VIOFO A119 or

SPYTEC A119 DASH CAMERA USER GUIDE

Thank you for purchasing the SpyTec A119 Dash Camera, a discreet camcorder that mounts to the inside of a windshield for capturing the driver's view at a resolution exceeding Full HD. The pocket-size video camera features a F1.8 lens with a 160° field of view and the ability to record video with nearly twice the resolution of a 1080p camera and four times the resolution of a 720p dash cam. Equipped with a G-sensor, the camera detects when your vehicle is bumped and automatically write-protects video recorded during the incident. A color screen lets you review video and photos in the camera even before transferring them to a computer, while loop recording ensures that the camera never runs out of memory. An optional GPS receiver in the form of a mount that replaces the included non-GPS mount is available for this camera.

What's Included

1 x A119 camera
1 x Non-GPS mount
1 x Dual USB car adapter
1 x USB cable
5 x Clips
1 x Mount detaching string
1 x User manual

Optional: GPS Mount (will be in same box as above items)

Requirements

MicroSD card (up to 64GB)
Vehicle with an available cigarette lighter to power the camera

Precautions

Do not:
- Install or operate with wet hands.
- Install in a location of high humidity or where inflammable gas or liquid is present.
- Leave the device inside an airtight vehicle exposed to extreme heat.
- Press the lens forcefully.
- Apply sharp object to the camera or its accessories.
- Remove MicroSD card during recording and shutdown process.
- Interrupt power supply during a system upgrade.
- Use power that exceeds the rated voltage.
- Disassemble the device and charging cable.
- Cut the charging cable.

Keep children away from the product, accessories and package.

Use only the original charging cable. The manufacturer is not liable for damage resulting from the use of other charging cables.

Use a Class 10, 8GB or above MicroSD card for best performance. (The highest supported capacity is 64GB.)

Format the MicroSD card in the camera prior to your first recording to ensure stable read and write.

Damage caused by incorrect use of the product is not covered by the warranty.

Installation

Make sure the car engine is shut off before installing the A119. With the camera off and its darkened display screen facing up, insert a microSD card, gold contacts pointed up, into the memory card slot. For a quick start, use a memory card with a capacity of 32GB or less. If you go with a 64GB card, it must be properly formatted. See "64GB microSD Card Support" on pg. 21 for formatting instructions.


Before mounting the camera with the adhesive pad, connect the power cable so that the camera turns on and you can hold it in place where you intend to mount it. One end of the cable plugs into the USB port on the camera; the other end into the included dual-port charger inserted in the vehicle's cigarette lighter. It there's a formatted card present, the camera will begin recording. Otherwise it will indicate that there's no memory card or you may be advised to format the card.

Note: Choosing the formatting option deletes all data on the card, so make sure you've first transferred any video or photos you want to keep.

Hold the camera vertically against the windshield by the rear view mirror so that it's centrally located with the lens pointed outward to take in the road while the camera's LCD and buttons face you. Check the live view on the screen. You can adjust the frame using two fingers to grab the lens housing. The outer housing ratchets vertically; the inner housing adjusts horizontally.

1 If you're not attaching the optional GPS module, install the non-GPS mount by sliding it into the slot on the back of the camera. If you're installing the GPS module, slide it into the slot instead of the non-GPS mount.
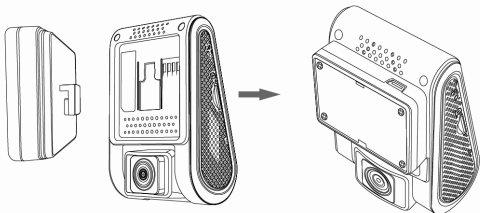

Choose a central location for installation of the camera such as near the rear-view mirror.
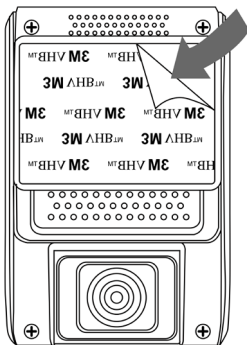
2 Once either the non-GPS module or the GPS module is slid into the camera, peel off the paper backing and press the camera against the windshield so that the LCD faces you and the lens points down and out. The camera should stick in place.

3 Plug the dual-port power adapter into your vehicle's cigarette lighter. Insert the mini-USB plug of the cable into the USB port on the camera if you're not using the GPS module. If you are using the GPS module, insert the plug into the USB port on the module rather than the one on the camera. Plug the full-size USB plug of the cable into one of the adapter's two power ports.

