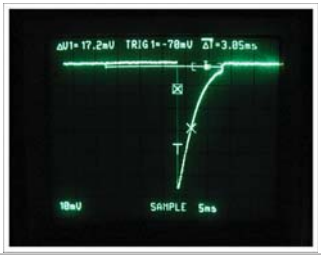
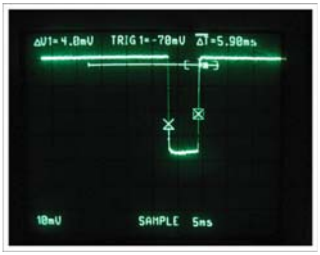
Instead of delivering one burst of light, RF60 units deliver several smaller bursts over a time interval as short as 1/125 of a second. This allows light to be captured by the entire area of the film or image sensor even though the shutter is never fully open at any moment.

Normal Flash



HSS Flash



To set up RF60 in HSS Sympathy Mode, you need a TTL flash with HSS / Auto FP capability.

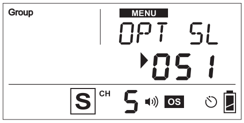
1. Mount the TTL flash on the camera's hot shoe.
2. Switch the RF60 Master to HSS mode by pressing Multi / HSS button twice. The HSS icon will show in the centre row of the LCD. This will automatically turn on the optical slave trigger in OS1 (the mode triggered by first pre-flash, see Section 11.3). Meanwhile, the RF60 Slave unit(s) will turn into HSS mode automatically.
3. Position the RF60 Master with its optical sensor facing the TTL flash head.
4. Take a test shot by pressing the camera shutter button.
5. If the flash does not fill up the picture, set the Delay Timer of the RF60 Master to 10ms and then 20ms, 30ms, etc. until the flash fully fill up the frame. The appropriate delay time that works with a high-speed shutter should be within the range of 10ms to 60ms.

11.3 Optical Trigger OS

Optical trigger can act as an alternative trigger mechanism from radio signal. It is very useful in capturing pre-flashes signals that are being emitted earlier than the flash sync. Setting pre-flash triggered optical trigger with the delay timer (see Section 11.4) could manipulate the exact time when flash starts to fire.

Three optical trigger modes OS1, OS2 and OS3 are available for selection:

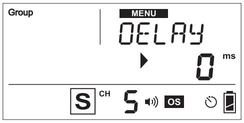
OS1: Triggering on the first pre-flash.
OS2: Excluding pre-flashes and triggering on the main flash.



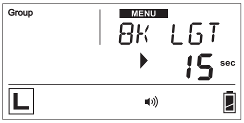
1. **To turn on the optical trigger**, press MENU then press NEXT button until the text area shows <OPT SL>. Use + and – buttons to select <OS1> or <OS2> in the selection area. Press NEXT or MENU to confirm.
2. The OS icon will show in the status bar of the main screen whenever any one of the optical trigger modes has been turned on.
3. **To turn off the optical trigger**, press MENU and then press NEXT buttons until the text area shows <OPT SL>. Use + or – button to choose <OFF>. Press MENU or NEXT to confirm.

11.4 Delay Timer

Every RF60 is equipped with a Delay Timer that can configure in either Master or Slave mode. The Delay Timer delays the trigger response for the time set by users. If you wish to fire the flash a bit later than the first curtain sync to create a different lighting effect, Delay Timer is helpful for your creation.



1. **To set Delay Timer**, press MENU then press the NEXT button until <DELAY> is displayed and the selection indicator ▶ points at the value in ms.

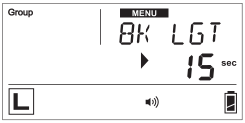


2. Use + or – button to set the Delay Timer in millisecond (ms) which is equal to 1/1000 second. You may set a delay time from 1 ms to 999 ms, i.e. close to 1 second.
3. The Delay Timer icon will show on the main screen status bar whenever a delay timer has been set.
4. **To turn off the Delay Timer**, follow step 1 to set delay time to 0. The delay timer icon will then disappear from the status bar on the main screen.

12. Personalizing RF60

12.1 LCD Backlight

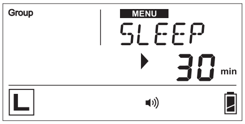
The LCD backlight of RF60 turns on whenever any button are pressed. For energy saving, there is a timer setting that automatically turns off the backlight.



