PocketWizard®

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Owner's Manual: Addendum v4.250

MiniTT1™/FlexTT5™ for Canon

340 - 354 MHz, US FCC/Canada IC

MiniTT1 Firmware Upgrade to version 4.250
FlexTT5 Firmware Upgrade to version 4.250

CAUTION!

- This firmware version requires PocketWizard Utility version 1.18 or later to be installed. If you are still running version 1.15, click here to get the latest version. Find the version number in the title bar of the Utility.
- Upgrade all of your MiniTT1 or FlexTT5 radios to the latest firmware. Mixing old and new revisions may result in undesirable behavior.
- Always perform a factory reset after updating your firmware. Be sure to write down any custom settings for Configuration 1 or Configuration 2 before you reset your radios so you can re-apply them after the upgrade. See RESET B on page 28 in the Owner's Manual or simply hold TEST as you power on for 10 seconds until you see 4 green blinks.

New Features

Higher Efficiency High Speed Sync (FP Flash)

Through-the-shoe communications have allowed PocketWizard radios with the new ControlTL™ firmware to significantly boost the performance of the High Speed Sync (HSS) feature of Canon Speedlite flashes. This means more light which equals greater working distance). You also get faster recycling and more flashes per battery set when shooting in Canon's HSS/FP Flash mode.

Because the MiniTT1 Transmitter and FlexTT5 Transceiver communicate through-the-shoe with the camera system in use, they can control the HSS burst duration to match the shutter speed more precisely. This results in large gains in efficiency, as much as 60% in many cases, for both remote and on-camera flashes.

This gain in efficiency is immediately translated into shorter recycle time (allowing faster HSS shooting for longer bursts), more shots per battery set, and from 0.5 to 1.8 stops brighter output which enables greater working distance. When using a 580EX II as MASTER for wireless manual, you can expect gains up to 2.3 stops brighter, depending on shutter speed. If you are shooting exclusively at HSS shutter speeds, you will get more than a doubling of battery life from your Speedlite, possibly eliminating the need for an external battery pack.

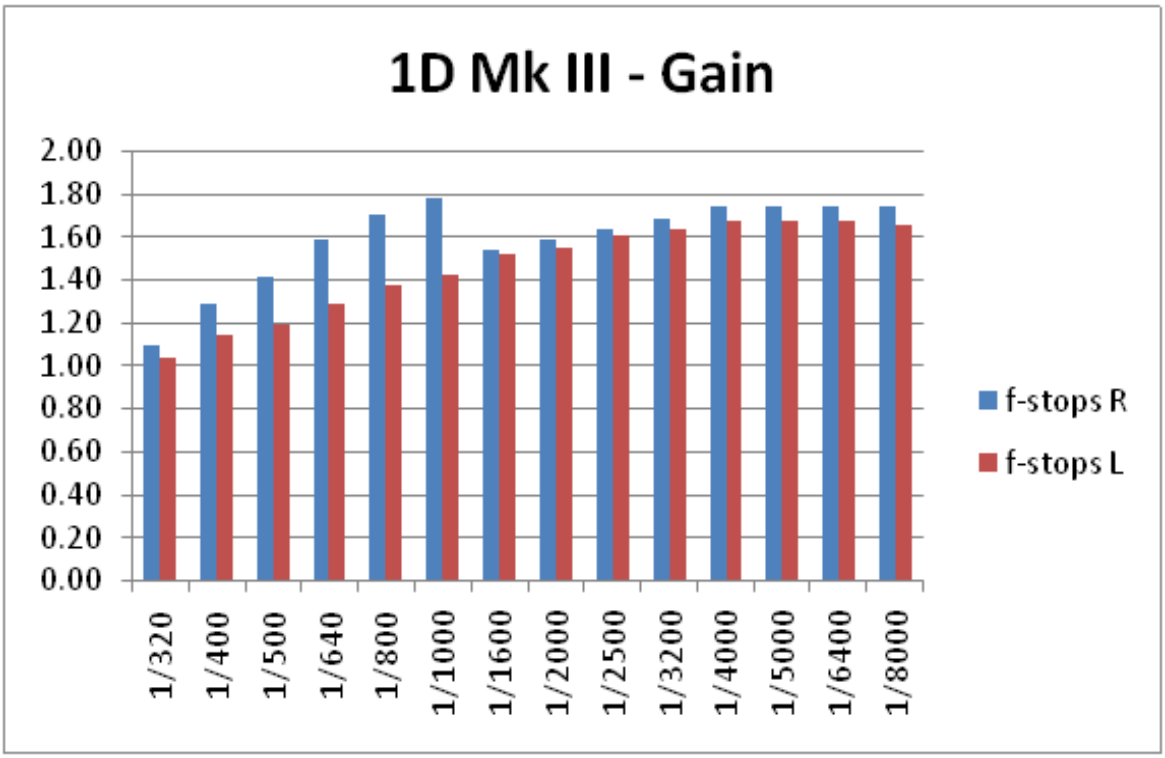
This feature only works with Canon Speedlites at HSS shutter speeds. It will not make your manual hot shoe or studio flashes have more light output at any given setting. Gains when using HyperSync™ are even greater and it is recommended that you use HyperSync for shutter speeds from 1/250 through 1/640 as your camera and flash combo allows.

