

# AlienBees Operation Manual

Aa B e e e e e Cc Dd Ee Ff Gg

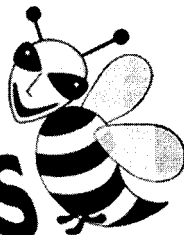
operating instructions  
for

ALIENBEES

Professional  
Photographic  
Studio Flash Units



**ALIEN  
BEES**



AlienBees, Inc. [www.alienbees.com](http://www.alienbees.com)

530 East Iris Drive, Melrose, Tennessee 37204

Toll Free 1-877-714-3381 FAX 615-383-9569



This unit contains high voltages and internal components that can store dangerous voltages even when the unit is unplugged. The unit contains no user-serviceable parts and should not be disassembled, except by a qualified technician.

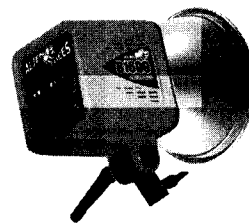
The flashtube and modeling lamp can get extremely hot. To change the lamps, turn the unit off, then unplug the power cord from the outlet. Allow the unit to cool, and use insulating gloves to remove or replace the lamps. Do not allow your finger oils to contact the lamps as this can cause excess heating and premature lamp failure.

Before attempting to operate the flash unit, make sure the unit is securely mounted to a lightstand. Do not allow unattended children around the studio flash equipment, as potentially dangerous conditions may result. These dangers may include burns and electrical shock hazards, as well as the possibility of falling equipment if cords are tripped over.



**warning**

Connect this unit only to 3-wire grounded outlet to avoid shock hazard. Do not connect the unit to an ungrounded outlet or use two-wire extension cords or adapters that eliminate the ground prong.



Your AlienBees studio flash unit is designed for the most demanding studio use, yet is equally at home in the hands of the novice photographer. Because of its extremely small size and weight it is well suited for location work. All AlienBees flash units feature very fast recycle times and built in cooling fans for time-critical work such as fashion and wedding photography.

The modeling lamp supplied is a standard 100 watt household bulb. Besides providing simple and inexpensive replacement, the large lamp envelope provides a closer correlation to the flash pattern characteristic than is provided with units using small quartz halogen modeling lamps. If halogen modeling lamps are preferred for a longer life and a slightly higher output, Phillips "Halogena" bulbs up to 150 watts are available at Home Depot and other stores for about \$4.00. Bulbs over 150 watts should not be used.

Flashpower and Modeling Lamp intensity are simultaneously and continuously variable over a 5 f-stop range from Full to 1/32 power via a single rear panel fader. Provisions are also provided to allow setting modeling lamps at full brightness regardless of flashpower, or off.

The AlienBees RC4X remote control unit is fully compatible with White Lightning remote controls. In fact, AlienBees units and White Lightning units may be operated together from the same remote control if desired.

The large diameter flashtube has a typical flashtube life in the 100,000 to 500,000 flash range, and is user replaceable. Replacement tubes are quite inexpensive compared to other professional flash units. It is worthwhile to note that the flashtubes in cheaper amateur flash units are usually rated at 10,000 flashes and are not user replaceable.

The built in flash-sensitive slave tripper will fire the unit anytime another flash unit is fired in the vicinity (typically up to 50' or more away). This eliminates the necessity of running a sync cord to each unit.

In most cases, completely wireless firing may be accomplished by firing a small on-camera flash unit toward the ceiling. As long as the camera mounted flash is not pointed directly at the subject its effect on the lighting will be negligible, but it will reliably fire all AlienBees units in the setup.

The built in slave tripper is automatically disconnected when a sync cord is inserted. Thus if you are in a location where other photographers are using flash units, your AlienBees unit will only be fired by your camera via the sync cord (or remote control). When several AlienBees units must be fired via a wired connection, the inexpensive RC4X remote control unit is the preferred method. (See RC4X specifications).

As a reliable means of indicating when each unit is recycled and ready for another exposure, the modeling lamp may be set to go dim when the unit is fired and to return to full brightness when full recycle has occurred. This also provides assurance that all units in a multi-light set up are firing properly. When the picture is taken, all units should go dim, then return on when recycled. If this feature is distracting it may be disabled via the rear panel or the RCX4 remote.

