

A question that often gets asked is "how much power does the X80 camera consume"? This is not a straight forward question to answer because the camera operates in several different modes, each of which consumes a different amount of power.

Power consumption for the camera depends on several factors:

- how often the camera takes a picture;
- amount of time it takes to transmit a picture;
- how often the camera has to use flash;
- base type;
- signal strength.

These factors affect how often the camera has to wake up and how long the camera stays awake while transmitting. To minimize power consumption, the camera goes to sleep after some idle time when it is not actively transmitting data or taking a picture.

The table below gives approximate current draw in different states from a standard 12V SLA battery:

State	Description	Current
Sleep	Minimum power consumption state.	2-3 mA
Idle	Camera remains in this state for about 20 seconds before transitioning from Transmit to Sleep state	40 mA
Transmit	Camera is this state when it is transmitting data	60 mA
IR flash on	Flash comes on for about 0.2-0.4 seconds.	2 A

At one extreme, consider a camera that takes only 1 or 2 pictures per week. In this case, the camera would be in the lowest power sleep state all the time, and would consume about 2-3 mA continuously. In this example, the expected battery life would be 3000 hours or 4 months. Each picture taken by the camera will reduce the battery life by "taking a bite" out of the 4-month battery run time.

Now consider an example at the other extreme, where a camera is taking a high-resolution image every minute. In this case the camera would be transmitting almost continuously and would consume an average of about 60mA. In this example, the expected battery life would be somewhere around 6 days and in 24 hours it would consume the same amount of power as it would sleeping for 20 days.

Obviously, most users will not be operating a camera at these extremes, but will be somewhere in between. As a rule of thumb, let's consider a couple of examples.

#### **Example A: 640×480 resolution with PCBase.**

A camera is set to take low resolution (640×480) pictures transmitting to the computer via a PCBase, and the approximate download time is 10 seconds.

The table below gives an approximate battery life for a 9Ahr battery based on the number of pictures taken.

Number of pictures per day	Approx. life for 12V 9Ahr SLA battery <sup>(1)</sup>
50	93 days
100	77 days
200	57 days
300	45 days
500	31 days

**Example B: 1 Megapixel resolution with PCBase.**

A camera is set to take 1Meg picture transmitting to the computer via a PCBase with approximate download time of 20 seconds.

The table below gives an approximate battery life for a 9Ahr battery based on the number of pictures taken.

Number of pictures per day	Approx. life for 12V 9Ahr SLA battery <sup>(1)</sup>
50	86 days
100	67 days
200	46 days
300	35 days
500	23 days

**Example C: 1 Megapixel resolution with CellBase.**

A camera is set to take 1Meg picture transmitting to the computer via a CellBase with approximate download time of 40 seconds.

The table below gives an approximate battery life for a 12V 9Ahr SLA battery based on the number of pictures taken.

Number of pictures per day	Approx. life for 12V 9Ahr SLA battery <sup>(1)</sup>
50	73 days
100	52 days
200	33 days
300	25 days
500	16 days

<sup>(1)</sup>For high activity cameras an optional solar panel can be used to increase the battery life indefinitely.

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