

Installing Batteries

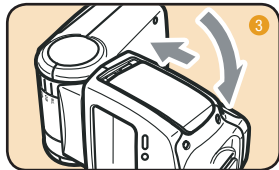
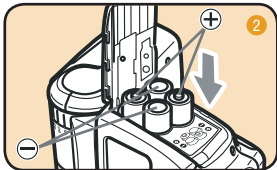
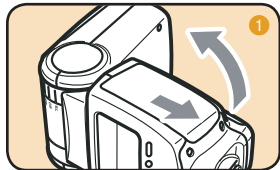
The VD-410 can be powered by four AA batteries of two types:

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

Note: For the fastest recycle times and longest battery life, NiMH batteries are recommended.

To install batteries, make sure the VD-410 is turned off and follow these steps:

1. With the battery compartment cover facing up, press down and slide the cover in the direction of the arrow to open it.
2. Insert batteries in the orientations indicated by the illustration inside the compartment.
3. Replace the battery compartment cover by pressing and sliding it into place in the opposite direction of the arrow on the cover.

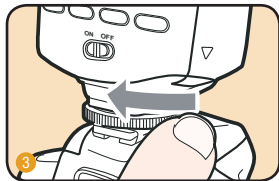
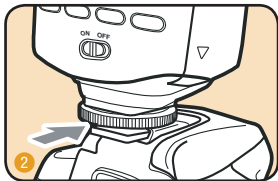
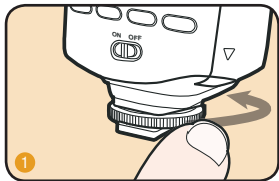


Important! Replace all four batteries at the same time. Do not mix battery types or brands, or use old and new batteries together.

Mounting the Flash

To mount the flash on your camera, make sure the VD-410 is turned off and follow these steps:

1. Turn the locking wheel counterclockwise to loosen it.
2. Slide the mounting foot all the way into your camera's hot shoe.
3. Turn the locking wheel clockwise until snug, but don't overtighten.



To dismount the flash from your camera, make sure the VD-410 is turned off and follow these steps:

1. Turn the locking wheel counterclockwise to loosen it.
2. Slide the mounting foot out of your camera's hot shoe.

Mounting the VD-410 on the included stand:

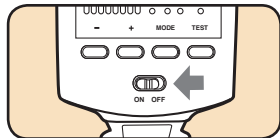
You can mount the VD-410 on the included stand in the same way you would mount it on your camera. This allows you to set the flash up on a flat surface or attach it to a tripod head, light stand, or clamp that has a compatible 1/4"-20 screw mount.

Turning On the Flash and Firing a Test

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

When the flash is ready to fire, the Ready indicator will glow red.

To fire a test flash, press the Test button.



Automatic power-saving function: After 30 minutes of inactivity, the flash will automatically enter a power-saving mode to conserve battery life. The Ready indicator will blink every three seconds and other indicator lights will turn off.

To reactivate the VD-410, press any button on the control panel. When in S1/S2 modes (Page 18), the flash will enter power-saving mode after 60 minutes of inactivity. During long periods of inactivity, we recommended using the power switch to turn the flash off completely.

When battery power is low, the Ready indicator will blink continuously.

Extended Interface

You can connect your VD-410 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 number of flashes and reduce the recycle time in between flashes.

Note: When an external power source is plugged into the flash, the AA batteries must still be in the flash in order for it to operate.

PC sync: You can synchronize your VD-410 with a camera by running a PC cord between your camera and the VD-410's PC sync socket. This lets you position the flash off-camera, thus giving you more lighting options.

Note: The PC sync socket on the VD-410 is only for synchronous signal input and does not produce output.

To access the extended interface, follow these steps:

1. Pull back the proper contact cover on the side of the flash.
2. Plug the cable into the corresponding socket.
 - A. For an external power source, plug the appropriate power cable into the external power socket.
 - B. For PC sync, plug a PC cord into the PC sync socket.

Using the Manual Flash

The VD-410 offers fully manual flash output adjustment, which enhances creative control over your photography.

You can set the flash output level to eight settings: 1/1, 1/2, 1/4, 1/8, 1/16, 1/32, 1/64, 1/128. The 1/1 setting is the full-power flash, and each successive setting halves the light output.

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

1. Make sure the Mode indicator is set to M.
2. Press the flash power level buttons (+/-) to set the desired flash output.
3. Adjust the exposure settings you want to use on your camera. The highest shutter speed available will be your camera's flash sync speed.
4. Take a test shot, and then check the exposure on your camera's LCD.
5. Adjust your camera's exposure settings and the flash output as needed.
6. Press your camera's shutter-release button to take a picture.

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

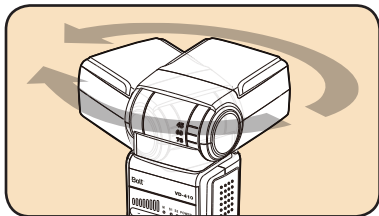
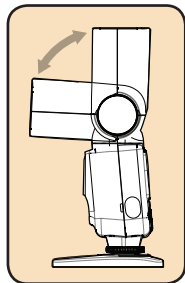
To avoid overheating the VD-410 and damaging it, wait at least 10 minutes after 20 continuous full-power flashes. The flash will automatically shut off if the internal circuit overheats, and the charging time will increase up to 25 seconds until the flash bulb cools down.

Bouncing Your Flash

Using a 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 of the larger surface before striking your subject to provide softer, more natural illumination. The VD-410 flash head can be tilted up at 45°, 60°, 75°, and 90° angles to the lens. It can also be swiveled horizontally 180° to the left and 90° to the right.

