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1. Getting to know Cactus V6

Thank you for purchasing Cactus Wireless Flash Transceiver V6. The Cactus V6 is a multi-functional wireless flash transceiver that allows you to command your flash of different brands off camera with remote power control. You can position your lights at any angle, direction and distance – the possibilities are endless!

1.1 Special Features

- **Wireless Manual Power Control** to a list of current and previous Canon and Nikon flashes;
- **Flash Profile Learning** for Analogue-TTL flashes;
- **Full manipulation of power levels to 1/10, 1/3, 1/2 EV stops;**
- **LoPower Mode** fires flash for extremely short duration of time
- **Absolute Power Mode** benchmarks power output of different flash models to same light

intensity;
- **TTL pass-through** with Canon, Nikon, Olympus, Panasonic, Pentax and Fujifilm via one single unit.
- **Built-in Optical Trigger** enabling pre-flash triggering;
- **Group Control** up to 4 groups;
- **Relay Mode** triggers camera shutter and flash in sync;
- **Delay Timer** configurable from 1ms to 10 seconds;
- **Mini-USB** port for optional power supply and firmware update;

1.2 Cactus V6 – Core Concept

Like human, every flash has its own fingerprint which we call a **Flash Profile**. By pre-installing the Flash Profile in the V6 system, it is capable of controlling power of various flash models wirelessly. We have included more than 20 Flash Profiles of the most popular Canon and Nikon models. With this unique feature, photographer could remotely control flash power of various flash models, even of different brands!

(We will include more flash profiles in later firmware updates.)

For flash models that have not been included in the profile list,V6 could still work with it by learning its Flash Profile. Check section 7.1.2 for the eligibility of flash models that work with V6.

Be it built-in or obtained from the learning program, the Flash Profile stored in V6 could virtually commands the flash to produce ANY power level within the maximum output, even exceeds what the flash menu allows you to do:

1. **Finer increment scales**: V6 could adjust the power level of flash to 1/10 EV step, a much finer increment level than the flash menu itself allows (see Section 12.3 for setting up EV stop).
2. **Extremely short firing time**: In LoPower mode, V6 can fire flashes for a very short duration of time at extremely low power level (roughly equal to 1/256), beyond the standard flash power range. (see Section 12.4 for enabling LoPower output).
3. **Benchmark light intensity output in different flashes**: V6 benchmarks the light intensity output of different flash models in your set up and command them to fire at the same intensity of light (see Section 12.2 for adjusting absolute power).

Ready to go? Let’s get on board and see what V6 can do!

2. Caution and Warnings

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

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

3. Major Specifications

- Working radio Frequency: 2.445796783-2.480988190GHz
- Number of channels: 12
- Number of groups: 4
- Support sync speed up to 1/1,000s (subject to camera's sync speed limitation)
- Maximum effective distance: 200 meters
- Operating temperature: -20℃ to +50℃
- Camera voltage handling: up to 6V
- Flash voltage handling: up to 300V
- Dimensions: 72mm (L) x 72mm (W) x 42 mm (H)
- Weight: 68g
- Power input: 2x AA batteries; mini USB 2.0, DC input 5V
- Estimated Battery life:

Battery Life	TX	RX
LCD Off		
LCD On		

*Battery consumption based on battery capacity of 2000mAh.

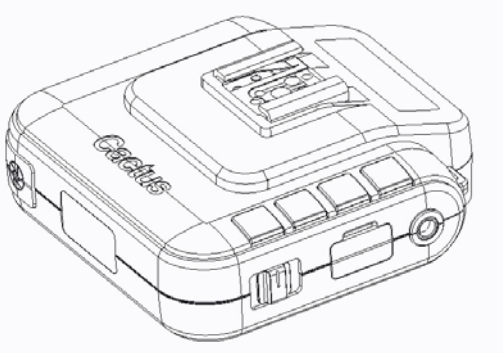
4. Package Contents:

- Cactus V6 Transceiver (x1)
- Cactus Flash Stand FS-2 (x1)
- Album (x1)
- Instruction Manual (x1)

(FIG. 1)

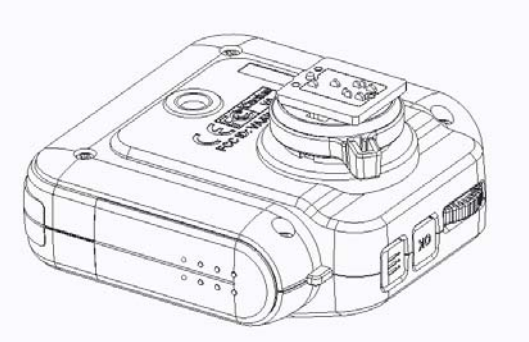
5. Nomenclature:

(FIG. 2)



- Multi-system Shoe (MSS) (Female)
- LCD Display
- Lanyard Loop
- Test Button / Shutter Release Button
- Photo-sensor
- Group Buttons
- Mode Switch
- Mini USB Port
- X-Sync Port

(FIG. 3)



- Multi-system Shoe (MSS) (Male)
- Hot Shoe Lock Lever
- Battery Door
- Tripod Mount
- LED Status Indicator
- Menu Button
- OK Button
- Selection Dial

6. LCD Panel

6.1 TX mode

- Channel
- Battery Indicator
- Power Levels
- Increments / sub-level
- Group

(FIG. 4)



6.2 RX mode

- Channel
- Battery Indicator
- Group
- Selected Flash Profile
- Delay Timer
- Relay Mode Indicator
- Slave Mode Indicator
- Wireless Sensitivity

(FIG. 5)



7. Compatibility

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

7.1 Flashes and Studio Strobes

1. Flash models with pre-installed Flash Profile in Cactus V6

The following flash models could be remotely controlled by Cactus V6:

Canon	600EX-RT, 580EX II, 580EX, 550EX, 430EX II, 430EX, 540EZ, 430EZ;
Nikon	SB-910, SB-900, SB-800, SB-700, SB-600, SB-26, SB-25;
Cactus	AF50 for Canon, AF50 for Nikon, RF50
Metz	50 AF-1 for Canon, 50 AF-1 for Nikon; 44 AF-1 for Canon, 44 AF-1 for Nikon, 36 AF-1 for Canon, 36 AF-1 for Nikon
Nissin	Di-866 for Canon, Di-866 for Nikon, Di-622 for Canon, Di-622 for Nikon;
Sigma	EF-500 DG Super for Canon, EF-500 DG Super for Nikon;

2. Flash models with Analogue TTL

Cactus V6 could learn the Flash Profiles of other flash models that come with Analogue TTL, i.e. the TTL operated by analogue quench signals. If your flashes come with a TTL mode that does not have an initial before TTL (e.g. E-TTL or E-TTL II from Canon, i-TTL or i-TTL BL from Nikon or P-TTL from Pentax), their flash profiles may be learnt and remotely controlled by Cactus V6.

