

LAUNCH PHOTOGRAPHY GUIDE

This launch photography guide has been produced to give you close to all of the information you will need to photograph a rocket launch. The camera settings will work from any location you may be photographing from around Cape Canaveral Air Force Station or wherever you may find yourself shooting a rocket launch. I have refined these suggestions from my experiences over the past several years while photographing launches along the Space Coast. While the settings may differ from other photographers' suggestions, they have been based around my particular style of shooting. In most cases, I will underexpose my photos by one or two stops to preserve certain details and recover in post processing. Use at your own discretion.

Be sure to check back as this guide will continue to be revised.

Have additional questions?
E-mail me at wscriptunas@gmail.com

LAUNCH TIME:

Daytime: A daytime launch will have the most variables you will encounter when photographing a launch. One of the main things I look at ahead of time is where the sun will be positioned at launch time. For this I use the LightTrac app, which is available for iOS, Android and Windows 8.

LightTrac: (\$4.99) www.lighttracapp.com

Shutter Speed: 1/900-1000
Aperture: F9
ISO: ISO 200

Nighttime: While a night launch may seem like it would be quite difficult to capture, it really is not as difficult as you would think. A common misconception is that settings for a night launch are drastically different from a daytime launch but this is not true, mainly due to the amount of light a rocket puts off.

	Atlas 5 401	Delta 4 & Atlas 5 Medium	Falcon 9 V1.1
Shutter Speed:	1/300	1/500	1/600
Aperture:	F7	F7	F7
ISO:	500	400	600

One of the most sought after photos of a night launch is the streak shot. To capture one of these, you will need to set your camera to bulb mode, pre-focus your lens, and set it to manual focus. Then adjust your ISO to 100, stop your lens down to approximately F20 and with the use of your cable release, open the shutter seconds before launch and keep it open for one to three minutes, depending on how wide of a lens you are using.

Please note that before launch the image will look dark, the light from the launch will illuminate the image significantly.

Twilight: For a twilight launch you will encounter the most challenging conditions. With the light changing every minute you will have to adjust your exposure accordingly. As the rocket ascends, it will eventually catch the light of the rising or setting sun, which is of course dependent on the time it occurs after sunset. These settings should work for up to 20 minutes following sunset.

Shutter Speed: 1/400

Aperture: 5.6

ISO: 800

The settings above should help give you a good base point to start out at. They can be adjusted accordingly to the intensity of light and cloud conditions.

CAMERA SETUP AND BASIC TIPS:

- One of the most important tips is using manual focus. This will ensure that your camera is not thrown off by the intense brightness of the rocket. This is extremely important for night launches. To do this, switch your lens to auto focus (AF), pre-focus on the rocket before switching back to manual focus. Be careful not to bump the focus ring during the launch as your photos will come out of focus.
- You can also tape the focus ring to prevent this from happening
- Do not use filters, they may cause ghosting and lens flare. This is especially true with night launches.
- Shoot in RAW, this will enable you to capture the best detail possible. However, be careful as some cameras' buffers will fill up very fast.
- If you have a second camera body, don't just take telephoto images of the launch, switch to the second body and capture a wide angle image of the exhaust trail.

USEFUL TOOLS:

The Triggertrap is a great tool not only for launches but also for photography in general. The free mobile app for iOS and Android works with most cameras and offers features such as time-lapse mode, sound sensor, HDR, cable release and shock & vibration sensor mode. To see if the app supports your camera and to buy the necessary hardware needed, visit www.triggertrap.com

A sturdy tripod is recommended, especially when shooting with a telephoto lens.

A cable release is important for a nighttime streak shot or to help you fire a second body.

IMPORTANT RESOURCES:

Launch Status Updates: SpaceflightNow.com – Mission Status Center

Often used by mission personnel, SpaceflightNow's mission status center offers the most complex, up to the minute countdown updates on the Internet!

EQUIPMENT RENTAL STORES.

Local: Lens Depot - Pickup locations in Orlando, Tampa and Miami.

<http://www.thelensdepot.com>

By Mail: Borrow Lenses, Lens Rentals

<http://www.borrowlenses.com>

<http://www.lensrentals.com>