

USER GUIDE

BY-180B Studio Flash (Strobe)

This package includes three BY-180B strobes. The 180B strobe (or so-called “moonlight”) is an “all-in-one” studio strobe that has the flash tube, modeling light and power supply built into a single compact housing, which can be mounted on a light stand. It can host a softbox or an umbrella. This unit uses North America standard household 110 AC power (no need of battery-pack).

- **Flashing power.** The 180B strobe offers 180 Watt Second (WS) flashing output power. The output flashing power level can be adjusted continuously via a knob on the back of strobe. The 180 WS is powerful enough to illuminate large subjects, or to supply strong lighting to smaller subjects.
- **Modeling light.** The modeling light is 75 watt continuous light that gives you a preview of what your flashing light effect will look like. There is a switch allowing the modeling light to be turned ON or OFF as desired.
- **Built-in slave trigger.** The 180B strobe has a built-in optical/infrared sensor that triggers the flash when it detects flashing from other strobe(s) or IR ray burst from a trigger.
- **Sync trigger socket.** This is an input for sync cord that connects to your camera. Three sync cords are included. Two are PC sync cords that are used for a camera has standard PC sync socket. The other one is PC/hotshoe sync cord that is used for an SLR camera (film and digital) with a standard hot shoe. Most SLR cameras today such as Nikon, Canon, Pentax, etc have a standard hot shoe. It is suggested to use manual mode of your camera and set the shutter of camera between 1/60 – 1/250th second. Adjust the aperture of your camera due to your lighting condition and ISO setting while taking studio photos.
- **Wireless triggering option.** Since the strobe has an IR sensor built-in, it will be triggered by an IR remote trigger. If you use a Radio remote trigger, just plug the sync cord of Radio receiver into the Sync trigger socket of the strobe.

Note: this package include three long sync cords, of which one is PC/hotshoe sync cord that is used for an SLR camera (film and digital) with a standard hot shoe. You do NOT need a wireless trigger, since this cord is long enough. You need to connect with this cord to your camera and **only** one of the strobes. One strobe flashing will trigger other strobes to fire since all strobes have a build-in slave sensor. There cord is more reliable than a wireless trigger usually. The IR or Radio triggers are cheap today. You shall be able to get one online or ebay easily if you want one. This kit works with all types of remote triggers.

- **Recharge cycle time.** The recharge time is about 1-3 seconds after each flashing.

Specification

Power source: 110 ~ 120 AC volts (50/60 Hz)

Max flash output power: 180 WS (Watt-Second)

Guide Number: 48 m or 150 ft

Output flash power range: 1/8 – full, Stepless control

Charge time: 0.5 – 3 second

Flash duration: 1/500 – 1/800 second

Flash Angle coverage: 55 degree

Remote control range: > 33 feet

Modeling lamp power: 75 watts

Flash color temperature: > 5500K

Trigger voltage: 12 DC volts

Triggering options: Sync cord, Test button, IR/optical sensor, Radio trigger.

Fuse: 5A

Control Panel

- (1) AC socket
- (2) Main power switch
- (3) Test button
- (4) IR/Optical sensors
- (5) Flash Ready indicating light
- (6) Flash output power control knob
- (7) Modeling lamp switch
- (8) Flash sync cord socket
- (9) Fuse

Operation and safety notes:

The Strobe has built-in IR/Optical sensors, so any external flashing will trigger this strobe to flash. The strobe can be triggered by a Camera through a sync cord or with a Radio trigger or an IR trigger. When a radio trigger is used, a radio receiver should be connected to the strobe via a sync cord.

There are two types of sync cords. One is regular sync cord which is used for any camera that has a standard PC socket. Other one is sync/hot shoe cord which can be used to connect to any camera that has a standard hot shoe. Almost all the SLR or digital SLR cameras today come with standard hot shoe. Hot shoe to PC socket adapter can also be purchased if needed.

Please always turn off the Strobe when not in use. The modeling light is a continuous lighting source so it will generate heat if you leave it on for too long. If a softbox is used, it is recommended to use high quality softbox that can withstand relatively high temperature. During a photo session, it is recommended to not leave the modeling light ON for over 20 minutes. One only needs to turn modeling light on while modeling the subject to fine-tune the effect of light and shadow.

