

The Original Portable Wireless Two Camera System!

Swift Hitch™

User's Manual

**Portable Wireless Two Camera System
with One Monitor and Extension Antenna**

Model: SH03



Please read this manual carefully and thoroughly before any attempt to operate this product and retain it for your future reference.

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EU Environmental Protection

Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.



INTRODUCTION

Thank you for purchasing this wireless two camera one monitor kit. This product works at ISM-2.4GHz frequency band, which could be legally used worldwide without permission. We feel confident that you will be pleased with the quality and features of this product.

Each camera features one CMOS image sensor and a transmitting module to capture the image and transmits them wirelessly.

The receiver features a receiving module to receive and display both cameras on a color (LCD) - liquid crystal display. Which camera's image is being displayed on the receiver is determined by the user pushing a toggle switch on the upper right hand side of the receiver.

Each time the toggle is pushed the selection of which camera image is being viewed changes.

Notice

Notice: This product may cause interferences with other wireless equipment that operates at 2.4GHz ISM band. Please turn off other devices that operate on 2.4GHz ISM band to eliminate the interference.

Product Assurance: These cameras will emit electromagnetic waves, just like other wireless products, but its transmitting power is less than other wireless products such as mobile phones. The 2.4 GHz wireless cameras meet wireless frequency security standards and recommended indexes while working. These standards and indexes are certificated by academic organization and represent the cogitative research of the scientific workers who continuously explore and annotate the involved fields. So we believe that our products are safe for customers.

Warranty

This product has a **one year limited warranty** with an effective date that begins the date of purchase. Refer to the troubleshooting guide at the end of this manual for help. Contact the phone number provided in that section for any additional support. Please retain proof of purchase receipt for verification. Any attempted disassembly of the product will void the warranty. **Do not return defective product to the retailer.**

Approval Information

All our products meet the requirements of approval FCC , and are granted the FCC certification. They are authorized to bear FCC mark.

FCC

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 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 relocated the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Consult the dealer or an experienced radio/TV technician for help.

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.
- (2) This device must accept any interference received, including interferences that may cause undesired operation. Changes and modification are expressly approved by the manufacturer or registrant of this equipment under Federal Communications Commissions rules.

Restrictions

1. DO NOT use this product to violate one's privacy. Monitoring one's activities without consent is illegal and this product is not designed and manufactured for such purposes;
2. DO NOT put this product near any medical equipment. Radio waves might potentially cause breakdown of electrical medical equipment. So this product should be placed at least 1 foot away from any heart pacemaker. Radio waves might potentially influence heart pacemaker and lead to respiratory disturbance;
3. DO NOT use this product for any illegal activities. We shall not be responsible for any consequences of illegal acts committed by the user.

Maintenance

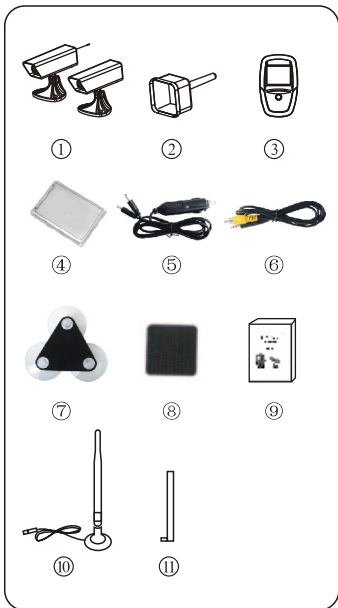
1. Do not shake or strike the product;
2. Keep it dry and dustless and avoid exposing it to direct sunlight;
3. Avoid putting the product in places where there is constantly changing temperatures and humidity;
4. Keep product away from heat sources such as electric heater;
5. Do not use the camera near caustic chemicals;
6. Do not use this camera near water, for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement or near a swimming pool and the like;
7. Do not use the camera in the places which are enclosed by metal. The surrounding metal like aluminum trailer walls may shield the electromagnetic waves and result in failure of signal reception.
8. Please obey the local government's environment protection policy;
9. Please turn off the power when left unused
10. Do not disassemble or repair the camera or receiver doing so might cause damages to the product and also **VOID THE WARRANTY.**

PRODUCT

Package Contents

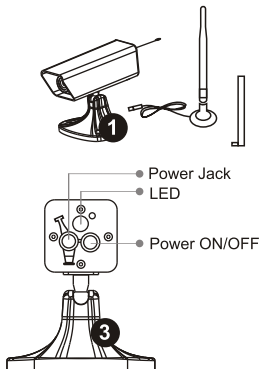
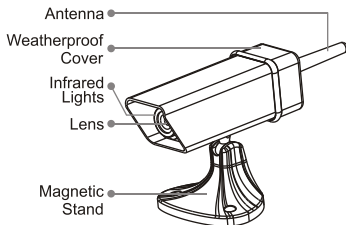
This SH03 package comes with the following items. Please check whether they are all included in the packaging box. If one or some is missing, please contact Swift Hitch directly for replacement.