1. **To configure the backlight duration**, press MENU, and press NEXT until the text area shows <BK LGT>. Then use + or – buttons to choose from OFF, 5 sec, 15 sec, and ON.
2. The option ON will instruct the LCD to be on constantly.
3. Press NEXT to confirm and configure other items, or press MENU to confirm and leave.

12.2 Sleep

To prevent unnecessary energy consumption when users forget to switch off RF60 after use, the sleep timer will switch RF60 into sleep mode after a specified period.



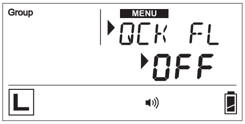
1. **To configure the sleep mode timer**, press MENU, and press NEXT a few times until the text area shows SLEEP. Then use + or – buttons to choose from OFF, 15 min, or 60 min.
2. The option <OFF> will deactivate the sleep mode.
3. Press NEXT to confirm and configure other items, or press MENU to confirm and leave.
4. To wake up RF60 from sleep mode, press any button once.

Note: Wireless triggering will not wake up RF60 Slave units remotely.

12.3 Quick Flash

The quick flash option allows user to fire RF60 even though it is not fully charged. However, the flash output may be lower than specified on the RF60 menu.

Enable quick flash when speed is more important than the accuracy of power output. Disable quick flash when accuracy is your prime concern.



1. **To enable or disable the quick flash**, press MENU, and press NEXT until the text area shows <QCK FL>. Then use + or – buttons to choose OFF and ON.
2. Press NEXT to confirm and configure other items, or press MENU to confirm and leave.

12.4 Beep

Besides the flash ready indicator, the built-in buzzer of RF60 also reminds you when the flash is ready in your own definition. Choose from the following options to best fit your shooting habit:

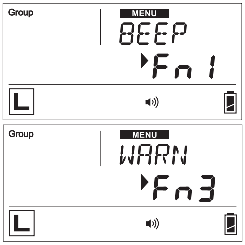
OFF
RF60 does not beep in any circumstance.

Fn1: Full Charge (READY)
RF60 beeps when the flash has been fully charged.

Fn2: Quick Flash (QCK FL)*
RF60 beeps when the flash has been charged enough for quick flash.

Fn3: Insufficient Power Warning (WARN)*
RF60 beeps only when the flash has fired a quick flash with a power lower than the selected level.

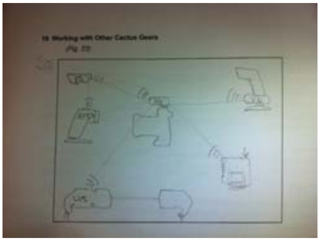
*Both Fn2 and Fn3 are only available for selection when the Quick Flash has been enabled (see Section 12.3).



1. **To configure the beep option,** press MENU, and press NEXT until the text area shows BEEP. Then use + or – buttons to choose from OFF, Fn1 (READY), Fn2 (QCK FL) or Fn3 (WARN).
2. When choosing the options with + or – buttons, the abbreviation of the options will be shown in the text area.
3. Press NEXT to confirm and configure other items, or press MENU to confirm and leave.
4. The beep icon will appear in the status bar whenever Fn1, Fn2 or Fn3 is selected.

13. Working with Cactus Triggers

The RF60 is compatible with Cactus Wireless Flash Transceivers V6, V5 and Laser Trigger LV5.



13.1 Cactus V6

With group function, Cactus V6 transceiver and RF60 flash can trigger and command each other, in either Master or Slave mode.

13.1.1 RF60 as Slave

With a built-in Cactus V6 RF module, Cactus RF60 can be remotely commanded and triggered by V6 TX. Note that the LCD of RF60 only supports the display of 1/3 EV stop.

Users may combine RF60 with other V6-compatible TTL flashes to form a manual flash control system. For example, assign a RF60 to group A, Canon 580EX (with a V6 RX) to group B, Nikon SB-900 (with another V6 RX) to group C. V6 TX will be able to trigger them all and command their power level in either relative or absolute power mode.

13.1.2 RF60 as Master

Users may assign RF60 as master on camera's hot shoe, and let it trigger and command other RF60 Slave and V6 RX units altogether. While RF60 Master can control the power level and zoom of RF60 Slave, zoom control is not supported when working with V6 RX units.