IMPORTANT: To get the most benefit from this feature, be sure to select your camera model in the PocketWizard Utility on the Misc Tab. If you do not select your camera model then you will still receive some improvements, but not as much as when you select your camera model. This feature is automatic and requires no adjustment other than selecting your camera model.

Here are some examples of the efficiencies gained:

f-stops R = f-stops Remote = Speedlite on FlexTT5 radio as a remote unit
f-stops L = f-stops Local = Speedlite on a MiniTT1 or FlexTT5 radio as a transmitter on the camera

For example, the chart below shows that the 1D Mark III camera, when using HSS triggering at 1/1000 shutter speed, will get 1.4 stops more light from the flash on top of the MiniTT1 in its shoe, and nearly 1.8 more stops from a Speedlite mounted on a remote FlexTT5.

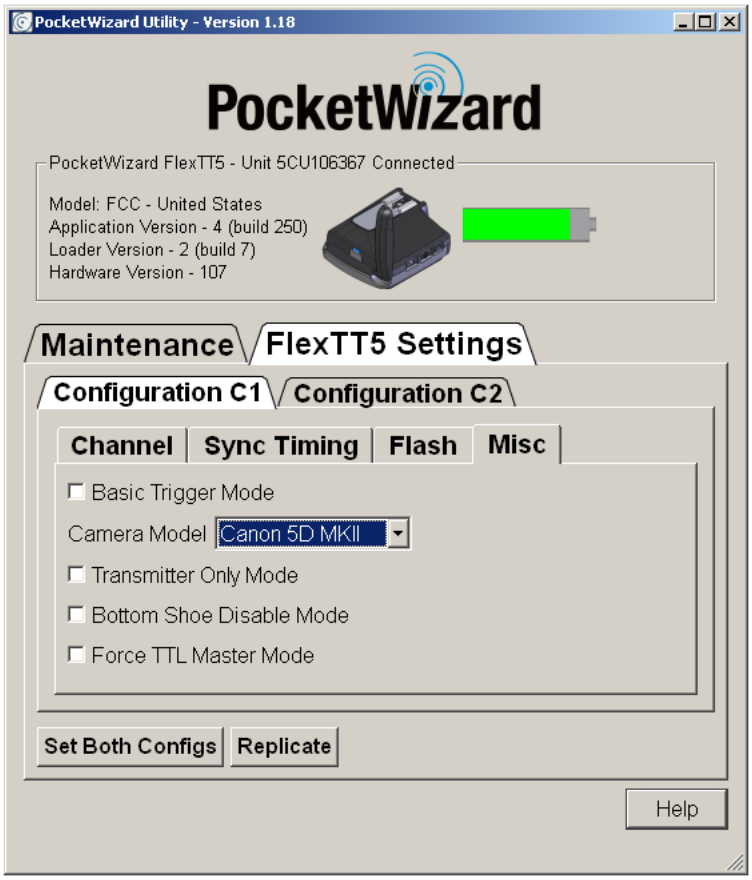


* For charts on other cameras, please refer to the end of Addendum v4.250.

