LIGHTPAINTER
Ryu's Lightworks

Instuction manual
V.01

Introduction

The LightPainter – Ryu's Lightworks Edition is a powerful and highly configurable flashlight, designed specifically for light painters, by light painters, through a collaboration between LightPainting Paradise and Ryu's Lightworks.

The flashlight itself provides one continuous lighting mode (with configurable brightness levels), 3 separate strobe modes (with configurable strobe frequencies) and a "single flash" mode, each of which can be memorised for instant access using the tail cap switch or side button as required.

The flashlight is also submersible to a depth of 2 metres (IPX8) and, for the technically inclined, uses a Cree XML-ML emitter with a colour temperature between 5400 – 5700K with a 70 CRI.

This manual explains how to configure the flashlight using the available buttons and is best read with the flashlight in hand so you can try out the example provided.

Basic Operation

In the standard mode of operation, the following actions can be performed using the tail cap switch and side button

- *Pressing the tail cap button will switch the flashlight from off to on and vice versa. The tail cap button can be half-pressed to allow for momentary operation.*

- *Pressing the side button once will change the settings for the currently selected mode. The setting affected depends on the current mode – in continuous lighting mode it will change the intensity of the flashlight whereas in strobe mode it will change the frequency of the strobe.*

- *Double clicking the side button will change the currently selected mode (see available modes). Once the final mode is reached, double clicking will return to the first mode again.*

- *Long pressing the side button will memorise the currently selected options (the flashlight will flash twice to confirm the settings have been memorised). From this point the flashlight will return to this mode every time it is switched on until a new mode is memorised.*

The flashlight can also be configured to work in "side access" modes where the side button can be used to switch on and off the flashlight (see "side access modes").

Available Modes

The flashlight provides the following modes

- *Continuous Lighting Mode (8 separate brightness levels).*

- *Intermittent Strobe Mode (equal flash and pause time with 10 separate strobe frequencies).*

- *Flash Strobe Mode (short flash followed by longer pause, 10 separate frequencies).*

- *Continuous Strobe Mode (short flash at approximately 60% intensity with continuous illumination at selected brightness in between each flash, 8 separate frequencies).*

- *Single Flash Mode (designed for use with the side access modes – emits a single 5ms flash every time the side button is pressed).*

Unlike the majority of flashlights, the brightness level selected in continuous lighting mode will then be applied to any of the strobe modes, allowing the power of the strobe to be configured to match other elements in the light painting.

Continuous Lighting Mode

In continuous lighting mode the flashlight acts as a standard torch with continuous output. Clicking the side button when this mode is selected will change the brightness of the output. 8 separate brightness levels are available with the following approximate intensities:

Mode	Output	Runtime	Beam Distance
Mode 1	8 LM	142 hr	6 m
Mode 2	50 LM	31 hr 14 min	11 m
Mode 3	190 LM	8 hr 30 min	43 m
Mode 4	300LM	5 hr 20 min	69 m
Mode 5	440 LM	3 hr 31 min	101 m
Mode 6	700 LM	2 hr 14 min	160 m
Mode 7	900LM	1 hr 53 min	205 m
Mode 8	1200 LM	1 hr 28 min	257 m

*Measures made with LightPainter 3000mAh battery.

Once the maximum brightness level is reached, clicking the side button again will return the flashlight to the minimum brightness level. Note that the brightness level selected in this mode will subsequently be used for the strobe modes.

Intermittent Strobe Mode

In intermittent strobe mode the flashlight will flash on and off, with the duration of the off and on periods being equal. Clicking the side button in this mode will change the frequency at which the flashlight flashes on and off.