AlienBees units produce "daylight spectrum" 5600° K illumination relatively with low UV emission and maximum efficacy. See individual device specification for specific flash duration and lumensecond output.

Your AlienBees unit offers exceptionally accurate modeling such that what you see under model lighting is a reliable preview of the lighting effect you will get on film. In order to assure accurate previewing, other strong sources of illumination should be eliminated from the shooting area. These light sources will usually have a negligible effect on the actual flash exposure but will strongly affect the preview under modeling lamps.

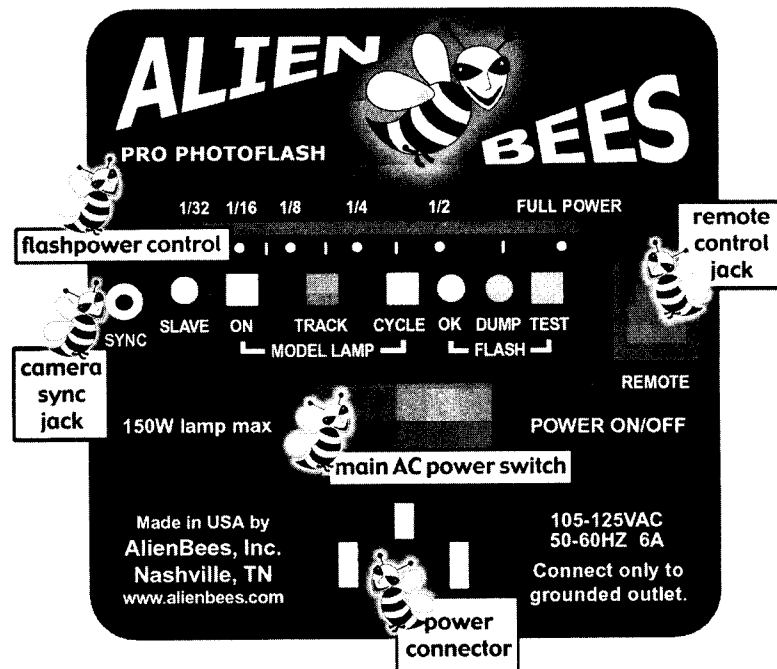
AlienBees units employ full voltage regulation of the modeling lamp circuits as well as flash circuits. Without this feature, it is impossible for a system to maintain consistent flash/model ratios under real-world powerline conditions.

Units are housed in an impact resistant Lexan polycarbonate housing. While this housing is very difficult to damage it can be replaced at minor cost by our factory if catastrophic damage should occur.

A quick-release mechanism attaches reflectors, softboxes and other accessories. The unit can be operated in "bare bulb" mode, with no accessory attached. It should be noted that White Lightning reflectors and accessories as well as many Balcar accessories may be mounted to the unit.

## POWER

Flash Unit	B400	B800	B1600
true wattseconds	160ws	320ws	640ws
effective wattseconds	400ews	800ews	1600ews
lumenseconds	7,000	14,000	28,000



A description of the function of the controls follows:

### POWER SWITCH

Turns entire unit on or off. Also serves as a circuit breaker.

### MODEL LAMP ON

Turns model lamp on when depressed.

### MODEL LAMP TRACK

When depressed the model lamp will track the flashpower setting. When released the model lamp will remain at full brightness regardless of flashpower.

### MODEL LAMP CYCLE

When depressed the model lamp visually indicates recycle status by going dark when unit is flashed and coming back on when unit is recycled. When released the model lamp remains on during recycle.

### FLASHPOWER CONTROL

Adjusts the flashpower from Full power down to 1/32 power.

### FLASH OK

Indicates unit is 100% recycled. (See also MODEL LAMP CYCLE).

### FLASH DUMP LIGHT

Indicates unit is charged to a higher flashpower than what is selected. This occurs when you change flashpower from a higher value to a lower value. To avoid overexposing the next frame, wait for light to go out or "dump" the excess charge by pressing "FLASH TEST". See also "AUTODUMP"

### AUTODUMP

Whenever dump light is on, automatic circuitry drains excess charge to get proper charge. This process may take from several seconds to a full minute. Pressing FLASH TEST will fire the unit to immediately dump excess power.

### FLASH TEST

Fires the flash for testing/metering.