- ① 2.4GHz Wireless Camera X 2
- ② Weatherproof cover for Camera X 1
- ③ 2.4GHz Wireless Receiver with Toggle Switch X 1
- ④ Lithium Battery for Receiver X 1
- ⑤ "Y" shaped Charging Cable for Camera & Receiver X 1
- ⑥ Video Out cable for Receiver X 1
- ⑦ Suction Cup Mount X 1
- ⑧ 7/8" Velcro X 1
(Velcro for Receiver)
- ⑨ User Manual X 1
- ⑩ Extension Antenna with 9 ft extension cable X 1
- ⑪ Short Antenna - Detachable X 1

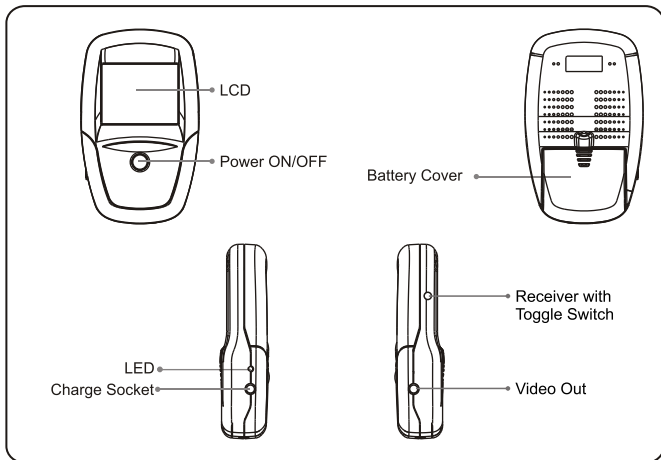


Feature Locations

1. Camera - Frequency 3



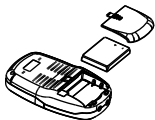
2. Receiver with toggle switch



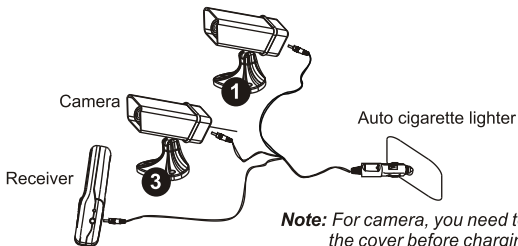
FIRST TIME USAGE

Charging the Cameras and Receiver

1. Load a Li-battery to the battery compartment with its polarities matched.

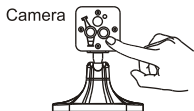


2. First connect both cameras to the vehicle cigarette lighter by the "Y" shaped charging cable. A red LED on the back of each camera will come on to indicate that the camera batteries are charging. A full charge may take about 4 hours. The red LEDs will turn off when the cameras are fully charged. Remove the cameras from the charging cable. Connect the receiver to the charging cable. A red LED on the left side of the receiver will come on to indicate that the receiver battery is charging. A full charge may take about 2.5 hours. The red LED will turn off when the receiver is fully charged.



Note: For camera, you need to remove the cover before charging.

3. The camera can work during charging. Press the Power ON/OFF button to power on (turn on off) the camera, then you can use it.



4. The receiver can also work during charging. Press and hold the Power ON/OFF button for about three seconds to turn on/off the receiver. When the receiver is powered on, LCD displays reverse the image by default. Pressing POWER ON/OFF button momentarily can switch between reverse and non reverse image.

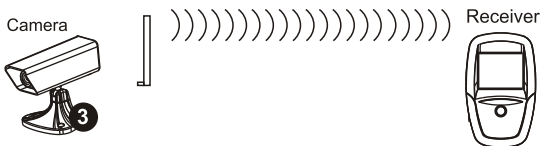
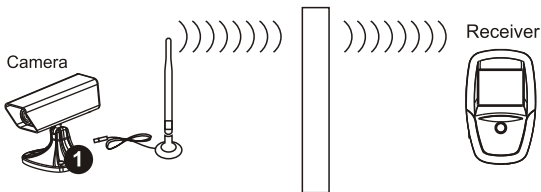
Receiver



5. Extension Antenna

The camera on Frequency 1 has the ability to attach two different antennas. The Short Antenna - Detachable allows the camera to be used in close unobstructed range of the receiver.

The Extension Antenna allows the camera on Frequency 1 to be placed in an obstructed location with the antenna positioned in an unobstructed area.



Notes for cameras:

- If the battery is exhausted, please recharge it with the charging cable.

Notes for charging cable:

- When the charging cable cigarette lighter adapter is connected to the vehicle a green LED will come on to indicate that power is being sent up the "Y" shaped cable to the camera or receiver.

If the green LED indicator is NOT on then the fuse inside the cigarette lighter adapter has blown. This fuse is designed to protect the camera and receiver from any power surges from the vehicle.

Replacement of the 2 amp fuse can be easily accomplished by unscrewing the sliver tip end of the cigarette lighter adapter and replacing the fuse inside.

