BY **Max Keppler**

HELI-MAX 1SQ V•CAM

YOU ARE GOING TO FLIP SHOOTING VIDEO WITH THIS LITTLE QUAD

If you've been wanting to do a little drone flying to capture video around the house, the new Heli-Max® 1SQ V•CAM multi-rotor quadcopter may just be your perfect pick. This little quad comes ready to fly, including a built-in digital camera that shoots jpeg images at 96 dots per inch, and that captures video that is 1280 x 720 pixels at 30 frames per second.

What makes this quadcopter so much fun is that it is small! It weighs just over an ounce and has four snappy little coreless brushed motors that let it zip around the room. It also employees Heli-Max's TAGS-FX Sensor Fusion stabilization system that makes the quad easy to fly and helps you get good-quality, in-air video when you are doing around-the-house surveillance.

It is small but provides BIG fun in terms of flying, taking photos and shooting video.

Everything you will need to fly the Heli-Max 1SQ V•CAM is included in the RTF package. You only need to charge the battery and it is ready to fly.

WHAT YOU GET

- 1SQ V•CAM with micro digital camera
- 6-channel 2.4-GHz SLT 640 Tx w/ "AA" batteries
- 1S 250-mAh LiPo battery
- USB LiPo battery charger
- Extra set of (4) rotor blades
- 2 Gig Micro SD Card
- Card reader
- Screwdriver

FEATURES

- TAGS-FX Sensor Fusion stabilization system
- On-board, micro, digital video camera
- 3D aerobatic Auto-FLIP feature
- On-board, micro, snap-shot, digital picture camera
- Tx-R SLT auto-define programming
- LED lights (white and red) on each of the motor pods

SET UP

Getting the 1SQ V•CAM quadcopter ready to fly is unbelievably easy. You'll start by plugging the battery into its USB charger. Then you'll plug the charger into a USB port on your computer, cell phone charger or even a cigarette lighter USB charge port. You'll know the battery is charging when the red charge light comes on. The charge will be complete when the red light starts to flash slowly. It is easy. However, know that a charge may take as much as an hour to complete, although we never had to wait that long for a charge to complete.

If you plan to take video on the maiden flight, you'll need to install the SD card into the camera module. That too is easy to do; just push the SD card into the slot until it clicks into place.

Once you have the SD card in place, you'll push the battery into its holder. Then you'll install the four "AA" batteries in the TX460 transmitter. Note that the transmitter comes set in mode two control. The manual explains how to change the control mode if needed. One mode makes the 1SQ easier to

Shown above is everything that comes in the RTF package for the quad. You even get an extra set of blades and a USB interface for the SD card.

This photo gives you a good look at what the guts of the Heli-Max 1SQ V•CAM look like. There is lots and lots of "brain power" packed into the microprocessor on this quad.

Here you can see where the SD card plugs into the bottom of the quad, as well as the camera. The battery holder sits just above the camera mount and the battery slides in from the back.

Charging the 1S 250-mAh LiPo battery is as easy as plugging the charger into a computer, cell phone, or other USB port. The charger charges at the rate of one C.

fly, with the other making it agile and aggressive. To change between modes you simply press down on the right control stick quickly. The transmitter displays its low-rate control when the LCD screen displays a half ellipse and the Tx emits a single, low-pitch beep. When the Tx is operating in high-rate mode a complete ellipse is displayed and the Tx will emit a single, high-pitched beep.

The Heli-Max 1SQ V•CAM has a gyro with adjustable sensitivity too. To change its sensitivity you must press and hold the right control stick down until the transmitter emits a slow beeping sound. You then adjust the gyro's sensitivity with the left control stick by moving it up or down to set the percentage, which will be shown on the LCD screen. A higher value makes the 1SQ V•CAM fly more aggressively, a lower value less so. We have ours set at 40 percent.

The Heli-Max 1SQ V•CAM has a flip mode built into the transmitter's programming. It is pretty cool. You simply press and hold the flip button and then quickly move the right stick in the direction you want the quad to flip. The quad needs upward momentum to maintain its position during the flip, so have it climbing when you hit the flip button.

The video mode is what I like! It is easy to use too. All you do is press the video button once, and then again to start taking video. The LED on the side of the V•CAM will flash when the quad is capturing video. To turn off the video you simply press the button again, then the LED will glow steady.

The 1SQ takes still pictures too. To take pictures press the picture button on the back of the transmitter one time to initiate that mode. Press the picture button again to take a picture. The LED will flash momentarily when a picture is taken. When the flashing stops the camera is ready to take another picture.

Note that you can switch between video and picture at any time but you must press the appropriate button to enter the respective mode.

SURVEILLANCE FLYING

For me this is where the fun really began. Once I had my Heli-Max 1SQ V•CAM in level flight I started capturing video with it. I flew it around the family room, down the stairs, into the TV room and then around my office. I did not try any flips in the house because I did not feel like there was enough room. So after a few minutes of flying in the house I recharged the battery pack again and took it outside.

Even in the light breeze of about five miles per hour I was amazed by how well the 1SQ V•CAM flew outdoors. It responded to the turbulence but I was able to hover it pretty well.

Then it was time to try the flip function. To do so, I added a bit of power so that the quad was climbing and then hit the flip button while adding some right stick. WOW! This little quad will roll over like a dog wanting a bone. I must say you need to be on top of the controls because it took me a couple of tries before I could return it to level flight without landing it in the grass after the flip.

While I was flying it outside I snapped a few still photos too. It is pretty fun to know you can shoot video and take photos with this little quad. I don't know if the starlings much like it buzzing their home however.

I measured the hover time with the LiPo battery charged to its maximum. The quad delivers five-minute-and-20-second flights pretty consistently. If you are flying it aggressively the flight time drops to about four minutes and change. My advice to you is to buy a couple of extra battery packs. In so doing, you can have one on charge while you are powering your quad with the others.

I'll end by saying that the Heli-Max 1SQ V•CAM is priced at just $129.99, which is a buy considering the technology packed into this little machine. An extra battery is only $5.49. So if you spend $150 you can fly this quad for hours on end—loads of fun!

As you can see, the video camera is mounted just under the PCB board of the quad where it can capture video unobstructed. It is adjustble too.

Your Heli-Max 1SQ V•CAM comes with four LED lights, one on each leg. There are two white up front and two red on the back, so you can fly it in the dark.

Specifications

Size	125-mm (diagonal—motor center to motor center)
Motors	20 x7 coreless brushed (4)
Empty weight	32.9 g (1.16 oz)
Weight RTF	40.6 g (1.43 oz)
Blade length	56 mm (2.20 in.)
Length	143 mm (5.62 in.)
Height	41 mm (1.61 in.)
Width	145 mm (5.70 in.)
Price	$129.99

Camera Specs

Memory	Accepts up to 32 Gig Micro SD card
Size	40 X 20 X 8 mm (L, W, H)
Codec video	Motion jpg, 1280 x 720, 30 fps, file extension .avi
Codec audio	PCM S16 LE, mono
Still image capture	1280 x 720, 96 dpi jpg

Distributor

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