

Blairgowrie Parish Church AV Upgrades Budgetary Proposal

Revision 5

29 August 2025 - Alastair Deacon

Exec Summary

Toasty Audio is delighted to provide this proposal to Blairgowrie Parish Church for a wide range of AV upgrades to support its congregation into the future.

This proposal follows the outline of requirements issued by Blairgowrie on the 1th July 2024.

We have proposed an “Office/Hotel” grade WiFi network is installed throughout the building, with centralised management features for secure and public access throughout the building.

A complete replacement of the sound system is outlined including a variety of options for the mixing desk style to suit budget and expandability. The speakers feature a “line array” design to project crystal clear sound evenly balanced throughout the sanctuary.

A video streaming solution is offered with remote control cameras and a very easy to use camera and video streaming controller which will allow one-button access to going live on YouTube (or Facebook). The cameras feature a x20 optical zoom to give clear, HD pictures from around the sanctuary. This solution has been installed in over 80 churches over the last few years.

A display system using commercial grade displays with full HD digital video cabling is proposed to show words and videos in the sanctuary. This is complemented with an HDMI matrix switching system for flexible video routing.

The system has been designed by Alastair Deacon, who has been designing and running church based AV systems for over 35 years. All electrical work will be undertaken by Alan Rue, a qualified electrician as well as AV installer with over 25 years experience.

Full training and support will be provided to ensure that Blairgowrie can always get the best out of the solution.

At Toasty Audio, we pride ourselves on the quality of our cabling and installation work. Church buildings are not the most modern, and all attempts are made to conceal cabling.

We have many happy church customers who can provide references for the work we have completed. We would be happy for you to talk to any of our customers

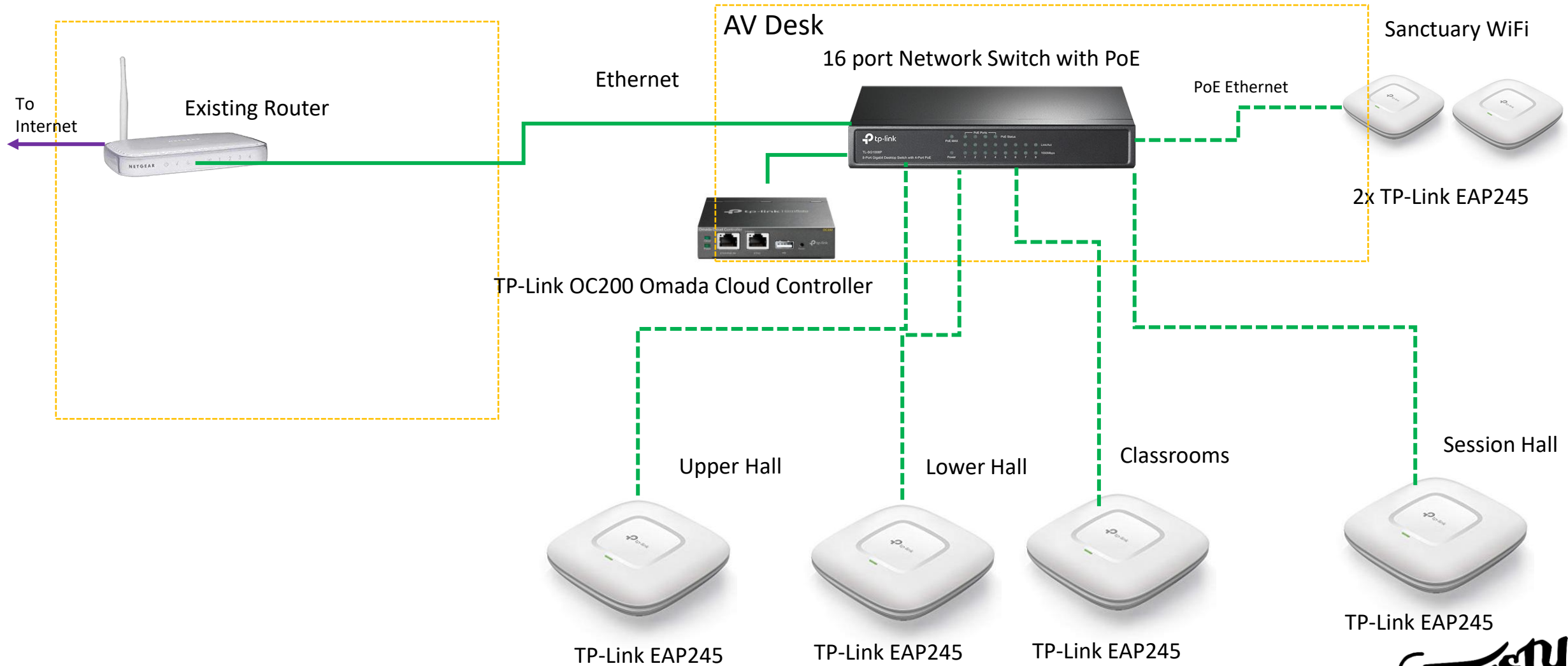
The proposal provides a range of options, and we would be happy to answer any questions and meet (in person or by Zoom) with the team at Blairgowrie to go over individual items of the proposal as we are aware that these can appear to be complex systems for people.

Regards

A handwritten signature in black ink, which appears to read "Alastair Deacon".

WiFi and Networking

Network and WiFi Solution



Solution Description

- The existing Internet connection and router will be connected to a PoE (Power over Ethernet) switch at the AV desk or central location in the church
- From there, six “Business Class” WiFi access points will be installed in the throughout the building.
 - Sanctuary x 2
 - Upper Hall x 1
 - Lower Hall x 1
 - Classrooms x 1
 - Session Hall x 1
- Using PoE (Power over Ethernet), there is no requirement to have mains power at each access point.
- An additional TP-Link OC2000 Omada Cloud Controller will manage the full WiFi network
- Allows management of secure private WiFi and public WiFi with multiple login options (Facebook Wi-Fi, SMS login, Voucher)
- NOTE: It is recommended that “Family Content Filtering” is enabled with your existing Internet provider
- You should also check the bandwidth available from your supplier. High Speed Fibre (>30mbps) is recommended



The following summary price is provided for the building wide WiFi.

