



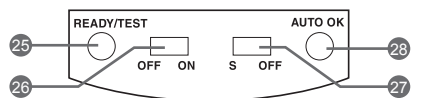
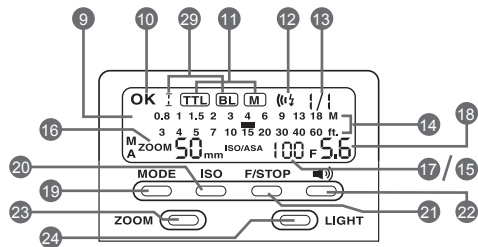
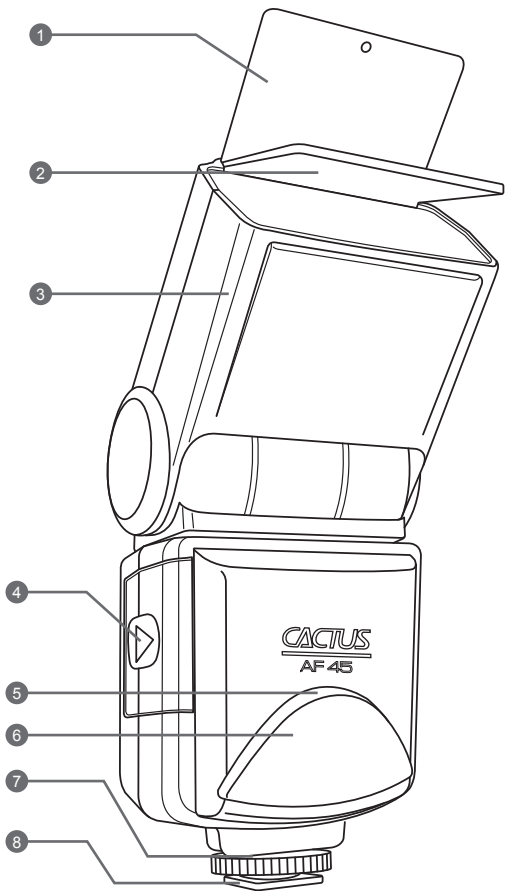
## AF45 Auto Electronic Flash

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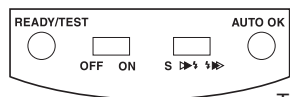
### Instruction Manual

**Harvest One Limited**

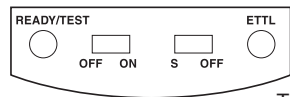
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2-16 Wo Liu Hang Road,  
Fotan, Hong Kong  
[www.cactus-image.com](http://www.cactus-image.com)



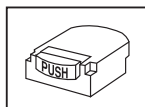
Type N, O, S



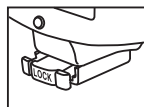
Type P



Type C



Type S  
Mounting  
foot



Type O  
Mounting  
foot

1. Reflecting Plate
2. Diffuser
3. Flash Head
4. Battery Compartment Cover
5. Slave Sensor
6. AF Red Light
7. Lock Ring
8. Mounting Foot
9. LC Display
10. Auto Check Indicator
11. Mode Indicator
12. Beeper Indicator
13. Power Level Setting
14. Flash Range Distance Bar
15. Power Off Indicator
16. Zoom Position
17. Film Speed Indicator
18. F-Stop Indicator
19. Mode Selector
20. Film Speed Selector
21. F/Stop Selector
22. Beeper On/Off
23. Zoom Selector
24. Back Light
25. Ready / Test
26. Power On/Off Switch
27. Slave Mode Switch
28. Auto OK
29. Mode Indicator (Type N only)

## IMPORTANT SAFEGUARDS

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When using your photographic equipment, follow the following basic safety precautions:

1. Do not fire flashes from a short distance directly into the eyes of a person or animal. This can cause damage to the retina and may even lead to blindness.
2. Use only the power sources specified in the operation instructions.
3. Never attempt to open or short-circuit batteries.
4. Never expose dry or rechargeable batteries to excessive temperature such as intensive sunlight or fire.
5. Always switch off the flashgun before changing batteries.
6. Do not attempt to open the flashgun because the electronic circuit contains high voltage.
7. In case the flashgun is so badly damaged that the internal components are exposed, the flashgun may not be used until it has been repaired. Remove the batteries to prevent inadvertent use.
8. Never try to repair the flashgun by yourself. If there are any problems, contact the customer service.