The maximum frequency in strobe mode is 50Hz which is practically invisible to the naked eye but is visible to the camera when the illuminated object is moving. As such, when you first switch to strobe mode it may look as if the flashlight is permanently illuminated until the strobe frequency is reduced.
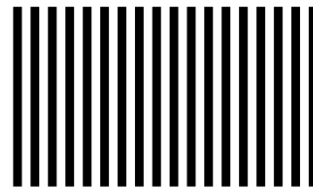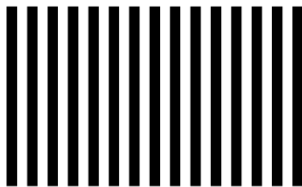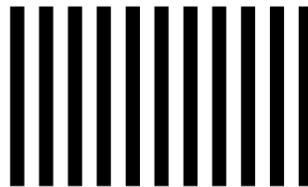
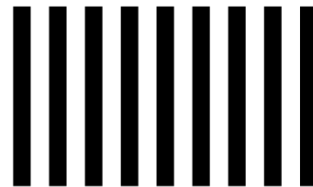# INTERMITTENT STROBE
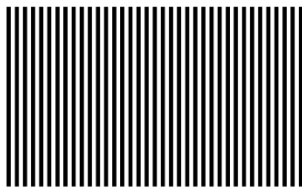
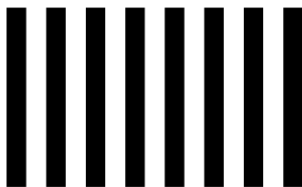MODE 1   MODE 2   MODE 3
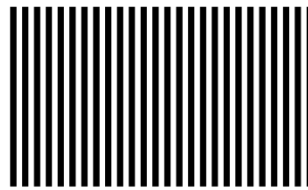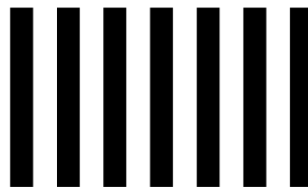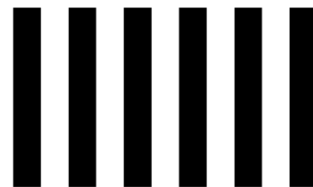
MODE 6   MODE 5   MODE 6
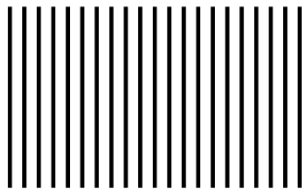
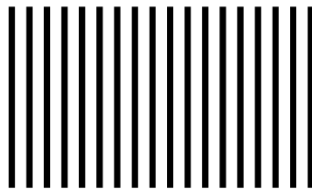MODE 7   MODE 8   MODE 9

MODE 10

Flash Strobe Mode

In flash strobe mode the flashlight has a constant 5ms "on" duration and the length of time between flashes is determined by the frequency selected. Clicking the side button in this mode will change the frequency, effectively increasing the time between the individual flashes.

The maximum frequency in flash mode is 66Hz which is practically invisible to the naked eye but is visible to the camera when the illuminated object is moving. As such, when you first switch to flash mode it may look as if the flashlight is permanently illuminated until the strobe frequency is reduced.
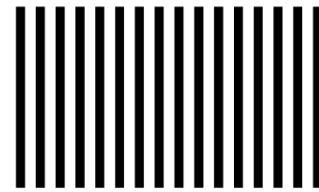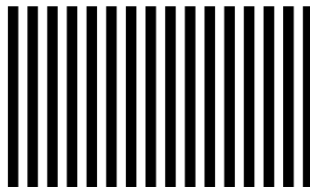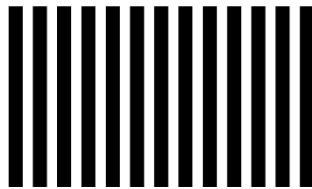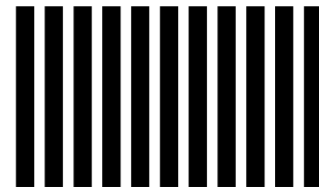
FLASH STROBE

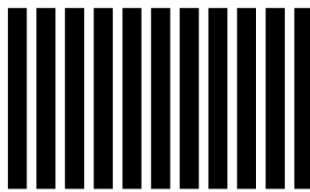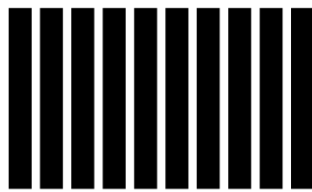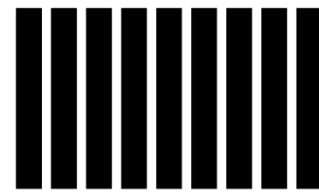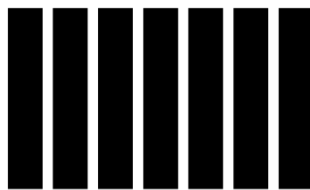MODE 1

MODE 2

MODE 3

MODE 6

MODE 5

MODE 6

MODE 7

MODE 8

MODE 9

MODE 10

<u>Continuous Strobe Mode</u>

In continuous strobe mode the flashlight alternates between a 5ms flash at approximately 60% intensity and a continuous light at the intensity selected by the user. This gives a solid trail of light with 5ms flashes at the selected frequency, where the flashes are either brighter or dimmer than the rest of the ribbon depending on the brightness selected by the user. Clicking the side button in this mode will change the duration of the gaps between the 5ms flashes.

The maximum frequency in flash mode is 66Hz which is practically invisible to the naked eye but is visible to the camera when the illuminated object is moving. As such, when you first switch to flash mode it may look as if the flashlight is

permanently illuminated until the strobe frequency is reduced.