A full breakdown of pricing is provided in the Bill of Materials



Option	Price
Building wide WiFi	£2,903

Sound System Upgrade

Mixing Desk Requirements

The current mixing desk is an analogue Soundcraft EPM12 which provides 12 mic inputs and 2 stereo inputs. This mixer is at capacity and does not provide the flexibility to support streaming and expansion for further microphone channels.

A new mixer should support 16 or more microphone inputs, and multiple outputs for streaming. It is recommended that a digital mixer is selected due to its programmability and ability to create pre-programmed mixes to simplify operation.

We have selected three suitable mixers to consider:

- Allen and Heath QU5: This is the brand-new mixer for Allen and Heath for 2025. With 38 channels, Buses and 17 Faders. The base model had 16 mic inputs and 2 stereo inputs. We have provided a second option for this model to add a digital stage box expander allowing for up to 32 inputs.
- Allen and Heath SQ5: This compact mixer provides 24 local inputs and is expanded with an additional 16 inputs using a "digital stage box" providing a total capacity of 40 inputs. The SQ5 supports further optional expansion up to 48 channels. The Allen and Heath SQ5 is the current benchmark for entry into professional mixing desks.
- Allen and Heath CQ18T: This is an ultra-compact, 18 input, digital mixer with touchscreen control. This is one of the best and easiest entries into digital mixing for small installations.

Should Blairgowrie believe that 16 channels is sufficient – then the CQ18T with touchscreen is an excellent choice.

If you require future proofing up to 32 channels, the QU5 is the recommended solution.



Current Mixing Desk

Option 1: Compact Digital Mixing Desk

Allen and Heath QU5 Digital Mixing Desk

- This is the brand-new offering from Allen and Heath for Q2 2025
 - 96kHz FPGA Processing
 - 38 Inputs to Mix (32 Mono/Linkable, 3 Stereo)
 - 12 Mixes (6 Mono/Linkable, 6 Stereo) + LR
 - 4 Mono/Linkable Matrix
 - 6 Stereo FX Engines + Dedicated Returns
 - 8 SoftKeys
 - All “moving faders”
 - Fully programmable
 - Save all “scenes and settings”
 - Full dynamic control on all channels
 - Inbuilt Digital recorder – record direct to SD card
- Control surface with 17 faders



Allen and Heath QU5

Option 2: Compact Digital Mixing Desk – With Expansion

Allen and Heath QU5 Digital Mixing Desk

- This is the brand-new offering from Allen and Heath for Q2 2025
 - 96kHz FPGA Processing
 - 38 Inputs to Mix (32 Mono/Linkable, 3 Stereo)
 - 12 Mixes (6 Mono/Linkable, 6 Stereo) + LR
 - 4 Mono/Linkable Matrix
 - 6 Stereo FX Engines + Dedicated Returns
 - 8 SoftKeys
 - All “moving faders”
 - Fully programmable
 - Save all “scenes and settings”
 - Full dynamic control on all channels
 - Inbuilt Digital recorder – record direct to SD card
- Control surface with 17 faders
- **Supplied with digital stage box for additional 16 microphone inputs**



Allen and Heath QU5



16 Input Digital Stage Expander

Option 3: “Pro” level Digital Mixing Desk

Allen and Heath SQ5

- Entry level “Pro” desk
 - 24 channels expandable to 48
 - 36 busses
 - 96Khz processing
 - All “moving faders”
 - Fully programmable
 - Save all “scenes and settings”
 - Full dynamic control on all channels
- Digital “Stage Box” with 16 inputs and 8 outputs
- Control surface with 16 faders



Allen and Heath SQ5



16 Input Digital Stage Expander

Option 4: Touch screen Digital Mixing Desk

Budget- Allen & Heath CQ-18T Ultra-Compact Digital Mixer

The Allen and Heath CQ-18 features:

- 18 Input Digital mixer (8 mic, 8 Line In/Radio Mic In, one stereo) with wireless
- Touchscreen control
- Remote tablet control (tablet not included)
- Detailed parametric equaliser on all channels to tune and minimise feedback
- Adjust the sound from anywhere in the room
- Automated Feedback Assistant
- Automated Mix Assistant for speech applications
- Inbuilt digital recorder to USB/SD
- Inbuilt effects for reverb, etc
- Master output eq and graphic equaliser to tune system to the sanctuary
- Main and up to 6 Aux outputs

Allen & Heath are the leaders in mid and high-end digital mixers.

