



Smart Studio™
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Case Study

TECHNICOLOUR CARDIFF STUDIO PROJECT



INTRODUCTION

In mid 2019, UK post-production facility Technicolor took a lease on a space in their client Wolf Studios' production stages in Cardiff, Wales.

The goal was to create an on-site audio operation capable of hosting ADR sessions, mixing, dubbing and playback.

The requirement was to deliver audio post-production services on a shortened timescale and to uncompromised acoustic standards.

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T: +353 (0) 1 517 5969 // jim.dunne@smartstudioinc.com



The Cardiff studio would be connected directly to Technicolor's HQ in Lexington St, London. As a consequence, a high standard of acoustic performance and continuity was a minimum requirement, i.e. the two rooms had to match.

Having contacted Smart Studio, the range of advantages presented by an off-site modular system were outlined; Rapid installation, fixed contract price, ease of integration of services and on-time delivery.

In August 2019, Smart Studio began the installation of an audio control room located within Wolf Studios in Cardiff. The project entailed the off-site manufacture, shipping and installation of a room, dimensions 5.3m wide, 7m long with a finished floor to ceiling height of 2.6m.

The room was installed in a corner of a large warehouse-style stage which was sectioned off to create a space for the studio. Being a ground-floor installation, it was possible for Smart Studio to pre-form the wall modules in advance at their base in Dublin.

It was then possible to ship the prefabricated modules directly to site and simply position them on the pre-installed isolated floor. This approach created a major lead-time benefit, which was far shorter than any

traditional build.

Within 14 days of starting on-site, the complete shell of the studio was fully installed: Isolated floor, wall modules and decoupled ceiling. Included in the shell was the integration of a low noise air conditioning system.

The electrical install – also an integral, plug-and-play element of Smart Studio's approach, was completed in a single day, eliminating the need to wait for electrical contractors' availability.

Included in the client specification was a monitor wall to house speakers and an acoustically transparent projection screen. While this element is client-specific and not part of the standard package, Smart Studio have the capability and flexibility to accommodate any such requirements.

Smart Studio was completed on site within 35 working days. Included in the shell build were integrated acoustic conditioning, power and lighting, monitor wall, mounting positions for wall and ceiling satellite speakers, cable runs and stretched fabric. All the essential elements for a professional audio dubbing, mixing and VO recording environment.

With the project complete, acoustic testing was undertaken to verify the



performance of the room.

A cornerstone of Smart Studio’s acoustic conditioning strategy is to deliver a room that does not resonate at low frequencies. This approach translates to Total Bass Control, TBC for short.

The target RT60 in the 63Hz octave band was set in the range of 0.25 and 0.32 seconds. Achieving such controlled RT’s in the more problematic low frequencies creates the knock-on effect of eliminating

related issues in the mid/upper frequency bands.

This attention to detail in the low frequency octaves is augmented by the use of 2D diffusion in the mid/upper frequencies. The objective is not to “kill” the room acoustically, a common error in traditional studio design which can create an unpleasant and tiring creative environment. 2D diffusion retains the necessary acoustic energy in the room but in an accurate controlled way.

The results of the RT measurements are detailed in Table 1 below.

OCTAVE BAND	63	125	250	500	1000	2000	4000	8000
MEASURED RT60	0.32	0.22	0.16	0.17	0.18	0.14	0.14	0.14

Table 1, Measured RT60 Test Results.

Technicolor’s on-site facility at Wolf Studios commenced operation in September.

On time, on budget and sounding like it should, matching the existing acoustic performance of the HQ facility in London.



As a potential customer, the team were looking for a repeatable design, which was quick to implement, where the high performance standards of the room was of paramount importance.

The Smart Studio team really excelled themselves on this project. Right from the get-go we established a great working relationship and their speed of response was a key factor in the overall project success.

The build time on site was absolutely amazing compared to traditional building methods for the same style and size of recording studios. It has really opened my eye as to what can be achieved with a well thought-out, modular system. Plus, their ability and willingness to work hand in glove with other contractors made it a very manageable project.

In the end what really mattered was how well the room integrated with our existing mixing studio facility in Lexington St, London. Our Customers internally from the sound department and externally were delighted with the sound and feel of the room. Where the two facilities simply work together day in day out, no issues what-so-ever.

Overall, it was a great working experience which has really turned me on to the benefits of a modular approach which is built off site.



Philip Crewe Project Plan Partners
- Technicolor Wales Studio

For further information on the Smart Studio modular design/install approach to the delivery of professional audio facilities please visit our website www.smartstudioinc.com. Or call us on +353 (1) 517 5969.