To determine whether your flash is compatible with the flash learning feature of the V6, follow the steps below:

1. Connect your flash to the Multi-system Shoe (MSS) of V6.
2. Switch on the V6 in RX mode.
3. Switch on your flash in TTL mode.
4. Use a V6 TX to command your flash to fire at the lowest and the highest power.

If the flash fires at both lowest and highest power and produces two contrasted output levels, it should work with the V6 flash profile learning program.

3. Other Flash models and Studio Strobes

Cactus V6 triggers all other flash models via hot shoe, and studio strobes with PC sync male port, 3.5mm or 6.35mm port via optional cables (see Section 20). This includes high trigger voltage portable flash models, and all strobe models with trigger voltage 300V or under. Power remote control is not supported. Please note: flashes or strobes with reversed polarity connectors DO NOT WORK with Cactus V6.

7.2 Cameras

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

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

7.3 Flash Triggers

1. Cactus V5 and LV5

Cactus V6 is compatible to Wireless Flash Transceiver V5 and Laser Trigger LV5. See Section 17.2 for details.

2. Other Flash Triggers

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

8 Multi System Shoe (MSS)

(Fig. 6)



Cactus V6 comes with a Multi-system shoe (“MSS”) that supports TTL pass through and remote flash wake-up.

8.1 TTL Pass Through

While the Cactus V6 does not transmit TTL information wirelessly, it is designed to pass TTL information from camera to flash via the transmitter (TX) and vice versa.

V6 supports TTL pass-through on Canon, Fujifilm, Nikon, Olympus, Panasonic and Pentax systems. When using TTL Pass Through, make sure that camera and flash unit belong to the same TTL system.

8.2 Remote Wake-up Support for TTL Flashes

The V6 TX can wake-up most of the dedicated TTL flashes from Canon and Nikon mounted on V6 RX units. Simply half press camera shutter to wake them up in remote.

8.3 AF Assist Support for TTL Flashes

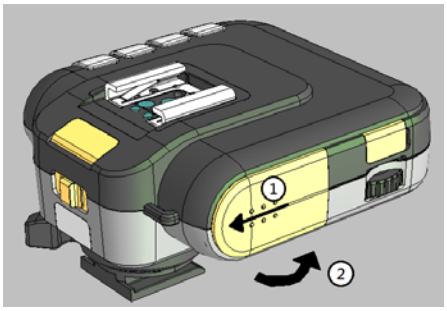
The AF assist feature of your Canon or Nikon TTL flashes can be activated as below:

1. Flash on TX connected with camera: Half press the shutter button on camera will activate the AF assist on the flash;
2. Flash on RX: Half press V6 TX Test button will activate the AF assist on the flash for 3 seconds.

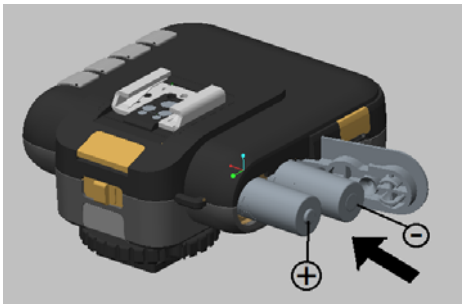
9 Setting up V6 for the first time

9.1 Installing Batteries

(Fig. 7)



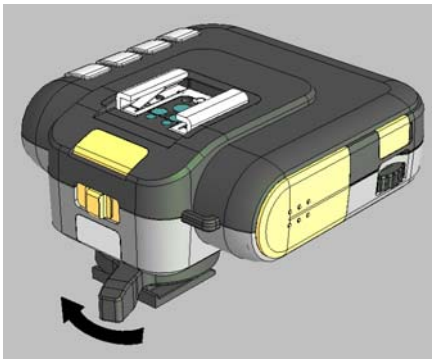
(Fig. 8)



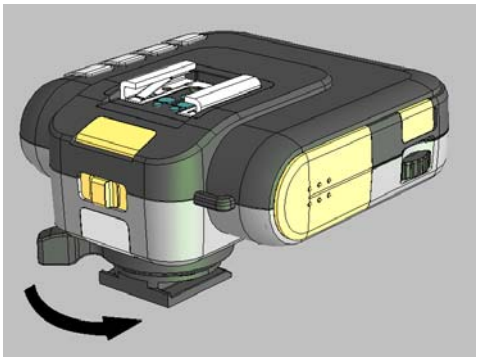
Open the battery door by pushing it backward. Flip open the latch and insert two AA batteries in correct polarities. Then close the battery door by pushing it to the front.

9.2 Hot Shoe Lock Lever

(Fig. 9)



(Fig. 10)



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

1. Turn the lock lever of V6 in the direction opposite to that indicated by (→LOCK).
2. Slide the V6 bottom hot shoe into the camera's hot shoe.
3. Turn the lock lever of V6 in the direction of (→LOCK) to lock it.
4. When releasing V6 from camera's hot shoe, turn the locking lever opposite to the direction of (→LOCK). Otherwise, the hot shoe will be damaged.

9.3 TX and RX

Cactus V6 is a wireless transceiver that is capable of transmitting and receiving radio signals. Set the V6 transceivers to the correct mode (Transmitter to "TX", Receiver to "RX)). This will automatically power on the transceivers.