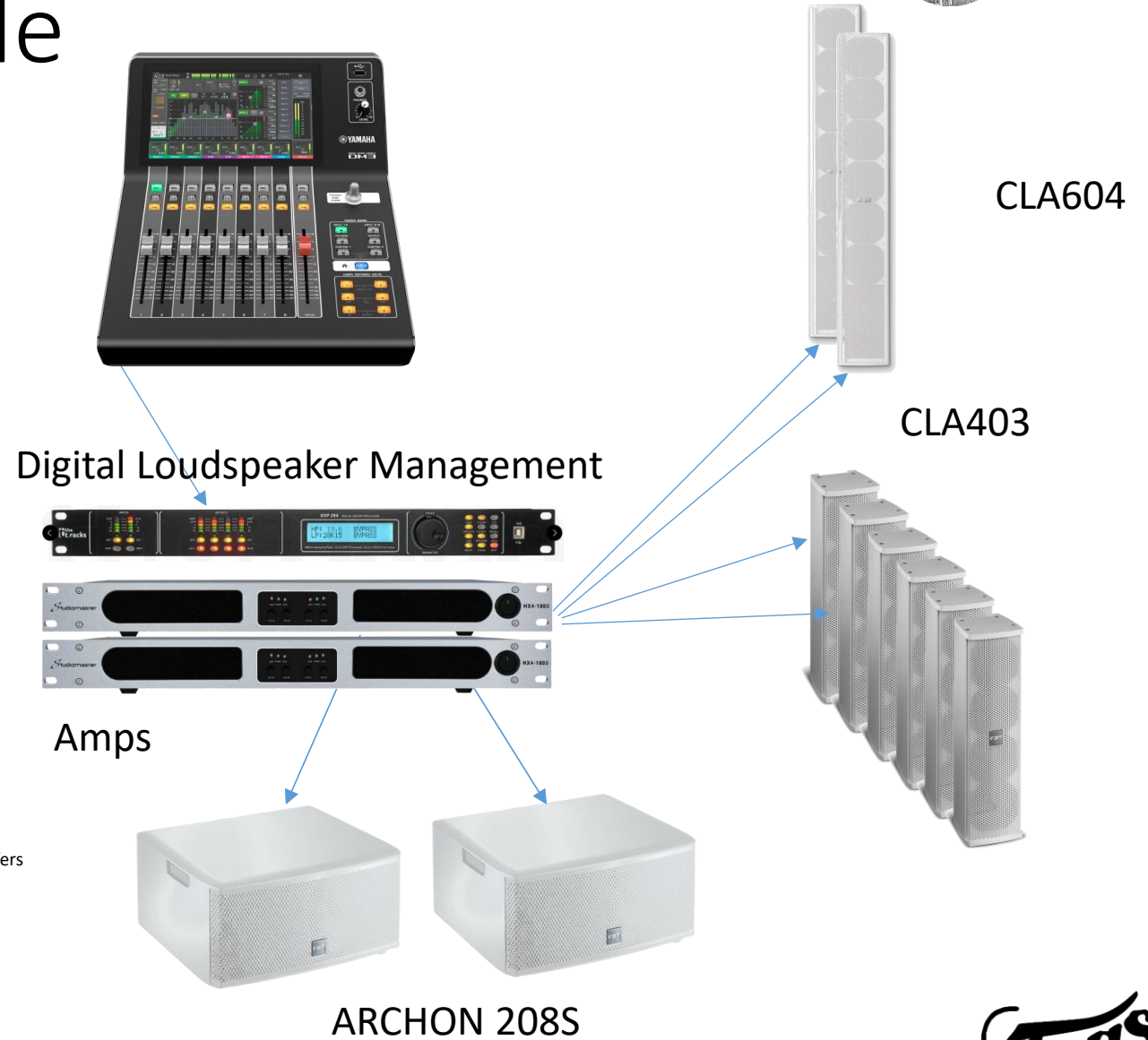


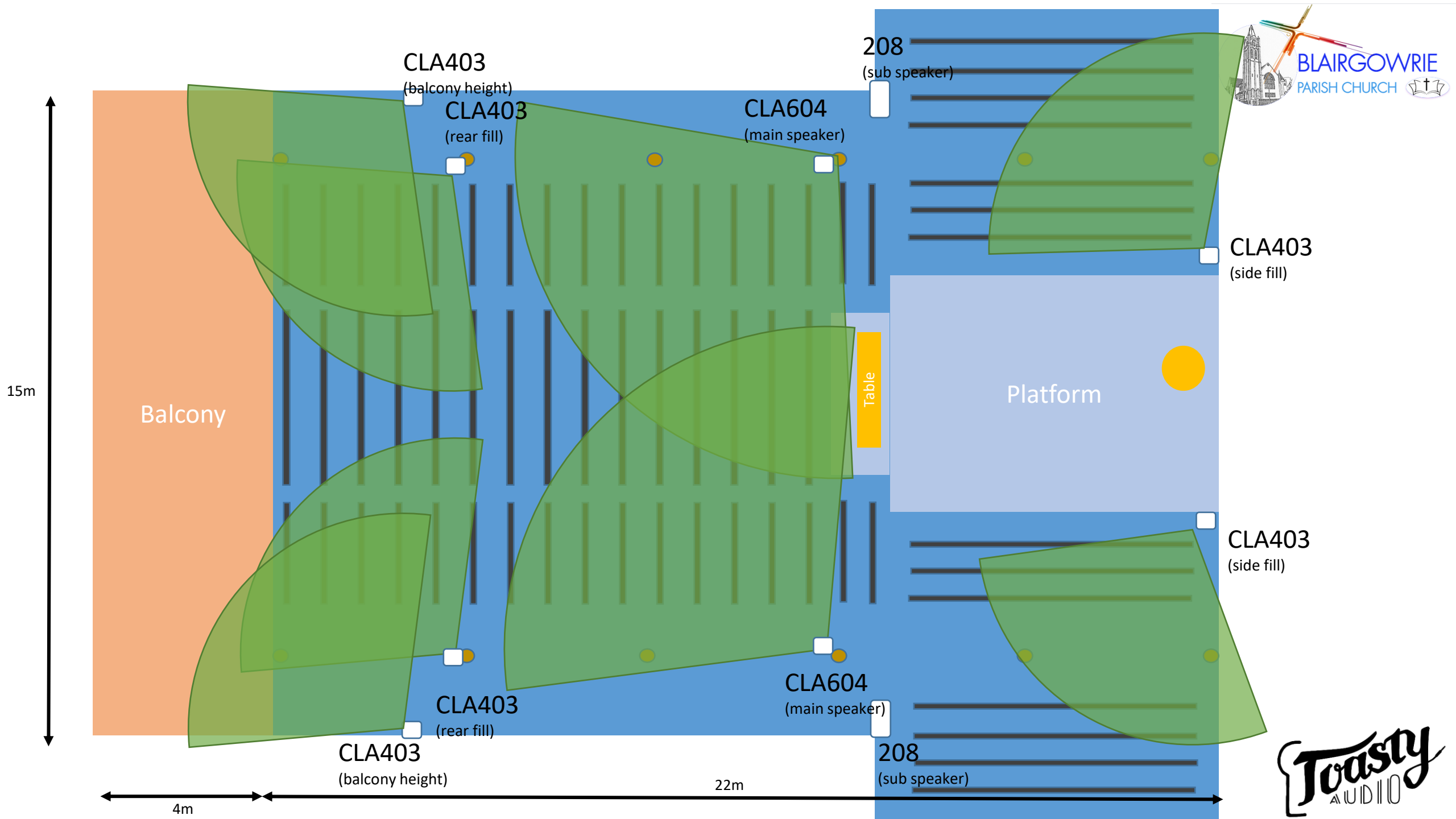
Allen and Heath CQ18T

Loudspeaker Upgrade

FBT Vertus Speaker System

- 2 x CLA604 Column Speakers
 - Mounted at the front either side of the sanctuary
 - 6x4" mid speakers, 4x1" tweeters
 - 100° Horizontal and 20° Vertical dispersion to allow control of spill and reverberation
- 6 x CLA403 Column Speakers
 - Fill in for the balcony and under the balcony
 - 4x3" mid speakers
 - 110° Horizontal and 25° Vertical dispersion to allow control of spill and reverberation
- 2 x ARCHON 208S Subwoofers
 - Compact subs with 2x8" speakers, 600w
 - These can be placed discretely on the floor
- Speaker Management – t.racks DSP408
 - Provides all speaker management
 - Crossovers
 - Room equalisation
 - Speaker protection
- Studiomaster HX4-1800 and HX4-1000
 - 4x450w and 4x250w amplifiers delivering power to each of the top speakers and the subwoofers









Loudspeaker Upgrade

FBT Vertus Speaker System

- The main CLA604 column speakers will be mounted on the columns at the front of the sanctuary at around standing head height. These are high quality "Line Array" speakers which ensure sound is projected directly to the congregation and minimises any spill into the ceiling area.
- This cuts down on any reverberation to aid clarity throughout the sanctuary
- A pair of subwoofers are discretely placed at the sides of the sanctuary
- A pair of smaller CLA403 column speakers will be mounted either side of the organ pipes to provide coverage for the pews to the sides
- A pair of smaller CLA403 column speakers will be mounted on the columns towards the back to provide even volumes throughout the pews
- A pair of smaller CLA403 column speakers be mounted on the walls at balcony level to provide coverage for the balcony
- The digital speaker management system also handles all room equalisation and any delays required for the over/under balcony fill speakers
- This is a high quality system for both speech and full range music
- A computer simulation of the speaker positions and coverage are provided in the following slides

