Cactus®

User Manual

Wireless Flash Transceiver V6 II

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1. Getting to Know the Cactus V6 II

Thank you for purchasing the Cactus Wireless Flash Transceiver V6 II. Compared with its predecessor V6, the Cactus V6 II allows you to command different brands' flashes off-camera below or above x-sync speed. The freedom to adjust shutter speed equips you with the most flexibility in controlling apertures and power levels. The possibilities are endless!

1.1 Special Features

1. Cross-brand wireless manual power and zoom control of Canon, Fujifilm, Nikon, Olympus, Panasonic, and Pentax flashes.
2. Two cross-brand high-speed sync modes: Normal HSS and Power Sync.
   - Normal HSS supports shutter speeds up to 1/8000s.
   - Power Sync boosts flash contribution above x-sync shutter speed.
3. Multi-master supports up to 20 photographers firing the same set of flashes at their own power setting.
4. AF-assist light assists focusing in low light environments.

5. Flash profile customization ensures accurate power output.
6. Auto-detect of camera and flash systems allows easy setup.
7. Works seamlessly with the RF60 series to support HSS and Power Sync.
8. Plenty of useful features inherited from the V6 including Lo Power, Absolute Power, TTL Pass-through, Group Sequence, Sports Shutter, Remote Shutter, Relay Mode, Delay Mode.

1.2 Cactus V6 II Core

The V6 II compiles the D-TTL (digital through-the-lens) protocols from different camera systems and builds up a common language between cameras and flashes.

Many of the new features in the V6 II are achieved by the continuous communications between the camera and the V6 II TX, and between the V6 II RX and the off-camera flashes. To ensure this seamless communications, it is necessary to set up your camera system (see Section 10) and flash system (see Section 11) in the V6 II.

Ready to go? Let’s get started and see what the V6 II can do!!

2. Cautions and Warnings

Before using your V6 II, read the following safety precautions to ensure correct and safe use:

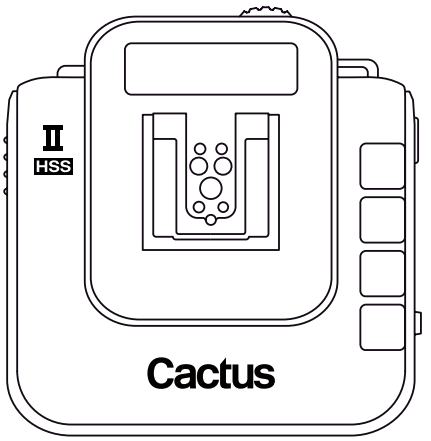
1. Turn OFF all your equipment (e.g., Cactus units, flash units, cameras, etc.) before changing batteries. Observe the correct polarity when changing batteries. There is a danger of explosion if the batteries are installed incorrectly.
2. Switch off the transceiver and remove batteries during storage.
3. Do not permanently store the product in a high temperature environment (i.e., under strong direct sunlight, near cooking stoves/oven).
4. The Cactus V6 II should never be submerged in liquid or exposed to heavy rain unless it is properly protected.
5. Do not operate the device in the presence of flammable gases or fumes.
6. Do not disassemble.
7. Do not crush the V6 II and do not expose it to any shock or force such as hammering, dropping, or stepping on it.

3. Major Specifications

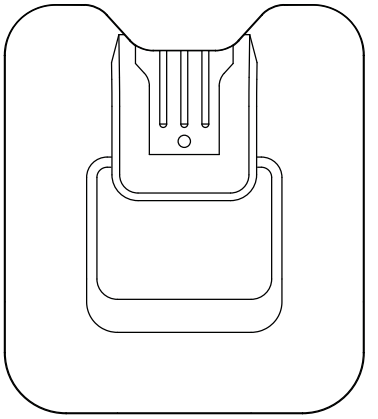
- Working radio frequency: 2.4 GHz
- Number of channels: 16
- Number of groups: 4
- Support sync speed up to 1/8,000 second
- AF-Assist LED: 1W
- Maximum effective distance: 100 meters
- Operating temperature: -20°C to +50°C
- Camera voltage handling: up to 6V
- Flash voltage handling: up to 300V
- Dimensions:
  79mm (L) x 77mm (W) x 48 mm (H)
- Weight: 96g
- Power input: 2 x AA batteries, 3V, 50mA, 0.15W; mini USB 2.0, DC input 5V
- Estimated battery life in hours (with LCD backlight on):

Alkaline AA Batteries 1000mAh		Rechargeable NiMH AA Batteries 2500mAh	
TX	RX	TX	RX
55	31	61	34