**Note:** The second USB power port can be used to charge your phone, for example.
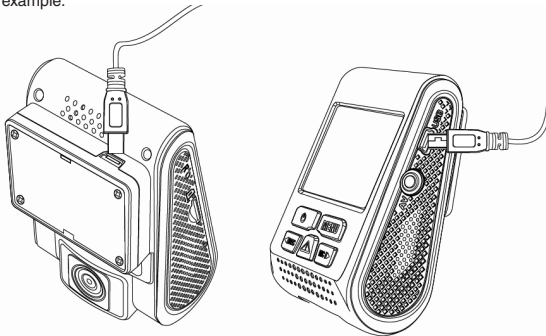
4 Look at the live view on the LCD. You can further adjust the angle of the lens up/down and right/left if necessary.
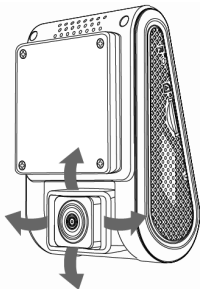
Installation Tips

- Keep the lens close to the glass in order to reduce reflections.
- Install the camera close to the rear-view mirror for the best view.
- Install in a place where the picture will not be affected by window tint or other electronic products.
- Do not turn on motion detection unless your vehicle is parked. If motion detection is enabled while driving, the camera may not continuously record.
- Keep the G-Sensor set to low (default setting).
- Do not install the camera in a location that will interfere with driver visibility or safety.
- The lens should be positioned within the windshield wiper area to ensure a clear view on rainy days.
- Do not install device on or near the area where the airbag operates.
- Depending on the location of the cigarette lighter and other accoutrements, decide whether it makes more sense to channel the cable along the passenger's or driver's side.
- Tuck the power cable into indentations along the periphery of the windshield where possible. In the absence of recesses, use the adhesive mount hooks to channel the cable.
- When you're satisfied that the cable is snag-free and reaches the cigarette lighter adapter, use a twisty tie to bunch together any extra length of cable.

Note: The included string is meant for removing a mount by flossing through the adhesive.
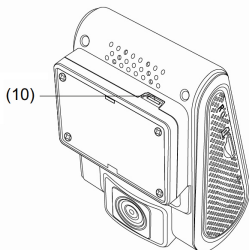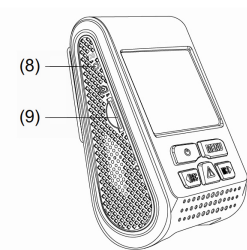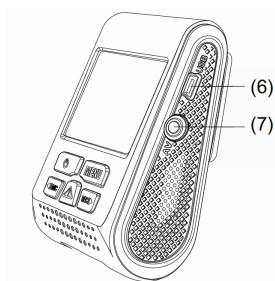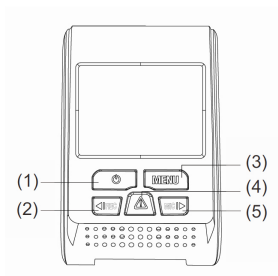
(1)	Power	(6)	USB Port
(2)	Rec/Left	(7)	AV Out
(3)	Menu	(8)	Reset
(4)	Emergency/Confirm	(9)	Card Slot
(5)	Mic/Right	(10)	USB Port (optional GPS mount

INTERFACE

LED Indicators

LED Color	Behavior
Solid Red	Power ON, Recording
Flashing Red	1. Power ON, not recording 2. Upgrading

Buttons and Icons

Mode	Buttons	Behavior
Stand-by Mode	⏻	To turn on/off device
	MENU	One press enters setting menu
	⚠	Enter playlist
	◀REC	One press starts recording
	MIC▶	One press disables audio recording; press again to enable audio recording

Mode	Buttons	Behavior
Recording Mode	⏻	One press turns off the screen; press again to turn on the screen
	MENU	One press captures a photo
	⚠	One press locks the file being recorded
	◀IREC	One press starts recording
	MIC|▶	One press disables audio recording, press again to enable audio recording
Playlist Mode	⏻	To turn on/off device
	MENU	Back to previous menu
	◀IREC	1. To select the last video 2. To delete the video
	MIC|▶	1. To select the next video 2. To lock/unlock the video
	⚠	1. To enter the video selected 2. To play/pause the video

Mode	Buttons	Behavior
Setting Menu Mode	⏻	One press turns off the screen; press again to turn on the screen
	MENU	One press returns to recording mode
	◀REC	Selects the last feature
	MIC▶	Selects the next feature
	⚠	Enters the feature selected

Onscreen Display

📹	Recording Mode
00:00:00	Recording Time
1080P60	Video Resolution
🔴	Recording Status
⚠	Emergency Lock
🎤	Microphone
💾	SD Card

Operation

On/Off
When you start the engine, the camera will turn on and begin recording automatically. Simply turn off the engine or unplug the charging cable from the power adapter to switch off the camera.