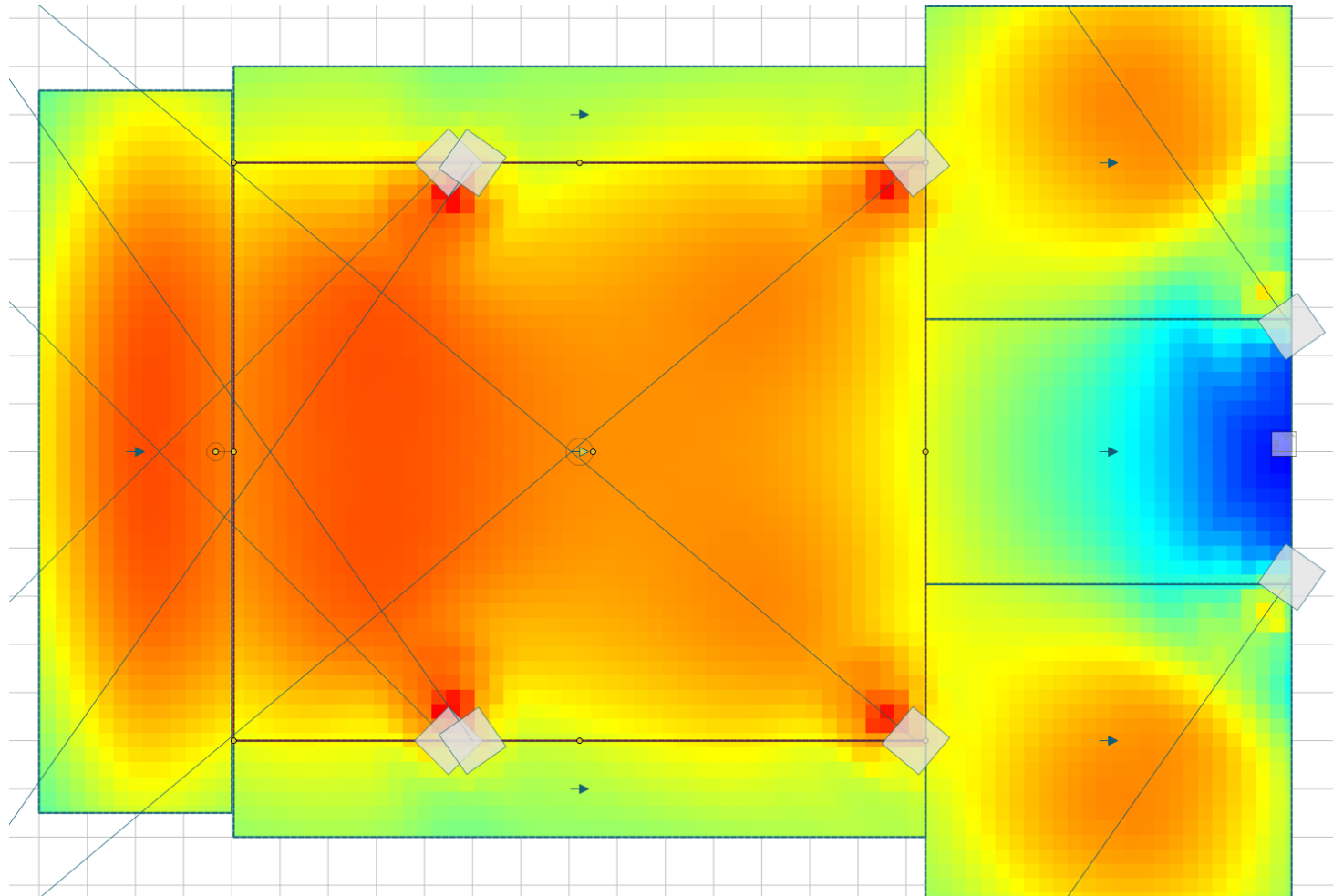
Bruce Memorial,
Cambusbarron



Glasgow City
Free Church

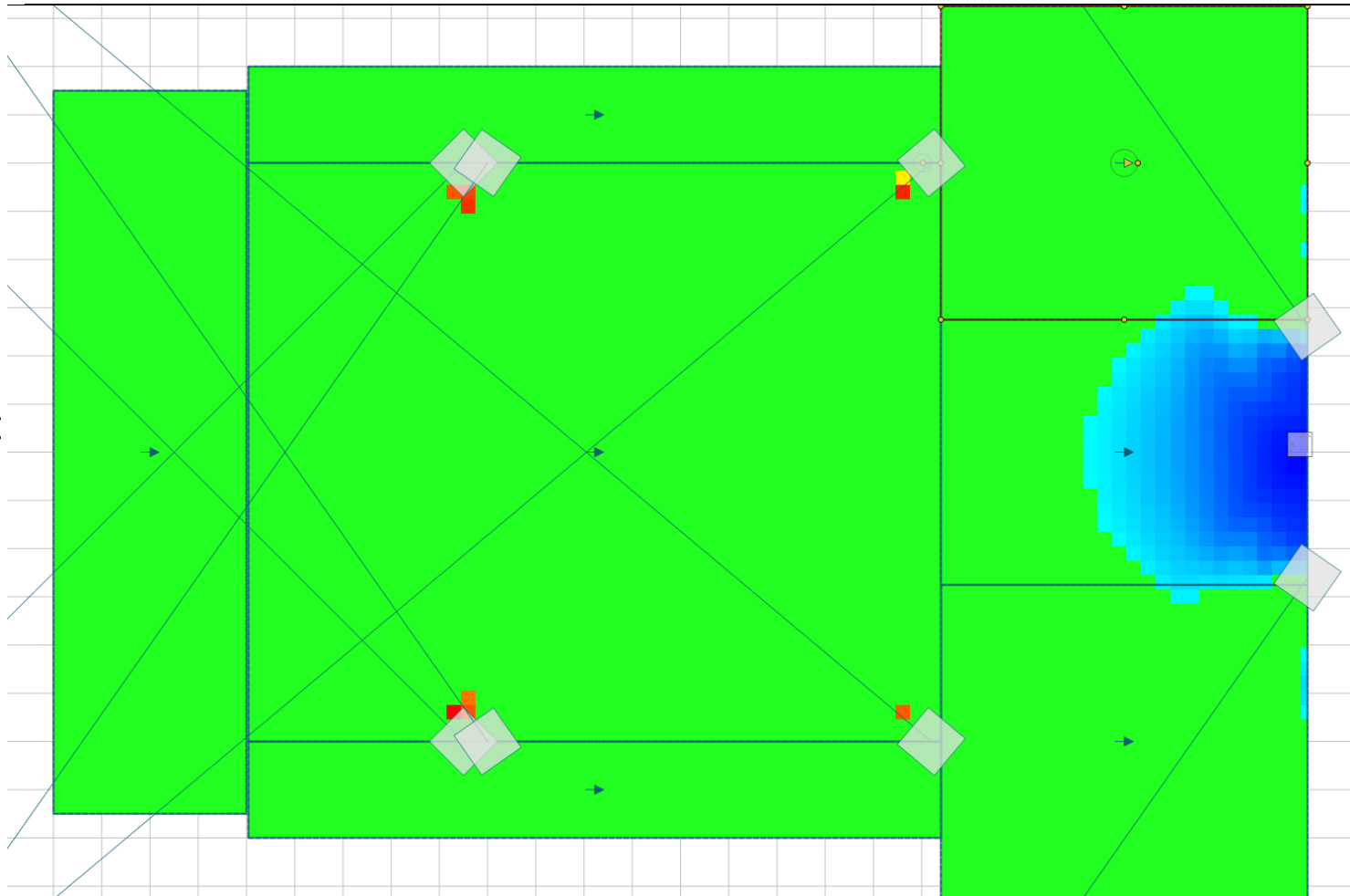
Loudspeaker Analysis: Volume Levels

- This computer analysis shows that the suggested speaker layout gives good volume throughout the sanctuary
- We are trying to reduce speaker volumes on the main platform area – as too much volume there can make eliminating feedback more difficult (feedback is caused by microphones picking up their own sound)
- Care needs to be exercised using tieclip style microphones far forward in the platform area and some EQ may need to be added and master volumes restrained. Head-worn microphones would be recommended here
- Microphones on the communion table should be directional “cardioid” style to give good performance
- The high level balcony speakers will give good volumes to the balcony
- The front speakers at the organ are mounted slightly higher and angled down. This reduces spill onto the platform and directs sound towards the pews at the side



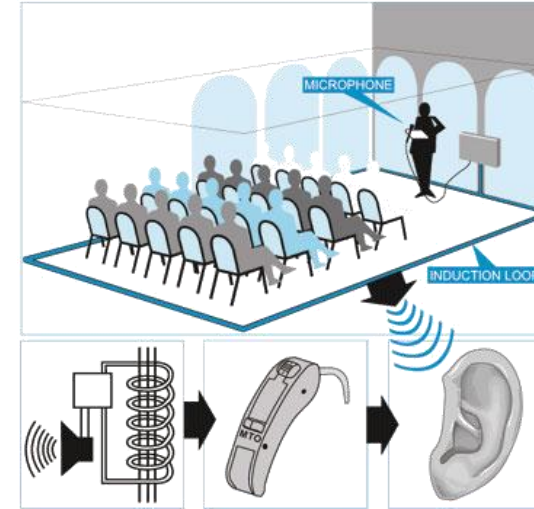
Loudspeaker Analysis: Relative Volume

- This computer analysis shows the “relative” volume throughout the sanctuary
- Green indicates the area where the sound is within $\pm 3\text{db}$ of the average
- This shows that no areas of the sanctuary will be too loud or too quiet relative to each other