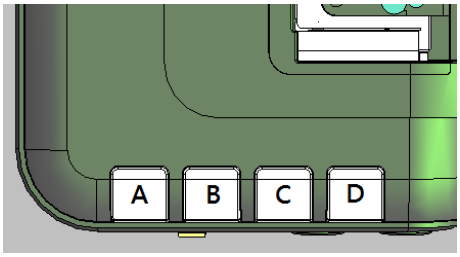
9.4 Channel

Cactus V6 communicates to each other via radio frequency. There are in total 16 channels available in V6. Always make sure that all of your V6 transceivers are set to the same channel:

1. To set both TX and RX to the same channel, press Menu, 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 Menu to exit.
2. The selected channel number will be shown on the LCD status screen.

9.5 Grouping

(Fig. 11)



Group function on V6 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 group setting must be set to the same channel.
2. Assign RX units into Groups A, B, C or D by pressing group button. Each RX can only be assigned to ONE group.
3. Command TX to fire any combination of groups by pressing group button(s). You can fire any combination of A, B, C and D group.
4. Pressing the group button of active group(s) again will turn off the group(s). V6 RX units which have been set to the off group(s) will not fire.
5. Switching off V6 will memorize group selection in both TX and RX. Switching on V6 next time will start up with the saved setting.

10 Flash Profiles: Choosing, Learning and Copying

10.1 Choosing Flash Profile from V6

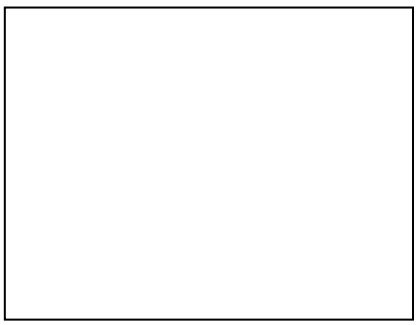
To let V6 (TX) to remotely control the power of a particular flash model, choose the appropriate flash profile from V6 RX to match.

1. Switch on V6 in RX mode.
2. Press Menu, then turn the selection dial to <CHOOSE FLASH>. Press OK.
3. Turn the selection dial until the LCD shows your flash model. Press OK.
4. Connect the flash unit to V6 and your flash will be ready for remote control. The flash profile will be applied until you choose another flash profile.

10.2 Learning Custom Flash Profile

If your flash model is not included in the list I but supports Analogue TTL, use V6 to learn the flash profile. Make sure that your flash is compatible to the V6 flash profile learning feature (check Section 7.1.2).

1. Switch on one of your V6 in RX mode.
2. Set up your flash on V6 Multi System Shoe. Put V6 together with your flash facing a white non-reflective surface at 1 meter distance in a dark environment.



(*Fig. 12*)

3. Press Menu, then turn the selection dial to <FLASH SET UP>. Press OK.
4. Turn the selection dial to <START>. Press OK again.
5. LCD screen will show <SET MAX GN> and the default number 45. Turn the selection dial until the LCD screen shows the maximum Guide Number of your flash. Press OK. (ADD LCD screen shot)
6. LCD screen will show <SET MANUAL 1/2>. Switch your flash to Manual mode at 1/2 power and press OK (marked with GO on LCD). V6 will trigger your flash a few times for learning.
7. Once your flash stop firing, the LCD screen will show <SET MANUAL 1/4>. Repeat and

follow the instruction on LCD screen. The same procedure will go on until the LCD screen shows <SET MANUAL 1/128>.

8. If your flash manual power control does not come with the smaller output like 1/64 or 1/128, simply choose Skip on the screen.
9. Once V6 has finished firing the flash in the step <SET MANUAL 1/128>, the LCD will show <BACK TO TTL MODE>. Change the flash mode to TTL and press OK (marked as <GO> on screen).
10. V6 will then undergo a series of fine-tuning of different power levels and fire the flash many times for approximately 3 minutes.

11. When the learning is finished, the LCD screen will show <PROFILE NAME>. Enter a profile name with 1-6 alphabets or numbers. Please enter a unique profile name that has not been used in other profiles. Turn dial to choose from A-Z and 0-9, press OK for every alphabet selected.
12. Then the LCD screen will show <PROFILE SAVED>. The flash profile learning is completed.

To choose saved Flash Profile from the profile list, see section 9.1.

Each V6 can save up to 15 custom flash profiles from the learning program. The deviations of the light output from the ideal / theoretical output are less than 0.2 EV.

NOTE: Not ALL flash profiles could be learnt by V6. To check whether your flash is capable for the V6 to learn, see Section 7.1.2.

10.3 Copying Custom Flash Profiles

Once you have finished learning a number of flash profiles with one V6, you may copy all the custom flash profiles to other V6 units.

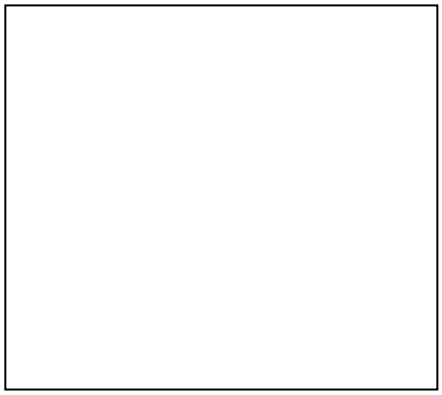
1. Set all the V6 units to the same channel.
2. Pick out the V6 source unit that contains all the learnt flash profiles that you wish to be copied to other V6 units. Switch it on in TX mode. Press Menu, and turn the selection dial until the LCD shows <BROADCAST FLASH PROFILES>. Press OK.
3. Switch on the V6 destination unit(s) in RX mode. Press Menu, and turn the selection dial to <FLASH SET UP>, press OK and turn the dial to <COPY>. Press OK. The V6 units will start copying flash profiles.
4. When the flash profiles are all copied to the V6 destination units, all the V6 will show <FINISH COPYING>. You may then leave the menu.

