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Photo Equipment Buying Guide

External Flash

Many might be surprised to find out how many different [types of flash units](#) there are.

- [Hotshoe mounted](#). This is the type most people think of when they think of external flash. It's also the type most of the rest of this guide will focus on.
- [Handle mounted](#). An older style, this may look dated but these are frequently more powerful units.
- [Ring flash](#). Commonly attaches to the front of your lens. These are used for macro and close-up shooting. The only time most people have seen these before is when they went to the dentist.
- [Slaved flash](#). External flashes of various types that are meant to be used separate from a camera but be triggered by camera mounted or on-camera flash.

1. **Power**, expressed in Guide Number (GN), is a measure of how much light the flash will produce. GN is a non-standard unit of measure. It basically tells you how far away a subject can be from the source of the flash, where the flash is the primary light source, and the subject to still be properly lit. The problem with this is that the distance can be expressed in either feet or meters. There is often no way of knowing which it is. GN also assumes ISO100 and f1.0 so adjustments will have to be made in the calculations to account for real-world conditions. For instance, f1.0 lenses are very rare and extremely expensive.

2. **Recycle time** is the time it takes for the flash to be ready to fire again after having just fired at full power. This time will vary and become longer as the charge in the batteries is used up.
3. **Number and type of batteries** is important. Many flashes use standard AA batteries. Those using four batteries will have more power, recycle faster and last longer than those using only two batteries. Other types may use specialized (usually rechargeable) batteries. Some even plug into AC power.
4. Unless you know for certain that you absolutely won't need it, you should look for a flash that offers:
 - **Tilt**- the ability for the flash head to point upward (and sometimes slightly downward at various angles, useful for bouncing off ceilings).
 - **Swivel**- the ability for the flash head to rotate, useful for bouncing off walls.
 - **Zoom**- the ability to control how wide or far the light is thrown.

These features can usually be used together in any combination. Some flashes may offer only one or two. The options are listed in order of importance.

5. **TTL ("Through the Lens") metering** is the ability for the camera to exercise very fine control over the behavior of the flash. Most, but not all, DSLRs support TTL metering. There are several different technologies (Such as iTTL, d-TTL, e-TTL, etc.) used for TTL metering and most DSLRs will support only one so make sure you get the kind that matches your camera!
6. **Remote TTL control.** Some cameras can control flashes even when they are not physically connected. Relatively few cameras offer this feature. Both camera and flash must be designed together for it to work.
7. **Focus Assist Light.** Many flashes will have a red "lens" on the front. This is a focus assist light. During use, the camera will project a red cross-hatch pattern to help the camera focus in low light. This is much less offensive to people than the strobing flash effect found on the focus assist of built-in flash units. It also saves battery life and speeds flash recycle time.
8. **Slave Mode** capability. Whether or not the flash supports remote TTL control, it may have slave mode capability. This enables the flash to be used off-camera and triggered by another flash (usually your camera's built-in flash.)
9. Some flashes will have a **supplemental flash tube**, a small secondary flash which always points straight ahead. This is found only on flashes which also offer tilt and/or swivel.

10. A few flashes have the **ability to accept filters**. Unlike filters which go in front of your camera's lens, which have largely been made obsolete by digital editing programs like [Adobe Photoshop](#), adding a deliberate color cast to the light from your flash can sometimes be useful. Especially in studio photography when you might want to balance mixed light sources or create interesting effects.

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