- Again this shows that there is speaker coverage towards the front of the platform area meaning that the correct types of microphone should be used there, especially if we are cranking up the volumes
- For normal church service volumes – there should be no real issues



Loop System

- We will replace the old loop amplifier with a modern equivalent. This will be connected to the existing loop wire and will be tuned to provide best performance



Radio Microphones

- Wireless – JTS Range
 - JTS R-4, four channel mic receiver with built in antennae distribution
 - 2x R-4TBM radio packs + headset mics
 - 2x JSS-4B handheld radio mics
 - 2x CH-2 rechargeable docking stations, store and automatically charge microphones between services
 - JTS Active Paddle Antenna Pack, ensures great reception throughout the sanctuary



Vocal/Instrument Microphones and DI Boxes

Sound systems are only as good as the mics and inputs used. A selection of recommended microphones can be provided:

- 2 x Rode M3 Condenser: This is a good sounding microphone which is recommended to be used overhead acoustic and orchestral instruments and other general purpose micing
- 2 x Shure SM58: Industry standard dynamic vocal mic, used by singers all over the world
- 1 x JTS GM-5218: Supercardoid gooseneck mics for the lectern

To allow for the connection of the piano, acoustic guitar and other sources, we will provide two DI Boxes. The DI Boxes allow for unbalanced jack style instruments to be plugged noiselessly into the multicore to the AV desk.