NOTE: If identical flash profiles are found in both the source V6 and destination V6, they will not be copied. For non-identical profiles that come with the same profile names, they will still be copied but the system will change the last alphabet of the newly added profile name by either adding one more alphabet at the end, if space allows, or by altering the last alphabet from 0 to A or A to B, so on and so on. (Add FIG)

11 Flash Triggering

To command the power of the flash units in different groups using V6:

(Fig. 13)



1. Set V6 transceivers to the correct mode (Transmitter to “TX”, Receiver to “RX). This will automatically power on the transceivers.
2. Set both TX and RX to the same channel (see Section 9.4).
3. Assign RX units to A, B, C or D group. On TX, switched on all the assigned groups by pressing the group button.
4. Connect V6 RX to portable flashes eligible for remote power control. Choose the flash profile from every V6 to match with the flash unit connected (see Section 10.1).
5. On TX, full press the Test button. The status LED of both TX and RX should blink in green simultaneously.
6. Attach TX to camera’s hot shoe. If your camera does not have a hot shoe, connect TX to the camera using an optional PC sync cable (CA-200).
7. Press the camera’s shutter release button. The flashes on RX will be fired wirelessly and in sync.

12 Remote Manual Power Control

Apart from flash triggering, V6 could also command the manual power of your flash. On each RX, choose the appropriate flash profile for each flash to be connected. The V6 TX would then be able to command the flash to fire from 1/128 to 1/1 full power. V6 offers two power definitions

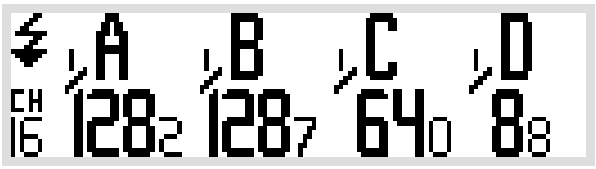
for users to command the power of flashes in the most convenient way.

12.1 Relative Power

Similar to ordinary flash display, V6 TX indicates the power level of the remote flashes in proportion to full power under Relative Power mode, i.e. 1/1 for full power, 1/2 for half power, etc. It demonstratives the fraction of power in relation to the full power of the particular flash concerned. Upon switching on V6 in TX mode, the LCD will show the relative power levels of all active groups.

When V6 is in Relative Power mode, select a particular power ratio on V6 will automatically command the flash to be set to that power ratio. For instance, if you assign 4 different flashes to Group A, B, C and D respectively, choosing flash ratio value of 1/16 on V6 under Relative Power mode will automatically set the power ratio of the flashes to 1/16.

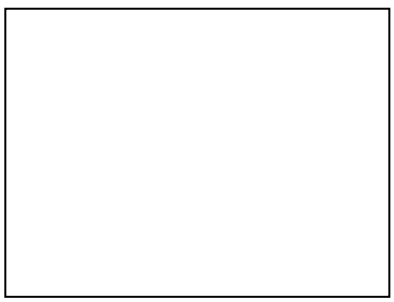
Note that the small single digit indicates the increment between major power levels.
(Fig. 14)



1. Single Group Power Adjustment

There are two ways to adjust power level at a particular group.

1. Two steps: To adjust the power level of a particular group, long press the group button until the power level of the chosen group is highlighted on LCD. Turn the selection dial left (to decrease) or right (to increase) to the desired power level.
2. Short cut: There is also a short cut to single group power adjustment: press the group button and turn the selection dial simultaneously. Once the adjustment is finished, un-press the group button.
   (Fig. 15)



2. Multi Group Power Adjustment

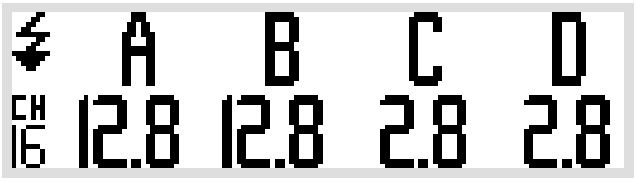
To adjust the power level of ALL active groups, simply turn the selection dial left (to decrease) or right (to increase) to the desired power level. (ADD FIG)

12.2 Absolute Power

V6 not only command flashes to fire at their own relative power ratio, It has the ability to benchmark the absolute power level, i.e. its absolute lighting intensity, of different flash models in your set up and command them to fire with the same intensity of light .

When V6 is in Absolute Power mode, V6 will benchmark the flashes to the same light intensity scale in EV despite of its relative power ratio. Increase the power level on V6 will increase the absolute light intensity of the flash or Group under command.

1. To change power mode to absolute power, switch on V6 in RX mode. Choose the correct flash profiles for each of the V6 RX.
2. Switch on the V6 that you would like to be the commander in TX mode. Press Menu. Turn the selection dial to <POWER MODE>, press OK. The current option will then be highlighted. Turn the selection dial to <ABSOLUTE (SETUP)> and press OK to confirm.
3. The V6 TX will then collect the flash profiles from the V6 RX units and set up the absolute power level scheme. Once the set up is finished, the LCD screen will return to the main screen again and show the absolute light intensity of the four groups.
4. The adjustment of power levels is the same as in the relative power mode (see Section 12.1.1 and 12.1.2)
5. Each figure before decimal place represents 1 EV and the figure after 1/10 EV.