Canon 5D Mark II Compatibility

Operation with a Canon 5D Mark II camera has been greatly improved. In addition to HyperSync, remote E-TTL II, and other features already present, you can now use a flash on top of a MiniTT1 or FlexTT5 radio in the shoe of the Canon 5D Mark II. You can now have on-camera flash as well as ratio controls via the 580EX II, 580EX, or ST-E2. Using the 580EX II, you can also use remote wireless manual mode.

For the 5D Mark II to function properly with ControlTL radios, you must select "5D Mark II" as the camera model on the Misc Tab in the PocketWizard Utility.



SPECIAL NOTE:

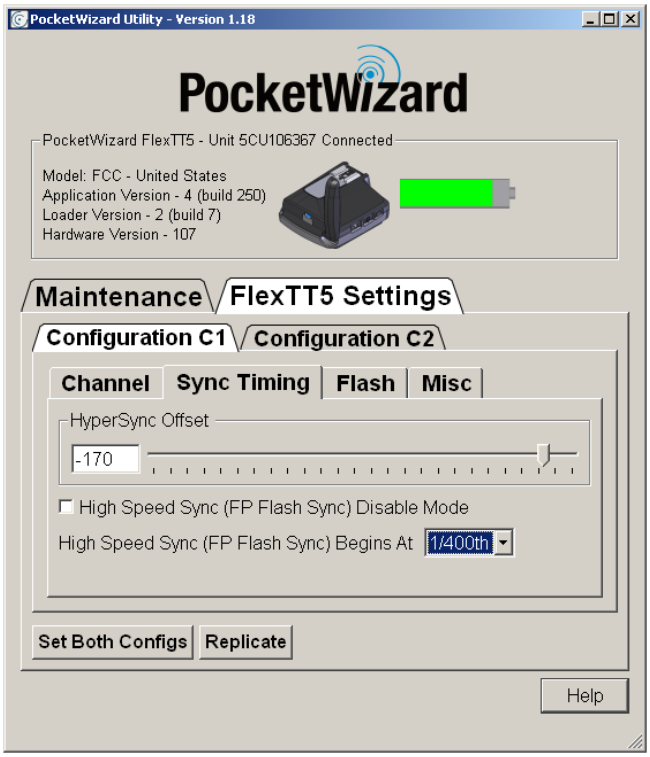
5D Mark II Aperture. Due to special trigger timing considerations for this camera, some lenses will experience frame clipping (hard lines or dark frames in the image caused by the shutter getting "caught" by the flash) at mid to narrower aperture settings. Larger maximum aperture lenses like f:1.4 or f:1.2 models are most affected and may start to see flash clipping as early as f:5.6. Lenses with a widest aperture of f:3.5 to f:5.6 may not experience clipping until stopped down to f:22 or narrower. If there is no flash on top of the ControlTL transmitter in the shoe of the 5D Mark II, results will be somewhat better (~1 f-stop narrower will work). This aperture issue does not affect any other camera we have tested. Please test each of your lenses across the full range of f-stops to be sure you understand the limitations.

Selectable HSS Cross-over Point

Using the PocketWizard Utility, you can choose the shutter speed at which High Speed Sync (FP Flash) will start to be used. This allows you to use HyperSync at shutter speeds where it is effective, and then switch to HSS at faster shutter speeds and have seamless high speed triggering with all shutter speeds usable. Once selected, HSS will be used for the selected shutter speed and all faster shutter speeds up to 1/8000.

In the PocketWizard Utility on the Sync Timing tab, select the shutter speed where you want HSS to start. For optimum light output, this should be the first shutter speed where you begin to see clipping in the frame that you cannot remove by adjusting HyperSync.

If you want to "turn off" HyperSync completely and just use HSS at all faster shutter speeds as if you were using Canon's optical triggering system, then set this control one shutter speed faster than your camera's X-sync. You will not receive the extra light output (and working distance and battery life) that HyperSync offers, but then you will also not need to adjust HyperSync.



The default is now set to 1/400 since 5D and 5D Mark II users were finding those shutter speeds unusable under the prior method of Auto-HSS crossover at 1/640.

ADDITIONAL NOTES:

CAUTION! To ensure you do not miss the first shot after the flash on camera sleeps, make sure to set the Custom Function for the flash on camera to Auto Power Off Disable. This applies for all cameras, and any Speedlite used on the MiniTT1 or FlexTT5 as a transmitter. It does not apply to a Speedlite used on a FlexTT5 as a remote flash.

