

## Bulb Ramping (updated)

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This article refers to [Promote Control firmware v2.47b](#). It is intended to serve as an interim reference manual until an instructional video is made.

Before you begin, make sure to go through Setup settings, checking everything, and calibrating your Shutter close lag with the camera you are about to use. This is very important for correct timing.

The basic workflow is to meter WITHOUT ND filters, and set your start/end exposures accordingly. The reason is that you will have to specify which filters to add ON TOP of your metered start/end exposures, and if you meter with filters and then tell Promote you are about to use them in the sequence, they will be applied twice. So again - meter WITHOUT filters. You can optionally meter with filters on, but then do not activate ND filter handling in Advanced screen (more about that ahead).

Note that with advanced bramping mode enabled, shortest of 1/20 and longest of (interval - buffering time) no more applies - yay, you can set whatever you want, like 1/200 to 10" with 5" intervals.

When you press START, you will see advanced screen that will a) require you to connect your camera over USB (for ISO checkups), and b) will then see what current camera ISO is, and calculate resulting exposures based on what it can do with ISO ramping off the current setting. If everything fits - you are good to go. If not - it will suggest what to do with ND filters. You can either not use them at all, start with them, end with them, or keep them through the sequence if you don't feel like babysitting your rig for hours. First you choose policy (none / start / end / keep), then start adding filters (up to three, 1-5 EV each) until Promote feels it can fit everything into what it can time well.

Then press START again - if you chose to use ND filters through the sequence, it will prompt you to take them off or put them on depending on your choice. Do that, press START one more time, and it will go off. If you chose "start" or "end" with ND filters, it will stop when it feels like ND filter can be removed or added respectively.

We prefer to keep the filters through the sequence, this a) resolves any issues with miscalibrated filters (they stay on all the time), and b) frees you from juggling them. And Promote will try to make up for darker scenes by raising the ISO, and since for modern cameras ISO 3200 is peanuts (and even higher is no problem sometimes), in most cases you can get away with keeping NDs on. Again, we cannot stress this enough - meter and specify start/end exposures without ND filters. OR if you meter and specify start/end with ND filters, do not activate ND filters in Advanced screen (set ND to "none"). Otherwise you will end up with ND filters applied twice, and that will make your

exposure too bright.

Last, but not least. With Nikons shutter close lags are much longer (you didn't forget to recalibrate your lags, did you?) - e.g. with the D3 the shortest exposure is around 1/5 second (yikes). Promote will work around that of course by further playing with ISO and/or asking for more ND filters, just wanted to let you know this is not a Promote Control issue, but rather a slow mirror on Nikons. Also note that Nikons will not provide image review while shooting, since rear LCD is disabled on Nikons while tethered over USB.