### REMOTE CONTROL JACK

Plugging the RC4X remote control unit into this jack causes unit's Flashpower and Modeling Lamp to be externally controlled. Rear panel controls are ignored. The Remote Control jack also provides for firing the unit from the Remote Control Unit. By connecting a camera sync cord to the RC4X unit, all units in the setup (up to four units) may be simultaneously fired without regard to the built in slave tripper. Plugging a sync cord or blank sync plug into each light unit will disable the slave trippers. This will eliminate unwanted firing in response to other photographer's flash units that might be in the same shooting area. Blank sync plugs are included with the units and are also available from Radio Shack Stores as a mini 3.5mm phone plug). This unit is also fully compatible with the White Lightning Ultra remote control standard set in 1986. Accordingly, White Lightning remote control units may also be used.

### SYNC JACK

Use the supplied sync cord to attach the unit to your camera sync jack for "hardwired sync". Sync voltage is 6 Volts.

### SLAVE TRIPPER

Unit contains a sensitive built-in slave tripper that fires the unit whenever it "sees" the light from another flash unit. The slave tripper is automatically disconnected whenever a sync cord is plugged into the sync jack.

### WIRELESS SYNC

A typical studio setup of units may be reliably triggered by a low-power battery flash mounted on (or built into) the camera. By using a business card or similar to bounce the battery flash output upward, it will have negligible effect on the scene lighting yet will be sufficient to trip the setup.

### WIRED SYNC

Connect a sync cord from one of the units to your camera's "pc sync" connection or "hotshoe adaptor". The remaining flash units will fire via their slave trippers. Wired sync of multiple units can be accomplished using the accessory RC4X remote control unit.

### EFFICACY

AlienBees units produce maximum efficacy in the conversion of electrical energy (wattseconds) into flashpower (lumenseconds).

### MODELING VS FLASH

AlienBees units incorporate large diameter frosted modeling lamps and large diameter circular flashtubes as a means of accomplishing a close correlation of the character of the light from both sources. This is important if the modeling lamps are to provide an accurate preview of the exposure about to be made with the flashtubes.

Units employing small quartz modeling lamps and/or small flashtubes are prone to hotspots and irregular lighting patterns, as well as a lack of correlation between flash and modeling illumination patterns. This may not be much of a problem when softboxes or white umbrellas are used (because of their diffusion), but it becomes quite important when open reflectors or grid spot attachments are used.

The most meaningful rating of a flash unit is the "lumensecond" - a term which defines the actual light emitted. We publish this rating (along with actual wattsecond ratings) but few other manufacturers understand the term or know how to use it. We also publish real watt second ratings and measured real-world f-stops.

The wattsecond rating defines the amount of electrical power emitted with each flash.

While the actual amount of light produced for a given number of wattseconds varies, depending on the efficacy of the unit's design, this term provides a reasonable guide for comparing output, as long as real wattseconds are specified.

Effective wattseconds are an arbitrary rating based on no real industry standard.

For the photographer who wants to know what sort of output to expect in real studio situations, we have measured our B1600 unit, using a Gossen Ultra Pro Flashmeter in a typical size room, in various configurations, all at 10'. Keep in mind that different brands of flashmeters can vary by as much as one f-stop in their interpretation of "correct" exposure values and the size, shape and color of the room can present similar variations. Accordingly, your results may be higher or lower.

f22+0/10	GN220	Direct flash with 7" reflector
f11+6/10	GN167	Medium softbox with internal diffuser
f11+2/10	GN126	White bounce umbrella w/black cover
f11+4/10	GN145	White shoot-thru umbrella
f11+7/10	GN178	White bounce umbrella w/silver cover
f22+5/10	GN300	Sliver bounce umbrella - focused
f16+4/10	GN211	Sliver bounce umbrella - defocused
f11+0/10	GN110	Bare bulb configuration*

\*Varies widely with room style

\*\*All readings taken at a distance of 10 feet, with the B1600\*\* Note 1: Add one f-stop for 7' distance, add two f-stops for readings at 5'. Note 2: Subtract one f-stop for B800, subtract two f-stops for B400. Flash Durations (T.5 Method) B1600 = 1/1600, B800 = 1/3200, B400 = 1/6400. Color temperature - all units: 5600°k at full, 5300°k at 1/32 power.

