

Introduction to Blynk

Lyfeshot's Blynk is an easy-to-use time-lapse camera. In this section, we will introduce the basics to get you up and running with your new Blynk as quickly as possible. Later sections contain more detailed information to allow you to use all of Blynk's capabilities.

Indicator Light A Indicator Light B

Lens

Front



Top



Main Button

Main button is encased in rubber.
Simply press on the top of the camera.

Bottom



Protective Flap

Bottom Uncovered



Micro USB Port

Operating System Requirements

Windows: Windows XP or newer

Mac: Mac OS/x 10.6 or newer

Connecting Blynk To Your Computer

Insert the small end of the provided USB cable into the USB port located on the bottom of Blynk under a plastic flap. Insert the other end into a USB port on your computer. Blynk uses standard USB drivers that will be automatically installed by your operating system when Blynk is detected. Blynk will be installed as two USB devices; a USB Video Class (UVC) camera, and a USB Mass Storage Class (MSC) disk drive.



Charging Blynk's Battery

If you have already connected Blynk to your computer as described in the previous section, then you have already started charging Blynk's internal battery. Blynk can also be charged by connecting the large end of the provided USB cable to an AC wall adapter. While Blynk is charging, Indicator Light B will show steady green light. When Blynk is fully charged the light goes off. If Indicator Light B starts flashing it indicates either the battery is too hot or too cold to be charged, or the battery is defective and will not accept a charge.

For more details on battery charging and what Blynk can tell you about the state of the charging system, refer to "Understanding Indicator Light B" on page 10

Using Blynk as a time-lapse camera

Using Blynk as a time-lapse camera is very simple. Whenever Blynk is not connected to a USB host it is ready to be used as a time-lapse camera.

Powering Blynk On and Off

To turn your Blynk on and off use the main button located on top.

To power on, press the main button down for 3 seconds (until Indicator Light A starts flashing). Note that the main button is encased in rubber. Just press down on its rubber cover until you feel

a click. It will immediately start recording. To stop recording and turn Blynk off, press the main button and hold it down for 3 seconds. indicator light A will flash an orange light 3 times, indicating it is powering off. Once it has begun flashing, release the main button.



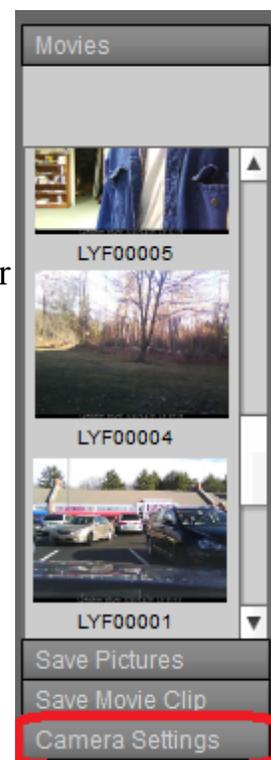
Changing setup options using LyfeView

To change Blynk's recording options, you will need to download LyfeShot's free software, LyfeView, available at www.LyfeShot.com/LyfeView.

Once you have installed LyfeView onto your computer, connect Blynk to the computer's USB port and open the LyfeView program. On the right hand side you will see four options. The top three are for viewing and saving pictures and movie clips. To change your setup options click on the bottom option, *Camera Settings*. This tab will not work unless Blynk is plugged into the computer. After configuring Blynk simply unplug Blynk from the USB. The next time you turn Blynk on, it will be using the new settings.

On the next page is a screen shot of Blynk's camera settings panel. Note that all of the available options are displayed because the "Advanced" box is checked. If you uncheck the "Advanced" box, only the basic settings are visible.