Softbox

This package includes two 22'x28' softboxes.

- **Softbox bag.** The softbox itself is a rugged foldable fabric box that opens up into a rectangular box. The interior of the fabric is a crinkled aluminum textured material that reflects all the light from your strobe flash around in the softbox so it can escape only through the front of the box. The exterior of the fabric is black matte to absorb light, so that it doesn't become a reflector itself.
- **Support rods.** The rods stiffen the soft box and provide its shape, and fasten to the speed ring.
- **Speed ring.** This is at the back end of the box and connects with the box's support rods, while hosting to the 180B strobe unit itself.
- **Inside diffuser.** This is a translucent diffusing cloth sheet that fastens inside the softbox, about halfway between the flash tube of strobe and the front of the box. Use this inside diffuser when you want the maximum amount of softness from your light. Remove it when you want a slightly harder light from your strobe.
- **Front diffuser.** This translucent cloth fits over the front of the softbox to provide the main diffusion.

Umbrella

One reflector umbrella is included in this package. It can be attached to the 180B strobe. You can adjust the distance between umbrella surface and strobe flash tube by moving the strobe closer to the umbrella's center, or farther away to change the coverage size and diffusion of the light. You can use the umbrella to vary the quality of the light reaching your subject. The soft white umbrella provides the most diffused illumination. It can be translucent or used as a reflector. A reflector type umbrella as this one reflects the soft diffusion light back to the subject. For translucent type, one can just turn the umbrella around and shoot through it.

Collapsible dual-surface reflector

This single reflector can serve two purposes. It has a shiny silver surface on one side and a dull matte metallic gold surface on the other.

STUDIO LIGHTING TUTORIAL

Main light

The main or key light is the primary light source used to illuminate a portrait, which is most often placed in front of the subject and on one side of the camera or the other. It is not usually placed exactly at the camera position, as this would create very flat lighting (like camera own flashing). The 180B strobe can be used as a main lighting.

Usually, for most portrait applications, the main light is positioned at an angle around 30 – 100 degree from the axis of the camera and subject. It shall be placed higher than the subject's head. You can experiment your setup placed at different positions by using the modeling light to see the effects and hence determine exact height and angle of your main light as you desire. Placed to the side, at 90-degree angle from the camera's axis, the main light becomes a sidelight that illuminates one side or the profile of a subject that is facing the light. Placed behind the subject, the main light can produce a silhouette effect if no other lights are used or a backlit effect if additional lights are projected from front.

Fill light

A fill light is usually positioned on the opposite side of the camera from the main light. The fill light is less powerful than main light. The purpose of a fill light is to lighten the shadows cast by the main light. A 180B strobe can be used as a fill light. One can place the strobe far away or turn down the intensity of flash. The lighting intensity ratio between the main light and fill light determines, in part, the contrast of a scene. If the main and fill are almost equal, the picture will be relatively low in contrast. If the main light is much more powerful than the fill light, the shadows will be somewhat darker and the image will have higher contrast. The fill light is usually placed with 60 - 120 degree angle away from the main light axis from the subject, and often placed at near to the camera position so they will fill the shadows that the camera "sees" from the main light. You shall adjust the distance between the fill strobe and the subject to add just enough light to soften the shadows created by the main light.

Reflector and Umbrella to fill

In your home studio, due to the walls and objects at your home, your main light flashing will likely bounce around. For relatively high contrast and soft shadow effects, one may not use a fill light at all. Instead, just use a reflector or an

umbrella placed at the position of fill light to reflect just enough light upon the subject to soften the shadows.

Background light

In your home studio, the background usually is only a few of feet away from subject. The bounced flashing from your main and fill lights usually illuminates enough to the background. If your background is far away from your subjects, a background light may be added to illuminate the background, gaining more depth or separation in your image. The light can be placed on the stand, lowered to the ground, and about halfway between your subject and the background.

Basic Portrait lighting techniques

The best way to learn portrait lighting techniques is to go online. Just go online and Google key words: "Portrait Lighting" so you will find all the resources you need.