# setting Flashpower



AlienBees Flash Units allow continuously variable flash power over the 5 f-stop range from Full to 1/32 power. To adjust the flash power, simply set the FLASH POWER control to the desired position, reading the fractional increment scale. When adjusting the flash power upward, the green OK LED will go off temporarily, then return on when the capacitors have been charged to the new, higher power setting. When adjusting the flash power downward, the red DUMP LED will light, reminding you to dump the excess power stored from previous higher power settings. To dump the excess power, simply press the TEST button. Failure to test-flash the system following a downward power change can result in overexposure of the film-frame immediately following.

## OK/DUMP LEDs

The two light-emitting diodes (LEDs) marked OK and DUMP indicate the status of charge in the main capacitors. Whenever the capacitor charge is within 1/4f of the setting of the Flashpower control, the green OK LED will light up, indicating that the unit is ready to fire. If the charge in the capacitors exceeds the setting of the flashpower control by over 1/4f, the red DUMP LED will light up, indicating the need to test-flash the unit, to dump excess power.

The DUMP LED will normally come on when there is a reduction in the flashpower setting.

## Modeling Lamp Settings

The TRACK LED indicates the status of your modeling lamp, set to adjust with your flashpower, to maintain correct brightness in accordance with the selected power. When tracking is turned on, the model lamp will dim in proportion to the flashpower. The CYCLE LED indicates the readiness of the light, causing your modeling lamp to go out during recycle, and come back on when your unit is powered and ready to be fired.

## Built-In Slave Tripper

The slave cell on the rear panel of your AlienBees Flash Unit is extremely sensitive to pulses of light, and will reliably trigger the flash unit when any light in the shooting area is detected.

To disable the slave tripper, a sync cord may be inserted into the SYNC JACK in the rear panel, making it so that no other detected light will fire the unit. This may be desirable when shooting on a location where other flashes are present, and you wish to fire your unit manually. Please allow 10-20 seconds for the sync cord to take effect and disconnect your slave cell.

## Sync Jack

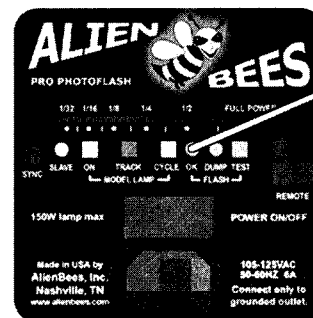
The sync jack additionally allows for a hard-wired sync directly to your camera, operating at 9 volts DC.



## How to replace your AlienBees flashtube

The flashtube in your AlienBees Unit is simple to replace. Just follow these easy instructions:

1. Turn your unit OFF and unplug it from your electrical outlet. Wait five minutes to make sure that they unit does not have any power stored in the capacitors before handling it.
2. Remove the modeling lamp...it screws out like a household lightbulb.
3. Take a piece of cloth or tissue and pull the flashtube straight up and out of the unit. ( You'll want to use a cloth or something equivalent as the tube may be warm, and you will not want to get finger oils on the tube.)
4. To install the new tube, hold the glass part of the tube in your hands with the three metal legs sticking out. Again, you may want to use a cloth for handling the tube. Make sure the three metal legs are straight; they may need to be straightened with either your fingers or needle nose pliers. Next, line each of the legs up with the socket on the unit, and insert the tube by gently pushing down on all areas until the tube is seated all the way down in the unit. Sometimes the middle leg, which is the trigger lead, wants to bend. Make sure it stays straight and does not bend around the body of the tube. The flashtube should fit snugly and not be touching any metal parts of the flash unit.
5. Screw the modeling lamp back in.
6. You are done. Plug the unit back into the AC source and turn it on. If the tube is working properly, the modeling lamp will come on, and the OK light on the back of the unit will light up, indicating that the unit is ready to be fired.



when the OK light comes back on, you know you've correctly replaced the tube!

To purchase a replacement flashtube, or for assistance in the replacement process, call Toll Free 1-877-714-3381, or locally call 615-383-9569.

bee safe...protect your hands  
when replacing the flashtube!