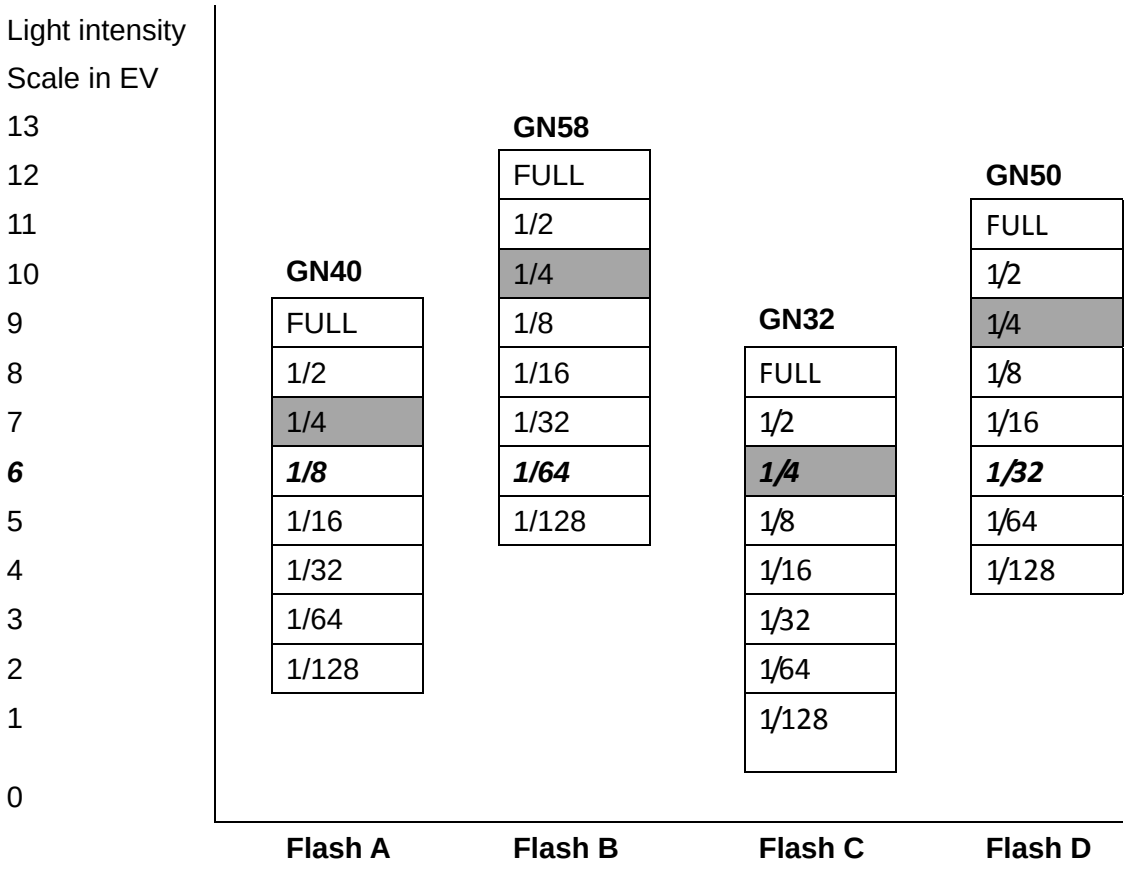
(Fig. 16)

6. The absolute power set up will not be saved upon switching off the V6 TX. When you switch on the V6 next time, it will start up in relative power mode.
7. Due to the differences in the environment where users undergo the flash set up, the absolute light intensity of a particular flash model may be different from another flash that has been set to the same absolute light intensity. In this case, you may fine tune the custom flash profile by adjusting its overall output up to +/- 1EV. In RX, press Menu and dial to <CHOOSE FLASH>. Press OK and dial to the custom flash profile that you would

like to adjust. Press OK and dial to <MODIFY OFFSET>. Press OK and dial to the appropriate adjustment level.

(Fig. 17)

Concept between Absolute and Relative Power:



When you set 1/4 relative power under Relative Power mode, Flash A to D will all in their 1/4 power ratio (boxes highlighted in gray) relative to its flash power in terms of Guild Number. Their absolute light intensity is different.

When you set all flashes at *6 EV* (*italicize*) under Absolute Power mode, all flashes will emit the same intensity of light at 6 EV but their relative power ratio may be difference. For instance, at 6 EV, Flash A is at its *1/8* relative power ratio while Flash C is at its *1/4*.

12.3 EV Stop

The increment of EV stops in most of the flashes available on market is of 1/3 level. By extracting the flash profiles, V6 offers two more increment levels, 1/2 and 1/10, which allows photographers to adjust the lighting output of flash to a finer level. In addition to it, V6 offers 1 EV increment level for swift operation.

(Fig. 18)



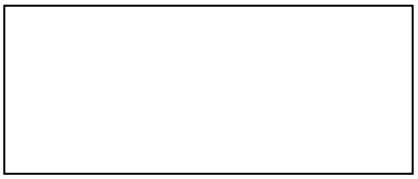
To adjust EV stop:

1. Switch on V6 in TX mode and press Menu. Turn the selection dial to <EV STOP>. Press OK and turn the dial to the desired increment level (1/3, 1/2 or 1/10). Press Menu to leave.
2. The selected EV stop will be memorized upon switching off. Switching on V6 again will apply the saved power ratio setting.
3. Pushing the selection dial once will change the EV stop to 1 EV. It is useful for fast power adjustment to the highest or lowest level. Pushing the selection dial once again will get back to the original power ratio you have selected in the Menu.

12.4 LoPower

At LoPower mode, the relative power output of a flash triggered by V6 is roughly equal to 1/256. The difference between 1/128 and 1/256 power output may be hardly detected by flash meter, but the extremely short firing duration helps freeze faster-than-lightning moments which is ideal for high speed photography

(Fig. 19)



To enable LoPower:

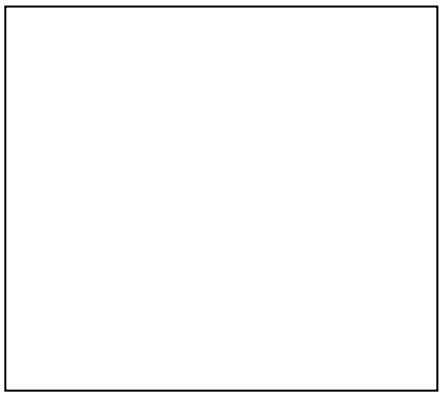
1. Switch on the V6 in TX mode, press Menu. Turn the selection dial to <LoPower>, press OK. Dial to <ON> and press OK.
2. Once the LoPower is enabled, the LoPower will be shown as <Lo> at one stop below 1/128 power in relative power mode, or one stop below the lowest power of each group in absolute power mode.
3. To disable LoPower output, follow step 1 to enter the LoPower menu. Choose <OFF> and press OK.