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## Introduction

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Thank you for purchasing Cactus AF45. This is an innovative electronic flashgun for both digital cameras and film cameras. Advanced technology is used in the flashgun to control the correct amount of light output. Please take few minutes to read the instruction manual before using.

The Cactus AF45 flash comes in 5 versions for different camera brands:

C - Canon Digital E-TTL, E-TTL II cameras & E-TTL film cameras

N - Nikon Digital TTL, i-TTL cameras & TTL, i-TTL film cameras

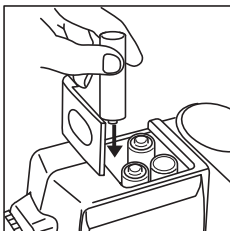
O - Olympus & Panasonic Digital TTL cameras

P - Pentax P-TTL Digital & film cameras

S - Sony Alpha & Minolta Digital ADI, D Lenses cameras & TTL film cameras

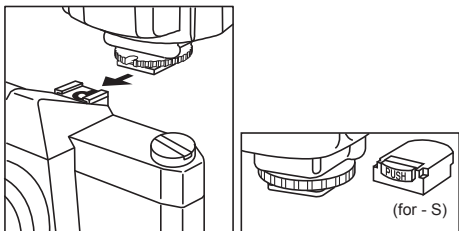
## Inserting Batteries

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1. Make sure the power switch is at "OFF" position.
2. Slide the battery compartment cover forward to open.
3. Insert batteries according to the indicated polarity.
4. Close the compartment cover and slide it back to lock in place.
5. Ensure all batteries be of same make with the same charge level, alkaline batteries are preferable.

## Attaching the Flash to the Camera



- For Type C, N & P:
  1. Loosen the lock ring.
  2. Slide the flash into camera accessory shoe.
  3. Tighten the flash with the lock ring.
- For Type O:
  1. Insert the mounting foot of the flash to the camera accessory shoe.
  2. Press "LOCK" to lock the flash in place.
- For Type S:
  1. Insert the mounting foot of the flash to the camera accessory shoe. The flash is then locked in place.

## Removing the Flashgun from the Camera

- For Type C, N & P: Loosen the lock ring and remove the flash off backward.
- For Type O: Press both sides of the Lock/Release button towards the directions indicated then pull the flashgun off backward.
- For Type S: Push the Shoe Release button and pull the flashgun off backward.

## On/Off Switch and Flash Test Operation

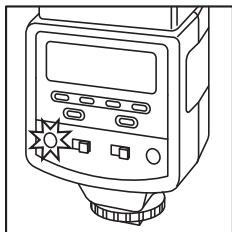
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To switch on the flashgun, slide the power switch to "ON" position. The "READY" indicator will light up as soon as the flash is ready for shooting. Press the Test button to ensure the flashgun works properly.

If the flashgun discharges completely, wait until the "READY" indicator glows again. To switch off, slide the power switch to "OFF" position.

## Illumination of LC Display

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LC display is used to show general information of the camera and current status of the flashgun. LC display will be illuminated for about 5 seconds every time the "LIGHT" key is lightly tapped.

## Shooting

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### **Automatic Flash Sync Speed Control**

When the flashgun is ready, the camera will automatically adjust flash sync speed from program mode or aperture-priority mode selected. The sync speed depends on camera model and usually ranges from 1/30 sec to 1/250 sec. When a shot has been taken, "OK" symbol flashes shortly on the LC display to confirm correct exposure.



### **Auto-focus "AF" Measuring Flash**

The integrated "AF" red light beam of the flashgun supports automatic focusing of auto-focus TTL cameras. When prevailing light is insufficient for automatic focusing, the flashgun will project a red light beam onto the object as soon as the camera's shutter is lightly touched. The camera's auto-focus system then focuses the object by this spot of red light beam.

### **TTL Flash Control**

When the flashgun is switched on, it will automatically set at TTL mode and the LC display will indicate "TTL". When "Ready" indicator lights up, press the shutter release firmly to shoot.

The advanced programming and computerized circuitry of the flashgun provide correct amount of flash light output according to the camera's exposure measurement through the lens (TTL). If you need to change mode, simply press the mode selector.

For Type C flash: The ETTL indicator will light while connected with ETTL cameras.

For Type N flash: The LC Display will show TTL, I-TTL or BL in different way while connected to different camera models. Please refer to the camera's manual.