Check the table below for the features supported in each pairing option:

TX(Master)	RX(Slave)	Note
V6	RF60	√ Triggering Slaves (RX) in 4 groups; √ Commanding the Power levels of of Slaves (RX) in 4 groups; √ Power levels adjustable from 1/128 to 1/1 full power, with 0.3 and 0.7 increments between major power levels (in 1/3EV power ratio); X Commanding the zoom of RF60; X RF60 LCD Screen Showing power ratio of 1/10 EV, 1/2 EV.
RF60	V6	√ Triggering Slaves (RX) in 4 groups; √ Commanding the Power levels of of Slaves (RX) in 4 groups; √ Power levels adjustable from 1/128 to 1/1 full power, with 0.3 and 0.7 increments between major power levels (in 1/3 EV power ratio); X Commanding the Zoom of RF60; X Commanding in power ratio of 1/10EV, 1/2EV and 1EV.

13.2 Cactus V5, LV5

Cactus RF60 can work in pair with Cactus V5 or LV5. They all share the same 2.4GHz, 16-channel platform.

Since V5 and LV5 do not support groups and remote power control, RF60 Master will only trigger V5 set in any group: A, B, C or D. Similarly, both V5 and LV5 will trigger RF60 Slave set in any group.

RF60 as Master: trigger Cactus V5 in ANY group.
RF60 as Slave: will be triggered by Cactus V5 or LV5 in ANY group.

14. External Power

External power source provides faster recycling time and longer durability. To use external power source:

1. Open the external power cover of RF60 and plug in Cactus external battery EP-1.
2. Install AA batteries into the battery compartment.

15. Optional Accessories

1. Cactus Wireless Flash Transceiver V6
2. Cactus Wireless Flash Transceiver V5
3. Cactus Wireless Laser Trigger LV5
4. Cactus Mini USB cable MU-1
5. Cactus External Battery Pack EP-1

16. Troubleshooting

Before reading this section, ensure that Cactus RF60 has been set up correctly (follow the instruction in the Section 7-9 of this manual).

If problem persists after conducting the troubleshooting steps, contact your seller directly for further assistance.

1. Flash cannot be charged		
Symptom	Possible Cause	Solution
No Flash Ready Signal	Batteries are installed in wrong direction	Install batteries in the correct direction
	Batteries are nearly or have already been used up	Replace a new set of AA batteries
Temperature warning signal appears in LCD screen	Too many flashes have been fired in a short interval	Allow the flash to rest for at least 15 minutes

2. Flash power turns off by itself		
Symptom	Possible Cause	Solution
LCD turns off	Sleep mode is activated	- Press any button on RF60 once to wake it up from sleep mode - Check the Sleep mode configuration in Menu and revise it (see Section 12.2)

3. Local or Master Flash does not fire		
Symptom	Possible Cause	Solution
Flash Ready LED blinks or keeps on	Flash is not attached securely to camera	Attach the flash's hot shoe securely on the camera
	Electrical contacts of the flash or camera are dirty	Clean the contacts

4. Slave Flash does not fire		
Symptom	Possible Cause	Solution
Flash Ready LED blinks or keeps on	Channel mismatch	Set Slave flash to the same channel with the Master flash
	Group mismatch	Make sure the group assigned to the Slave flash has been activated on the Master flash
	Background radio interference	- Set both transceivers to another channel - Change setup location as interference may come from other equipment in the surrounding area
	Beyond 200m effective range	- Make sure Master and Slave flashes are placed within 200m (656 ft) of each other **Note:** The effective range of 200m (656 ft) may not be achieved in the presence of radio interference

5. Flash does not fire in sync		
Symptom	Possible Cause	Solution
Black frame appears in pictures	Shutter speed is faster than the camera's x-sync limitation	- Adjust the camera's shutter speed to the maximum supported x-sync speed - Set up RF60 in HSS Sympathy mode (see Section 11.3)
	Delay timer has been set incorrectly	Turn off the delay timer or adjust the delay timer to correct sync time

6. Flash misfires (Unexpected flash firing)		
Symptom	Possible Cause	Solution
Local or Master flash misfires	Poor hot shoe connection	- Adjust tightness of hot shoe contact - Clean hot shoe contact of RF60 with clean cloth
Slave flash misfires	Background radio interference	- Set both Master and Slave flashes to another channel - Change setup location as interference may come from other equipment in the surrounding area
	Master and Slave flashes are placed too close to each other	Place the Master and Slave flashes at least 20cm apart and retry
	Optical Trigger has been switched on and triggered by unexpected ambient light	Switch off the optical trigger, as it may not work in those environments

7. Flash power lower than specified		
Symptom	Possible Cause	Solution
Insufficient Power Warning beep (if enabled)	Flash fires when it is not fully charged	- Turn off quick flash - Fire subsequent flash slower
Ready Signal takes longer than usual to turns on	Batteries are nearly or have already been used up	Replace a new set of AA batteries

17. Notices

NOTICES FOR CUSTOMERS IN THE U.S.A.