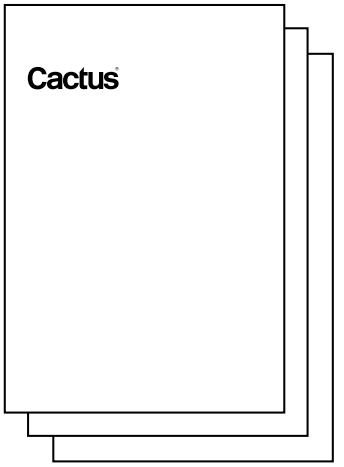
4. Package Contents



V6 II Transceiver

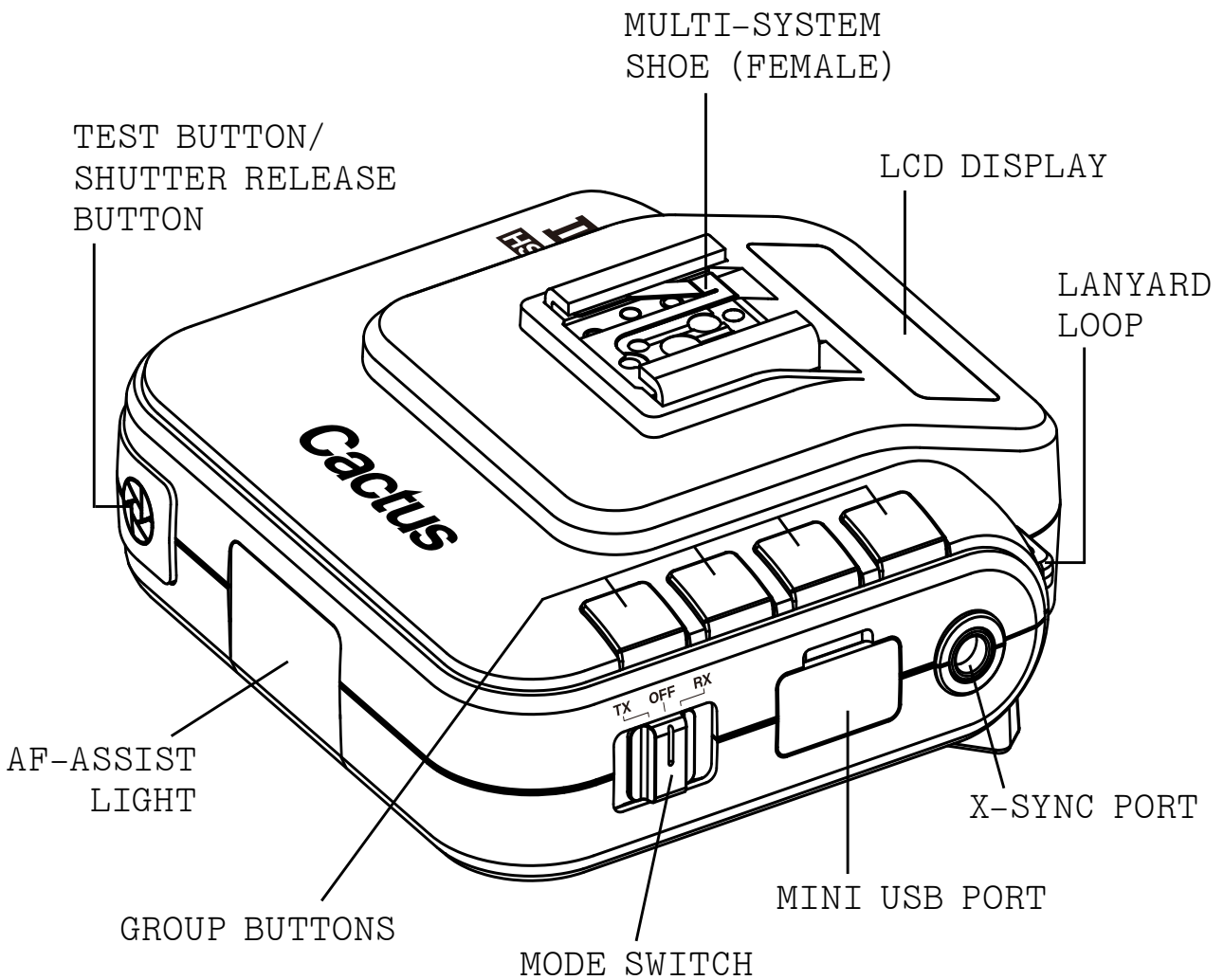


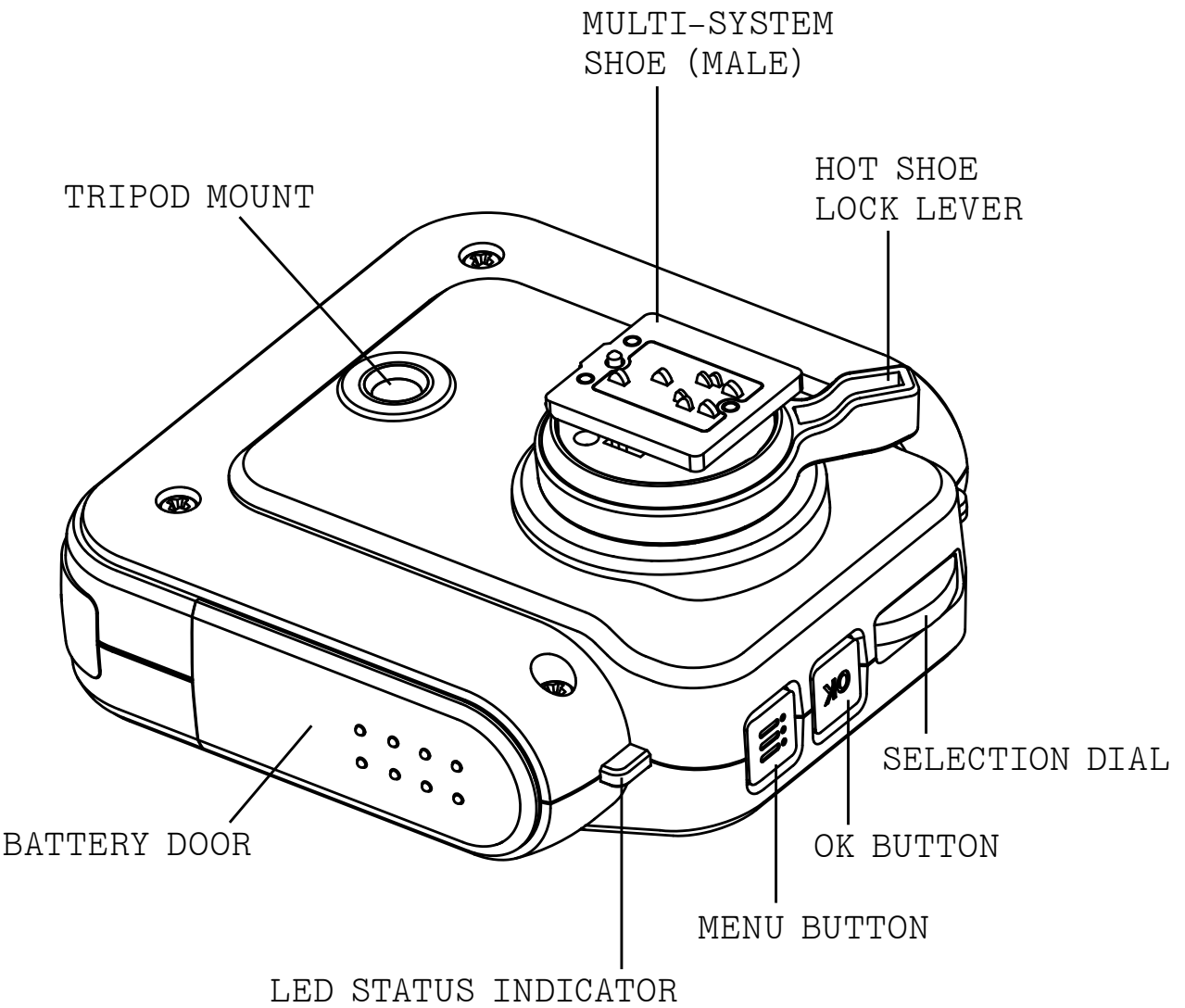
Flash Stand FS-2



Album, Sticker
& Quick Start
Guide

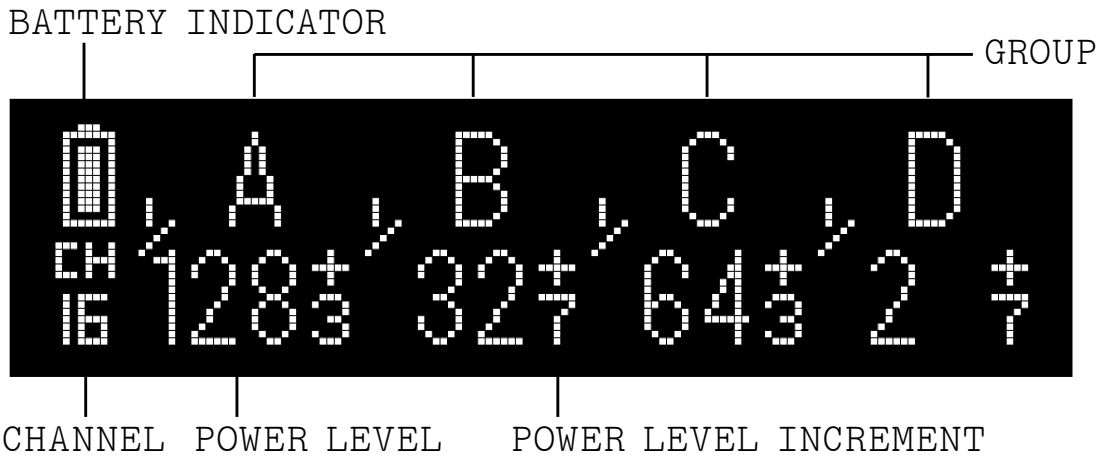
5. Nomenclature



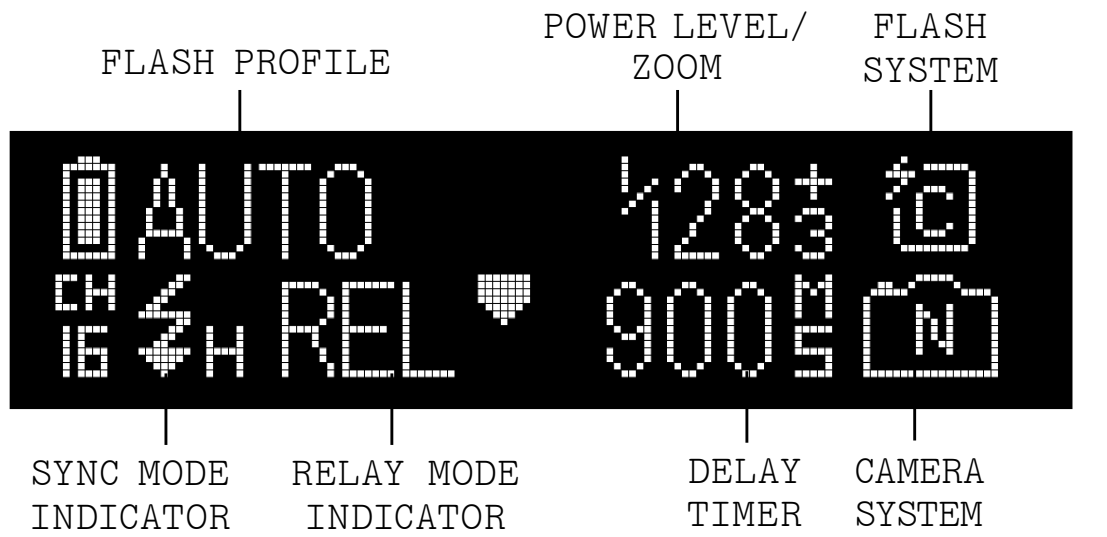

MULTI-SYSTEM
SHOE (MALE)
HOT SHOE
LOCK LEVER
TRIPOD MOUNT
SELECTION DIAL
BATTERY DOOR
OK BUTTON
MENU BUTTON
LED STATUS INDICATOR

6. LCD Panel

6.1 TX mode



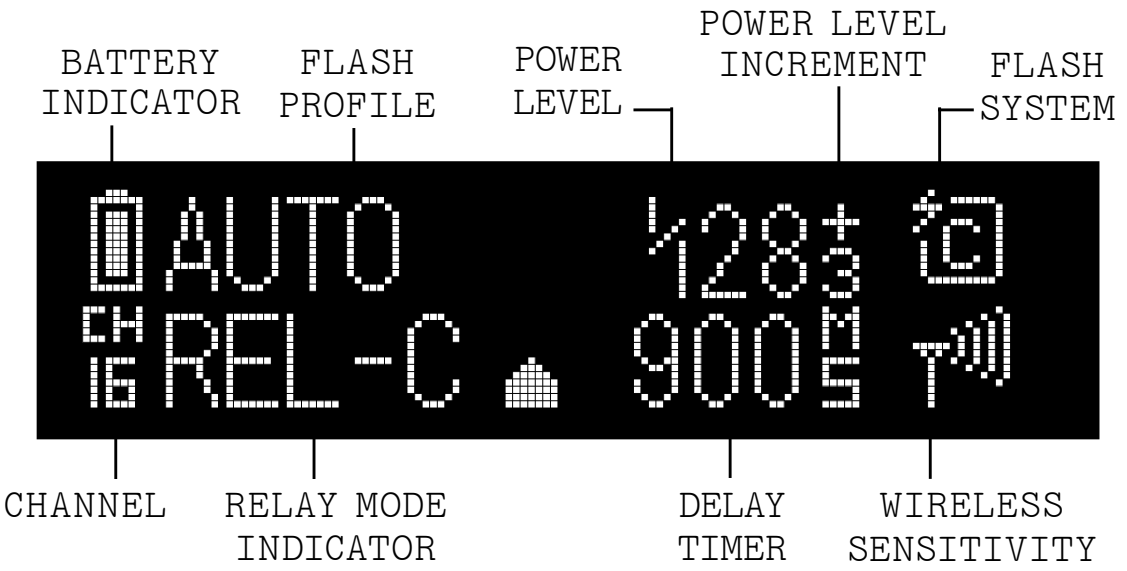
MAIN SCREEN



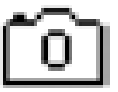
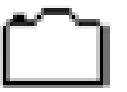
STATUS SCREEN

(The status screen is accessible by pressing and holding the Menu button while turning the selection dial to either the left or right at the same time.)

6.2 RX mode



6.3 Camera and Flash Indicators

Canon	Fujifilm	Nikon	Olympus (M43)	Pentax	Others
					
					

7. Compatibility

The Cactus V6 II is both a wireless flash trigger and wireless remote control. While it triggers both portable flashes and studio strobe lights, it also supports remote control features with selected flash models.

7.1 Flash & Studio Strobes

7.1.1 Cactus RF60X/RF60

With the built-in Cactus V6 module, the Cactus RF60 series can be remotely commanded and triggered by the V6 II TX (see Section 18.1.1).

7.1.2 Flash Models with Digital TTL Mode:

- Canon e-TTL
- Fujifilm TTL
- Nikon i-TTL
- Olympus/Panasonic TTL
- Pentax P-TTL

7.1.3 Other Flash Models and Studio Strobes

The Cactus V6 II triggers all other flash models via the hot shoe, and studio strobes with the PC sync male port, 3.5mm or 6.35mm port via optional cables (see Section 21). This includes high trigger voltage portable flash models, and all strobe models with a trigger voltage of 300V or less. The Cactus V6 II does not provide remote power control of these flashes and strobes.

For studio flashes to work with high-speed sync, they have to maintain a flash duration of 1/100 second or longer.

> **Caution:**
> Flashes or strobes with reversed polarity connectors DO NOT WORK with the Cactus V6 series.

7.2 Cameras

The Cactus V6 II works with practically all cameras that come with either (1) a standard ISO hot shoe, or (2) a female sync port connection.

For high-speed sync and AF-assist capabilities, the V6 II will work with Canon, Fujifilm, Nikon, Olympus, Panasonic, and Pentax cameras that (1) come with their specific system hot shoes, and (2) support these features when working with their system flashes.

To use the V6 II as a wireless shutter release, specific shutter cables are required. For the list of optional accessories, see Section 20.

7.3 Flash Triggers

7.3.1 Cactus V6

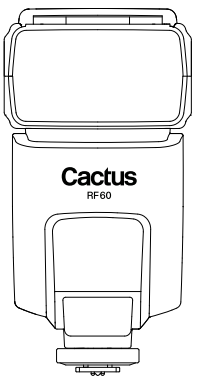
The Cactus V6 II is compatible with the Wireless Flash Transceiver V6 IIs, V6, V5, and Laser Trigger LV5. See Section 18.2 and 18.3 for details.

7.3.2 Other Flash Triggers

The Cactus V6 II is NOT compatible with any other flash trigger model, including the Cactus V4, Cactus V2s, and Cactus V2.

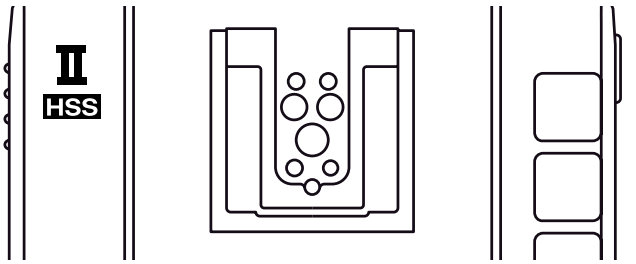
7.4 Multi-brand

The V6 II transceivers can sync your camera with different flash systems within or beyond the x-sync shutter speed. Check the table below for the compatibility between the camera and the flash systems:

Camera System	Compatible Flash System	
C	C N O	 RF60/RF60X
N	C N O	
O	C N O	
P	C N O P	
F	C N O F*	

* Fujifilm flashes do not support HSS capabilities.

8. TTL Pass-through



The V6 II transceiver comes with a multi-system shoe that supports TTL pass-through.

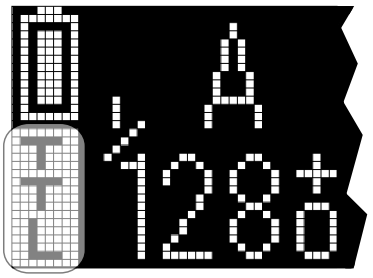
While the V6 II does not wirelessly command off-camera flashes to fire according to TTL metering, it is designed to pass the TTL signal from camera to flash via the transmitter (TX) and vice versa.

The multi-system shoe supports the TTL pass-through of Canon, Fujifilm, Nikon, Olympus, Panasonic, and Pentax systems. Make sure the camera and flash unit belong to the same TTL system.

With TTL pass-through, the TTL flashes behave as they would when directly connected to the camera hot shoe. The V6 II will work as a wireless flash commander while supporting all the automatic features (e.g.,

automatic flash output via TTL metering, AF-assist light, second curtain sync, and high speed sync/FP shutter) provided by the TTL flash system.

To enable the TTL pass-through in the V6 II TX, press and hold [≡] for 2 seconds. The LCD will show the TTL pass-through indicator at the left bottom corner where the channel indicator used to be.



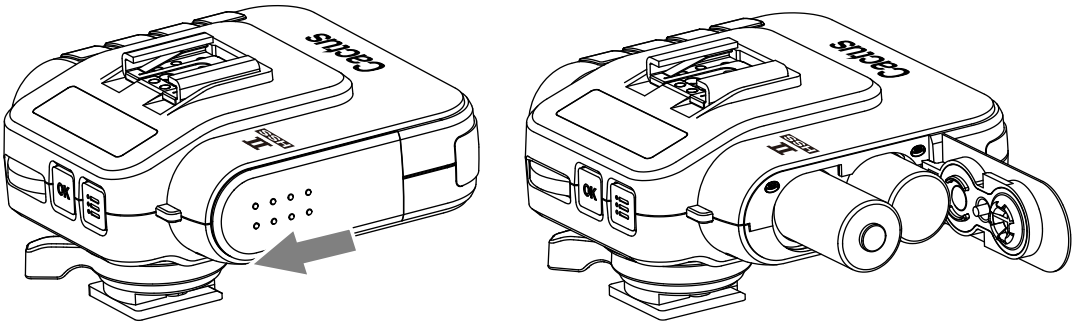
In TTL pass-through mode, the V6 II TX cannot control the power level of the flash attached.

To disable the TTL pass-through mode, press and hold [≡] for 2 seconds. The TTL pass-through indicator will be replaced by the channel indicator on the LCD.

Alternatively, the TTL pass-through mode can be enabled or disabled in the <FUNCTIONS> menu (see Section 9.7).