### **Manual Flash Mode at Full Light Output**

To use the flashgun at full light output in manual mode, the mode selector must be set to M (Manual). A full-power flash will be fired each time the flashgun is triggered. The LC display automatically shows the flash-to-subject distance required for a correct exposure. An adaptation to individual shooting situation can be achieved by changing the lens aperture or focal length (on the camera).

5 level "Power Ratio" of 1/1, 1/2, 1/4, 1/8 and 1/16 could be selected by slightly tapping the Mode selector when it is at the manual position.

## Front and Rear-curtain Synchronization

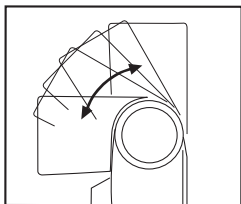
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Some cameras offer the option of rear curtain synchronization (Rear mode) that triggers the flash unit at the end of the exposure time. Rear curtain synchronization is particularly advantageous when using slow shutter speed (slower than 1/30 sec.) or when shooting moving objects that has their own source of light. Rear curtain synchronization gives a more realistic impression of movement because the light streaks behind the light source instead of building up in front of it, as is the case when the flash is synchronized with the front shutter curtain.

For Type P: Select the synchronization mode as front curtain or rear curtain at the back of the flash. The flash will fire according to the mode selected to match with the camera shutter.

For Type C, N, O and S: The camera controls front or rear-curtain synchronization, therefore no setting is required to be done on the flash.

**Note: Rear curtain synchronization is only possible on cameras with this feature. See your camera's instruction manual for details.**



Using direct flash to illuminate a subject will result in harsh, unnatural and unattractive shadows. This can be avoided by bounce and/or swivel flash. The flash head of Cactus AF45 can be tilted to an angle of 45°, 60°, 75°, or 90° and rotated horizontally 180° to the left and 90° to the right. You can tilt or rotate the flash head to bounce the light off the ceiling or walls. When shooting indoor, this technique can help create more natural-looking pictures of people with softer shadows. While using bounce or swivel flash, zooming position will be locked in 50mm except in manual mode.

In order to have your pictures correctly exposed using bounce or swivel flash:

1. Select white or reflective surfaces to bounce the light off. Otherwise your pictures will come with unnatural color cast similar to that of the reflecting surface.
2. Set the camera's exposure mode to Aperture Priority Auto ("A") or Manual ("M").
3. Use wider aperture than normally do, as 2 or 3 stops of light can be lost when using bounce or swivel flash.

### **Reflecting Plate and Diffuser**

The flashgun has built-in reflecting plate and diffuser. You can slide out the reflecting plate or diffuser from the top of flash head. Bouncing the flash head and using reflecting plate can produce more professional looking pictures. The diffuser can reduce strong light to create soft effects.

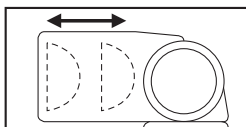
## Off Camera Direct and Bounce Flash

Cactus AF45 can be operated wirelessly with Cactus Wireless Flash Trigger. Off camera flash provides better lighting control of your subject by placing AF45 at various angles and distances without being hindered by wire. The flash can be aimed either directly at the subject or at many different types of reflective surfaces such as ceilings, walls or photo umbrellas and still maintain fully automatic exposure control and manual control.

## Power Zooming

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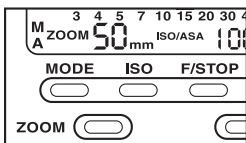
### Automatic Motor-zoom Control



If you use a zoom lens, it could transmit focal length information to the camera. The camera will pass this information to the flashgun. The flashgun then automatically adjusts its zoom position to comply with the focal length of the lens. Automatic motor zoom control is only possible with cameras that allow digital data transmission to the flashgun.

The LC display on the flashgun indicates zooming position of 24-28-35-50-70-85mm. When the flashgun is first switched on, the zoom position is set to 35mm. As soon as the camera's shutter is lightly touched, the focal length of the flashgun is automatically adapted to the focal length of the lens. If the flash head is at bounce or swivel position, the zooming position of the flash will be adjusted to 50mm and indicated in the LC display as auto mode 50mm.

## Manual Motor-zoom Control:



The "Zoom" key permits you to change the zoom reflector's position that is independent of the focal length of the lens.