Note: Switching the camera off manually is required for vehicle models in which the cigarette lighter provides continuous power even after the engine is turned off. Press and hold the power button for at least 5 seconds to turn off the camera. Press the power button for at least 3 seconds to turn on the camera.

Loop Recording
1. Loop recording starts by default automatically when power is supplied to the camera.
2. The elapsed time for each video file can be set to: 1/2/3/5/10 minutes.
3. When there is insuffcient space on the MicroSD card, loop recording will automatically overwrite the oldest files one by one.
4. Loop recording files are saved in the memory card under the folder: \DCIM\Movie.

Emergency Recording
1. Automatic emergency recording

This is activated when the G-sensor is turned on and a collision occurs. The current footage is locked automatically to avoid being overwritten by loop recording.

Note: The sensitivity of the collision-sensing feature can be adjusted in settings under the G-sensor option.

2. Manual emergency recording

Pressing the emergency recording (the OK) button while recording will lock current footage to avoid being overwritten by loop recording. An exclamation point in a yellow triangle will briefly appear on the screen. Upon playing back the scene, a key icon will indicate that the file is protected.

Motion Detection
When this feature is activated, recording will begin when there is movement in front of the camera. Once the camera doesn't detect further movement for 60 seconds, recording will stop and the device will switch back to detect mode. The camera will begin recording again when it detects new movement.

Mute
When you're talking in your car and prefer not to record the conversation, press the "Mic" button once to avoid the audio from being recorded by the dash camera. A slash will appear through the mic icon above the live view.

VIDEO SETTINGS MENU

If you haven't already done so, stop recording by pressing the Rec button. Then press the Menu button. A list of settings will be displayed. Scroll down by pressing the Mic button. Scroll up be pressing the Rec button. Select a setting you want to change by pressing the OK button.

Resolution
Before recording a video, you can set the camera to one of seven selections comprising resolution and frame rate. The best quality and default setting is 2560 x 1440p at 30 frames per seconds. You can also choose 2304 x 1296p, 30 fps; 1920 x 1080p, 60 fps; 1920 x 1080p, 30 fps; 1280 x 720, 120 fps; 1280 x 720, 60 fps; and 1280 x 720, 30 fps. Press OK to make your selection and return to the options directory. All videos from that point on will be recorded at the chosen setting until you elect to change it.
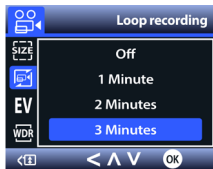
Loop Recording
As the camera records video, clips are saved as contiguous but separate files at one of the following durations: 1-, 2-, 3-, 5- or 10 minutes. The default is 3 minutes. When the card's capacity is reached, loop recording will automatically overwrite the oldest file with the newest file. If you turn off loop recording, a single video file could reach an unwieldy 4GB in size. Also, once the card memory fills up, the camera will be unable to save more video until you manually delete files or insert a fresh card.

EV Exposure
You can increase or decrease the exposure value in videos and photographs as they're being captured by the camera to compensate for poorly-lit or overly-bright scenes. You can adjust the value to -1/3, -2/3, -1.0, -4/3, -5/3 or -2.0 as well as +1/3, +2/3, +1.0, +4/3, +5/3 and +2.0. The default is a neutral +0.0.

WDR
Wide dynamic range capability helps reveal details when the scene contains extremely bright and dark areas. If WDR is turned off while driving toward a rising or setting sun, for instance, objects that come between you and the horizon may appear very dark. WDR is turned on by default.
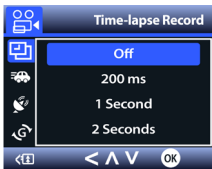
Time-lapse Record
To conserve memory and reduce the time it takes to review video, you can set the camera to record frames at one of the following timed intervals: 200 milliseconds; 1-, 2-, 5-, 10- or 30 seconds; 1-, 5- or 10 minutes. The default is off.
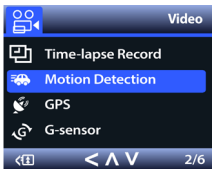
Motion Detection
When activated, recording will begin if there is movement in front of the camera. Once the camera does not detect movement for 60 seconds, recording will be stopped and the device will switch to detect mode. The camera will record again upon detecting new movement.
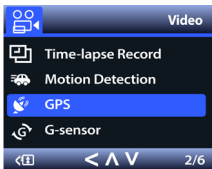
GPS