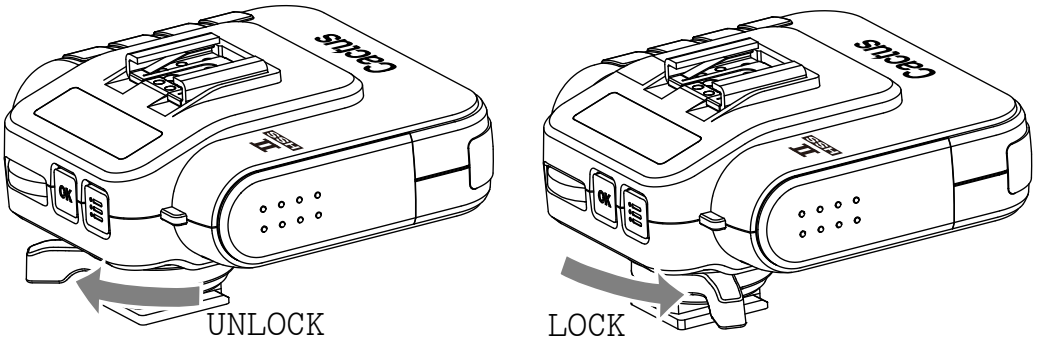
9. Getting Started

9.1 Installing the Batteries



Open the battery door by pushing it backward. Flip open the latch and insert two AA batteries using the correct polarities. Then close the battery door by pushing it to the front.

9.2 Attaching to and Detaching from the Camera



To mount the V6 II on a camera's hot shoe mount:

1. Turn the lock lever of the V6 II to the left to unlock the multi-system shoe (male).

2. Slide the V6 II into the camera's hot shoe.
3. Turn the lock lever of the V6 II to the right to lock the multi-system shoe (male).
4. When detaching the V6 II from the camera's hot shoe, turn the lock lever to the left to unlock the multi-system shoe (male). Otherwise, the multi-system shoe (male) may be damaged.

Note: Attach your flash to the V6 II as you would to the camera's hot shoe. If your flash is not locked securely on the Multi-System Shoe (female), try half-locking the flash and retracting it slightly from the Multi-System Shoe until the locking pin hits the pinhole. Then lock your flash fully to the V6 II.

9.3 Buttons and Dial

The V6 II control panel is equipped with a Menu button  , an OK button  , and a selection dial  for quick access to different functions and the configuration menu.

The selection dial has a built-in push-in button that serves as a quick OK button. You may configure how the dial works to suit

your work habits (see Sections 17.1-17.3).

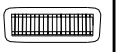
Major functions of the V6 II listed below are easily accessible by the buttons and dial.

Group Control (see Section 9.6)

Function	Mode	LCD	Key
Select a group (e.g., group A) for adjusting parameters (power level/zoom)	TX	Main screen, when the group is not selected	Hold* A
Deselect a group (e.g., group A)		Main screen, when the group is selected	A
Turn on/off a group (e.g., group A)		Main screen, when the group is not selected	A
Test firing a group (e.g., group A)		Main screen	A +
Group EV offset in absolute power mode (e.g., to group A)		Main screen, in absolute power mode	+ A
Change the RX to another group (e.g., to group A)	RX	Main screen	A

* Hold = Press and hold the button for 2 seconds, then release.

Adjusting Power Level and Zoom (see Sections 13.1 and 13.5)

Function	Mode	LCD	Key
Adjust power level/zoom of all groups	TX	Main screen	
Adjust power level/zoom of a single group (e.g., group A)		Main screen	A + 
			Hold A, then 
Adjust power level/zoom of the on-camera flash**		Main screen	☰ + 
Toggle between the power level and the zoom control panel		Main screen	OK
Toggle to and from the quick power adjustment (needs configuration in menu beforehand)		Main screen	OK

** The same command is used to check the TX status screen.

TTL Pass-through (see Section 8)

Function	Mode	LCD	Key
Enter/leave TTL pass-through mode	TX	Main screen	Hold ☰

Navigating the Menu (see Section 9.7)

Function	Mode	LCD	Key
Enter the menu	TX/ RX	Main screen	☰
Browse through menu items and options		Menu	▭
Choose a menu item or option		Menu	OK
Leave the menu		Menu	☰

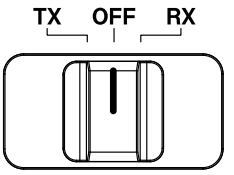
Dial Lock (see Section 17.2)

Function	Mode	LCD	Key
Lock the dial	TX	Main screen, when the dial is unlocked	Hold OK
Temporarily unlock the dial		Main screen, when the dial is locked	OK
Unlock the dial		Main screen, when the dial is locked	Hold OK

Firmware (see Section 20.2)

Function	Mode	Key
Check firmware version	OFF	Hold A + D and switch on to TX or RX mode
Firmware update mode		Hold ☰ and switch on to TX or RX mode

9.4 Choosing the Operating Mode



The Cactus V6 II is a wireless transceiver that is capable of transmitting and receiving radio signals. Set the V6 II transceivers to the correct mode (transmitter to “TX”, receiver to “RX”) by sliding the mode switch to the correct position. This will automatically power on the transceivers.

9.5 Setting the Channel and Radio ID

The Cactus V6 II transceivers communicate with one another via radio frequency. There are 16 channels available. Always make sure that all of your V6 II transceivers are set to the same channel:

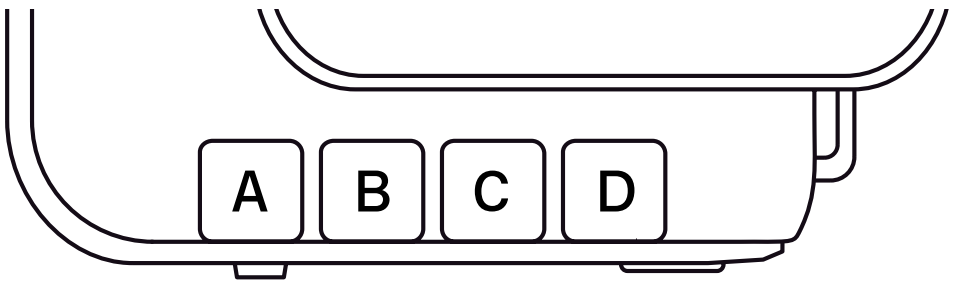
1. To set both the TX and RX to the same channel, press [☰]. Turn the selection dial to <RADIO SETUP> and press OK. The LCD will show <CHANNEL> and the default channel number. Press [OK] and turn the selection dial to the preferred channel number. Press [OK] to set other menu items or press [☰] to exit.
2. The selected channel number will be shown on the LCD display.

Use the wireless sensitivity indicator on the RX LCD display to check the strength of the wireless signal from the TX in the selected channel. The wireless sensitivity ranges from excellent to poor . Change your V6 II to another channel when the sensitivity is poor.

To protect your setup from interference from other Cactus devices, assign all your V6 II to a specific radio ID. Press [≡] and turn the selection dial to <RADIO SETUP>. Press [OK] and turn the selection dial to <RADIO ID>. You may then set up a 4-digit key by turning the dial and pressing [OK] for each digit.

9.6

Setting and Selecting the Group



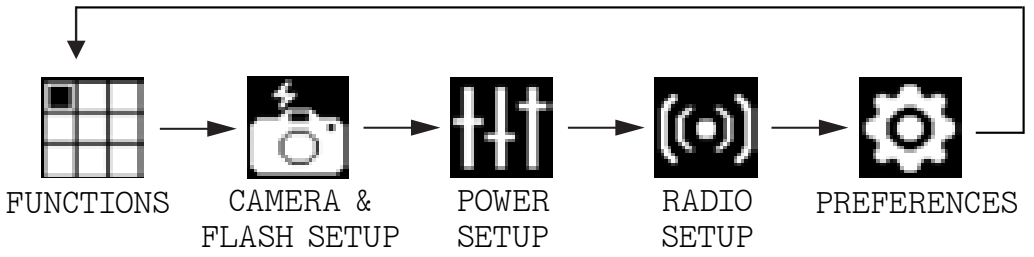
The group function in the V6 II can assign RXs into Group A, B, C, or D, and allows you to choose which group(s) to fire from the TX unit.

1. All V6 II transceivers must be set to the same channel.
2. Assign RX units to Group A, B, C, or D by pressing one of the group buttons. Each RX can only be assigned to ONE group. The LED of the selected group will turn on.
3. Command the TX to fire any combination of groups by pressing the group button(s). You can fire any combination of A, B, C, and D groups. The LED of the activated group(s) will turn on.
4. To change the power level of a specific group, press and hold an activated group button. Briefly pressing the group button again will de-select the group.
5. Pressing the group button(s) of activated groups again on the V6 II TX will turn off the group(s). The V6 II RX units that have been set to the off group(s) will not fire.
6. The V6 II will memorize the group selection in both TX and RX when it is switched off. Next time you switch on the V6 II it will start up with the saved setting.

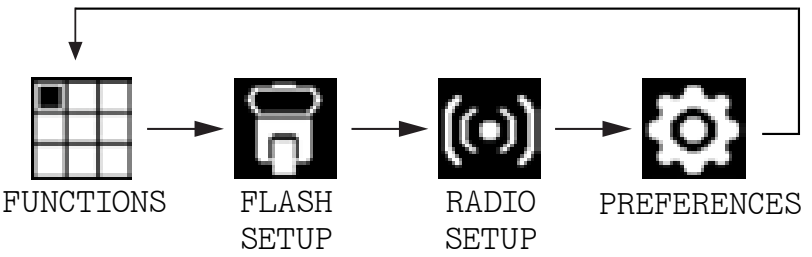
9.7 Navigating the Menu

The configurable menu items of the V6 II are grouped under categories shown in the following sequences:

TX



RX



To change a menu option:

1. Press [☰] to bring up the first menu category.
2. Dial right or left to scroll through each menu category. Press [OK] or the push-in button once to access a menu category.
3. Dial right or left to scroll through each menu item. Press [OK] or the push-in button once to access a menu item.
4. Dial right or left to scroll through each option of a menu item. Press [OK] or the push-in button once to select the option.

The configuration of the menu item will change immediately.

5. Press ☰ to leave and go back to the main screen, or dial right or left to the next menu item in the sequence.

Check the list of menu items in each category below:

FUNCTIONS	TX	RX
– SYNC MODE	√	
– DELAY	√	√
– RELAY	√	√
– GROUP SEQUENCE	√	
– SPORTS SHUTTER		√
– TTL PASSTHROUGH	√	
CAMERA & FLASH SETUP	**TX**	**RX**
– CAMERA SYSTEM	√	
– FLASH SYSTEM	√	
– FLASH PROFILE	√	
– LEARN HSS ▲	√	
FLASH SETUP	**TX**	**RX**
– FLASH SYSTEM		√
– FLASH PROFILE		√
POWER SETUP	**TX**	**RX**
– POWER MODE	√	
– EV STEP	√	
– LO POWER	√	

RADIO SETUP	TX	RX
– CHANNEL	√	√
– RADIO ID	√	√
– MULTI-MASTER	√	
– WORK RANGE	√	
PREFERENCES	**TX**	**RX**
– AF-ASSIST (TX/RX)	√	√
– BACKLIGHT POWER	√	√
– BACKLIGHT TIME	√	√
– DAYLIGHT MODE	√	√
– SWAP CONTROL	√	
– DIAL DIRECTION	√	√
– TEMPORARY UNLOCK	√	
– SLEEP	√	√
– FACTORY RESET	√	√

▲ Shown only when a Fujifilm camera is used.

10. Camera Setup (TX)

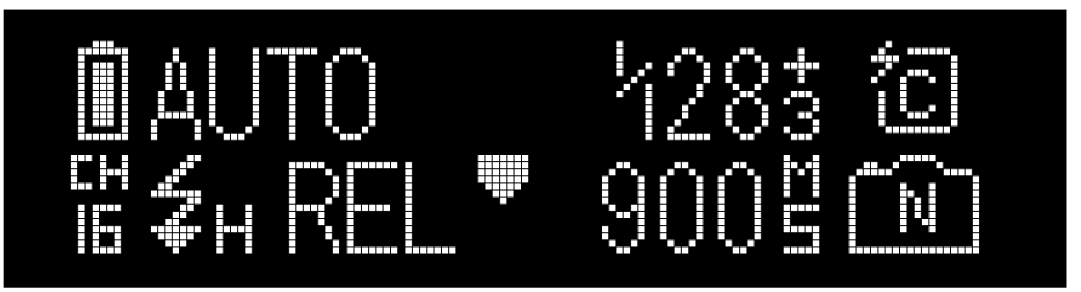
To fully utilize the advanced features of the V6 II transceivers, it is necessary to configure the correct camera system in the V6 II TX.