# AlienBees Specifications

features	B400	B800	B1600
Output	400 effective ws 160 true ws	800 effective ws 320 true ws	1600 effective ws 640 true ws
Recycle to 100%	1/2 second	1 second	2 seconds
Flash Duration (t.5 method)	1/6400th second	1/3200th second	1/1600th second
Power Range	Full to 1/32 5 f-stops	Full to 1/32 5 f-stops	Full to 1/32 5 f-stops
Weight	2.5 pounds total	3 pounds total	4 pounds total
Dimensions	9 x 7.5 x 5.5"	9 x 7.5 x 5.5"	9 x 7.5 x 5.5"
Modeling Lamp	100 watt standard up to 150 watt max	100 watt standard up to 150 watt max	100 watt standard up to 150 watt max
User Replacable Flashtube	yes	yes	yes
Cooling Fan	yes	yes	yes
Output with 48" <sup>1</sup> Silver Umbrella	f8-f11	f11-f16	f16-f22
Output with 48" <sup>1</sup> Diffusion Umbrella	f5.6-f8	f8-f11	f11-f16
Typical <sup>2</sup> Softbox Exposure	f8-f16	f16-f22	f22-f32

1. Measured with Gosen Ultra Pro Flashmeter (ISO 100) placed 10 feet from flashtube for direct reflector specs, and 10 feet from center of radiating fabric for umbrella specs. Measurements taken in center of 20' by 27' white room with 20' ceilings. Readings may vary when taken in other environments with other meters.
2. Typical with double diffused softbox at 4 to 6 feet.

○	NOTES
○	
○	
○	



## Upgrades and Color Changes

Within two years of your purchase date, our factory will upgrade any AlienBees Flash Unit to any higher power model for a charge of \$25 plus the price difference between the original model and the model which you choose to upgrade to. If you desire only a color change without upgrade, the cost is \$25 and includes a new housing and any factory warranty service needed. The normal turnaround time for upgrades, color changes or factory warranty service is 2 to 4 days from the receipt of your unit and payment arrangement. Return shipping charges via ground UPS or FedEx are included.

## Satisfaction Guarantee

If you are not completely satisfied with your purchase of an AlienBees Flash Unit, for any reason whatsoever, you may return it within 60 days of your purchase date for a full refund of your purchase price (excluding shipping).

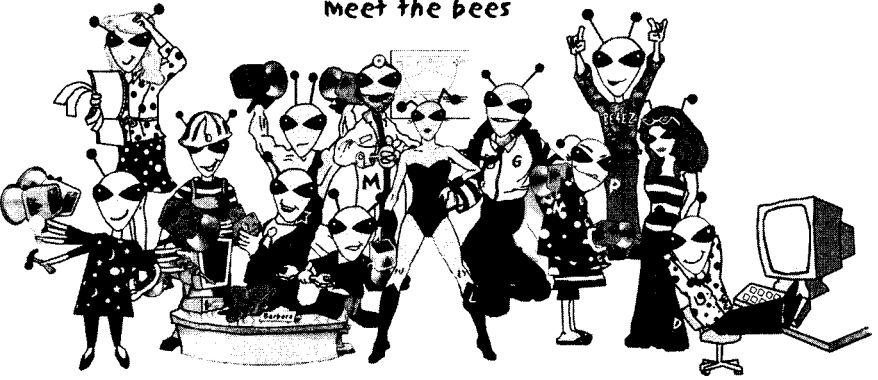
## Factory Direct Sales Only

AlienBees products are sold only factory direct. This saves you money by eliminating the middlemen, and gives you a direct line of communication to the people who made your product. We are happy to provide you with any help, technical or otherwise, via our toll free 800 numbers.

## Ordering and Shipping

We accept Mastercard, Visa, and American Express cards through the telephone and on our website. When possible, orders will be shipped the same day as received. For UPS or Federal Express ground shipping, a shipping charge of \$7 will be added to each light unit or package. We will do our best to combine small items into a single package where possible. Additional shipping charges will be applied to oversize or overweight items, and to shipping methods other than ground. Shipments within Tennessee must add 8.25% state sales tax.

meet the bees



Remember, should you still need help of any kind,  
our mastermind bees are here for you.  
No question is too big or too small.  
We bees aim to please.

this product was made in the USA by  
AlienBees, Incorporated



**AlienBees, Inc. [www.alienbees.com](http://www.alienbees.com)  
530 East Iris Drive, Melrose, Tennessee 37204  
Toll Free 1-877-714-3381 FAX 615-383-9569**