The camera using an optional piggybacking module can access the Global Positioning System for embedding location information in videos and photographs. A No GPS message appears on the bottom right of the screen when the module is missing. A satellite dish icon appears when the module is installed. Use this menu selection to activate the GPS. If disabled, your camera will no longer measure your speed and position nor synchronize the time/date with the atomic clock.

Note: When you've attached the GPS module, make sure the USB power cable is plugged directly into the module rather than the port on the camera body. However, if you cable the camera to a computer, use the USB port on the camera.
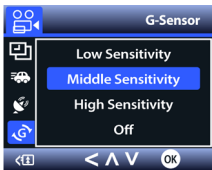
G-Sensor

The camera has a built-in shock detector called the G-sensor. In the case of a collision, the camera locks the video recorded at the time and displays a lock icon on the screen. G-sensor sensitivity can be adjusted. The settings from "low to high" determine the amount of force needed to lock the file from being overwritten. We recommend that you set it to low. Alternatively, you can turn off the feature entirely.

Tip: Bumped or not, if you see a noteworthy incident while the camera is recording that's a keeper, meaning the video is worth protecting from being erased later during loop recording, hold down the center button with the triangle icon until a yellow triangle with an exclamation point appears on screen indicating that the video currently being recorded will be protected. Upon playing back the video, a key icon will appear in the upper left corner indicating that the file is protected and will not be erased automatically as are unprotected files.

1. For a 1440p video, the camera will lock the current whole file, and save it under MOVIE\RO.

2. For 1080p 60 fps mode, the camera will lock and save a 35-second file (15 seconds before the button was pressed and 20 seconds after) and saved under the movie\EMR subdirectory and as a copy in the MOVIE directory.

3. For the 1080p 30 fps mode, the camera will lock and save a 40-second file (20 seconds before and 20 seconds after and saved under movie\EMR and as a copy in the MOVIE directory.

LDWS
The Lane Departure Warning System causes the camera to beep repetitively when the vehicle moves out of lane. The default is off.

FCWS
The Forward Collision Warning System causes the camera to beep repetitively when detecting an obstacle ahead. The default is off.
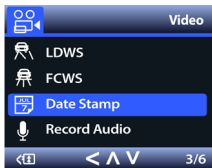
Date Stamp
The data stamp is normally superimposed on a corner of the picture, but you can disable it on recordings going forward.

Record Audio
Video is normally recorded with audio, but you can turn off the microphone. When the mic is off, the LED labeled mic, which normally glows red, will not be lit and a slash will appear over a mic icon on the screen.

Note: This can also be changed during recording by pressing the microphone button on the camera.
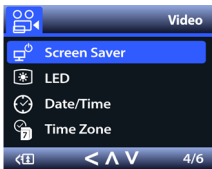
Screen Saver
The LCD goes dark by default after 3 minutes of inactivity. You can turn this off so that the screen stays on.
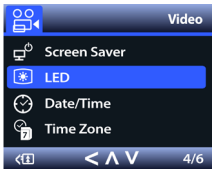
LED
You can turn the camera's LEDs off, which are enabled by default.

Date/Time
Use this to set the system date and time. Use the Rec button to increase each digit or the Mic button to decrease it. Press the Menu button to go to the next field. Press the OK button to accept the Date/Time settings and return to the previous menu. You can change the order that the year, month and day appears in the date/time format.

Time Zone
Set your time zone in relationship to Greenwich Mean Time (GMT). For example, East Coast time in the U.S. is GMT-5. Use the Mic or Rec button to cycle through the zones until you find yours. Press the OK button. The time zone must be manually adjusted for daylight savings.

Language
Sets the on-screen display to English, French, Spanish, German, Italian, Portuguese, Simplified Chinese, Traditional Chinese, Russian or Japanese.

Beep Sound
By default, the camera emits a beep whenever you press a button. If you prefer, you can turn it off.
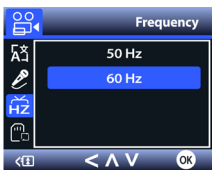
Frequency
Adjusts the camera's frequency setting to minimize flickering and banding in the recorded video. Set it to 60 Hz in North America.