13 Camera Shutter Release

Notes:
This function requires the use of a separately purchased shutter release cable for connection between the transceiver and camera. This cable is NOT included.

13.1 Basic Setup

(Fig. 20)



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

1. Set V6 transceivers into correct modes: Transmitter to <TX>, Receiver to <RX>. This will automatically power on the transceivers.
2. Connect RX to your camera using an appropriate shutter release cable.
3. Set both TX and RX to the same channel using the Channel Dial. When setting channels, ensure the channel set on the wireless shutter release transceiver pair is different from that of wireless flash trigger.
4. Half press the Test Button on TX to test auto focus. The status LED on both TX and RX

will turn ORANGE to indicate auto focus.

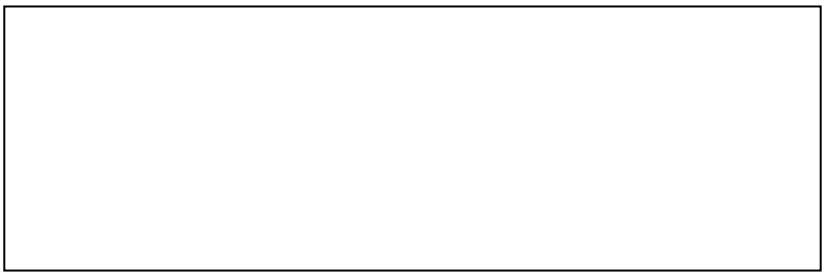
5. Full press the Test Button on TX for shutter release. The status LED on both transceivers will turn GREEN to indicate shutter release.

13.2 Bulb Mode

1. Set the camera to Bulb.
2. Full press and hold the Test Button on TX. The status LED on TX and RX will turn green at first and go off after approximately 2 seconds. The camera's shutter is now in a continually opened state.
3. Release the Test Button on TX.
4. To close the camera's shutter, full press and release the Test Button on TX again. The green status LED on both TX and RX will blinks simultaneously.

13.3 Relay Mode: Camera Shutter + Flash

(Fig. 21)



The internal switch in V6 could turn V6 from RX to TX mode swiftly. With relay capability, you need only 3 transceivers to wirelessly control both camera and flash at one go. It is an economic solution for collaborating wireless shutter release with flash trigger systems.

1. Make sure that all the V6 units are set to the same channel.
2. Set the V6 that you would like to be the handheld remote as TX, then all other as RX.
3. Mount one of the RX onto the camera's hot shoe, and also connect the V6 to the camera's shutter release port with an appropriate shutter release cable (optional).
4. On the camera's RX, press Menu. Turn the selection dial to <RELAY>. Press OK. Turn dial to <RELAY (CAMERA)>. Press OK.
5. On other RX units that is connected to flashes via hot shoe. On these RX units, press Menu. Turn the selection dial to <RELAY>. Press OK. Turn dial to <RELAY (FLASH)>. Press OK.
6. By pressing the test button on TX, both camera and flash will be triggered and sync with each other. What's more, you will also be able to control the power level of the flash with your V6 TX.
7. To exit Relay mode, press Menu and turn selection dial to <RELAY>. Press OK and turn dial to <OFF>. Or switch off the transceivers and switch on again.

14 Advanced Operation

14.1 Optical Trigger

Optical trigger can act as an alternative trigger mechanism from radio signal. It is very useful to capture pre-flashes signals that are being emitted earlier than the flash sync. Setting pre-flash triggered optical trigger with the delay timer (see Section 14.2) could manipulate the exact time when you would like the flash start to fire.

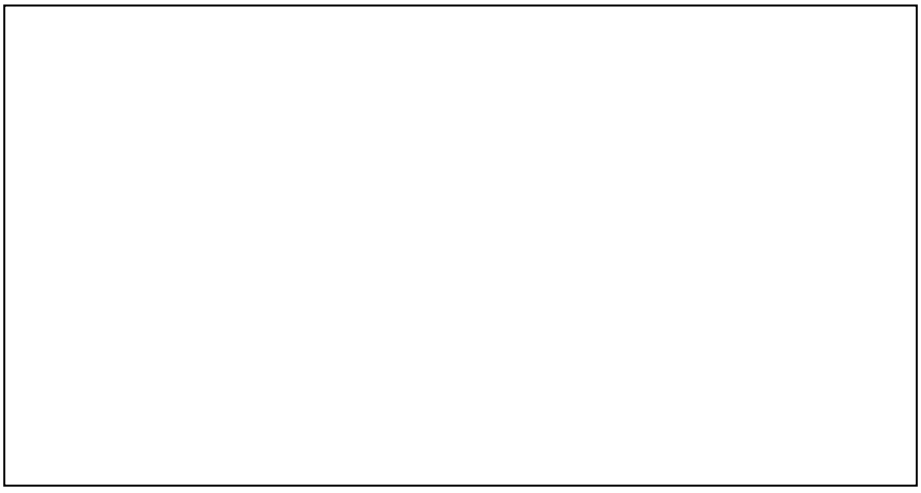
Three optical trigger modes S1, S2 and S3 are available for selection:
S1: Triggering on the first pre-flash.
S2: Excluding pre-flashes and triggering on the main flash.
S3: Triggering on the delay timer (see Section 14.2) after the first pre-flash.

To activate optical trigger, press Menu and turn the selection dial to <OPTICAL SLAVE>. Press OK and turn dial to S1, S2 or S3. Press Menu again to leave.

The main screen in RX will show the status of Optical Trigger.

14.2 Delay timer

(Fig. 22)



Every V6 has a built in delay timer that could be configurable in RX 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 light effect, delay timer is helpful for your creation.

1. Switch on V6 in RX mode, press Menu and turn the selection dial to <DELAY>. Press OK.
2. Turn dial to <SET>, press OK. Turn dial to set each digit and press OK to confirm and pass to another digit.

3. Exit Menu and the delay time will be shown on the RX main screen.

15 Personalizing V6

15.1 LCD Backlight Timer

The LCD backlight of V6 would turn on whenever the Menu button, the OK button, the selection dial, and the group buttons have been pressed or turned. For energy saving, there is a time-off setting that automatically turns off the backlight.