10.1 Auto-Detect

The V6 II TX is capable of auto detecting the camera system of an attached camera. It facilitates photographers to switch between camera systems promptly. To initiate the auto detection of a camera system:

1. Attach the V6 II to your camera (see Section 9.2) and turn on your camera.
2. Half-press the shutter release of your camera while switching on the V6 II to the TX mode.
3. The V6 II will detect the camera system of the attached camera during the startup. The LCD display will show the auto-detected camera system briefly before displaying the main screen.

4. To check the detected camera system on the status screen, press and hold the menu button ☰, and turn the selection dial to the left or right at the same time. The detected camera system will be shown at the lower right-hand corner of the status screen.



5. The V6 II will memorize the detected camera system until the next detection takes place.

Notes:

1. If you would like to command an on-camera flash, connect your flash to the V6 II and switch on your flash. Then switch on the V6 II while half-pressing the camera shutter. The V6 II will detect the camera and flash systems at the same time.
2. The auto-detect of the camera system can be used to cross-check the alignment of the hot shoe contacts. Only properly connected cameras will be detected by the V6 II.

10.2 Manual Selection

Alternatively, photographers who mainly work on one camera system may choose it from the menu:

1. Switch on the V6 II in TX mode.
2. Press [☰], and turn the selection dial to <CAMERA & FLASH SETUP>. Press [OK].
3. Press [☰], and turn the selection dial to <CAMERA SYSTEM>. Press [OK].
4. Turn the selection dial until the LCD shows your camera system (e.g., <PENTAX>). Press [OK] .

5. The V6 II will memorize the selected camera system until the next time you select another camera system from the menu.

Note:
By choosing the camera system on the menu, the V6 II will disable the auto-detection of the camera system when it is powered on. If you would like the V6 II to detect the camera system for you, choose <AUTO>.

11. Flash Setup (TX/RX)

The V6 II transceiver commands flashes to fire at a particular power output via flash profiles. There are three ways to obtain the correct flash profiles:

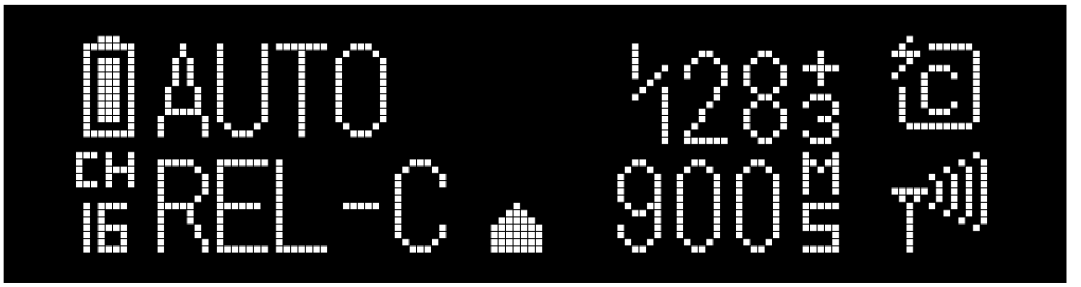
1. Let the V6 II detect and apply the <AUTO> flash profile (see Section 11.1).
2. Choose from the pre-installed flash profiles in the V6 II (see Section 11.2).
3. Customize the auto profile in the Cactus Profile Editor on a PC or Mac (see Section 11.3).

11.1 Applying an Auto Flash Profile

The V6 II is capable of auto detecting the flash system of the attached flash. The auto-selected profile is camera system specific and works with most of the digital TTL flashes of the selected system.

1. Attach your flash to the V6 II and turn on the flash.
2. Switch on the V6 II to the RX mode (for off-camera flashes) or TX mode (for on-camera flashes).
3. The V6 II will detect the flash system of

an attached flash during startup. The LCD display will show the auto-detected flash system at the top right-hand corner.



4. The V6 II will memorize the detected flash system until the next detection takes place.

If you wish to obtain more accurate output that is fine-tuned for your specific flash units, choose the model-specific flash profiles (see Section 11.2) or customize the existing flash profiles (see Section 11.3).

11.2 Choosing a Flash Profile

Choose the appropriate flash profile from the pre-installed profile list for each V6 II RX assigned to a flash.

1. Switch on the V6 II in RX mode.
2. Press [≡], and then turn the selection dial to <FLASH SETUP>. Press [OK].
3. Turn the selection dial to <FLASH SYSTEM>. Press [OK].

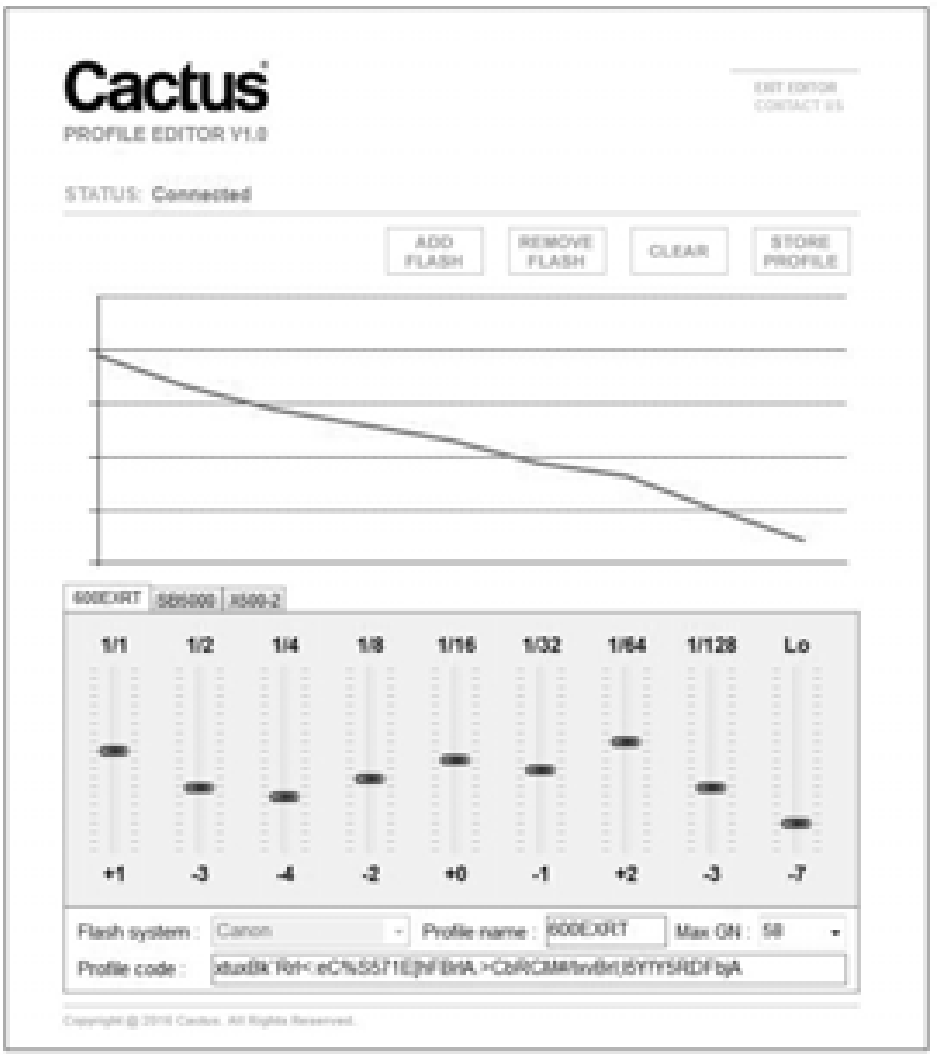
4. Turn the selection dial until the LCD shows your flash system (e.g., <CANON>). Press [OK].
5. Turn the selection dial to <FLASH PROFILE>. Press [OK].
6. Turn the selection dial until the LCD shows your flash model (e.g., <580EX*>). Press [OK].
7. Connect the flash unit to the V6 II. Switch your flash to TTL mode and your flash will be ready for remote control. The chosen flash profile will be applied until you choose another flash profile.

If you wish to fire and control an on-camera flash via the V6 II TX, go to <CAMERA & FLASH SETUP> and follow steps 3-7 above in the TX mode and choose the appropriate flash profile for the on-camera flash.

11.3 Customizing a Flash Profile

If your flash model is not included in the pre-installed profile list but supports digital TTL, apply the Auto Flash Profile in the V6 II (see Section 11.1). To fine tune the power level commanded by the Auto Flash Profile, you may customize it in the Cactus Profile Editor available for a PC or Mac.

1. Download the Cactus Profile Editor from the Cactus website.
2. Follow the firmware update procedures to connect the V6 II with your computer (see Section 20.2).



3. Choose the flash system. Input the guide number of your flash at the zoom angle of 105mm (which is the benchmark of the pre-installed profiles in the V6 II).
4. Based on your experience in controlling

the flash with the Auto Flash Profile, input the power adjustment you would like to achieve in each of the reference power levels.

5. Enter the profile name using a maximum of 6 digits in letters or numbers.
6. Press SAVE PROFILE button. The custom profile will be loaded to the connected V6 II. The LCD display on the V6 II will return to the main screen.

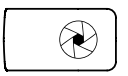
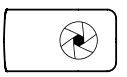
To choose the saved flash profile from the profile list, see Section 11.2. All custom profiles will be stored in the <FLASH PROFILE> menu.

Each V6 II can save up to 10 custom flash profiles from the Cactus Profile Editor.

Note: The Profile Editor supports profile sharing by codes. When customizing a flash profile, the editor will generate a code representing the changed parameters. You can share this code with others, or simply enter the code received from other users in the SHARE CODE column to generate a new customized profile in a second.

12. Flash Triggering

To command the flash units in different groups to fire:

1. Set the V6 II transceivers to the correct mode (transmitter to “TX”, receiver to “RX”). This will automatically power on the transceivers (see Section 9.4).
2. Set both the TX and RX to the same channel (see Section 9.5).
3. Assign RX unit(s) to A, B, C, or D group and activate the group(s) on the TX (see Section 9.6).
4. Connect the V6 II RX to portable flashes or studio strobes.
5. On the TX, press  completely. The status LED of both the TX and RX should blink in green simultaneously. The portable flashes or studio strobes will fire at the same time.
6. Test fire a particular group by simultaneously pressing the group button and  completely.
7. Attach the TX to the camera’s hot shoe. If your camera does not have a hot shoe, connect the TX to the camera using an optional PC sync cable (CA-200).

8. Press the camera's shutter release button. The flashes on the RXs will fire wirelessly and in sync.

Tips: The V6 II transceiver can trigger portable flashes with or without remote power control. If you wish to wirelessly trigger the off-camera flashes without controlling their power levels, choose <OTHERS> in the <FLASH SYSTEM> menu.

13. Remote Manual Power Control and Zoom Control

Apart from flash triggering, the V6 II can also command the manual power and manual zoom angle of your flash. On each RX, choose the appropriate flash profile for each flash to be connected. The V6 II TX will then be able to command the flash to fire from 1/128 to 1/1 full power, and at a zoom angle between 16mm and 200mm.

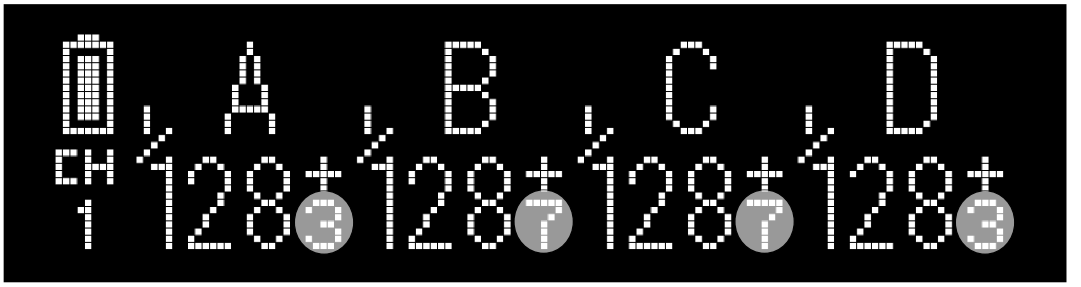
To remotely control the power and zoom angle of your flash units:

1. Connect the flash units to the V6 II.
2. Switch on the flash units in TTL mode. Then switch on the V6 II in RX mode.
3. Apply the correct flash profile for each V6 II (see Section 11).
4. If you want to command the flash to fire above the x-sync speed, turn on the HSS or FP mode on your flash units (see Section 14.1).

V6 II offers two power definitions for users to command the flashes' power in the most convenient way.

13.1 Relative Power

Similar to a common flash display, the V6 II TX indicates the power level of the remote flashes in proportion to full power in relative power mode (i.e., 1/1 for full power, 1/2 for half power, etc.). Upon switching on the V6 II in TX mode, the LCD will show the relative power levels of all activated groups.