A new set of mic stands can be provided



Rode M3

JTS GM-5218



Shure SM58



DI Box

Audio System Installation

The selected mixing desk, microphones and loudspeakers will be professionally installed within the sanctuary.

We recommend a clear desk space of approximately 2400mm width to support the volunteers operating sound, visuals and stream.

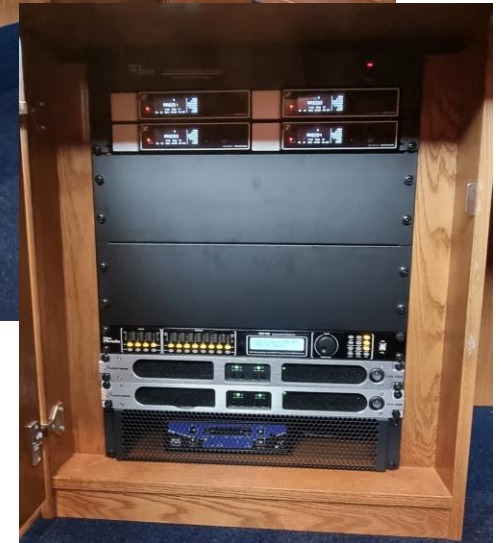
The Toasty team will install all equipment, cabling and wiring to the front of the church. This will either be the 16 channel analog “stage box” or the digital stage box depending on the option selected.

Toasty will provide all audio racks under the desk to house the equipment.

All audio equipment will then be “tuned” to the sanctuary acoustics and default audio scenes created on the mixing desk.

Full training and support will be provided at handover.

Should you be interested in ready made “church AV” furniture, we recommend contacting Turning Leaf for an excellent range of desks. Should you select a desk from their site, Toasty can coordinate this as part of the project. See <https://www.turning-leaf.org/furniture/church-furniture/mixing-desk-cabinets-church-furniture/> for details.



Turning Leaf
Church AV desk at
Milngavie St Pauls

The following summary prices are provided for the three main sound system options, including new mics, loop system and installation.

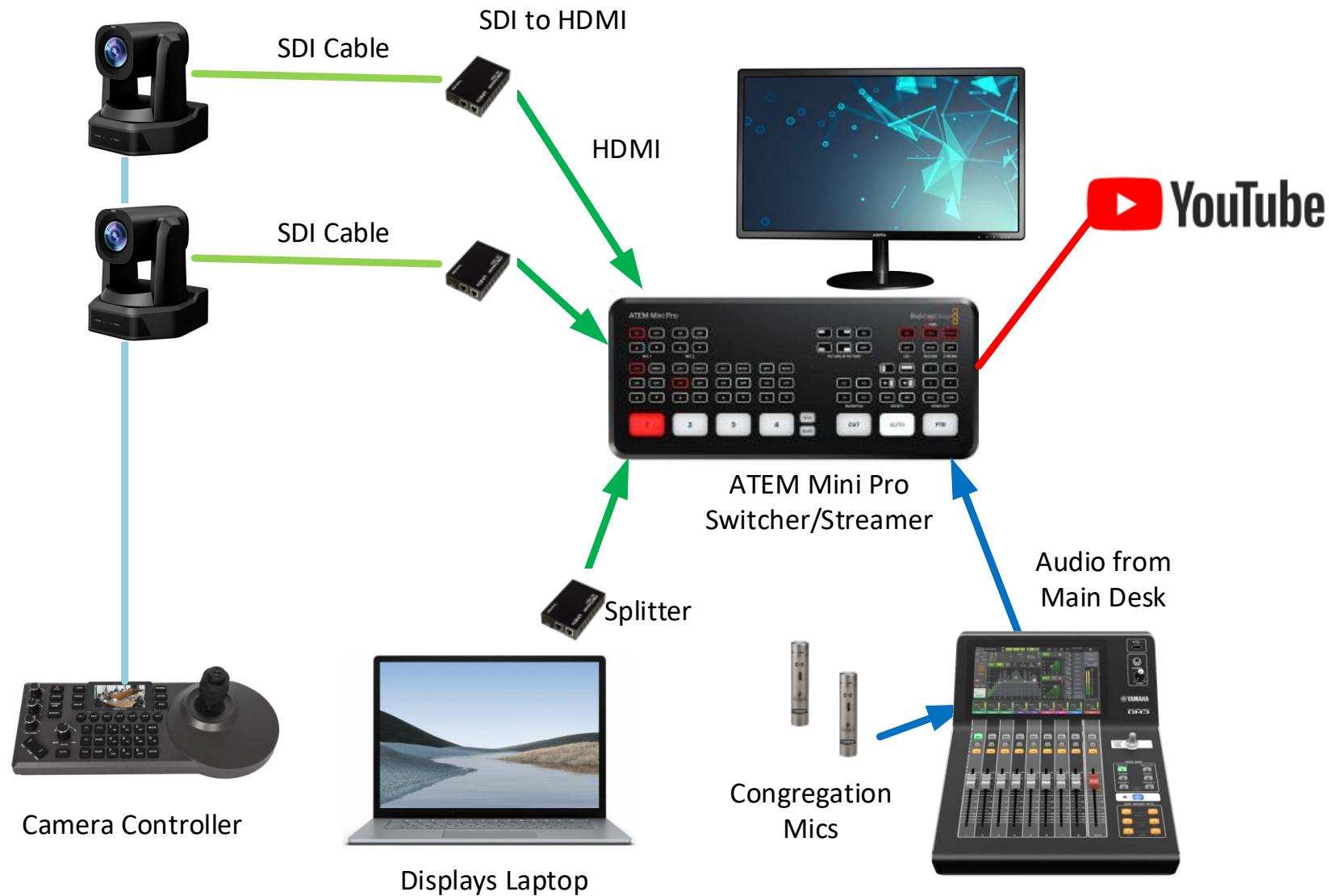
A full breakdown of pricing is provided in the Bill of Materials

