

The P+S technique

Liz Smith has used both the P+S Technik Mini35 and Pro35 on narrative projects. Here she outlines how to get the most out of the cine lens adaptors.

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Narrow depth of field with the P+S Technik lens adaptor.



If the groundglass is not spinning, it is clearly visible.

The Mini35 and Pro35 adaptors from P+S Technik have really made using HD and HDV cameras for drama a much more viable option for cinematographers. Much of my frustration working with digital camera packages in the past has been related to lack of depth of field. Being able to draw the viewer's attention to a specific part of the frame can be very important for narrative storytelling, and these adaptors really make that possible with HD.

In the past few months, I have worked on three projects with these adaptors, each time with a different camera: the Sony HDW F900R with the Pro35, and the Panasonic HVX200 and JVC HD100 with the Mini35. On all three shoots we used a set of Zeiss Superspeed T1.3 lenses. You lose a couple of stops with the adapter, so it is advisable to get fast lenses with the kit.

The Pro35 is designed for use on the bigger 2/3in chip cameras, whereas the Mini35 is for the 1/3in chip cameras. The Pro35 has a B4 mount, and there is a choice of PL, Panavision, Nikon or Canon mounts for the front element. The Mini35 has different connecting kits on the back for each camera, and it can work with the JVC HD100, Panasonic HVX200 and DVX100, the Sony Z1 and PD170, and the Canon X-series.

Prep time

The adapter is a bit fiddly to put on to the camera, so I would always recommend you get it shipped already built from the rental house – or plan for some extra prep time. I found myself building it in the back of the van in poor light and under time pressure recently, and I dropped one of those fiddly little screws on the floor. You should have heard the expletives! Depending on the camera you will also need to check the backfocus, so proper prep time is absolutely essential.

Both the Mini and the Pro35 work in the same way: the image is projected onto a ground glass inside the adapter, and the ground glass is in exactly the same position as the film plane on a 35mm camera, which means the characteristics of the lens don't change in any way. The angle of view and the depth of field is exactly the same as if you were shooting with a 35mm camera. The ground glass also oscillates, so you don't see any of its structural detail in the image. If you don't run the motor that makes the ground glass oscillate, you get a static grain look (above right).

For the short film *Next*, produced by Fearlessly Frank Films and directed by Brett Goldstein, shallow depth of field played a very important role. As the film progresses the couple, played by Joel Beckett and Joanna Bobin, get emotionally and physically further and further apart. We emphasised this in-camera through lens choice and the use of narrow depth of field. At one point in the story, when the characters are talking to each other in a traditional over the shoulder shot, the director purposely chose to keep the man's shoulder in focus and the woman, who was facing the camera, very soft (above). It is a powerful moment in the film and it could never have been achieved with the camera alone.

We encountered one difficulty on this shoot due to the adapter, and that related to the greenscreen. On shots where the greenscreen was in very soft focus in the background, it made it much harder to key because the green bled into the character, and a simple key made it look as if he were swimming through the frame.

Also, with the Pro35, it is worth having at least a 14in HD monitor on set. There is a dial on the side of the adapter that regulates the spin on the ground glass, and you need to check for a 'swimming effect' on the monitor each time you change the lens. If the 'swimming effect' is there you need to adjust the dial until you lose it. It is a subtle thing, but when it is played back on a big screen it is perceptible.

There was a surprising amount of latitude in the footage, and we were able to do a lot with it in the grade. Clearly it does not have the same latitude as film, and it is at this point in the process that you really see the benefit of working with the bigger HD cameras with larger chips. That said, I was extremely happy with the footage we shot for *Furnace Four*, a Furnace Films Production directed by Haydn Butler. We were shooting with the HVX200, the Mini35 and a set of Zeiss superspeeds. This package is probably the best option for a low-budget short or pop promo because you get all the benefits of working with a 35mm lens as well as Panasonic's DVCPRO HD 1080 format, and yet it doesn't cost an arm and a leg to rent. We added a focus dolly to our kit, and combined with James Lees' great set design we had everything we needed to accomplish a sophisticated looking short film. Using this camera also meant we were using a tapeless workflow. The need to record to tapes was eliminated, so we were already dropping the footage into the timeline while we were on set. I would add though that if you are going to be working handheld with this camera, it is worth getting the handheld rig that comes as an accessory with the Mini35 adapter – otherwise it is a bit like operating a brick.

The other package I have worked with is the JVC HD100 with the Mini35 and the Superspeed lenses. From an ergonomic point of view, the JVC is by far the best built camera in its range. Unlike some other adaptors, with the Mini35 you remove the standard Fujinon lens entirely, so the only glass the image has to be projected through is the high quality 35mm prime lens itself. That said, it is hard to judge if this gives any significant gain in the image quality because there are so many other variables, such as the JVC being 720 and Panasonic being 1080, and the Sony Z1 being 1080, but not recording true 25p; however, removing what should be the weakest link in the optical chain logically has to help.

As with all HD and HDV cameras, you have to be careful with highlights, and in particular hot windows. I've been caught out a few times using 1/3in cameras with overexposure and underexposure problems in post, such as being unable to pull back any detail in the grade on overexposed shots. Similarly, always make sure there is a hint of light even in your darkest corners – it can be very subtle – because I've found that when I've tried to pull up the blacks they go milky. In fact, I'd say that lighting for the JVC and similar cameras is harder than lighting for film because the limited latitude means you have to fill in more areas and think much harder about balancing the light in your frame.

There is no question that the 35mm adaptors are wonderful pieces of kit. I would find it hard to go back to shooting dramas and promos on digital cameras without them.



Liz Smith

Liz Smith trained at The London Film School but when she left she quickly realised she was going to have to embrace the new emerging digital technology if she was to be able to work competitively as a freelance cinematographer. She has since shot shorts, promos and independent features on a variety of formats. She also runs an audio visual production company, Film38 Ltd.