1. To customize the backlight timer, press Menu, turn the selection dial to <MISCELLENEOUS> and press OK.
2. Dial to <LCD BACKLIGHT>, press OK and dial to the time you wish to set as time-off. User can choose from OFF, 5 secs, 15 secs, and ON. The option ON will instruct the LCD to turn on constantly.

15.2 Sleep Timer

To prevent unnecessary energy consumption when users forget to switch off V6 after use, the sleep timer will switch V6 into sleep mode after the specified period.

1. To customize the sleep timer, press Menu, turn the selection dial to <MISCELLENEOUS> and press OK.
2. Dial to <SLEEP>, press OK and dial to the time you wish to set as sleep timer. Choose from OFF, 15 mins, 60 mins.
3. Once the V6 has entered the sleeping mode, it cannot be awaked by other V6 remotely. The only way to wake up a sleeping V6 is by pressing any button on that unit.

15.3 Factory Reset

To return to the original manufacturing settings of V6 and erase all the custom flash profiles, use Factory Reset. Press Menu, turn the selection dial to <MISCELLENEOUS> and press OK. Dial to <FACTORY RESET>, press OK and dial to YES. The screen will show <CONFIRM>. Press OK to confirm.

Please be reminded that Factory Reset will erase ALL Flash Profiles you have saved in V6.

16 Frequency Self-Tune

One of the most common issues with flash triggering system is unintentional frequency shift in relation to temperature change. This results in high failure rate in extreme weather conditions. Frequency Self-Tune (FST) is an exclusive feature of Cactus 2.4Ghz triggering system that minimizes the likelihood of “no fires”.

The concept behind FST is simple – every Cactus transceiver is equipped with a chipset that records the last functioning frequency (i.e. the frequency level at which V6 works) at different temperature levels.

When the V6 transceiver is exposed to changing environment, (e.g. extreme weather conditions, sudden and large change in temperature), it will self-calibrate to the last functioning frequency after each firing.

To take full advantage of this feature, it is advised that a “test firing” be done before taking the actual shot. This will ensure that the V6 transceiver (in either TX or RX mode) will be calibrated to a functioning frequency, and that important and stunning photographs will not be missed!

FST is especially useful when V6 is exposed to the following extreme conditions:

1. When operating temperatures is <5°C or >+30°C;
2. When there is a sudden temperature change of larger than 20°C.

For sudden temperature change larger than 20°C, it is highly advised that a series of test firings be done to ensure that V6 is tuned to a functioning frequency. It is suggested that a 5-minute interval or about 5-10 test firings be allowed for V6 to adjust to the new temperature.

17 LED Signal Guide

Status	Indicator on TX	Indicator on RX
Flash triggering	Green	
Shutter releasing	Green	
Half-press auto focusing	Orange	
Bulb mode activation	Green (for 2 seconds)	
Bulb mode close	Green	
Low battery on TX	Red (every 3 seconds)	None
Low battery on RX	None	Red (every 3 seconds)

18 USB Connection

Cactus V6 comes with a mini-USB port that serves two purposes:

18.1 External USB Power

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

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

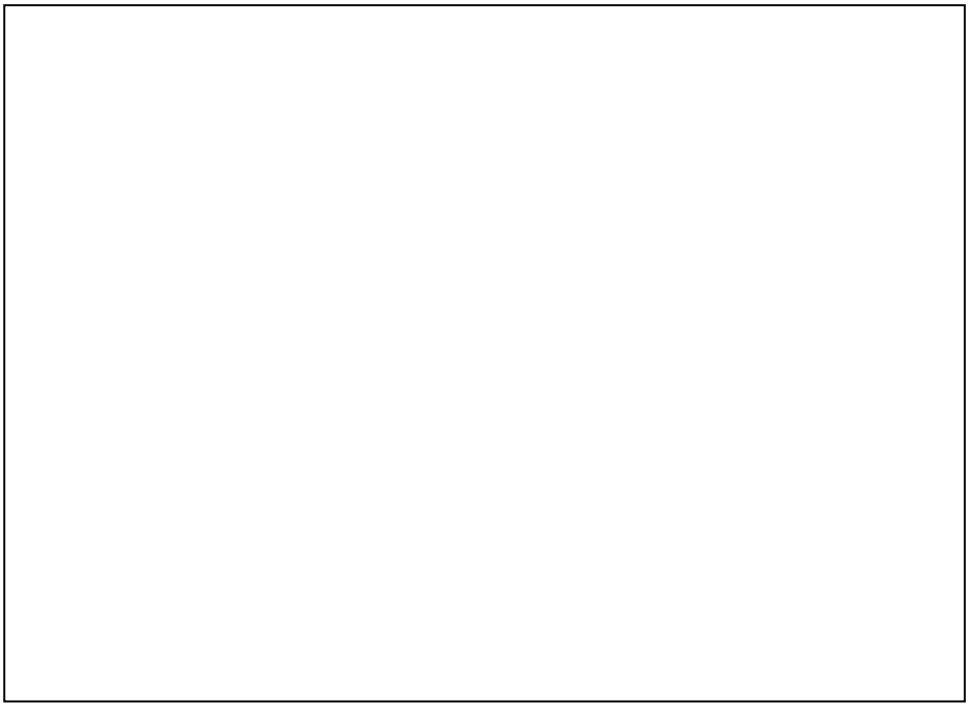
18.2 Firmware Update

To undergo firmware update when available, switch off V6 and connect it with a computer via a compatible USB to mini-USB cable. Press and hold the Test button, then switch on V6 in TX or RX mode at the same time. The firmware update program will then recognize the connected V6 and start the upgrade. Please visit www.cactus-image.com/v6.html for more information.

Currently, firmware update only works on Windows. Mac OS is not supported.