Note that the small single digit indicates the increment between major power levels.

13.1.1 Single Group Power Adjustment

There are two ways to adjust the power level of a particular slave group.

1. Press and hold the group button until the power level of the chosen group is highlighted on the LCD. Turn the

selection dial to the desired power level. Press the group button briefly to leave the group selection.
2. Short cut: Press and hold the group button and turn the selection dial simultaneously. Once the adjustment is finished, release the group button.

You may also adjust the power level of the on-camera flash that you have mounted on the V6 II in TX mode.

1. Make sure that the TTL pass-through mode has not been activated (see Section 8).
2. Press ☰ and turn the selection dial simultaneously to change the power level of the on-camera flash.

13.1.2 Multi-Group Power Adjustment

To adjust the power level of ALL active groups, simply turn the selection dial left or right to the desired power level.

Note: The power level of the on-camera flash is not affected by the multi-group adjustment.

13.1.3 Quick Power Adjustment Mode

By turning the dial left or right one “click”, the power level of the chosen groups will increase or decrease by one step. The EV step in the V6 II factory setting is 1/3 EV. The EV step can be configured to 1/2, 1/3, or 1/10 in the <EV STEP> menu (see Section 13.3).

If you wish to quickly change the power level using a larger interval, use the quick power adjustment mode.

1. Switch on the V6 II in TX mode. Press ☰ and turn the selection dial to <PREFERENCES>. Press OK and turn the selection dial to <SWAP CONTROL>. Press OK and turn the selection dial to <QUICK POWER ADJ> and press OK to choose.
2. In the main screen of the V6 II in TX mode, press OK once to enter the quick power adjustment mode.
3. In this mode, each click of the dial will increase or decrease the power level for 1EV to and from the original value, respectively. For example, if the power level of a group was 1/16 +3, one click

of the selection dial will increase the power level to 1/8 +3 or decrease it to 1/32 +3.

4. When you have finished the quick change, press [OK] once to leave the quick power adjustment mode. Each click of the dial thereafter will increase or decrease the power level in accordance with the setting you have made in the <EV STEP> menu.

> **Note:**
> By configuring the [OK] button to toggle to and from the quick power adjustment mode, you will not be able to adjust the zoom levels of the remote flashes (see Section 17.3).

13.2 Absolute Power

If you want to coordinate the light output of multiple flashes with different maximum power outputs, the regular power ratios such as 1/4 or 1/8 may not be as helpful. The output of one powerful flash model at 1/8 can be higher than that of another, weaker flash model at 1/4. For this reason, the V6 II offers an Absolute Power mode in which EV numbers can be used to specify an absolute light intensity, independent of the maximum power output of a flash model.

The power levels in guide number have been rescaled to the absolute power scheme in EV as below:

ABSOLUTE LIGHT INTENSITY IN EV	GUIDE NUMBERS (IN METERS)			
	+0.0	+0.3	+0.5	+0.7
17	58.0	64.4	69.0	73.9
16	41.0	45.5	48.8	52.3
15	29.0	32.2	34.5	36.9
14	20.5	22.7	24.4	26.1
13	14.5	16.1	17.2	18.5
12	10.3	11.4	12.2	13.0
11	7.2	8.0	8.6	9.2
10	5.1	5.7	6.1	6.6
9	3.6	4.0	4.3	4.6
8	2.6	2.8	3.0	3.2
7	1.8	2.0	2.1	2.3
6	1.3	1.4	1.5	1.6

When setting up the absolute power mode, the V6 II TX will collect the flash profiles being selected by the RX units in the same channel and rescale them to the unified light intensity scale. The following example shows how the model-specific relative power scales are translated into the absolute power scale.

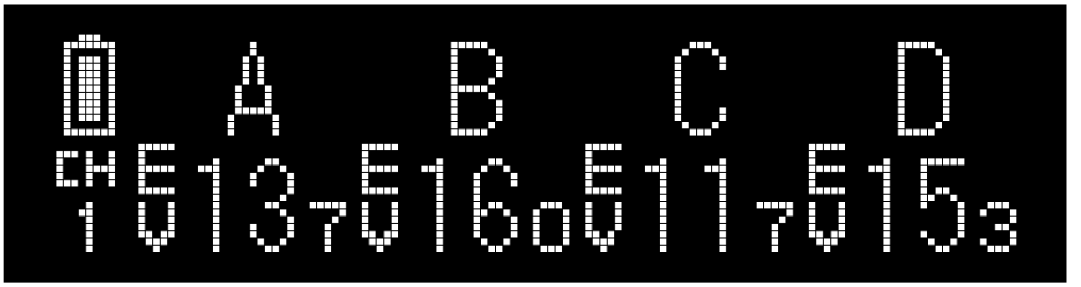
ABSOLUTE LIGHT INTENSITY SCALE IN EV	RELATIVE LIGHT INTENSITY SCALE OF 4 FLASHES WITH DIFFERENT FULL POWER GUIDE NUMBERS			
	FLASH A	FLASH B	FLASH C	FLASH D
18				
17		GN58		
16		1/2		GN41
15	GN29	1/4		1/2
14	1/2	1/8	GN21	1/4
13	1/4	1/16	1/2	1/8
12	1/8	1/32	1/4	1/16
11	***1/16***	***1/64***	***1/8***	***1/32***
10	1/32	1/128	1/16	1/64
9	1/64		1/32	1/128
8	1/128		1/64	
7			1/128	
6				

When you set all flashes to 11 EV (see italicized section in the above table) in absolute power mode, all flashes will emit the same intensity of light notwithstanding the differences in their own relative power scale. For instance, at 11 EV, Flash A is firing the amount of light equal to its 1/16 power, while Flash C is firing equal to its

1/8 power.

To change the V6 II system to the absolute power mode:

1. Switch on the off-camera V6 II in RX mode. Choose the correct flash profiles for each of the V6 II RX.
2. Switch on the V6 II that you would like to be the commander in TX mode. Make sure it is on the same channel as the RX units.
3. Press [☰]. Turn the selection dial to <POWER SETUP>. Press [OK]. Turn the selection dial to <POWER MODE> and press [OK]. Turn the selection dial to <ABSOLUTE (SETUP)> and press [OK] to confirm.
4. The V6 II TX will then collect the flash profiles from the V6 II RX units and set up the absolute power level scheme. Once the setup is finished, the LCD display will return to the main screen again and show the absolute light intensity of the four groups.
5. Adjust the power level as you do in relative power mode (see Section 13.1). Each figure before decimal place represents 1 EV and the smaller figure thereafter 1/10 EV.



6. Set all the activated groups to the same power level. Test fire the off-camera flashes and determine whether they produce the same flash output.
7. If the initial setup is not accurate enough, you may offset the absolute power scale of each group. Press any group button and [≡] simultaneously to get into the offset mode for that group. For example, if the flash output of group A is slightly stronger than the other groups at the same absolute power levels, press [A] and [≡] simultaneously. The LCD display will show <GROUP A OFFSET>. Turn the selection dial left or right to adjust the power scale from -1EV to 1EV. Press [OK] to return to the main screen.

Note: The absolute power setup will not be saved upon switching off the V6 II TX. The V6 II TX will restart in relative power mode.

13.3 EV Step

The control panel of the V6 II TX offers three EV step options: 1/10 EV, 1/3 EV, and 1/2 EV. The configuration applies to both relative and absolute power modes.

To adjust the EV step:

1. Switch on the V6 II in TX mode.
2. Press [☰]. Turn the selection dial to <POWER SETUP> and press [OK]. Turn the selection dial to <EV STEP> and press [OK].
3. Turn the dial to the desired increment level (1/10, 1/3, or 1/2). Press [OK] to confirm.

Notes:

1. The selected EV step will be memorized upon switching off and will be applied when switching on again.
2. In the quick power adjustment mode (see Section 13.1.3), the configured EV step will be replaced by the 1EV step changes.

13.4 Lo Power

At the Lo Power level, the relative power output of a flash triggered by the V6 II is roughly equal to 1/256. The difference between 1/128 and 1/256 power outputs may

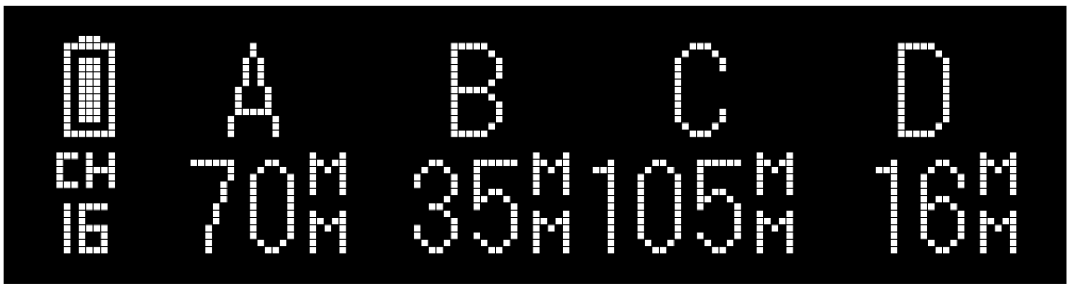
hardly be detected by flash meter, but the extremely short firing duration helps freeze faster-than-lightning moments and is ideal for high-speed photography.

To enable Lo Power:

1. Switch on the V6 II in TX mode and press [☰]. Turn the selection dial to <POWER SETUP> and press [OK]. Turn the selection dial to <Lo POWER> and press [OK]. Turn the selection dial to <ON> and press [OK].
2. Once Lo Power is enabled, it will be shown as <Lo> at one step below 1/128 power in the relative power mode, or one step below the lowest power of each group in the absolute power mode.
3. To disable the Lo Power output, follow step 1 to enter the <Lo POWER> menu. Turn the selection dial to <OFF> and press [OK].

13.5 Zoom

On the main screen of the V6 II, press OK to get into the zoom control panel.



In each group, the zoom angle can be configured to one of the following options:

16mm – 20mm – 24mm – 28mm – 35mm – 50mm – 70mm – 80mm – 105mm – 120mm – 135mm – 180mm – 200mm

In case the zoom angle parameters of the connected flashes do not match with the options above, they will be adjusted to a zoom angle that is closest to the configured option. For example, if the V6 II is configured to 80mm for a particular group of flashes, a flash equipped with 70mm – 85mm – 105mm zoom angles will be adjusted to 85mm.

Adjust the zoom angle as you do to adjust the power level (see Section 13.1):

1. Multi-group: Simply turn the selection dial to change the zoom angle of all activated groups.
2. Single group:
   - Press and hold the group button until the zoom level of the selected group is highlighted on the LCD. Turn the selection dial to the desired zoom level. Press the group button briefly to deselect a group.
   - Short cut: Press and hold the group button and turn the selection dial simultaneously. Once the adjustment is finished, release the group button.
3. On-camera Flash: Press and hold  and turn the dial simultaneously. Once the adjustment is finished, release  .

14. High Speed Synchronization

Most cameras support normal flash sync up to its x-sync shutter speed (commonly between 1/160 second and 1/250 second). Beyond this shutter speed, the cameras and the system flashes will behave differently. The high speed sync, which is also known as HSS or FP sync, has to be enabled on the system flash in order to synchronize the flash light with the camera beyond the x-sync shutter speed.

Cactus V6 II supports cross-brand high-speed sync in two ways:

1. Normal HSS: It supports the HSS or FP sync capabilities of the system flashes. While it allows users to adjust power levels, the flash exposure is much lower than the normal flash sync.
2. Power Sync: It syncs with the full power flash pulse without compromising the flash exposure. While it does not allow power level adjustment, the flash exposure is much higher than in the normal HSS mode.

> Tip: HSS flash is commonly used outdoors, especially in sunlight. The faster shutter speed supported by the HSS flash allows you to use a wider aperture to achieve shallower depth of field while maintaining correct exposure.

14.1 Normal HSS

When the shutter speed of the camera exceeds its x-sync speed, the normal HSS setting of the V6 II will command the flashes to fire continuous and constant flash pulses for the full duration between the first curtain opening and second curtain closing of the shutter.

To activate the normal HSS mode:

1. Configure the V6 II TX and the V6 II RX to the correct camera and flash systems (see Sections 10 and 11).
2. On the V6 II TX, press [☰]. Turn the selection dial to <FUNCTIONS> and press [OK]. Turn the selection dial to <SYNC MODE> and press [OK]. Turn the selection dial to <NORMAL HSS> and press [OK]. On the status screen, the normal HSS icon  will be shown.