Federal Communications Commission (FCC) Radio Frequency Interference Statements.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

HARVEST ONE LIMITED AND THE MANUFACTURER OF THIS WIRELESS FLASH IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER AUTHORITY TO OPERATE THE EQUIPMENT

FC Cactus RF60

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interfe-rence, and (2) this device must accept any interference received, including interference that may cause undesired operation.

R&TTE Declaration of Conformity (DOC)

We, Harvest One Limited, 9D On Shing Industrial Building, 2-16 Wo Liu Hang Road, Fo Tan, Hong Kong, declare under our own responsibility that the product:
Cactus Wireless Flash RF60
is in conformity with the essential requirements and other
relevant requirements of the R&TTE Directive (1999/5/EC).

This product Cactus Wireless Flash RF60 is in conformity with the provisions of EU Council Directive: 1999/5/EC.

The crossed-out wheeled bin means that within the European Union the product must be disposed separately at the end of product cycle. Do not dispose this product with other municipal waste.

18. Warranty

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

Your Cactus Wireless Flash 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 Wireless Flash 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 Wireless Flash as determined by Harvest One Limited or the authorized dealers.

This limited warranty shall only apply if the Wireless 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 the Wireless Flash, and does not apply in any of the following cases:

(a) Loss of or damage to the Wireless 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 Wireless Flash as set forth in the operating instructions.

NO IMPLIED WARRANTY, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, APPLIES TO THE WIRELESS FLASH AFTER THE APPLICABLE PERIOD OF THE EXPRESS LIMITED WARRANTY STATED ABOVE, AND NO OTHER EXPRESS WARRANTY OR GUARANTY, EXCEPT AS MENTIONED ABOVE, GIVEN BY ANY PERSON OR ENTITY WITH RESPECT TO THE WIRELESS FLASH SHALL BIND HARVEST ONE LIMITED. HARVEST ONE LIMITED SHALL NOT BE LIABLE FOR LOSS OF REVENUES OR PROFITS, INCONVENIENCE, EXPENSE FOR SUBSTITUTE EQUIPMENT OR SERVICE, STORAGE CHARGES, LOSS OR CORRUPTION OF DATA OR ANY OTHER SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES CAUSED BY THE USE OR MISUSE OF, OR INABILITY TO USE, THE WIRELESS FLASH, REGARDLESS OF THE LEGAL THEORY ON WHICH THE CLAIM IS BASED, AND EVEN IF HARVEST ONE LIMITED HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL RECOVERY OF ANY KIND AGAINST HARVEST ONE LIMITED GREATER IN AMOUNT THAN THE PURCHASE PRICE OF THE CACTUS WIRELESS FLASH SOLD BY HARVEST ONE LIMITED OR ITS AUTHORIZED DEALERS AND CAUSING THE ALLEGED DAMAGE. WITHOUT LIMITING THE FOREGOING, YOU ASSUME ALL RISK AND LIABILITY FOR LOSS, DAMAGE OR INJURY TO YOU AND YOUR PROPERTY AND TO OTHERS AND THEIR PROPERTY ARISING OUT OF USE OR MISUSE OF, OR INABILITY TO USE, THE CACTUS WIRELESS FLASH NOT CAUSED DIRECTLY BY THE NEGLIGENCE OF HARVEST ONE LIMITED. THIS LIMITED WARRANTY SHALL NOT EXTEND TO ANYONE OTHER THAN THE ORIGINAL PURCHASER OF HARVEST ONE LIMITED, OR THE PERSON FOR WHOM IT WAS PURCHASED AS A GIFT, AND STATES YOUR EXCLUSIVE REMEDY.

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2-16 WO LIU HANG ROAD,
FO TAN, HONG KONG

PLEASE CONTACT YOUR LOCAL DEALER FOR CUSTOMER SERVICES.

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You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

Cactus

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