



Churches & Places of Worship

# Live Streaming System at Liverpool Metropolitan Cathedral

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*Katie Lucas, Liverpool Metropolitan Cathedral*

## The Requirement

Adlib has a long-standing relationship with Liverpool's Metropolitan Cathedral of Christ the King where it has provided technical services for a wide range of live events in the past.

As places of worship were forced to close at the start of the national lockdown resulting from the Covid-19 pandemic, Katie Lucas, reached out to Adlib to get support with taking their services online. At first, it was expected that this would only be a temporary measure and so Adlib's rental department, led by Tom Edwards and ably assisted by Lighting & Video Technical Manager, Nick Whitehead, swung into action. They provided a package comprising a Panasonic AG-DVX200 camcorder, a Blackmagic Web Presenter and a MacBook Pro running OBS, along with full training and support for the Cathedral's team.

As the weeks went on, it became clear that the live streams were popular with a broader audience than just the Cathedral's regular congregation with over 5,000 views a week. Even as the Cathedral planned its reopening in a 'COVID-secure' way, it was felt that streaming would remain an important channel for their ministry and the decision was made to invest in an installed live streaming system.





Though the rental system was ideal on a temporary basis, it was not suitable for permanent installation. The tripod-mounted camera was subject to movement or even theft; cables, though neatly run, could pose a hazard once the general public were readmitted; and the Web Presenter, though convenient, limited the resolution of the stream to 720p.

## The Solution

Adlib's rental and installation teams worked together to design a system which would be functionally similar to the rented system and even improve on it in several respects. With the readmission of an assembled congregation, services would move to the High Altar, rather than the smaller Chapel of the Blessed Sacrament in which earlier streams had been carried out. With a larger area to cover, a single wide shot would no longer provide adequate detail and, as a manned camera would create an obstruction, a Panasonic AW-HN40 PTZ camera was specified. A second HN40 was added behind the High Altar, providing views into the Chapel of the Blessed Sacrament and shots of the choir and organist. Both cameras made use of the NDI|HX protocol and were PoE+ powered, allowing them to be installed with just a single cable.

With a congregation now present, it was essential to ensure that the unique ambience of the Cathedral, and indeed the organ, which was to be used again for the first time in months, be captured for those watching and listening remotely. Adlib installed four DPA 4098 microphones, with two as general ambients aimed at the congregation and two directed at the organ and still-empty choir stalls. These were processed and mixed



with a mono sum mix from the Cathedral's sound reinforcement system, before being transmitted to the production gallery via Dante.

The scale of the Cathedral posed special challenges to the installation team. With all audio inputs and one of the two cameras coming from a point almost exactly in the centre of the circular building, Adlib needed to find a route for cables some 97m to the production gallery, which was established on a previously unused balcony overlooking the Sanctuary from three storeys up. Adlib's installation designer, Tim Robinson, specified Cat7A cable with especially large 0.5mm<sup>2</sup> (22AWG) conductors to ensure that not only data, but also PoE and any analogue signals which may be sent down spare cables in the future, would make the journey intact.

An Elgato Streamdeck XL was provided and configured by Nick Whitehead to provide intuitive control of OBS and the cameras from a single, tactile interface. Dell supplied the control laptop, into which both cameras, via NDI|HX and audio, via Dante Virtual Soundcard, were brought straight into OBS on a single network cable, minimising format conversions, outboard hardware and cable.

The network-based approach was, in part, chosen with a view to the future: additional cameras and audio sources can be added with minimal changes to infrastructure. Likewise, additional outputs can be added, such as use of the in-house microphones (including the ambients) by visiting productions and broadcasters, simply by soft-patching the Dante streams; or a last-minute request that the organist be able to view camera feeds from the



organ console. Rather than requiring the installation of a video matrix and additional cable, this requirement could be met simply by installing Newtek's free NDI Tools software on an existing laptop.

## The Result

The Metropolitan Cathedral is now able to extend its reach far beyond Liverpool and engage with viewers anywhere in the world.

This project showcases the benefits of working with Adlib; a company that can offer all aspects of audio, lighting, and video for both rental and installation.

Katie Lucas said "Adlib has provided a fully bespoke streaming package that is user-friendly and effective. The whole team has been really professional and available to offer advice and solutions at short notice. It has been a pleasure working with Adlib and I wouldn't hesitate to recommend their services."

It was the close cooperation and sharing of experience between the rental and installation departments that made this project so successful and resulted in a seamless transition for the Cathedral from a rented solution to a permanent system that will grow with their requirements in the future.

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