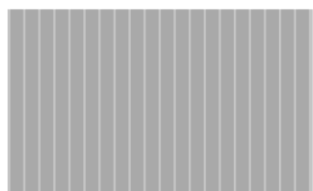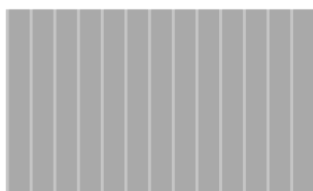## CONTINUOUS STROBE 100%

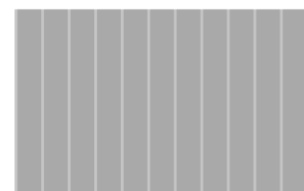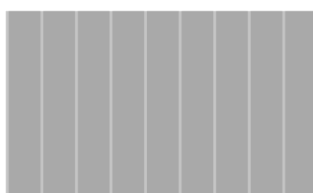|		
MODE 1	MODE 2	MODE 3
MODE 4	MODE 5	MODE 6
MODE 7	MODE 8	

CONTINUOUS STROBE 20%
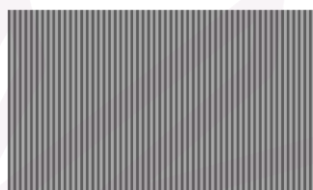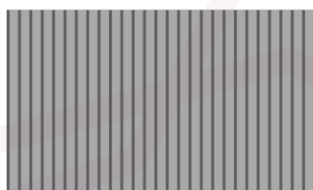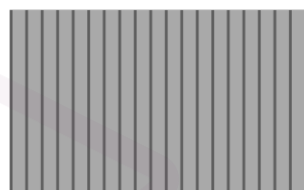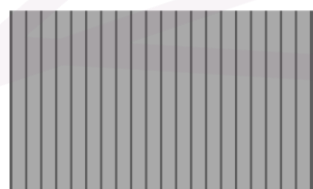
MODE 1	MODE 2	MODE 3
MODE 4	MODE 5	MODE 6
MODE 7	MODE 8	

Flash Mode

The single flash mode is designed for use exclusively with the side access mode of operation of the flashlight. When first entering this mode the flashlight will appear to be off. However, if this mode is memorised and the flashlight is switched on in either side access mode (see later) then each press of the side button will trigger a single 5ms flash.

This mode therefore allows for precise use of the flashlight. It can be used to freeze tools in mid-air at exact positions, it can be used to add individual lens flares, to freeze moving objects in the frame – the possibilities are endless.

Example Of Programming The Flashlight

Suppose that you wish to use the flashlight with medium brightness and a medium frequency 50/50 strobe. The sequence of steps to select this configuration and memorise it (assuming no previous memorised mode) would be as follows

- *Press the tail cap button. This will switch the flashlight on in continuous lighting mode*

- *Click the side button until the desired brightness is reached*

- *Hold the side button until it flashes twice to memorise the brightness level*

- *Double click the side button to enter strobe mode*

- *Click the side button until the desired strobe frequency is reached*

- *Hold the side button until the flashlight flashes twice*

The selected mode is now memorised. If you switch the flashlight off using the tail cap and back on again, it will switch back on with the intensity and strobe frequency you just selected and this selection will be maintained until overwritten with another.

Side Access Modes

Although the standard method of illuminating the flashlight is to use the tail cap switch, there are scenarios in which it is useful to be able to switch the flashlight on and off using the side button, for example when creating circles or using acrylic tools. The LightPainter – Ryu's Lightworks Edition therefore provides access to two side access modes as follows.

Trigger Mode

If the side button is held down when the flashlight is switched on using the tail cap button it will enter "trigger mode" and flash twice to confirm this mode has been engaged. In this mode, pressing the side button will switch the flashlight on and pressing the side button again will switch it off.

Momentary Mode

If the side button is held for longer when the flashlight is switched on using the tail cap button it will enter "momentary mode" and flash three times to confirm this mode has been engaged. In this mode, holding the side button will illuminate the flashlight and it will automatically switch off as soon as the side button is released.

Warnings

- *This flashlight has no deep discharge protection so protected batteries should be used*

- *This flashlight has no temperature protection. If the head of the flashlight becomes uncomfortably hot, please let it cool down before using it further as overheating can cause damage to both the LED and the controller unit.*

- *The high frequencies available in the various strobe modes can cause epileptic seizures in those with photosensitive epilepsy and nausea in those*

who are sensitive to strobes. Please exercise care in the use of strobes around other people and, if you experience nausea or any ill effects, use the slower strobe frequencies.

- *Some batteries have issues with the LED driver used by this flashlight. If the flashlight does not react as described in this manual, please try another battery as the protection in certain batteries turn off the battery's output for a fraction of a second, thus confusing the controller. We therefore always recommend using the supplied battery.*

- *LightPainting Paradise and Ryu's Lightworks are not responsible for any injuries or damages caused by improper use, modification or disassembly of this flashlight.*

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www.lightpaintingparadise.com

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