A MiniTT1 when used in Basic Trigger Mode must have its TEST button pressed once to trigger remote radios.

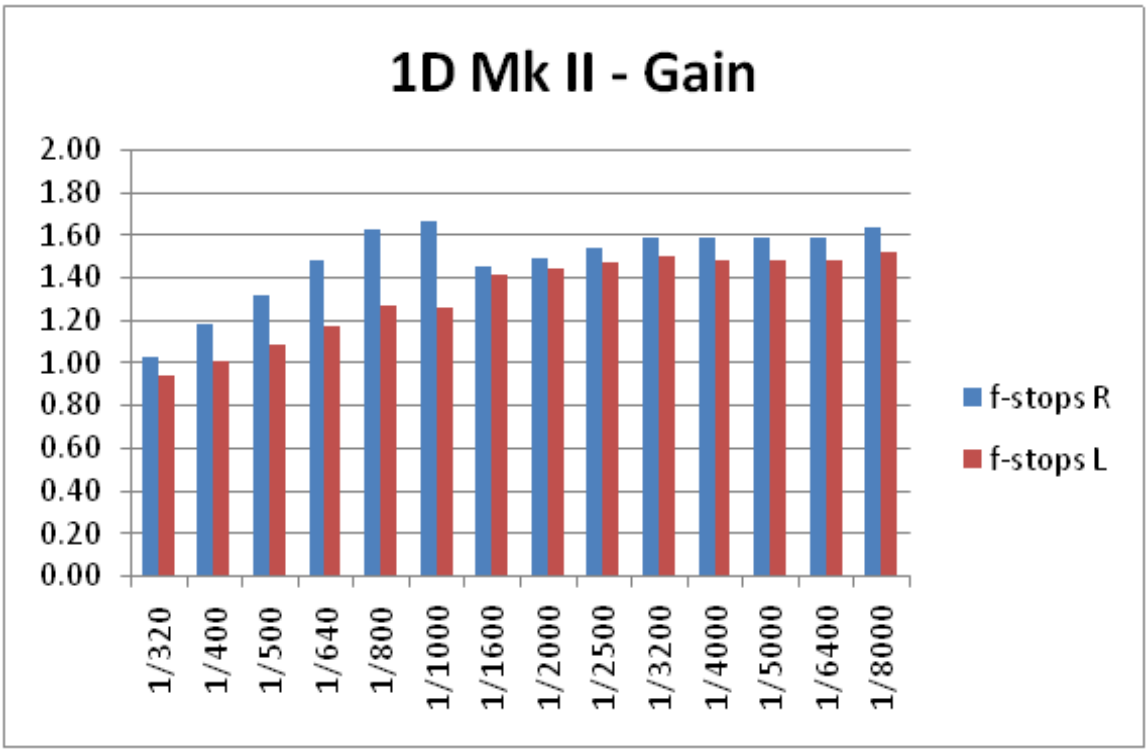
Bug Fixes:

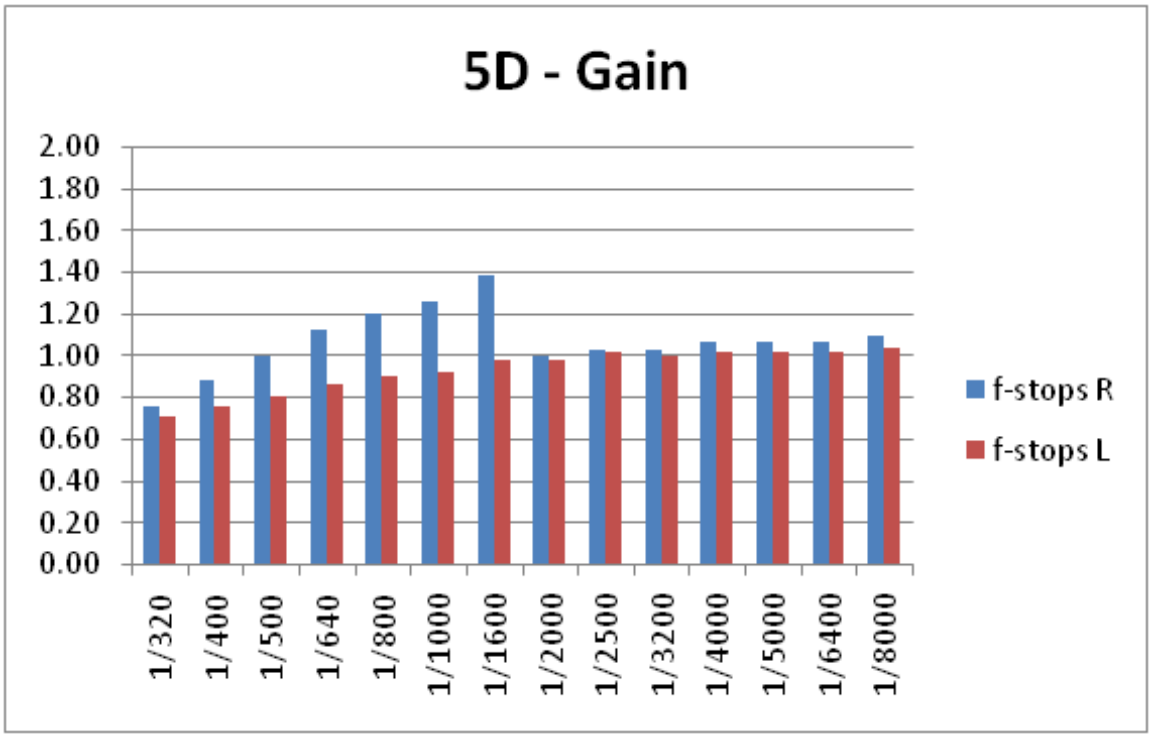
- 30D now triggering properly. Previously, this camera would randomly stop triggering a FlexTT5 when used as a transmitter. Additionally, the 30D would not trigger as a remote camera from the FlexTT5. This has been corrected.
- 5D Mark II HSS sync failures fixed.
- "Remote TTL Flash Sleep Mode" issues resolved. Previously, when set in the Utility, this feature would cause undesired flashing when changing camera settings or when the camera went to sleep or was awakened. This has been corrected.
- 1D Mark II ratio mode now functioning properly. Previously this operation required more than 1 shot on a ratio setting for the setting to engage, and sometimes there were over-exposures. This has been corrected.
- ST-E2 AF-Assist now works on a 5D, 50D or 40D, and other cameras. Previously the AF-Assist light would not turn on. This has been corrected.
- Wide aperture values now registering properly. On lenses that open up to f:1.2 or wider, the aperture values were being handled improperly. This has been corrected.
- Fixed a TEST button issue. Previously a TEST button press on MiniTT1 could cause failed triggers for ~5 seconds. In situations where there was a MASTER flash on top of the MiniTT1, TEST was pressed and you tried to take a picture before the MiniTT1 went back to sleep, the exposure would not be correct. This has been fixed.
- Basic Trigger Mode battery power management in the MiniTT1 was improved, resulting in slightly longer battery life.
- When using the FlexTT5 as a transmitter on a camera, HSS for a flash mounted in the top shoe was not working properly. This has been corrected.
- Remote camera triggering via the FlexTT5 has been improved, especially when using "Bottom Shoe Disable Mode." Use of legacy cables is better supported. Using an -ACC cable is still recommended.
- HSS mode was triggering all zones/groups instead of just group A. Now HSS mode honors groups better.
- Triggering a remote Speedlite, set for manual flash and triggered by a Plus II or MultiMAX, mounted on a FlexTT5 has been improved.