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

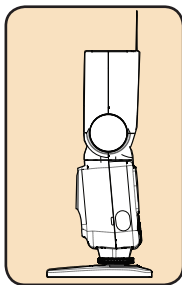
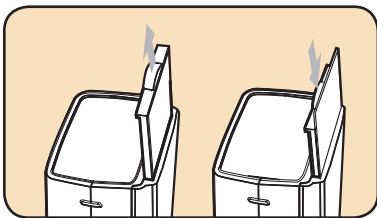
Tip: Bouncing your flash off of colored surfaces can create a color cast in your images. Bouncing off of a white or neutral-colored surface will not alter the color of the light, while bouncing off of a gold-toned surface can give portraits a warmer look. Other colors can be used for creative effects.



Creating catchlights: Catchlights are the reflections that appear in people's eyes in photographs.

To create catchlights in your subjects' eyes when bouncing your flash, follow these steps:

1. Position the flash head at the 90° angle (pointing straight up) to bounce your flash off the ceiling or an overhead reflector.
2. 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.

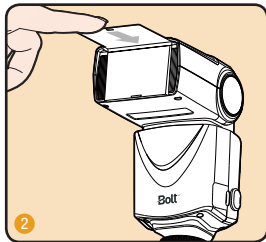
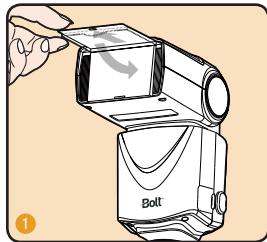


Using the Flash with the Diffuser Panel

You can use the built-in diffuser panel to give the flash a much wider coverage area. The diffuser also softens the light, providing an alternative when no surface is available for bouncing the flash.

To use the diffuser, follow these steps:

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.



Using Your VD-410 in Wireless Optical Slave Mode

Using the optical slave feature, the VD-410 can be set to fire whenever it detects a signal from a master flash. This works optically—when the VD-410 “sees” another flash firing, it will instantaneously fire along with it. In order to ensure that the VD-410 fires at the correct time, there are two different slave modes available: S1 and S2.

In S1 Mode, the flash will fire when it senses any burst of light. In S2 mode, it will ignore any pre-flash and fire on the second burst of light. Pre-flash is used to help the camera meter or focus, and is done automatically by the camera. If the slave flash is not set correctly, it may be triggered by the pre-flash and fire before the camera's shutter opens.

To use the VD-410 flash unit as a slave, follow these steps:

1. In Manual (M Mode), use the (+) and (-) buttons to select the power output (1/1 through 1/128).
2. Press the Mode button repeatedly until the S1 or S2 slave mode indicator glows.
3. Set the exposure settings you want to use on your camera and master flash.

4. Take a test shot, and check the exposure on your camera's LCD.
5. Adjust your camera's exposure settings and the light output level of the flash as needed.
6. Press your camera's shutter-release button to take the picture.

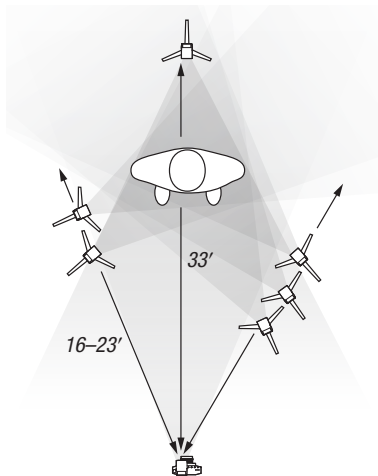
Important! Some cameras, when set to red-eye reduction, will emit a series of quick flashes lasting a second or more. This may not work properly with any slave mode. We suggest you avoid using red-eye reduction when the VD-410 acts as a slave.

Positioning Remote Flash Units

You can create a professional lighting setup by positioning remote 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 remote flash units is approximately 33' (10 m)
- The wireless sensors are located on the front of the VD-410. Make sure 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.



Troubleshooting

Problem	Solution
The flash is turned on but won't fire.	Make sure that fresh batteries are installed and in the proper orientation. (Page 8)
The flash is set up as an optical slave but won't fire.	• Make sure that the master flash is within the transmission range, and the wireless sensor on the slave is pointing toward the master flash. Remove any obstructions in the line of sight between the two sensors. (Page 20) • The ambient light may be too high. (Page 20)
The flash is set up as an optical slave, but the light is not noticeable in the picture.	Make sure that the flash is set to the appropriate power level. (Page 14)
The edges of the images look dark.	Make sure the flash power setting corresponds to the focal length of your lens, and you are at the proper flash sync speed.
There's a whining sound coming from the flash.	This is normal and does not indicate a malfunction. When the flash becomes warm from continuous use, vibrations inside the unit may cause this sound. It will dissipate as the unit cools.

Specifications

Type: On-camera and optical wireless manual flash

Guide number: 124.7' (38 m) ISO 100

Flash duration: 1/300–1/20,000 sec.

Flash recycle time: 0.1–5 sec. (AA , NiMH)

Manual mode power output: 1/1, 1/2, 1/4, 1/8, 1/16, 1/32, 1/64, 1/128

Wireless transmission method: Optical pulse

Wireless transmission range: Up to 33' (10 m)

Wireless optical slave modes: 2

Slave timing modes: Instant sync, skip one pre-flash

Power source: 4 AA lithium, NiMH, or alkaline batteries; optional external power source

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

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

Dimensions: 7.7" × 3" × 2.2" (19.5 × 7.7 × 5.7 cm)

Weight: 10 oz. (286 g) without batteries

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.

Product warranty provided by the Gradus Group.
www.gradusgroup.com



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