Format
The operation will delete all data on the MicroSD card. Make sure to back up all files you want to keep before formatting.

Format Warning
Sets how often you'll be warned to reformat the memory card: every 15-, 30- or 60 days. The default is 30 days. Or you can turn off the warning entirely.

Note: While reformatting the card helps preserve the integrity of files to be recorded going forward, you can always cancel the prompt when it appears.

Default Setting
Restores the device to the factory settings.

CarNo
You have the option to enter your vehicle's license plate number.

Version
Check here to see the firmware version installed in the camera.

Taking Photographs

While the camera is recording video, press the Menu button in order to take a photograph. A camera icon will briefly appear at the center of the screen.

Note: if you press the Menu button when the camera is not recording video, the Video Settings Menu will appear.

Playing Videos and Photos on the Camera

Video and Photo Playback
After stopping any recording in progress, press the OK button. Up to nine thumbnails will appear on the screen at once showing your videos (designated by filmstrip icons). Ones that have been protected from being deleted also feature a key icon. Navigate to a particular video using the Mic or Rec button. As you navigate through the play list, information at the top of the screen will change. The highlighted thumbnail will be listed, for example, as 9/108 or the ninth of 108 files followed by the date and time it was created. Press OK to select the highlighted video to occupy the full screen. Three icons will appear under the first frame: a trash can (delete), a right arrow (play) and a key (protect). Use the bottom row of hard buttons to choose: Rec to delete; OK to play; and Mic to toggle between protecting or unprotecting the file. In the case of deleting a file, you'll be prompted by "Erase This?" Use the OK button to cancel or confirm and the Rec or Mic button to navigate to the opposite choice from the one highlighted. If a file has been protected, you'll have to first unprotect it to delete.

Once you begin playing a file, you can pause the video by pressing the OK button or increase the speed to 2X or 4X by pressing the Rec button once or twice. You can play the video in reverse at -2X by pressing the Rec button once. (Pressing it again will give you the option to delete the file.)

To return to the first frame and the options of deleting, playing or protecting the file, press the Menu button. Press the Menu button again to return to the screen of nine thumbnails.

Thumbnails not designated by a filmstrip icon are still photos. Selecting one will display the image full screen. In the upper-right corner are the filename (containing the date and time the picture was taken) and the image resolution (such as 2560 x 1440). Pressing the Rec button will bring up the "Erase This?" prompt. Pressing the Mic button will toggle the Protect file function. The Menu button will return you to the thumbnails screen.

Note: You can simultaneously play videos or photos on an external screen by connecting an optional cable to the camera's AV output.

Transferring Videos and Photos to a PC

You can connect the camera to your computer with the long USB cable normally used to receive power from the vehicle. However, you may find it more convenient to use an optional mini-USB to USB cable. In either case, make sure the cable is plugged into the USB port on the camera itself rather than the USB port on the optional GPS module. The words "Mass Storage" will appear against a blue screen on the camera display.

As an alternative to using a cable, you can readily move the microSD card from the camera to a microSD card adapter that plugs into an SD slot if there's one on your computer or into a card reader that plugs into a USB port on your computer.

Whether the memory card is still in the camera or not, the computer will identify it as a removable disk drive. Clicking on it will bring up the DCIM folder. It contains the Movie and Photo subdirectories. The Movie folder will be further divided into unprotected loop recording videos and RO (Read Only) emergency recording files.

You can play files directly from the card, copy them to your computer or delete them.

64GB microSD Card Support

If a 64GB card is not recognized by the A119, you'll need to properly format it. If the card has not been used before, formatting it won't wipe out any data. But if the card has been in use, keep in mind that any data stored on the card will be lost during formatting.

Fully insert the 64GB microSD card into the camera's memory slot until a click is heard and connect the camera to your PC using the included USB cable.

Windows Users

Download the formatting utility from http://support.spytecinc.com/help/article/link/gui-format-program to format the card as FAT32. Quit all other programs including the anti-virus, firewall, browser and file manager. Otherwise, it will fail to start formatting. Disable the computer sleep mode. There are two removable drives added. Choose the drive for the microSD card with capacity 59-/63-/128GB listed. The allocation unit is 32768. Choose "quick format" and press start. Once finished, if the memory card still cannot record, please do it again but uncheck the "quick format". It will take around between 2- and 9-hours to finish. Do not touch anything during this time and make sure the power supply and cable connection are stable.