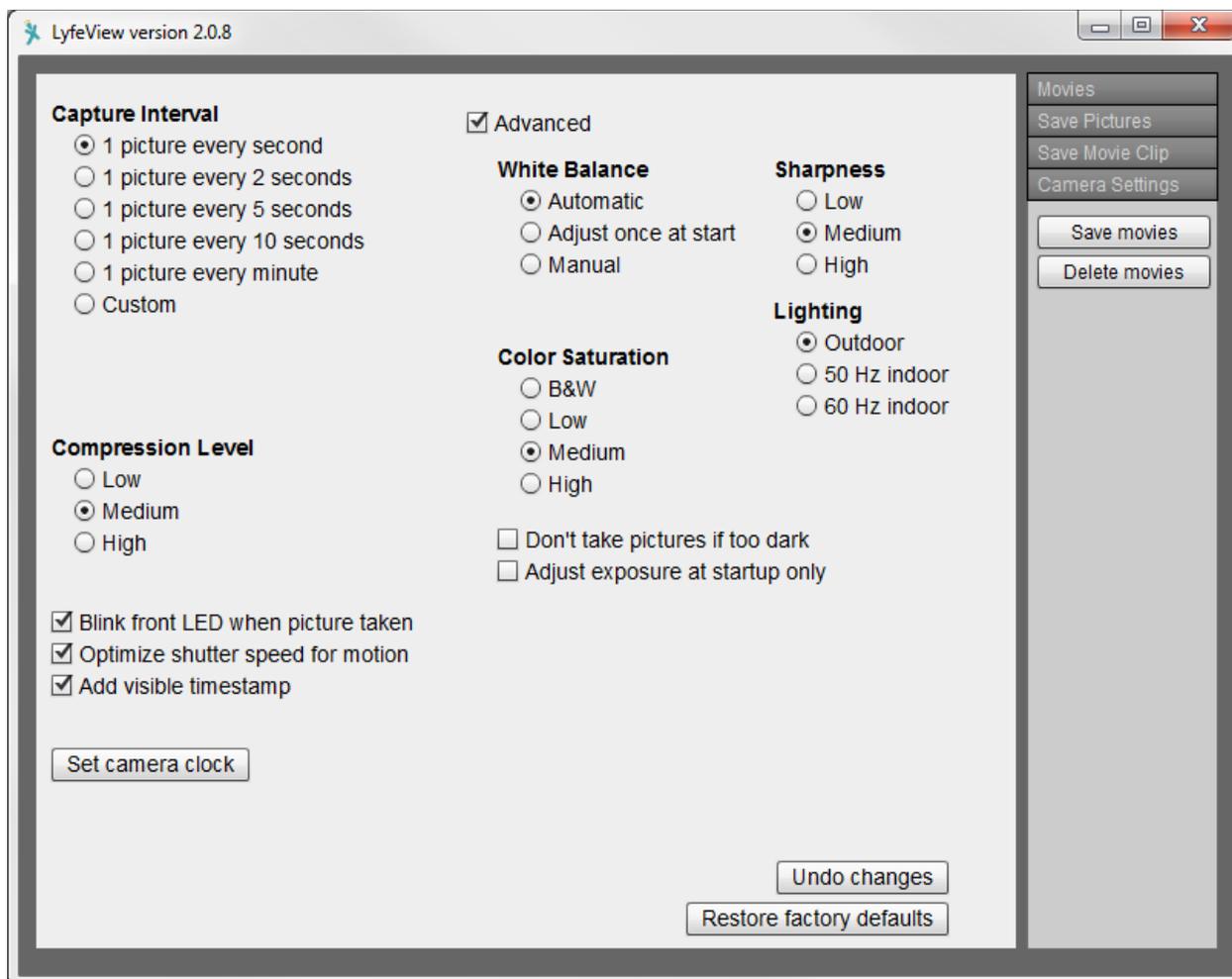
Following the screen shot are the descriptions of all of the selections.



LyfeShot Blynk User Guide

Items noted as a Standard Setting always appear in the Camera Settings menu, while items noted as Advanced Setting only appear when the "Advanced" check box is checked.

Note that these are the factory defaults are set when Blynk is shipped. If you do not download LyfeView and change the settings, this is how the camera will be configured.



Each time an item is checked, the message "Camera updated" will flash at the bottom of the window, and when it's done the message will remain on.

Capture Interval (Standard Setting)

Set the time between pictures using the Capture Interval section of the Camera Settings panel. There are several popular interval times and a Custom selection.

If you select “Custom,” then an hours, minutes, and seconds dialog will appear, allowing you to set any interval between 1 second and 24 hours.



The screenshot shows a settings dialog for the 'Custom' capture interval. It features a radio button labeled 'Custom' which is selected. Below it are three input fields: 'Hours' with the value '0', 'Minutes' with the value '10', and 'Seconds' with the value '0'. Each input field has small up and down arrow icons for adjustment.

Compression Level (Standard Setting)

Blynk stores each frame as a compressed JPEG image. In the same way that some photo editing programs allow you to select high or low compression to trade off image size vs. image quality, Blynk lets you choose the level of compression for each frame. At a high compression setting, more frames can be stored. Lower compression leads to more detailed pictures with less frames being stored.

Blink front LED light (Standard Setting)

If you check the “Blink front LED when picture taken” box, the green LED on the front of the camera will come on as each frame is captured and recorded. If you uncheck this box, then the LED does not come on during recording. However, all the other LED functions (see Blynk’s LED indicators section) continue to function normally.