19 Working with Other Cactus Gears

(Fig. 23)



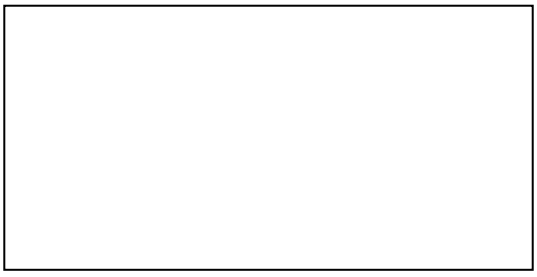
19.1 RF50

19.1.1 RF50 as Slave

With the built-in Cactus V6 transceiver, Cactus RF50 can be remotely commanded and triggered by V6 TX. Note that the LCD of RF50 only supports the display of 1/3 EV stop.

Users may combine RF50 with other V6-compatible TTL flashes to form a manual flash control system. For example, assign RF50 to group A, 580EX (with a V6 RX) to group B, 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.

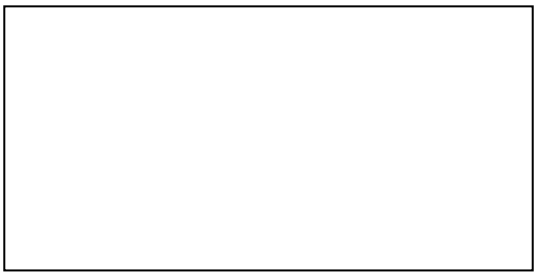
(Fig. 24)



19.1.2 RF50 as Master

Users may also assign RF50 as master on camera's hot shoe, and let it trigger and command other slave RF50 and V6 RX units. While RF50 Master can control the power level and zoom of RF50 Slave, zoom control is not supported when working with V6 RX units.

(Fig. 25)



19.2 V5 and LV5

Cactus V6 transceiver can work in pair with Cactus V5 or LV5 in all the basic operation specified in 8.1-8.3. They all share the same 2.4GHz, 16-channel platform.

Since V5 and LV5 does not support grouping, V6 TX will trigger V5 in any group. In turn, both V5 and LV5 will trigger V5 RX set as any group.

V6 in TX: will trigger Cactus V5 in ANY group.
V6 in RX: will receive signal from Cactus V5 or LV5 in ANY group.

20 Optional Accessories

20.1 Wireless Manual Flash RF50

20.2 Wireless Laser Trigger LV5

20.3 Shutter Release Cables

Cactus Shutter Cables available for most camera models by Canon, Leica, Minolta, Nikon, Olympus, Panasonic, Pentax, Samsung and Sony. Please visit our website for compatible models.

20.4 Sync Cables and Adapters

PC Sync Cable CA-200

3.5mm Plug Cable w/6.35mm Plug adapter CA-360

20.5 USB to mini USB cable MU-1

20.6 Lanyard CL-1

21 Troubleshooting

Before reading this section, ensure that Cactus V6 transceiver have been set up correctly (follow the instruction in the Basic Operation section of this manual).

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

1. Flash Misfire (Unexpected Flash Firing)		
LED blinks?	Possible Cause	Solution
TX: No RX: No	Poor hot shoe connection	● Adjust tightness of hot shoe contact ● Remove hot shoe metal plate ● Clean hot shoe contact of V6 and flash with clean cloth
TX: No RX: Yes (GREEN)	1. Background radio interference	● Set both transceivers to another channel ● Change setup location as interference may come from other equipment in the surrounding area
	2. TX and RX transceivers are placed too close to each other	● Place the TX and RX transceivers at least 20cm apart and retry
	3. Optical Trigger has been switched on and triggered by unexpected ambient light.	● Switched off the optical trigger, as it may not work in those environments.

2. Slow Synchronization (Delayed Flash)		
LED blinks?	Possible Cause	Solution
TX: Yes (GREEN) RX: Yes (GREEN)	1. Shutter speed is faster than the camera's x-sync limitation	● Adjust the camera's shutter speed to the maximum supported

		x-sync speed
	2. Delay timer has been set.	● Turn off the delay timer or adjust the delay timer to correct sync time.
TX or RX: Yes (RED every 3 secs)	Insufficient battery power	● Replace batteries and retry

3. Flash Not Triggered / Shutter Not Released		
LED blinks?	Possible Cause	Solution
TX: No RX: No	1. Poor battery contact or insufficient battery on TX	● Replace batteries on TX and retry
	2. Shutter speed is faster than the camera's x-sync limitation	● Adjust the camera's shutter speed to the maximum supported x-sync speed
TX: Yes (GREEN) RX: No	1. Poor battery contact or battery out of power on RX	● Replace batteries on RX and retry
	2. Channel mismatch	● Ensure both transceivers are set to the same channel
	3. Background radio interference	● Set both transceivers to another channel ● Change setup location as interference may come from other equipment in the surrounding area
	4. Beyond 200m effective range	● Make sure TX and RX transceivers 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
TX: Yes (GREEN) RX: Yes (GREEN)	1. Poor hot shoe contact	● Adjust tightness of hot shoe contact ● Remove hot shoe metal plate ● Clean hot shoe contact of V6 and flash with clean cloth
	2. Flash used is not compatible with V6	● Check that the flash used is compatible with V6 (refer to Compatibility section of the user manual)
	3. Poor cable connection	● Check cable connection ● Change cable
	4. Wrong cable is used (only when V6 used Wireless Shutter Release)	● Ensure that an appropriate shutter release cable is used

4. Flash Profile Learning		
Issues	Possible Cause	Solution
Cannot complete the flash profile learning.	The flash model is not supported.	● Check Section 7.2 for the compatibility of flash models for flash profile learning.
	The flash is powered by nearly dead battery and produce unstable output.	● Replace the batteries of the flash.
	The distance between the wall and V6 is too close or too far.	● Make sure to place V6 at 1 meter distance from the wall. ● Make sure to place V6 and the flash towards a white wall. ● Use light stand or tripod to fix the position of V6.

	The ambient light around the scene is too prominent or unstable.	● Try undergo the learning process in an enclosed space with low and stable ambient light.

22 Notices

NOTICES FOR CUSTOMERS IN THE U.S.A.

Note: 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.

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

M/N: V6

FCC ID: VAAWFTV6

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.