3. Turn on the HSS or FP flash option on the flash units.

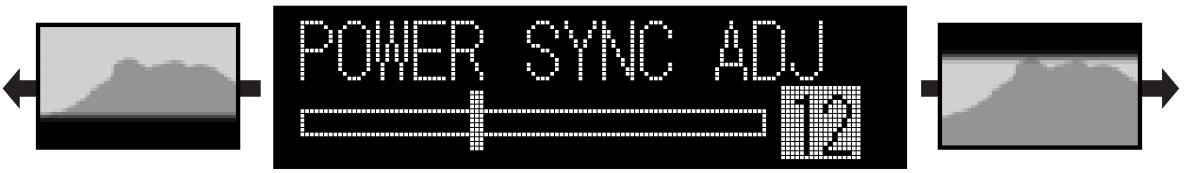
Tips:
1. The continuous light output of a normal HSS flash does not freeze a moving object as a normal flash does. Instead, it will cause motion blur, much like a continuous light source would. In order to freeze motion using a normal HSS flash, you need to use high shutter speeds.
2. Increasing the shutter speed in a normal HSS flash implies that the contribution of the flash decreases accordingly. When changing the shutter speed, you also need to adjust the flash power level if you want to maintain the same contribution of the flash.

14.2 Power Sync

As an alternative to the normal HSS, the Power Sync of the V6 II syncs with the full power flash of the remote flashes. Power Sync yields a much higher exposure than the normal HSS flash.

To activate the Power Sync mode:

1. On the V6 II TX, press [☰]. Turn the selection dial to <FUNCTIONS> and press [OK]. Turn the selection dial to <SYNC MODE> and press [OK]. Turn the selection dial to <POWER SYNC> and press [OK]. On the status screen, the Power Sync icon  will be shown.
2. Switch the camera shutter beyond its x-sync speed and take a picture.
3. If the frame is not illuminated from top to bottom, go back to the <SYNC MODE> menu (repeat step 1). Press and hold [OK], turn the selection dial simultaneously to access the <POWER SYNC ADJ> panel. When you see a dark band at the top of the image, adjust the sync time to a larger value (to delay the default sync time). When the dark band appears at the bottom, adjust the sync time to a smaller value (to shorten the sync time).



Notes:

1. Since the Power Sync always command the remote flashes to fire in full power, the power level cannot be adjusted. The power levels on the main screen will be executed when the shutter speed is within the x-sync.
2. If dark bands appear at both the top and bottom of the picture, the flash duration of the portable flash may not be long enough to support Power Sync.
3. The flash fires full power in Power Sync, so check for any overheat warning on your flash from time to time. Frequent use of Power Sync may overheat the portable flash.

Tip:

Even if there is no dark band in the frame, the Power Sync adjustment can shift the brightest part of the flash pulse up and down to create your desired effect. You may also achieve an even illumination by moving the brightest part of the flash pulse outside the frame.

14.3 Forced HSS for Fujifilm

Fujifilm cameras made before the X-Pro 2 do not support automatic high speed sync. However, the V6 II offers a workaround to support normal HSS and Power Sync with Fujifilm cameras.

1. Auto-detect or manually select the Fujifilm camera system on the V6 II TX.
2. Learn the HSS timing with your Fujifilm camera. Press [☰]. Turn the selection dial to <CAMERA & FLASH SETUP> and press [OK]. Turn the selection dial to <LEARN HSS> and press [OK]. Follow the instructions on the LCD display and take a picture at 1/1000s shutter within 30 seconds.
3. The HSS timing will be recorded for that particular camera model. Learn the HSS timing again when you work with another Fujifilm camera model.
4. When you need to shoot at shutter speeds beyond the x-sync of your camera, press the selection dial once to turn on the forced HSS. The LCD display will show <FORCED HSS ON>.
5. When you need to shoot at shutter speeds within the x-sync of your camera, press the selection dial once again. This will

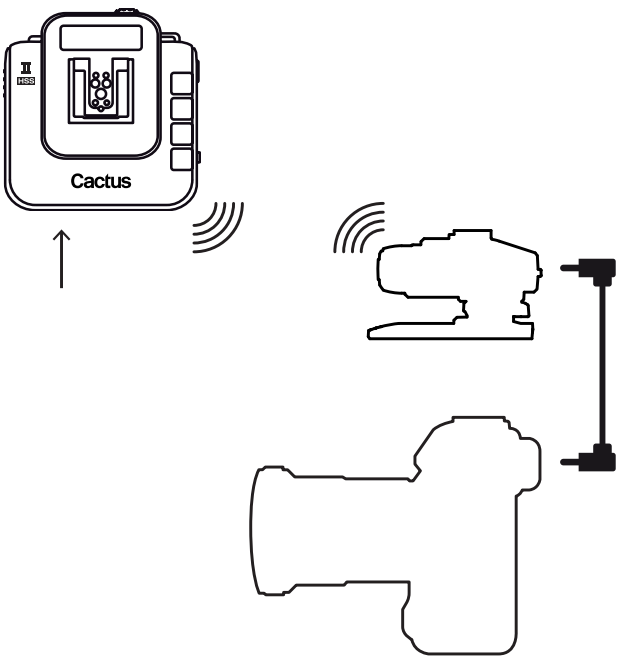
turn off the forced HSS. The LCD display will show <FORCED HSS OFF>.

Note:
Since the timing of the Forced HSS is obtained by simulation, flash exposures may not cover the entire picture taken at the highest shutter speed.

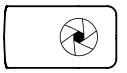
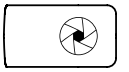
15. Camera Shutter Release

Note:
This function requires the use of a separately purchased shutter release cable for connection between the transceiver and camera. This cable is NOT included in the V6 II transceiver package.

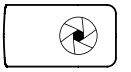
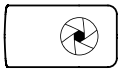
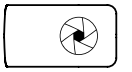
15.1 Basic Setup



A minimum of two Cactus V6 II transceivers is required to operate Cactus V6 II as a wireless shutter release.

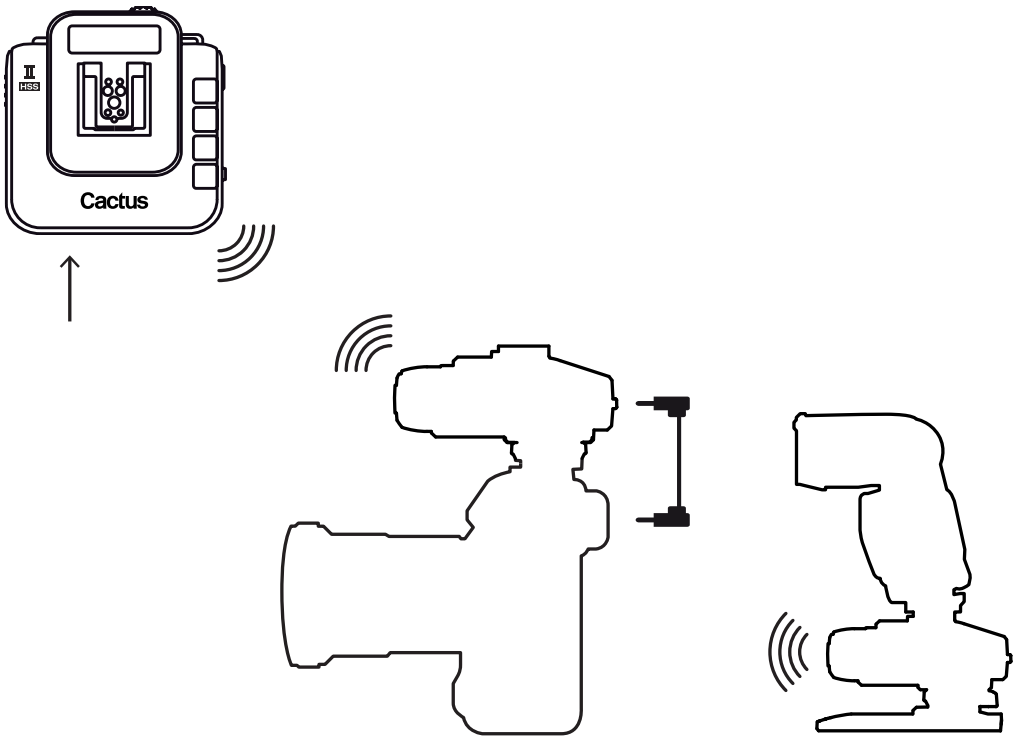
1. Connect the V6 II RX to your camera using an appropriate shutter release cable.
2. Set both the V6 II TX and RX to the same channel. On the V6 II TX, activate the group assigned to the V6 II RX.
3. Half-press  on the TX to test the auto focus. The status LED on both the TX and RX will turn ORANGE to indicate auto focus. Press  completely on the TX for shutter release. The status LED on both transceivers will turn GREEN to indicate shutter release.

15.2 Bulb Mode

1. Set the camera to Bulb.
2. Press completely and hold  on the V6 II TX. The status LED on the V6 II TX and V6 II RX will turn GREEN at first and go off after approximately 2 seconds. The LCD display will show <BULB MODE ON>.
3. Release  on the V6 II TX. The camera's shutter is now in a continuous open state.
4. To close the camera's shutter, press completely and release  on the V6 II TX again. The green status LED on both the TX and RX will blink simultaneously.

15.3

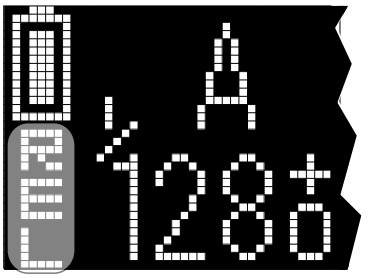
Relay Mode: Camera Shutter + Flash



The relay mode in the V6 series is an economic solution for coordinating the wireless shutter release with flash trigger systems. With relay capability, you need only three transceivers to wirelessly control both the camera and a flash unit at one time.

1. Make sure that all the V6 II units are set to the same channel.
2. Set the V6 II you would like to use as the handheld remote as TX, then all others as RX.

3. Mount one of the V6 II RXs onto the camera's hot shoe, and also connect the V6 II RX to the camera's shutter release port with an appropriate shutter release cable (optional). Connect the other V6 II RXs to the flash units.
4. The on-camera V6 II RX will apply the camera system setting last recorded in the TX mode. Make sure you have selected the correct camera system (see Section 10).
5. Set the on-camera V6 II RX to relay mode. Press [☰]. Turn the selection dial to <FUNCTIONS> and press [OK]. Turn the selection dial to <RELAY>. Press [OK]. Turn the selection dial to <ON>. Press [OK] to confirm and then press [☰] to return to the main screen. The relay mode indicator <REL-C> will appear on the main screen.
6. In the handheld V6 II TX unit, press [☰]. Turn the selection dial to <FUNCTIONS> and press [OK]. Turn the selection dial to <RELAY> and press [OK]. Turn the dial to <ON> and press [OK]. Then press [☰] to return to the main screen. The relay mode indicator will replace the channel indicator at the lower left-hand corner.



7. By pressing [ ] on the TX, both the camera and flash units will be triggered and sync with one another. In addition, you will also be able to control the power level of the flashes with your V6 II TX.

16. Advanced Operations

16.1 Auto-focus Assist Light

The V6 II is equipped with an auto-focus (AF) assist LED and it is capable of emitting an AF-assist light in accordance with the camera's command. The power of the AF-assist light can be adjusted in either TX or RX mode to best suit your working environment.

To configure the AF-assist LED:

1. Switch on the V6 II in TX or RX mode. Please note that the set up will be applied to that operating mode only.
2. Press [☰] and turn the selection dial to <PREFERENCES>. Press [OK].
3. Turn the selection dial to <AF-ASSIST> and press [OK]. You will then be able to turn on and select the power of the AF-assist LED.

Each V6 II will memorize the AF-assist light setting in the TX and RX independently. In a setup when the AF-assist light of both the TX and RX are turned on, the AF-assist light on both devices will light up simultaneously when the camera commands the TX to do so.

> **Note:**
> The V6 II TX completely replicates the AF-assist signal commanded by the connected camera. If the camera does not support an AF-assist signal via the hot shoe, the AF-assist LED will not be activated.

16.2 Multi-master

The V6 II supports up to 20 TXs working together in a lighting set up. Photographers can share the same set of remote flash units and command them to fire their desired power output without being affected by the others.

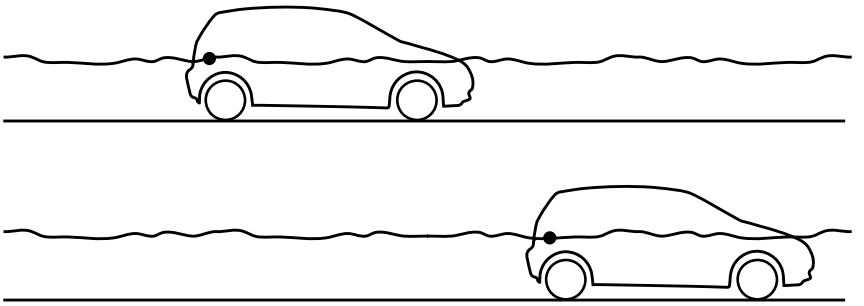
To activate the Multi-master:

1. Switch on the V6 II in TX mode.
2. Press ☰. Turn the selection dial to <RADIO SETUP> and press OK.
3. Turn the selection dial to <MULTI-MASTER> and press OK. Select <ON> and press OK.