If you choose to operate Blynk with the LED blink turned off, it's difficult to tell if a recording is in progress. To check whether or not Blynk is recording you can briefly press the button. If it is recording, the green LED will come on momentarily. If not, there will be no LED response.

Optimize shutter speed for motion (Standard Setting)

Blynk offers two types of automatic exposure, depending on the application.

If this box is checked, then Blynk attempts to keep the exposure time at a minimum. Exposure adjustment is biased in favor of increasing imager gain (effectively, ISO.) This will minimize motion blur at the expense of a mild increase in sensor noise. This setting is recommended for applications where the camera is to be attached to something moving, such as a bicycle or automobile.

If this box is unchecked then Blynk will allow the exposure time to increase before increasing

LyfeShot Blynk User Guide

imager gain. This will lead to a reduction in sensor noise, but at the risk of increased motion blur if something in the frame is moving quickly. This setting is recommended for applications where the camera is fixed and recording a slow-moving process, such as plant growth.

Add visible time stamp (Standard Setting)

If “Add time stamp to the picture” box is checked, Blynk will embed the date and time in the image so that it is displayed in a strip across the bottom of the frame. If the box is unchecked this information is not displayed. However, the frame date and time are still recorded and the LyfeView player will display them.

Set Camera Clock (Standard Setting)

Pressing the “Set Clock” button in the Camera Settings menu area will set Blynk’s internal clock to match the current time and date of the host computer.

White Balance (Advanced Setting)

You can select either Automatic, Adjust once at start, or Manual white balance:

Automatic:

In Automatic white balance mode, Blynk adjusts the white balance for each picture individually as it records.

Adjust once at start:

In this mode Blynk will adjust the white balance automatically at movie startup. During this time it will capture about 30 frames which it will not record, but it will analyze to determine the best White Balance settings for the environment. Once recording starts, the white balance settings will remain constant, making for a stable color balance throughout the movie. Be aware that if the lighting does change, you might see some odd-colored frames.

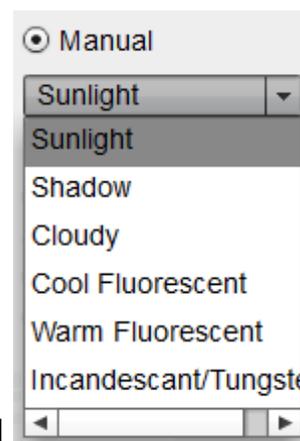
LyfeShot Blynk User Guide

Manual white balance modes:

If you select Manual, a pull-down menu will appear with the following options:

- Sunlight
- Shadow
- Cloudy
- Cool Fluorescent
- Warm Fluorescent
- Incandescent/Tungsten

Select the option that most closely matches the lighting in which you will be recording.



Sharpness (Advanced Setting)

You can select one of three sharpness settings. Low sharpness will decrease the noise in the images, and high sharpness will accentuate edges in the images, at the expense of slightly increased noise.

Color Saturation (Advanced Setting)

Three choices for color saturation allow you to choose the most pleasing color saturation for a particular scene. If you want your time-lapse recording to feature more vivid colors, set a high saturation. For more subdued colors, choose a lower saturation setting. This is recommended especially for low-light recording, where vivid colors can sometimes become visually displeasing. A fourth choice (B&W) allows you to record in black and white.

Lighting (Advanced Setting)

If you are recording indoors, to prevent flickering due to interaction between room lighting and exposure time, select 50 Hz indoor or 60 Hz indoor, depending on the frequency of the AC line current in your region. If you are recording outdoors, you can select “Outdoor.”

Most of North and South America use 60 Hz AC. Europe and most of Asia and Africa use 50 Hz. Notable exceptions are South Korea and Taiwan, which use 60Hz.

Don't take pictures if too dark (Advanced Setting)

If this box is checked, Blynk will pause recording in dark scenes. For long recording sessions, this allows you to record more days by not filling up Blynk's memory with dark frames.

Note: If this box is checked and Blynk determines that it is too dark to record, then Blynk goes into "night mode" in order to save battery life. In night mode Blynk only wakes up every 5 minutes to see if there's enough light to start recording again. So for Blynk to "wake up" from night mode can take up to 5 minutes.

Adjust exposure at startup only (Advanced Setting)

If you select this option, Blynk will adjust exposure while the movie is starting up, and then leave it fixed. If you don't expect the lighting to change during recording this is the preferred option, since the image brightness will be very stable.

Updating Camera Settings

After Blynk's new settings have been chosen, just unplug Blynk from the USB cable. After unplugging, Indicator Light A will very briefly flash orange, indicating that the new configuration has been stored in Blynk. If no changes were made, the orange LED will not flash.

