

Random Notes

Out-of-place stuffs...

SQ11 Info

Useful info on sq11 mini cam...

[sq11_info.txt](#)

Operating Instructions SQ11

Charging

Attention! Before using for the first time, fully charge the mini camera battery!

This mini video camera has a built-in lithium-ion battery. You can perform

charging in one of the following ways:

1. Connect the mini video camera to the USB port of your PC, stop recording first.
2. Connect the mini camera to a charger from a 220V network or a portable 5V charger. In this case, you can continue to use the mini-camera in the charging process. In the charging process, the blue and red LEDs will light constantly.

After the mini camera battery is fully charged, the blue LED will light constantly and the red LED will turn off.

- If the built-in battery is empty or there is not enough space on the memory card to continue, the blue and red LEDs on the mini camcorder will blink for 5 seconds simultaneously, after which the mini camcorder will save the recorded video and automatically turn off.
- If the memory card is not installed, the blue and red LEDs of the Mini Recorder will blink simultaneously for 5 seconds, after which the Mini Camera will automatically turn off.
- If the camcorder is in the standby mode and does not take any action

on it,

the camcorder automatically turns off after 1 minute to save the charge of the built-in battery.

Video recording

- Shooting video with a resolution of 1280X720P

Press the <On / Off> button to turn on the mini camera - the blue LED will

light up - the mini camcorder is in the video recording standby mode with 720p

quality. Press the <On / Off> button once to start recording video - the blue

LED will blink 3 times and go out - 720p video is recorded. The video will be

automatically saved every 5 minutes. To stop recording, press the <On / Off>

button.

- Shooting video with a resolution of 1920X1080P

Press the <On / Off> button to turn on the mini camera - the blue LED will

light constantly. Press the <Mode> button once to enter the video capture mode

with 1080p resolution - the red and blue LEDs will light simultaneously, the

mini camera is in the video recording standby mode with 1080p quality. To start

recording, press the <On / Off> button once - the blue LED will go out, and the

red LED will blink 3 times and go out - the video is recorded with a quality of

1080p. The video will be automatically saved every 5 minutes. To stop recording, press the <On / Off> button.

- Motion sensor video recording

To do this, while in the 720p or 1080p video recording standby mode, press and

hold the <Mode> button of the mini video camera for 3 seconds - the camcorder

enters the motion sensor recording mode. If motion is detected, the video

recording will start automatically, with red and blue LEDs blinking at the same

time. When recording motion sensor, the video recording is automatically saved

every 5 minutes.

- Photo

Press the <On / Off> button to turn on the camera - the blue LED will

light up.

Press the <Mode> button twice to enter the photographing mode - the red LED

will stay lit. To take a picture, press the <On / Off> button once - the red

LED blinks once, the photo is saved. The resolution of the received photos is

4032x3024.

- Night light

Press the <On / Off> button to turn it on. Press and hold the <On / Off> button

for 2 seconds - the red LED will blink twice - the night illumination is on. To

turn off the night illumination, press and hold the <On / Off> button for 2

seconds, the red LED will blink three times - the night illumination is turned

off.

- Shutdown

To turn off the camcorder, press and hold the <On / Off> button for 6 seconds.

If the Mini Camcorder is in the standby mode and is not in use, it automatically turns off after 1 minute.

- Viewing files

Do connect the camcorder in the off state to the computer - after a few seconds it

will automatically be detected as a removable disk. The blue indicator will

indicate the transfer of information, and the red indicator will indicate the

charging of the built-in battery.

Parameters

- Video resolution: 1920x1080, 1280x720

- Frame rate: 15, 30 frames per second

- Video file type: AVI

- Photo resolution: 4032x3024

- Photo file type: JPEG

- Viewing angle: 140 °

- Night illumination: 6 IR LEDs (range of 5 meters, DO NOT emit light!)

- Motion sensor: Yes (range 5 meters)

- Recording while charging: +

- Duration of work:

 - > 100 minutes (1 hour 40 minutes) in constant recording mode

 - > About 5 hours in motion sensor mode

 - > 24/7 24/7 clock when external power is connected

- Support for memory cards: Micro SD up to 64GB

- Cyclic recording: +

- Operating temperature: $-10^{\circ}\text{C} + 60^{\circ}\text{C}$
- Humidity of the environment: 15-85%
- Dimensions: 23x23x23 mm, 15 grams

Mini camera SQ11 with night illumination, motion sensor and viewing angle 140° .

Mini DV SQ11 is an improved version of the previous SQ8 and SQ9

The camera SQ11 has a built-in motion sensor, can shoot photos with a resolution of 4032x3024, and can also be used for recording in the process of charging from a 220V network or portable chargers, which increases the battery life by 30-40 times.