CAMERA LED INDICATOR	STATUS
Red on	Charging when Power off
Off	Power off (disconnect with cigarette lighter)/Finish Charging
Green on	Power on
Yellow on	Charging when Power on

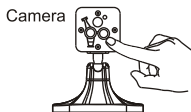
Notes for receiver:

- A full charge will take about 2.5 hours, which can power the receiver for about 4 hours continuously.
- You are recommended to have the battery fully charged before its first installation to optimize its life.
- Do not burn or disassemble the Li-battery. ⚠
- Do not short-circuit the battery as it may cause fire or electric shock. ⚠

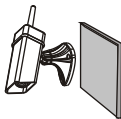
RECEIVER LED INDICATOR	STATUS
Red on	Charging when Power off
Off	Power off (disconnect with cigarette lighter)/Finish Charging
Green on	Power on, working at reverse image
Yellow on	Charging when Power on, working at reverse image
Green flash	Power on working at non reverse image
Yellow flash	Charging and working at non reverse image

Using the Cameras

1. Before using make sure the cameras are fully charged. Press the camera Power ON/OFF button to power on your cameras.



2. Mount the cameras and adjust the base to a suitable angle. Both cameras have a magnetic base, and the SH03 also has a suction cup mount that can be used for one of the cameras.



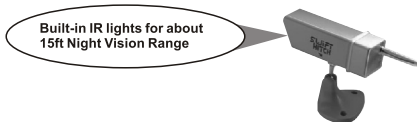
3. Use the toggle switch on the receiver to select which camera's image you want to view.



Note: the Velcro supplied for those customers who desire to attach the display to vehicle dashboard.

Night Vision

Both cameras have built-in Infra-red lights that provide night vision for low light conditions. The Infra-red lights will be automatically activated at night. The picture will turn to Black & White (monochrome) in Night Vision status.



Video Out

The video out feature is to display the image on the receiver to your monitor or recording device. You simply plug the video out cable into the side of the receiver's video out slot and then into your monitor or recording device.

The image sent to video out can only be the one camera image that is being viewed on the receiver. Pressing the toggle switch will change the image being viewed and the image being sent to video out.



Water Resistant

The water resistant feature is for the cameras only. Even though there is only one plastic rear cover for the camera on Frequency 3 - both cameras are sealed and are weather resistant. The cameras can be used in rain but we do not recommend submerging the entire camera.





SPECIFICATIONS

	ITEMS	VALUE
CAMERAS	Imaging Sensor	1/3" CMOS
	CMOS Total Pixels	628 x 582 (PAL); 510 x 492 (NTSC)
	View Angle	55°
	Minimum Illumination	5Lux/F1.2 & 0Lux (IR ON)
	Transmission Frequency	ISM 2.400 GHz - 2.483 GHz
	Transmission Power	10mW/CE
	Modulation Type	FM
	Bandwidth	18MHz
	Power Supply	+12V _{dc}
	Battery Type	Rechargeable Lithium-ion Battery- 3.7 VDC
	Consumption Current	180mA & 230mA (IR ON)
	Charging Current	330mA
	Charge Time	Up to 4 hours
	Working Time	Up to 10 hours
	Unobstructed Effective Range	Up to 300 feet/ 100 yards (100 meters)
	Night Vision Range	15 feet (5m)
	Dimensions (WxDxH)(mm)	28 x 90 x 28
Weight	5.7oz (156 grams)	
RECEIVER	LCD	2.5" TFT
	LCD Resolution	960 x 240
	Receiving Frequency	ISM 2.400 GHz - 2.483 GHz
	Intermediate Frequency	480MHz
	Demodulation Type	FM
	Receiving Sensitivity	-80dBm
	Power Supply	+12V _{dc}
	Consumption Current	240mA
	Charge Time	Up to 2 hours
	Working Time	Up to 4 hours
	Dimensions (WxDxH)(mm)	80 x 38 x 130
	Weight	5.5oz (156 grams)
Operating Temperature	-10° C - 50° C/ +14° F - +122° F	
Storage Temperature	-30° C - +65° C/ -22° F - +149° F	
Operating Humidity	85%RH	

- Actual transmission range may vary according to weather, location, interference or building construction.
- All the specifications are subject to minor change without prior notice.

TROUBLESHOOTING

When you experience an operation problem, please check and try the following. If you have any additional questions or concerns, please call or email.

Abnormal Phenomena	Possible Reasons/Solutions
 No image	Check whether the camera/receiver is connected to power supply and powered on.
 Snowflakes on image	Check the distance & obstructions.
 Ghost image	<ol style="list-style-type: none">1. Check for interference from other 2.4GHz devices.2. Check the distance & obstructions.
 No Green LED on Camera or Receiver	Check that cigarette lighter adapter when connected to the vehicle has a green LED to indicate that charging power was being sent to the camera or receiver.

Thank you for using the Swift Hitch!

Questions?

Please call: (617)600-8282

Monday - Friday 9:00am to 5:00pm EST

Email to: swifthitch@sun-tronics.com