Pressing "Restore factory defaults" will restore the factory default settings.

Pressing "Undo Changes" reverts the options back to whatever they were when you plugged in Blynk.

Understanding Indicator Light A

What Blynk is telling you

Blynk communicates a wealth of information through Indicator Light A. Indicator Light A is comprised of a red and green LED light. Whenever you start a recording with Blynk, Indicator Light A will flash ten times. This ten flash sequence lets you know the current state of Blynk's battery life or internal memory. The 10 blinks represent



LyfeShot Blynk User Guide

100% capacity, so each blink represents 10% of Blynk's capacity. If you see 3 orange (green and red both on at the same time) blinks and 7 green blinks, Blynk is telling you that it has about 70% of its capacity available. This means one of two things:

- Blynk's battery is down to 70% of its capacity.
- Blynk's disk is down to 70% of its capacity.

Blynk will always show you the lesser of the two. So if Blynk has full memory capacity, but the battery is down to 30% of its capacity you will see 7 orange blinks followed by 3 green blinks.

After the 10 blinks are completed, the green LED will stay on for a few seconds while Blynk prepares to make a movie. If you have your indicator light turned on (Blynk comes from the factory with it on), there will be a brief green blink every time Blynk takes a picture.

Other things Indicator Light A will tell you:

Battery gets too low to continue recording	Red LED flashes for 5 seconds, then turns off.
Starting a time-lapse recording when the battery is too low to record	Red LED flashes for 5 seconds, then turns off.
Memory is full when attempting to start recording, or fills up while recording	Red LED turns on for 10 seconds, then turns off.
Updating Blynk firmware	After a delay of approximately 3 seconds, the orange LED turns on for approximately 5 seconds while programming. Orange LED turns off when programming is complete.
Updating Blynk configuration	As soon as Blynk is unplugged from USB, the orange LED turns on briefly while configuration is updated. Orange LED turns off when configuration update is complete.

Understanding Indicator Light B

What Blynk is telling you about its battery

When Blynk is being charged Blynk's battery condition is indicated by Indicator Light B. Below are the four possibilities.

Light B state	Condition	Comment
On steady	Blynk is charging normally	
Off	Blynk is fully charged	
Blinking at 1.5 flashes per second (slow flash)	Blynk's battery is out of its valid temperature range for charging	When the temperature of the battery rises/falls enough to get within the valid range, battery charging will commence automatically
Blinking at 6 flashes per second (fast flash)	Blynk's battery is defective	Blynk should be returned for service

Blynk's Reset Button

Blynk is equipped with a reset button, in case of firmware crashes or hangs. If Blynk will not respond to button presses or to being connected to USB, press the reset button to force a complete reboot. If Blynk still fails to respond after a reset, try connecting it to USB host for 10-15 minutes to ensure that the battery is charged enough for Blynk to function. Try pressing the reset button again. If Blynk still doesn't respond, continue charging. If after 30 minutes, Indicator Light B starts blinking rapidly, the battery might be bad.

Reset Button



Updating Blynk's firmware

Blynk was designed so that its firmware is field-upgradeable. If LyfeShot releases updated firmware for Blynk the following procedure can be used to update Blynk:

- Plug Blynk into your PC or Mac.
- Copy the new firmware file, BLYNK_FW.BIN, onto Blynk.
(Navigate to Blynk's Mass Storage Class drive, and copy the firmware file into the DCIM\100BLYNK folder.)
- Unplug Blynk to make Blynk power off automatically.
- Power on Blynk by pressing the button for about 1 second.

After about 3 seconds, the orange LED will come on and remain on for about 5 seconds while the new firmware is programmed. Blynk will then turn off automatically, and the next time you power up Blynk it will be using the new firmware.

Using Blynk as a webcam

Although Blynk is most definitely a high tech device, changing Blynk's operational mode is decidedly low tech. To use Blynk as a webcam the only action required is to connect Blynk to a Windows PC or Mac PC using the supplied micro USB cable. Blynk will show up as a USB Video Class (UVC) device so most applications that are UVC-aware (see note about Blynk and Skype below) will be able to stream live video from Blynk.

Note about Blynk and Skype compatibility: *Although Blynk was detected by previous versions of Skype, there is an issue with newer versions of Skype, which we hope to have resolved soon. In the meantime, Skype has provided a version of their application for users with cameras that stopped working with newer versions of Skype.*

Here's a download link for that version of Skype:

<https://support.skype.com/en/faq/FA12252/why-can-t-i-make-video-calls-on-the-latest-version-of-skype-for-windows-desktop>