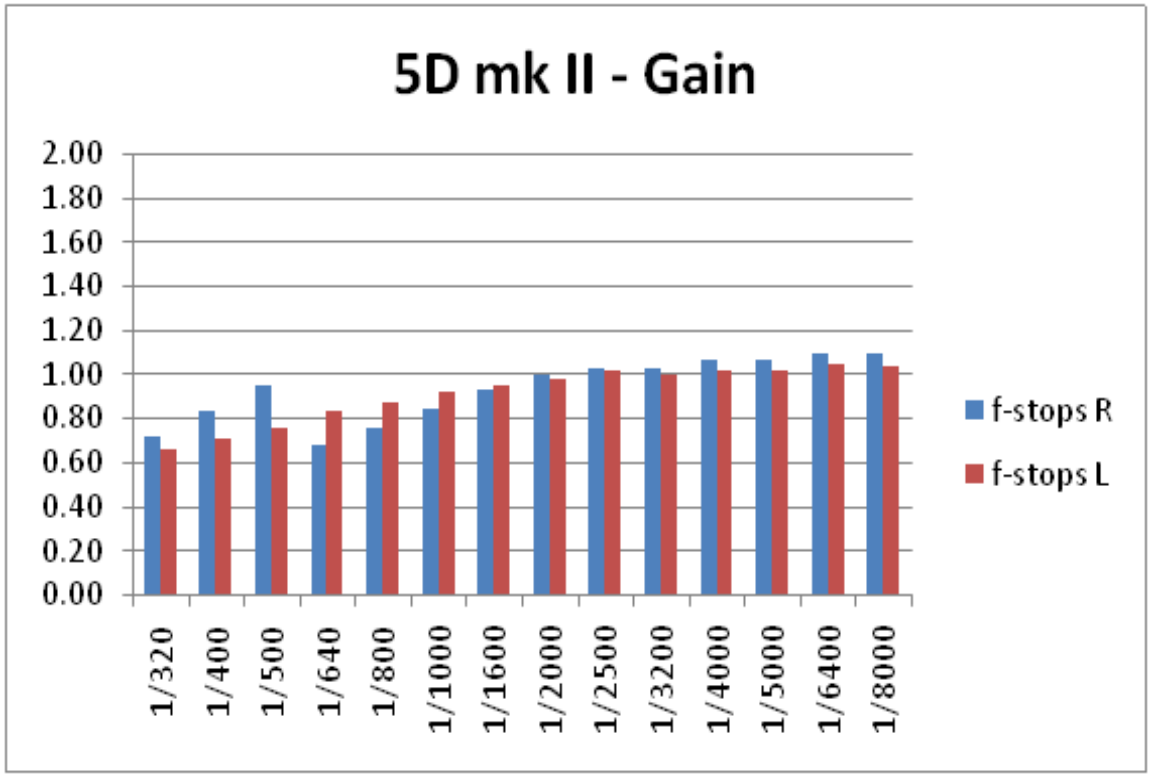
Not included in this release:

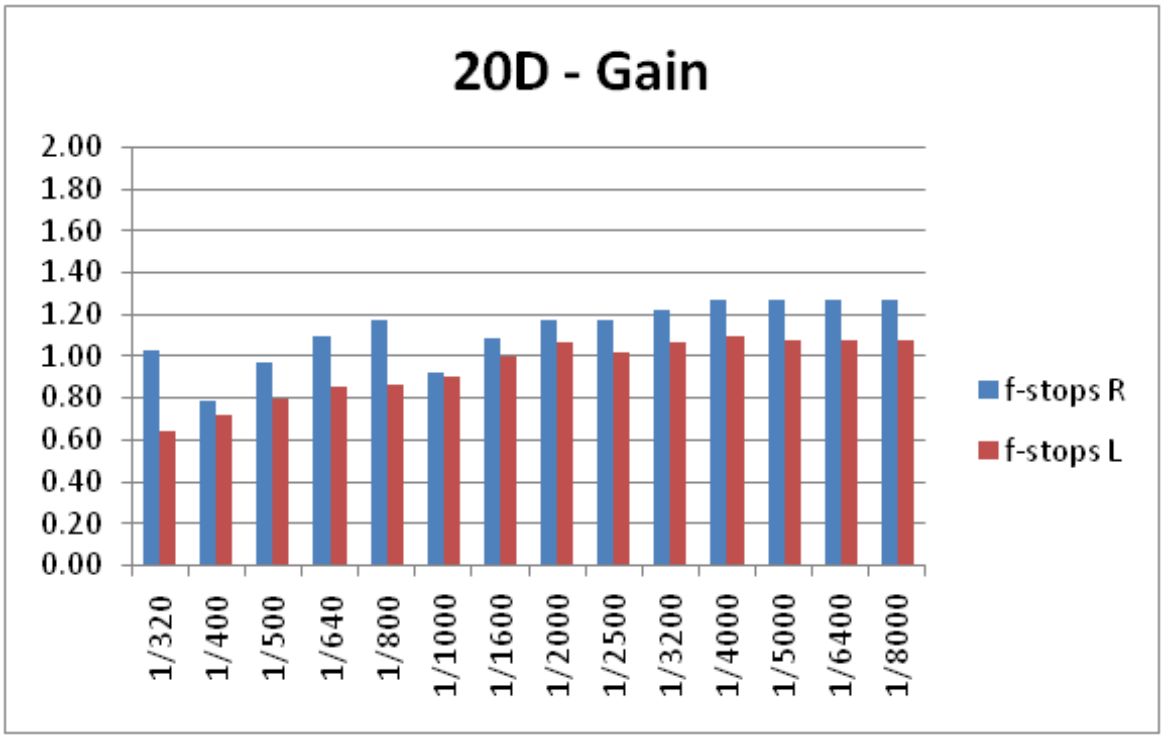
- FEC control from the flash is not implemented for the MiniTT1 and the FlexTT5 when used as a transmitter. FEC from the camera works. Some photographers prefer to use the flash FEC control due to familiarity and simplicity, as well as the ability to achieve +/- 3 stops versus some camera's +/- 2 stops.
- ST-E2 on top of a MiniTT1 on top of a 5D Mark II. The ST-E2 can forget its settings when coming out of sleep mode.
- Other features not expressly covered like Rear Curtain Sync, FEB, stroboscopic, remote DOFP and modeling mode, and adjusting flash settings or custom functions via the camera's controls are not implemented.
- Distance info on 580EX II not updating sometimes.
- Other flash manufacturer's flashes. Quantum, Metz, Sunpak, etc. compatibility is not confirmed.
- Custom IDs not yet available.