When any of the photographer in a group presses the shutter, the V6 II TX will trigger the RXs and command the flash to fire the configured power levels from that specific TX.

Note:
If two TXs are triggering at the same time, the RXs may interfere with each other. Avoid triggering at the same time.

16.3 Delay Timer



Every V6 II is equipped with a delay timer that is configurable in either the TX or RX mode. The delay timer delays the trigger response for the time period set. If you wish to fire the flash a bit later than the first curtain sync to create a different light effect (e.g., to achieve a second curtain sync), set an appropriate delay time from 1 millisecond to 99 seconds.

To set up the delay timer:

1. Switch on the V6 II in TX or RX mode and press [☰]. Turn the selection dial to <FUNCTIONS> and press [OK]. Turn the selection dial to <DELAY> and press [OK].

2. To set a delay time in milliseconds, turn the dial to <SET MS> and press [OK]. Turn the dial to set each digit, press [OK] to confirm, and move to another digit.
3. To set a delay time in seconds, turn the dial to <SET SEC> and press [OK]. Turn the dial to set each digit, press [OK] to confirm, and move to another digit.
4. The status screen of V6 II TX and main screen of the V6 II RX will show the status of the delay timer (see Section 6).

16.4 Group Sequence

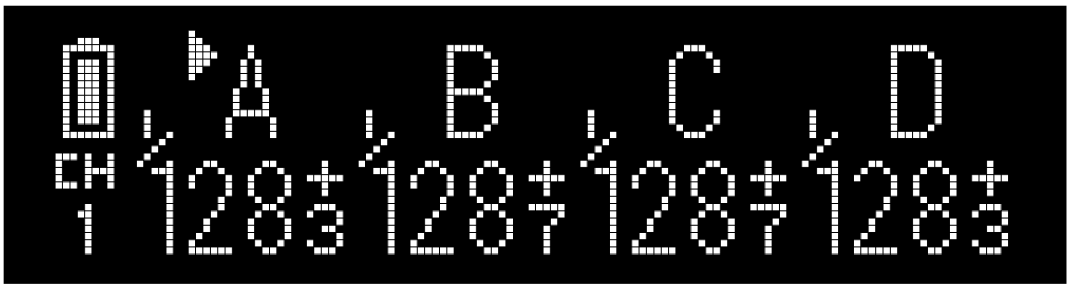
There may be some situations in which you would like to fire the slave groups in a very short sequence such as:

- **Post-production of high dynamic range (HDR) photos:** In burst mode, photographers can take two pictures of the same scene with contrasted flash power levels very quickly. The resulting pictures can be very handy in the post-production of HDR photos.
- **Evaluating the individual contribution of the slave groups:** Taking a series of pictures in burst mode will allow you to review the contribution of each slave group individually.

- Speed up the flash cycle: When you need to fire a series of flashes at high power levels, assign two or more flashes to different groups and adjust them to the same power level. Alternately firing the flashes will let the capacitors recharge during the longer interval, ensuring enough charge for the next high power output.

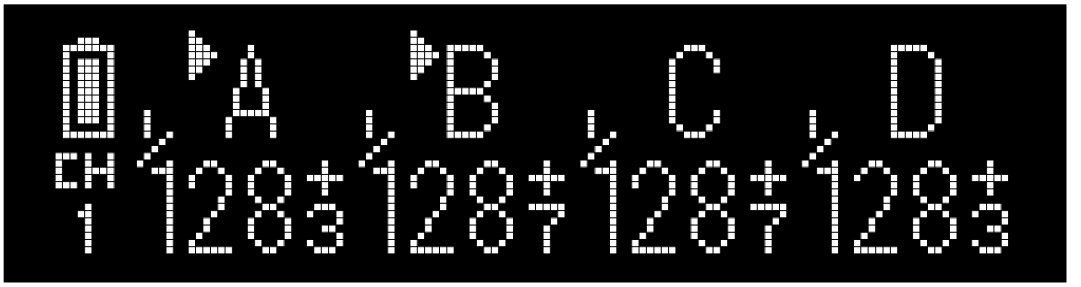
The V6 II offers two group sequence modes for selection:

A-B-C-D: The first trigger in a series will fire group A, then group B, and so on. The fifth trigger will fire group A and start the cycle again. Another series will restart at group A when there is no triggering event in 2 seconds.



AB-CD: The first trigger in a series will fire group A and B together, then group C and D. The third trigger will fire group A and B, and start the cycle again. Another

series will restart at group AB when there is no triggering event in 2 seconds.



To select a group sequence mode:

1. Switch on the V6 II in TX mode. Press [≡]. Turn the selection dial to <FUNCTIONS> and press [OK]. Turn the selection dial to <GROUP SEQUENCE> and press [OK].
2. Turn the selection dial to <A-B-C-D> or <AB-CD> and press [OK].
3. Depending on the group sequence mode you set, one or two cursors will point to the group alphabets on the main screen, indicating which group(s) will be fired next.

16.5 Sports Shutter

The sports shutter is designed for burst mode triggering. In the setup, the V6 II transceivers are used as a wireless shutter release. The remote camera is triggered by a master camera in burst mode (or high speed continuous shooting mode).

In sports photography when the subject is in quick successive motion, photographers may shoot in burst mode to capture as many images as possible. The sports shutter in the V6 II is designed to maximize the frames per second (FPS) of the slave camera in this setup.

When the sports shutter is activated, the V6 II RX will treat a series of triggering signals that are faster than three times per second as one triggering event. It would then command the slave camera to shoot continuously at its own burst mode setting, until the shutter of the master camera is released.

To activate the sports shutter:

1. Switch on the V6 II in RX mode.
2. Press [☰]. Turn the selection dial to <FUNCTIONS> and press [OK].
3. Turn the selection dial to <SPORTS SHUTTER> and press [OK]. Select <ON> to activate, or <OFF> to deactivate the sports shutter.

17. Personalizing the V6 II

You may configure a number of personalized options in the <PREFERENCES> menu of the V6 II to suit your needs. Press [☰], turn the selection dial to <PREFERENCES>, and then press [OK]. Turn the selection dial again to scroll through all the personalized options.

17.1 Dial Direction

In <DIAL DIRECTION>, the selection dial of the V6 II can be configured to operate in a <CLOCKWISE> or <ANTI-CLOCKWISE> direction. To increase the power level in the main screen, for example, you would have to turn the selection dial to the left in the clockwise setting, or turn it to the right in the anti(counter)-clockwise setting.

17.2 Dial Lock

To prevent unintended turning of the selection dial and its consequence of affecting the power levels, the dial can be locked in the main screen of the TX mode:

1. To lock the selection dial, press and hold the selection dial or [OK] for

2 seconds. The LCD will show  at the upper left-hand corner.

2. To temporarily unlock the selection dial, press the selection dial or OK once. Alternatively, press and hold any group button to select a group for power level adjustment. The LCD will show  to indicate the temporary unlock status. The dial will be locked again when no button or dial is pressed or turned in 2 seconds.
3. Temporary unlock can be enabled or disabled in the <TEMPORARY UNLOCK> menu.
4. To permanently unlock the selection dial, press and hold the selection dial or OK for 2 seconds.

Note: The short-cut for adjusting the power level of a single group by simultaneously pressing a group button and turning the dial (see Section 13.1.1) will be unaffected.

17.3 Swap Control

In the main screen of the V6 II TX, pressing OK or the push-in selection dial once will change it to one of the following modes:

- Zoom Control <ZOOM>: controlling the zoom level of the connected flashes and the

Cactus RF60 series (see Section 13.5).
- Quick Power Adjustment Mode <QUICK POWER ADJ>: expanding the power adjustment to 1EV step (see Section 13.1.3).

The option can be configured in <SWAP CONTROL>.

17.4 LCD Options

The LCD display of the V6 II can be configured in the following ways:

1. LCD Backlight Auto Off: The LCD backlight of the V6 II will turn on whenever [☰], [OK], the selection dial, or any of the group buttons has been pressed or turned. In order to conserve energy, there is a timer setting that automatically turns off the backlight. In <BACKLIGHT TIME>, choose from <OFF>, <5 SECS>, <15 SECS>, or <STAY ON>.
2. LCD Backlight Power: In <BACKLIGHT POWER>, configure the brightness of the LCD display from 1 to 9.
3. LCD Daylight Mode: Enable <DAYLIGHT MODE> if you work under direct sunlight. The LCD display will replace the reversed fonts with black fonts on white background.

17.5 Sleep Timer

To conserve energy when you forget to switch off the V6 II after use, the sleep timer will switch the V6 II to the sleep mode after a specified period. In <SLEEP>, choose from <OFF>, <15 MINS>, or <60 MINS>.

To wake up the V6 II from sleep mode, press any button or turn the selection dial once. Local triggering via a hot shoe or x-sync port also awakens the V6 II.

Note: Wireless triggering will not wake up the V6 II RX units remotely.

17.6 Work Range

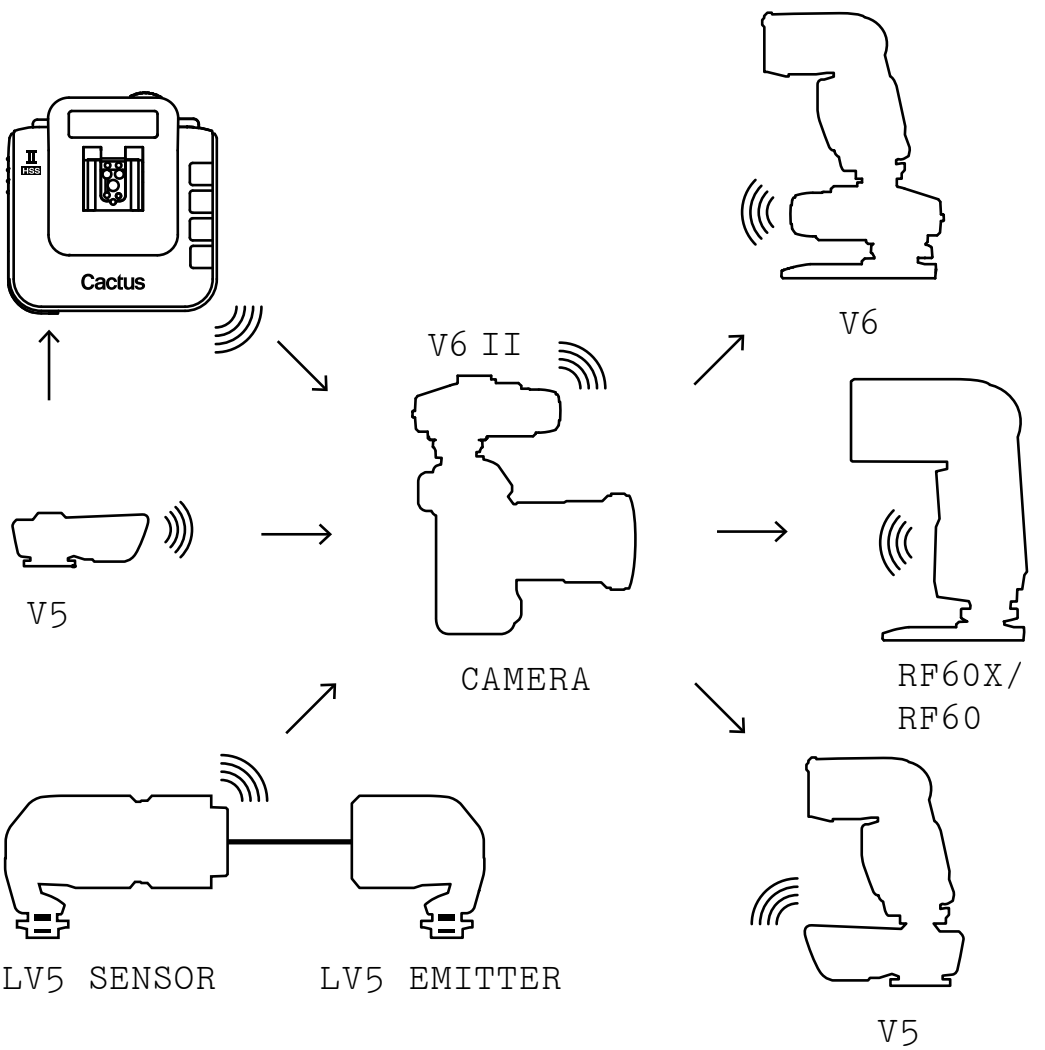
The working distance of the V6 II can be customized to suit your shooting purpose. In <WORK RANGE>, choose <SHORT> when you need to place the V6 II TX units very close to the RX units (e.g., when shooting macro), or choose <LONG> for normal shots. While the <SHORT> option will reduce the maximum effective distance of the V6 II by approximately 70 percent, it will eliminate the interference caused by placing the V6 II TX and RX units in close proximity.