Macintosh Users

Format the card as "MS-DOS FAT" by using spotlight to search for "disk utility". There are two removable drives added. Choose the drive for the microSD card with capacity 59-/63-/128GB listed. Choose Erase. Choose "MS-DOS FAT" under the Format. Press "Erase" at the lower right corner. Then press "Erase" in the new pop-up windows. Wait for a while, making sure and that the power supply and cable connection are stable. Formatting should be complete.

For more help formatting memory cards greater than 32GB, see:

http://support.spytecinc.com/help/article/link/64gb-sd-card-formatting-guide

http://support.spytecinc.com/help/article/link/how-to-video-formatting-a-64gb-sd-card

GPS Data Playback

The optional GPS Module for the A119 Dash Cam enables GPS logging for video recordings and photographs. Besides latitude and longitude coordinates, the module enables a speed stamp on video footage as well as the LDWS and FCWS capabilities.

Using a media player alone on your computer won't access the tracking data collected by the GPS module. For that you'll need specialized software such as Dashcam Viewer, which splits your computer screen into several windows. One pinpoints the vehicle's position on a roadmap, another graphs the vehicle's speed and yet another shows the view recorded by the camera—so you won't even need a media player. You'll also be able to zoom the view to show a license plate, pull up a Google Earth view, export data or combine video clips. A feature-packed version of the software is free to download and use. A pay version enables you to handle more files at once.

To get Dashcam Viewer, go to:

http://support.spytecinc.com/help/article/link/a118-c-1080p-hd-dash-camera-w-capacitor-dashcam-viewer-gps-track-viewing-software-e4a2926
Choose the Windows or Macintosh version.

Firmware Upgrade

An occasional firmware upgrade may be available for the A119. To check, visit:
http://support.spytecinc.com/

SPECIFICATIONS

Imaging sensor	4 MP CMOS
Lens / Field of Vision	6-element, F1.8 160°
Sensor	OV4689
LCD size	2"
Video resolution and frame rate	2560 x 1440p, 30 fps; 2304 x 1296p, 30 fps; 1920 x 1080p, 60 fps; 1920 x 1080p, 30 fps; 1280 x 720, 120 fps; 1280 x 720, 60 fps; and 1280 x 720, 30 fps
Video format	.MOV
Photo format	JPG
Microphone	Built-in
Speaker	Built-in
Ports	Mini USB, AV out
Sensors	G-sensor, motion detection
GPS receiver	Optional
Internal memory	None usable
Memory card slot	MicroSD
Maximum capacity	Up to 64GB
External power supply	Mini USB 5-pin interface and USB5V
Battery	None; capacitor IC
Operating current	400 MA
Quiescent current	20 mA
Storage temperature	-4 to 158°F (-20 to 70°C)
Operating temperature	14 to 140°F (-10 to 60°C)
Operating humidity	15% to 65% (RH)
In-car charging cable length	13.3" (4.1 m)
USB cable length	30" (76 cm)
Size	3.3" x 2" x 1.3" (8.4 x 5.1 x 3.3 cm)
Weight	2.6 oz. (74 g)

Help

Thanks again for purchasing a SpyTec product! We appreciate your business and strive to make your experience the best possible. If you have any issues with your product, please contact us at support@spytecinc.com so that we can help you get things started.

Warranty

This Limited Warranty applies to physical goods sold by STI and lasts for a period of one year from the date of sale of the device.

This Limited Warranty covers any manufacturing defects to the device or accessories encountered by normal use. This warranty does NOT cover damages resulting from improper use of the device (including the use of incompatible accessories such as chargers, storage devices, etc.), unauthorized modifications to the device, negligence, or from any environmental or natural disasters, or from loss or theft. This warranty requires proof of sale of the device from STI or from approved resellers only.

Devices that are covered will be repaired or replaced at STI's discretion. Devices requiring replacement will be fulfilled with a new or refurbished unit, or a similar unit if the original unit is no longer available.

To take advantage of our warranty, please go to http://www.spytecinc.com/return-policy/ and review our returns policy. If your device meets the above guidelines as well as the guidelines on our website, please click the button to proceed to the Return Authorization Form. In the event our online guidelines change, this warranty will supersede any newer changes. Once you have filled out the Return Merchant Authorization form, please wait for instructions. The date the form is filled out must not exceed one year from the date of sale.