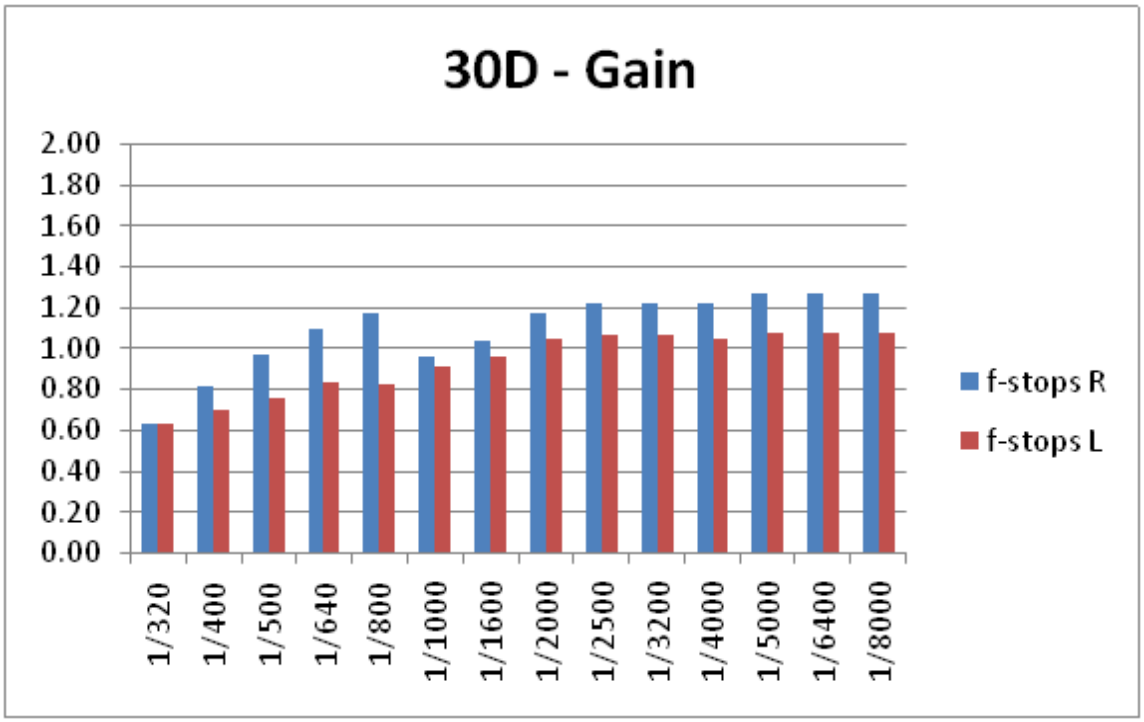
Additional Graphs for f-stop Gains:

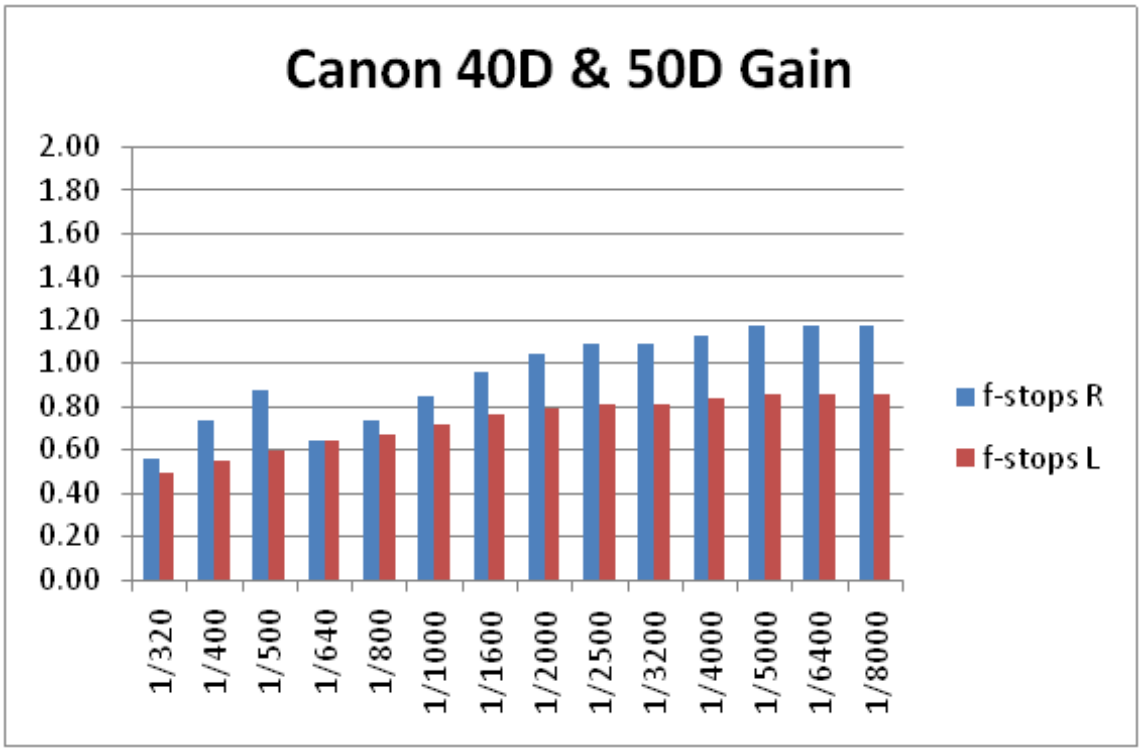





5D mk II - Gain
2.00
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
1/320
1/400
1/500
1/640
1/800
1/1000
1/1600
1/2000
1/2500
1/3200
1/4000
1/5000
1/6400
1/8000
f-stops R
f-stops L


20D - Gain
2.00
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
1/320
1/400
1/500
1/640
1/800
1/1000
1/1600
1/2000
1/2500
1/3200
1/4000
1/5000
1/6400
1/8000
f-stops R
f-stops L


30D - Gain
2.00
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
1/320
1/400
1/500
1/640
1/800
1/1000
1/1600
1/2000
1/2500
1/3200
1/4000
1/5000
1/6400
1/8000
f-stops R
f-stops L


Canon 40D & 50D Gain
2.00
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
1/320
1/400
1/500
1/640
1/800
1/1000
1/1600
1/2000
1/2500
1/3200
1/4000
1/5000
1/6400
1/8000
f-stops R
f-stops L

This product is covered under a warranty. For more information on this warranty and to register your product, please go to **www.PocketWizard.com/support**.

US Patent: 5,359,375 and Patents Pending