Outline costs
– Sound
System
Option
Pricing

Option	Price
Sound System including Allen and Heath QU5 16 channel mixer	£19,175
Sound System including Allen and Heath QU5 16 channel mixer + 16 input expander (32 channels total)	£20,595
Sound System including Allen and Heath SQ5 32 channel mixer	£21,883
Sound System including Allen and Heath CQ-18T 18 channel mixer	£18,275

Streaming Camera System

Solution Overview ATEM Mini Pro Switcher



ATEM Mini Pro Solution

The PTZ cameras are brought over SDI from agreed locations in the sanctuary and connected into the ATEM Mini Pro Video Switcher Streamer.

See <https://www.blackmagicdesign.com/uk/products/atemmini> for details of the ATEM Mini Pro.

This is an “all in one” video switcher and recorder with inbuilt streaming direct to YouTube/Facebook.

This provides 4 HDMI inputs.

The Presentations PC is connected via HDMI so graphics can be sent to the stream.

Additional cameras can be connected to the 4th input if required.

The mixed video can be sent directly over the internet to YouTube, (or Facebook, Restream.io etc.)

Additionally, the ATEM Mini also provides a USB “Webcam” output. This allows the video output to be used directly back to Presentations Laptop as a video input for display on the sanctuary screens if required. The webcam input can also be used for Hybrid Zoom or Microsoft Teams meetings.

The video can be recorded locally to a USB stick and can be uploaded later to YouTube/Facebook for further use.

Audio from the sound system is brought across to deliver sound to the stream. An additional “congregation mic” is provided to capture audio for singing, organ, responsive prayers, etc.



Cameras

Two ToastyVision AI Cameras will provide a movable, Pan Tilt and x20 Zoom capability. They feature 1080HD resolution, as well as AI autotracking of subjects. The cameras also feature NDI live network video for further flexibility and access from anywhere on the network.

These will be connected via IP networking to the Control Joystick/Keypad.

This will allow remote control of the camera positions as well as setting and recalling preset positions.

Video from these cameras will be brought over SDI cabling which allows for long video runs.

Additional cameras can be added if required.



Camera Locations and Cabling

The cameras require one CAT6 and an SDI cable to run from the camera to the AV desk position.

We would suggest the cameras are mounted on the front of the balcony or two mid-point columns. Final positions of the cameras can be agreed during installation.

Examples from other churches are shown below.



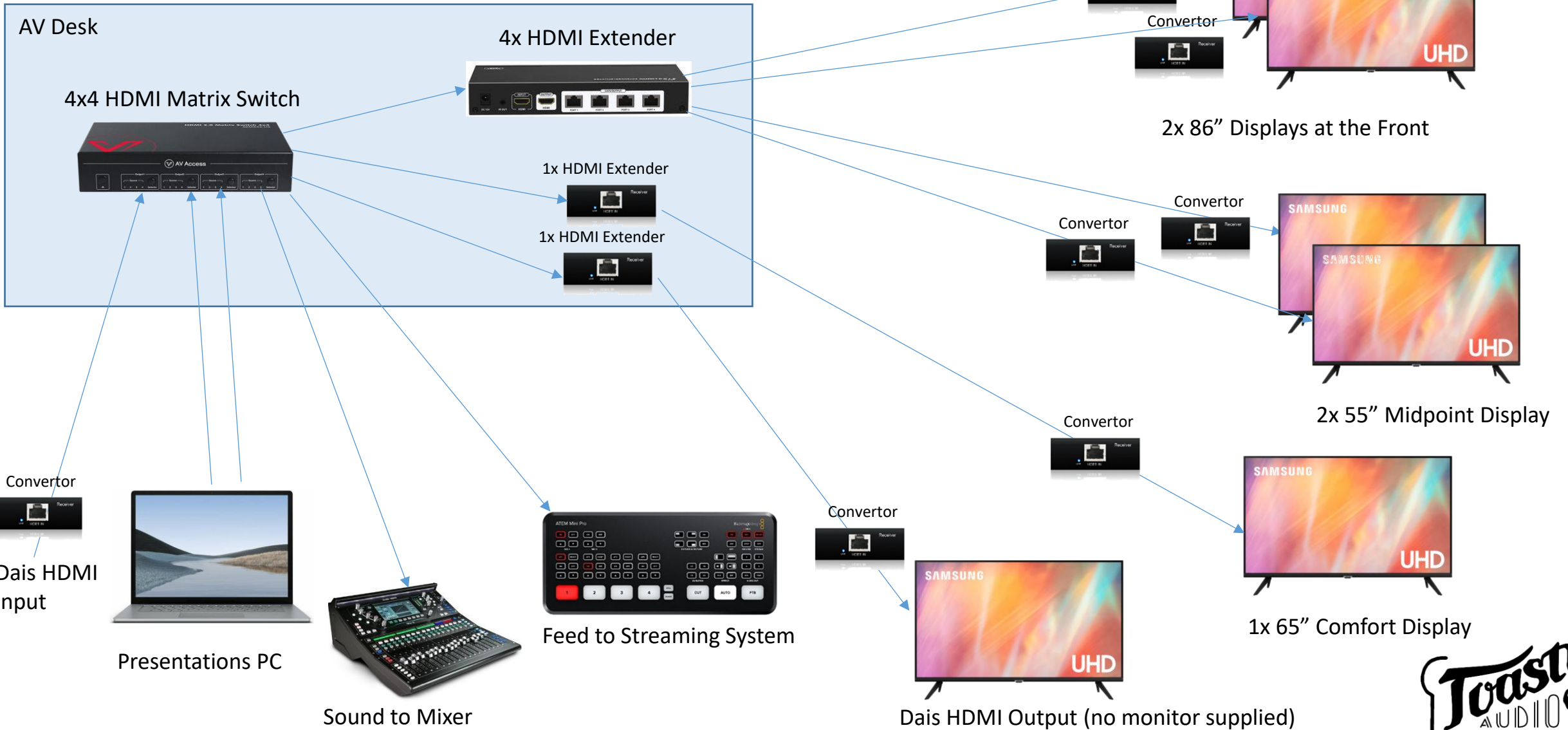
A full breakdown of pricing is provided in the Bill of Materials

Streaming System Costs

Option	Price
Streaming System with 2 cameras and joystick controller	£5,173

Display Systems

Display Systems Overview



Display Systems Overview

There is a requirement to provide displays for presentations and videos within the sanctuary. We would recommend two 86" monitors mounted on the front walls. A second pair of monitors will be installed under the arches half-way back. We would recommend 55" monitors for this position.

