

Forge TV - Technical Innovation

Despite live broadcasts being the main content produced by Forge, our technical setup was complicated, challenging for new members to use and generally not brilliant.

That all changed at the start of 2018, as we finally secured the funding to rebuild our livestreaming system. We already owned the necessary components including a PC, ATEM and other equipment (cameras, cables etc). The components being separate wasn't perfect as it took significantly longer to get to venues, increased the risk of stuff getting lost or broken and made it harder for members to help out.

As streams were happening so regularly, we were desperate to build a much more reliable and straightforward system.

The home of this is our flight case - known colloquially as 'The Box'. Instead of having to take several pieces of equipment to the site we're streaming from, everything is now contained within The Box. As part of the build, we rack mounted components, whilst adding proper power distribution, a cable patch panel and local networking. Our XR12 and X-Touch audio mixing solution means we're no longer reliant on our friends at Forge Radio to mix audio for every stream we do, and the addition of a Hyperdeck has allowed us to start incorporating replays - something that has massively raised our production value, especially during coverage of Sheffield Varsity.

This transition has also made live production much more inclusive to new members and allowed us to focus on more original and pre-recorded content. Members can set up and be ready to stream in under 10 minutes after a brief introduction (trust us we've timed it), rather than a more technical 'lecture'. This has made Forge TV much more accessible and inclusive. The fact that our main type of content went out live meant it was something that everyone in Forge needed to know how to do in great detail. People have been put off by the complexity and more technical nature of it in the past, so the move to the box has improved this hugely. People are much more eager to get involved knowing that livestreaming is as straightforward as plugging in cables, turning on the PC and bang - off we go. The Head of Technology is now the main person focusing on the actual workings of it, freeing up the committee's time to work on content more focused to their section.

We realise that not everyone finds it difficult to set up a livestream, but when you're new and trying to get involved it can all seem a bit daunting and off putting. Even members of the committee can find it a bit difficult to understand, especially if you're someone who's more focused on content creation and creativity.

We're always planning for the future and it has plenty of space and options for potential upgrades. Overall this has revolutionised our livestreaming capabilities - in terms of accessibility, performance and overall benefit to Forge TV.

Figure 1 – The control side. Here sits the PC, ATEM and other Blackmagic components and the cooling system. A 1U gap remains at the top for future expansion.



Figure 2 – The I/O side. Here is where the majority of connections, both internally and externally, are situated. There are separate patch panels for SDI and HDMI cables – brushed panel is for any other cables we may need. The network switch and XR12 also reside here.