17.7 Factory Reset

To set the V6 II back to the original manufacturing setting, use Factory Reset. In the <FACTORY RESET> menu, press [OK] and turn the dial to <YES>. The screen will show <CONFIRM?>. Press [OK] to confirm.

18. Working with Cactus Gear

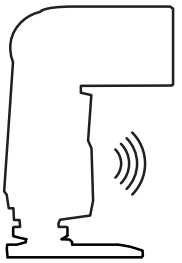
The V6 II transceiver is compatible with the Cactus Wireless Flash RF60 series, Wireless Flash Trigger V6 IIs, V6, V5, and Laser Trigger LV5.



18.1

RF60 Series

18.1.1 RF60 series as Slave



RF60X

V6 II

CAMERA

With the built-in Cactus V6 module, the Cactus RF60 series can be remotely commanded and triggered by the V6 II TX, within or beyond x-sync speed. The RF60 series in this set up would support both normal HSS and Power Sync flash.

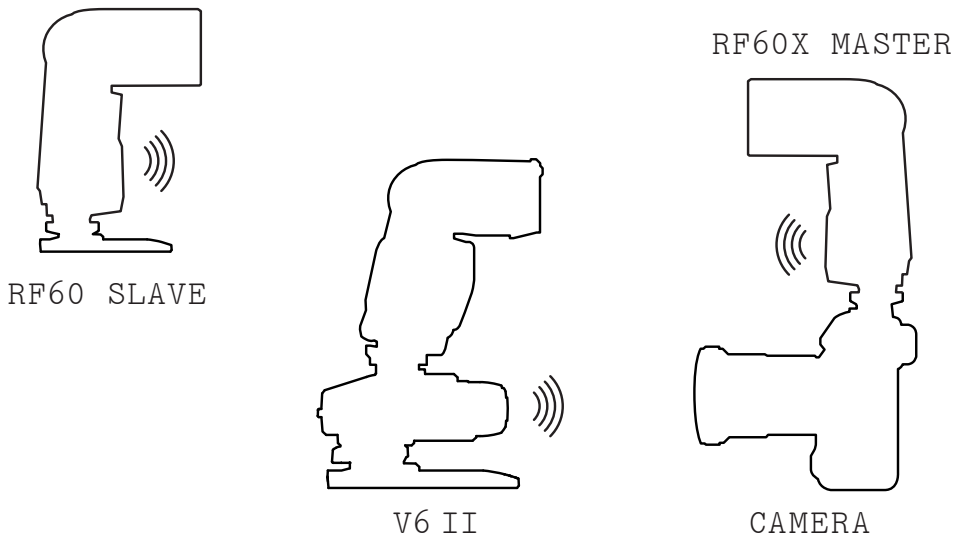
> **Note:**
> The Cactus V6 II can specify up to 1/10 EV step and communicate it with any flash of the RF60 series; however, the flash will only display the nearest 1/3 EV step.

To control the power level and zoom of the RF60 series in Slave:

1. Set the V6 II and the RF60 series to the same channel.
2. Activate the group assigned to the RF60 series slave on the V6 II TX.
3. Adjust the power level and zoom of each group as you would with the V6 II RX.

You may also combine the RF60 series with TTL flashes to form a remote flash control system. For example, assign a RF60X to group A, a Canon 580EX II (with a V6 II RX) to group B, and a Nikon SB-900 (with a V6 II RX) to group C. The V6 II TX will be able to trigger them all, set their power levels in either relative or absolute power mode, and adjust their zoom angles.

18.1.2 RF60 Series as Master



You may assign the RF60 series as master on the camera's hot shoe and let it trigger and command other RF60 series in Slave and V6 II RX units. While the RF60 series in Master can control the power and zoom levels of slave flashes, it would not be able to support high speed sync capabilities.

18.2 V6 Series

The Cactus V6 II in RX mode can work in pairs with V6 IIs (for Sony cameras with an MI hot shoe) in TX mode, but not vice versa.

The Cactus V6 II can work in pairs with the V6 to support remote power control and flash triggering within the x-sync shutter speed.

18.3

V5 and LV5

The Cactus V6 II transceiver can work in pairs with the V5 or LV5 for wireless triggering without group control. They all share the same 2.4GHz, 16-channel platform.

Since the V5 and LV5 do not support groups and remote power control, the V6 II TX will trigger all V5s, independent of which group it considers active. Similarly, both V5 and LV5 will trigger any V6 II RX, independent of which group the V6 II RX has been assigned to.

19. LED Signal Guide

STATUS	INDICATOR ON TX	INDICATOR ON RX
Flash triggering	Green	
Shutter triggering	Green	
Half-press auto focusing	Orange	
Power level command received	N/A	Orange
Bulb mode activation	Green (for 2 seconds)	
Bulb mode deactivation	Green	
Low battery	Red (every 3 seconds)	
Firmware update mode	Red (every 0.5 second)	
TTL pass-through setup error	Red (every 0.2 second)	

20. USB Connection

The V6 II transceiver comes with a mini-USB port that serves two purposes: providing external USB power and for firmware updates.

20.1 External USB Power

Apart from AA batteries, the Cactus V6 II can also be powered by a 5V DC external USB power device. Check with the specifications of your USB power device to determine the compatibility with the V6 II transceiver.

Note: External USB power cannot charge the rechargeable batteries inside the V6 II battery compartment.

20.2 Checking and Updating Firmware

Cactus will release new firmware for the V6 II from time to time. Update your V6 II via the USB connection.

To check the firmware version of the V6 II, press and hold **A** and **D**, then switch on the V6 II in TX or RX mode at the same time. The LCD display will show the firmware version installed in the unit. Release the buttons

and the LCD display will return to the main screen after 3 seconds.

To perform a firmware update when available:

1. Switch off the V6 II and remove the batteries inside.
2. Connect it to a computer via the Cactus mini-USB cable MU-1 (optional).
3. Press and hold ☰, then switch on the V6 II in TX or RX mode at the same time.
4. The V6 II is now in firmware update mode. The status LED blinks red rapidly. The firmware update program will then recognize the connected V6 II and start the upgrade.

> Note:
> The mini-USB port can also be used to customize an Auto Flash Profile (see Section 11.3). Follow the steps above to get V6 II into the firmware update mode to undergo the customization.

Please visit www.cactus-image.com/v6ii.html for more information.

21. Optional Accessories

1. Wireless flash RF60X/RF60
2. Wireless flash trigger V6
3. Laser trigger LV5
4. Shutter release cables
   (Cactus Shutter Cables are available for most camera models by Canon, Fujifilm, Leica, Minolta, Nikon, Olympus, Panasonic, Pentax, Samsung, and Sony. Please visit our website for compatible models.)
5. Sync cables and adapters
   - PC Sync Cable CA-200
   - 3.5mm Plug Cable w/6.35mm Plug adapter CA-360
6. USB to mini USB cable MU-1
7. Lanyard CL-1

22. Troubleshooting

Before reading this section, ensure that the Cactus V6 II transceiver has been set up correctly (following the instruction in Section 8-15 of this manual). If the problem persists after conducting the troubleshooting steps, contact our authorized dealer directly for further assistance.

1. Wrong Flash Power Fired

LCD DISPLAY	POSSIBLE CAUSE	SOLUTION
RX displays wrong power levels	More than one TXs are controlling the flash power of the RXs	- Set Radio ID to prevent the RX from receiving unintended commands by other TXs - Set all transceivers to another channel
RX displays correct power levels	1. The chosen flash profile does not match the flash model	Choose the correct flash profile or customize a new one
	2. The flash is in a wrong operating mode (e.g., M mode)	Check and set the flash to the TTL mode
	3. A wrong EV offset has been set in the absolute power mode	Check and reset the EV offset of the group concerned

2. Unexpected Triggering

LED BLINKS?	POSSIBLE CAUSE	SOLUTION
TX: No RX: No	Poor hot shoe contact	- Adjust tightness of hot shoe contact - Clean the hot shoe contacts of the V6 II with a clean cloth
TX: No RX: Yes (Green)	Background radio interference	- Set both transceivers to another channel and radio ID - Change the setup location as interference may come from other equipment in the surrounding area

3. Delayed Triggering

LED BLINKS?	POSSIBLE CAUSE	SOLUTION
TX: Yes (Green) RX: Yes (Green)	1. Wrong camera setup	Check Section 10 for camera system setup
	2. Delay timer has been set	Turn off the delay timer or adjust the delay timer to a correct sync time
	3. Power Sync has been adjusted to a wrong timing	Use Power Sync adjustment to set the correct sync time (see Section 14.2)
TX or RX: Yes (Red every 3 seconds)	Insufficient battery power	Replace batteries and retry

4. Flash Not Triggered/Shutter Not Released

LED BLINKS?	POSSIBLE CAUSE	SOLUTION
TX: No RX: No	1. Wrong camera setup	Check Section 10 for camera setup
	2. Poor battery contact or insufficient battery on TX	Replace batteries on TX and retry
	3. Poor hot shoe contact	- Adjust tightness of hot shoe contact - Clean the hot shoe contacts of the V6 II with a clean cloth

LED BLINKS?	POSSIBLE CAUSE	SOLUTION
TX: Yes (Green) RX: No	1. Poor battery contact or battery out of power on RX	Replace the batteries in the RX and retry
	2. Channel and group mismatch	Ensure both transceivers are set to the same channel and the group assigned to the RX has been activated on the TX
	3. Background radio interference	- Set both transceivers to another channel and radio ID - Change the setup location as interference may come from other equipment in the surrounding area
	4. Beyond 100m effective range	Make sure TX and RX transceivers are placed within 100m (328 ft) of each other
	5. TX and RX transceivers are placed too close to each other	Choose <SHORT> in the work range menu

LED BLINKS?	POSSIBLE CAUSE	SOLUTION
TX: Yes (Green) RX: Yes (Green)	1. Poor hot shoe contact	- Adjust tightness of hot shoe contact - Clean the hot shoe contacts of the V6 II with a clean cloth
	2. Flash used is not compatible with the V6 II	Check that the flash used is compatible with the V6 II (see Section 7.1)
	3. Poor cable connection	- Check the cable connection - Change the cable
	4. Wrong cable is being used (only when the V6 II is used as a Wireless Shutter Release)	Ensure that an appropriate shutter release cable is being used

23. 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.

Changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

HARVEST ONE LIMITED AND THE MANUFACTURER OF THIS WIRELESS FLASH TRANSCEIVER 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.

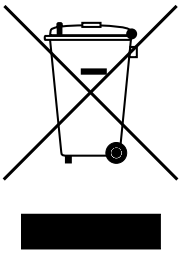
FCC ID: VAAWFTV6II
MADE IN CHINA
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

R&TTE Declaration of Conformity (DOC)

We, Harvest One Limited, 11D, Block 2, Koon Wah Mirror Factory (6th) Industrial Building, 7-9 Ho Tin Street, Tuen Mun, Hong Kong, declare under our own responsibility that the product: Cactus Wireless Flash Transceiver V6 II is in conformity with the essential requirements and other relevant requirements of the R&TTE Directive (1999/5/EC).

CE

This product, Cactus Wireless Flash Transceiver V6 II, 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 the product cycle. Do not dispose this product with other municipal waste.

NCC Warning Statement

Article 12
Without permission, any company, firm or user shall not alter the frequency, increase the power, or change the characteristics and functions of the original design of the certified lower power frequency electric machinery.

Article 14
The application of low power frequency electric machineries shall not affect the navigation safety nor interfere a legal communication, if an interference is found, the service will be suspended until improvement is made and the interference no longer exists.

CCAE16LP0660T6

Japan Electrical Safety Approval

R 017-160007

24. Warranty

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

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

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

(a) Loss of or damage to the Wireless Flash Transceiver 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 transceiver, 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 Transceiver 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 TRANSCEIVER 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 TRANSCEIVER 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 TRANSCEIVER, 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 TRANSCEIVER 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 TRANSCEIVER 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.

Corporate Office:

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11D, BLK 2,
KOON WAH MIRROR FACTORY (6TH) IND. BLDG.,
7-9 HO TIN ST,
TUEN MUN, HONG KONG

PLEASE CONTACT YOUR LOCAL DEALER FOR CUSTOMER SERVICE.

(2nd EDITION, BASED ON FIRMWARE VER. 1.1.007)

cactus

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