By slightly tapping the "Zoom" key you can select the zoom position in the following sequence:

Auto Zoom position → 24mm → 28mm → 35mm → 50mm  
→ 70mm → 85mm → Auto Zoom position

## Slave Function

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This flashgun can perform as a wireless slave by switching Mode to "S". The flashgun will automatically switch to M mode with power ratio 1:1. When the sensor detects a flash from an external source, the flash will be triggered to fire. The amount of light output can be controlled by selecting the power ratio. The power ratio ranges from 1/1 to 1/16. If multiple flashes are used as slave unit, you must adjust the light output from each flash in order to get the correct exposure for your photos. When the slave mode is on, the power saving mode does not function.

## Power Saving Function

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If there is no communication between the flash and the camera for around 3 minutes, the flash will automatically switch to power saving mode in order to save battery power. "OFF" sign will appear in the LCD. The Ready light will be off while in power saving mode. To reactivate the flashgun, press any push buttons underneath the LC display panel or switch the main switch off and on again.

The flashgun is not completely switched off in power saving mode. However, power consumption is drastically reduced. If you are not going to use your flashgun for a while, we recommend you to turn the flash off.

## Troubleshooting

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- Check that AA Alkaline battery is used (not mercury or lithium-ion) and that the batteries have not run out.
- Make sure that the flash's On/Off button has been switched to "On".
- Double check that all plastic battery wrapping has been removed and that the battery is installed to the correct polarity.
- Switch the power dial to 1/16 power and press the Test button for test fire.

## Specifications

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- Guide Number (ISO 100): 45(m)/148(ft) at 85mm position
- Motor Zooming Reflector: 24 - 28 - 35 - 50 - 70 - 85mm
- 5 Level of Power Ratio: 1/1, 1/2, 1/4, 1/8 and 1/16
- Power Source: 4 x 1.5V AA size alkaline batteries
- Flash Duration: 1/1,000 - 1/20,000 second
- Recycling Time: 0.5 - 9 seconds
- Number of Flashes: 80 times with fresh alkaline batteries
- Color Temperature: Daylight
- Front and Rear Curtain Synchronization
- Red Eye Reduction for N, O, P only
- Built-in Slave Function
- Built in Reflecting Plate and Diffuser
- Dimensions: Approx. 72 x 100 x 125 mm
- Net Weight: Approx. 270 grams (w/o batteries)

Product specifications and external appearance are subject to change without prior notice.

## Warranty

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The limited warranty set forth below is given by Harvest One Limited in the world with respect to the Cactus brand Flash AF45 purchased with this limited warranty.

Your Cactus Flash AF45 or other contents, when delivered to you in new condition in its original container, is warranted against defects in materials or workmanship as follows: for a period of one (1) year from the date of original purchase, defective parts or a defective Cactus Flash AF45 returned to our authorized dealers, as applicable, and proven to be defective upon inspection, will be repaired with new or comparable rebuilt parts or exchanged for a new Flash AF45 as determined by Harvest One Limited or the authorized dealers.

This limited warranty shall only apply if the flash is used in conjunction with compatible camera and flash equipment, as to which items, Harvest One Limited, shall have no responsibility.

This limited warranty covers all defects encountered in normal use of Cactus Flash AF45 and does not apply in any of the following cases:

- (a) Loss of or damage to the Flash due to abuse, mishandling, improper packaging by you, alteration, accident, electrical current fluctuations.
- (b) Failure to follow operating, maintenance or environmental instructions prescribed in Cactus user's manual.
- (c) Receive services performed by someone other than Harvest One Limited or authorized dealers.
- (d) Without limiting the foregoing, water damage, sand/corrosion damage, battery leakage, dropping the flash, scratches, abrasions or damage to the body, or damage to the hot shoe or PC cables, will be presumed to have resulted from misuse, abuse or failure to operate the flash as set forth in the operating instructions.

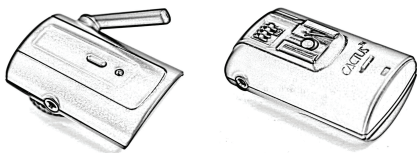


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## Optional Accessories

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### Cactus Wireless Flash Trigger Set V4



Compatible to Cactus AF45

- Working radio frequency: 433Mz
- 16 channels selectable
- Responding time: 1/500 - 1/1000 second
- Support sync speed: up to 1/500 second (depending on sync speed limitation of the flash unit)
- Maximum effective area: 30 meters / 98 feet (open area without interference)
- Operating temperature: above -10°C (14°F) and below 45°C (113°F)