Solar panel stuff

[solar_power_system_calc.txt](#)

- inverter?
- battery?
- solar panel?

1) load calculation

- assume 4x25w led light, 2x80w fan, 1x40w tube light, 1x50w tv
- total power = 100w + 160w + 40w + 50w = 350w

2) inverter selection

- load = 350w (consider: 500w)
- recommended: 800w-1000w

3) battery selection

- assume 12v dc battery
 - for 350w ac load, $i(\text{dc}) = 350\text{w}/12\text{v} = \sim 30\text{a}$
 - assume battery operation of 8h
 - battery capacity = $30\text{a} \times 8\text{h} = 240\text{ah}$
- # 250ah battery available!

4) battery charging current calculation

- assume 250ah
- charging current = $\sim 10\%$ current rating (Ah)
- charging current = 25A

5) solar panel selection

- solar panel current = charging current + load current = $25 + 30 = 55\text{A}$
- solar panel power = $12\text{v} \times 55\text{A} = 660\text{W}$
- solar panel options: 125w / 180w / 375w / 440w

```
- solar panel count = 660W / 180W = ~4!
```

Chakras (From Avatar:The last Airbender)

Interesting...

[chakras.txt](#)

```
release all 7 chakras (from avatar :p)

1-earth (base of spine) root
  => survival, block by fear
  => release/surrender all fears

2-water (lower ab - below navel) sacral
  => pleasure, block by guilt
  => release all blame/guilt (forgive yourself)

3-fire (stomach) solar plexus
  => power, block by shame
  => release letdowns and disappointments

4-love (heart)
  => love, block by grief
  => release all sadness and loss

5-sound (throat)
  => truth, block by lies
  => release denials and lies

6-light (center of forehead) @third eye
  => insight, block by illusion
  => release all illusions (collective conscious)

7-thought (crown of the head)
  => pure cosmic energy, block by earthly attachment
  => release all earthly attachments
```

FFmpeg

```
ffmpeg -i "concat:vts_01_0.vob|vts_01_1.vob" -vcodec libx265 ~/temp/test.mp4
ffmpeg -i test.mp4 -codec:a aac -b:a 128k -ac 2 -af volume=10 -codec:v copy
test1.mp4

ffmpeg -i in.mp4 -c:v copy -c:a copy -map_chapters -1 out.mp4
```

```
ffmpeg -itsoffset 1 -i vsrc.mp4 -i vsrc.mp4 -c:a copy -c:v copy -map 0:v:0 -map 1:a:0 vdst.mp4
```

Video Notes

NTSC

- used mainly in US, Japan
- 60 Hz, 525 lines at 30 fps (480i)
- resolution $\Rightarrow$ 720 x 480 (DVD-NTSC?)

PAL

- used mainly in UK, Europe, SE Asia
- 50 Hz, 625 lines at 25 fps (576i)
- resolution $\Rightarrow$ 720 x 576 (DVD-PAL?)

Standard	Supported Aspect Ratio
MPEG	1:1 4:3 2.11:1 16:9
TV	4:3 16:9

Settings	Resolution
Fullscreen (Std)	4:3
Widescreen	16:9 (LetterBox)
Widescreen	16:9 (Anamorphic)

Issue Running ImageMagick's Convert

I got the following error message

```
convert-im6.q16: attempt to perform an operation not allowed by the security policy `EPS'
```

I got the solution from [here](#). It turns out, there is a security feature that we need to grant. Edit file `/etc/ImageMagick-6/policy.xml`. Find the following line,

```
<policy domain="coder" rights="none" pattern="EPS" />
```

and change the rights value to `read|write`.

Live Video Streaming using ffmpeg

Dumping this here as it is for now...

```
# may run on ramdisk?  
  
- hls?
```

```
ffmpeg -f v4l2 -i /dev/video0 -strict experimental -pix_fmt yuv420p  
playlist.m3u8
```

- generic segmenter?

```
ffmpeg -f v4l2 -framerate 25 -video_size 640x480 -i /dev/video0 -f segment -  
segment_time 10 -segment_format_options movflags=+faststart out%03d.mp4
```

- option to place keyframe every 2s (every 50 frames at 25fps)

```
-c:v libx264 -r 25 -g 50
```

*note: segment_time should be multiple of keyframe interval

We need to modify /etc/apache2/mods-available/mime.conf

```
AddType application/x-mpegURL .m3u8
```

```
AddType video/MP2T .ts
```

From:

<https://azman.my1matrix.cc/> - **Azman @MY1**

Permanent link:

<https://azman.my1matrix.cc/doku.php?id=notes:random>

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