

SAVE-ON-FILTERS : CUSTOMIZING YOUR Z6

by James Cooper,

August 2020

Having purchased a Mini Matte box for use on my Nikon Z6 video rig that uses industry standard 4x5.65 inch filters, I looked around for suitable filters from coloured to neutral density that would allow me to vary the mood of video and stills and discovered buying professional filters can really take a toll on cash you might have looked to put into a new lens or accessories.

To start, the cost of 4" x 5.65" x 0.2" (101.6mm x 143.51mm x 4mm) can easily run upward of \$200 (USD) per filter and although made of high quality tempered precision glass they are commonly subject to the accidental drop, getting left behind or simply misplaced if working in a rush or among crowds. Damage and loss adds up for the photographer, so I decided to try a different approach using readily available coloured Plexiglas cut to size for the Mini Matte Box taking time to lightly sanded the edges of each pre-cut making them easier to sliding them in and out of the built in filter retainer.

Once I got the size right, ensured the filter slipped in and out of the matte box without binding and, I was able to keep static dust from accumulating ahead of attaching the matte box to the lens, which isn't difficult if you store your filters in anti static sleeves left over from electronic components or small anti-static zip lock bags which also serve to protect the surfaces of your home made filter from scratches, I set out to test the combination.

Once I got the design and minor mechanical adjustment of the filters right, I found I needed to preset a custom white balance in the Nikon as the neutrality of tinted Plexiglas produces a slight brown tint and not a true neutral grey, which in some cases wouldn't work for conventional cinematography but does create interesting mood results in video and stills photography. The custom white balance was easily overcome using a neutral grey card with the filter is inserted in the Matte Box installed. Go to 'custom settings' – 'white balance' and set your own to match your lighting conditions or adjust for the mood your looking for, make minor adjustments in settings to reach the tone desired, sharpness and other adjustments then save the new setting to your custom image settings. Don't forget to give each filter its own name in the camera. I also suggest putting a small label or piece of tape on each filter to remind you of the preset in camera.

Though not a perfect solution to thousands of dollars a videographer or photographer can spend on high quality filters, the solution works great for run and gun mood oriented video and stills. Results in black and white video using a dark red filter really adds mode a near no cost. Results are far better than I expected considering a cost that allows you to consider the filter disposable if you do manage to scratch, misplace or quite simply loose it along the way.

As said professional filters and do cost upward of \$200 each, filter kits into the thousand range with speciality filters at even more. In this experiment I made each filter in like colours, with varied tonal ND filters based on tints and percentages available in Plexiglas for under \$5 including stopping for coffee on the way back from the plastic shop. What a price difference and lots of flexibility.

Plexiglas and other rigid Acrylic comes in high quality glass replacement sheeting commonly used in display cases, sports safety barriers and many other applications, available in 1.5mm, 3mm, 4.5mm and thicker material I chose the 3mm thickness for its rigidity and easy sanding to finish the form needed to fit in the Mini matte box.

I would recommend for the price if your interested in changing your video moods or simply want to make a creative ND or coloured filters, take the time to go to your local plastics shop and have them make you a handful of cuts in the dimension above from their left overs, most plastic shops will be happy to sell you their leftovers for the cost of running them through a saw, they win and so do you!

End result, interesting undistorted images with interesting moods, maybe not for everyone though certainly a value added project you may find useful without spending thousands of dollars on expensive filters.

END