Blairgowrie has suggested 65" in this position, however we believe these would be too big. We suggest Blairgowrie checks the dimensions and should 65" be required – these can be changed.

To allow the minster or speakers to view the presentation, we recommend an additional 65" "comfort" monitor mounted on the front of the balcony.

The input for the displays will be placed at the AV desk.

For additional flexibility, two additional HDMI ports (with associated extenders) will be installed at the raised dias. One HDMI port will allow a laptop to be plugged in at the front. The second HDMI port will allow an additional monitor to be plugged in to provide a local display.

We require flexible switching and distribution of the HDMI signals as there is a requirement to switch various HDMI inputs to outputs.

A 4 in x 4 out HDMI Matrix with HDMI extenders will form the centre of the display switching.

This will allow video inputs from the AV desk PC and remote HDMI input at the dais.

The different video inputs can then be sent flexibly to the displays.

A 4 way HDMI extender will send the same picture to the main congregation displays.

The remaining displays can all be individually switched to any of the different video sources.

Lastly, audio is extracted from the HDMI matrix and sent to the mixer for playback of any videos on the system.



Example displays at Darvel Parish Church

Commercial Grade Screens

- Commercial grade screens with a 3 year commercial warranty will be provided.
- These will support UHD (4K) 3480x2160 Resolution
- These are brighter than domestic TVs and feature anti-glare coatings to reduce reflections
- Screen dimensions are
 - 86" 1,937mm x 1109mm
 - 65" 1,463mm x 838mm
 - 55" 1,240mm x 712mm



Approx Sizing of Screens



Example Wall Mounting



86" TVs in Bruce Memorial, Cambusbarron



75" TVs in St Pauls, Johnstone



65" TVs in St James the Less, Bishopbriggs

Arch Mounted TVs



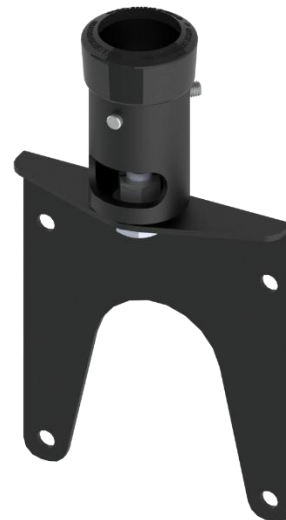
The pictures shows a number of displays which are mounted from above on poles. The top is attached with a “universal ceiling mount”. This is jointed and so can be affixed to various locations to drop the screen down.

The TV bracket can then be affixed to the pole in the correct position.

Arch Mounted TVs Bracket Components



Unicol CP6 Tilting Ceiling Plate



Unicol PS1
Single Column Adapter



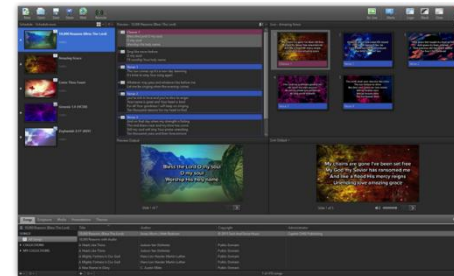
Unicol 1000 pole

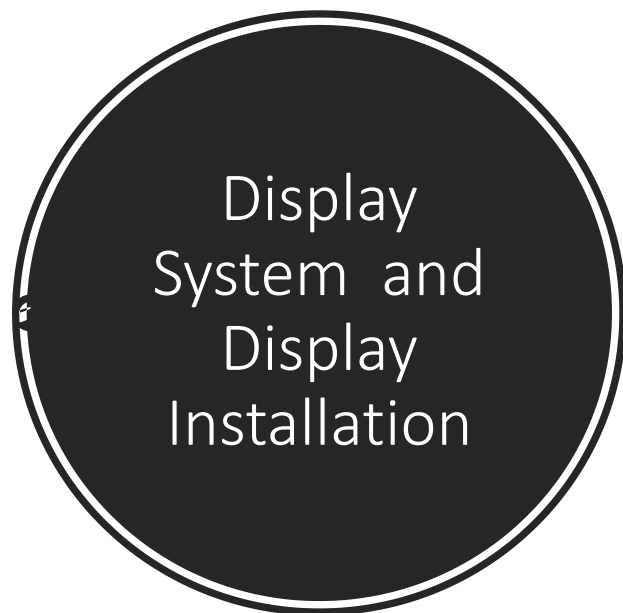


Unicol PZW0 VESA Universal
Tilting Mount

Optional Presentations Laptop/PC and Presentation Software

- Powerpoint with many pictures, slideshows and videos as well as most church presentation software (Easyworship, Propresenter, Proclaim, etc) require a laptop/PC with a dedicated graphics card capability
- When running multiple slides and embedded videos, we do recommend that a good specification laptop is used as “office style” laptops can struggle with multiple displays and video.
- We recommend an up-to-date laptop with a dedicated graphics card (often referred to as “gaming laptops”)
 - Intel® Core™ i5-11400H Processor
 - RAM: 8 GB
 - Storage: 512 GB SSD
 - Graphics: NVIDIA GeForce 1650 or better
 - Full HD screen
- Specifications and models of laptop change regularly – a similarly spec’d laptop will be supplied with the project
- As an alternate, a “Desktop PC” with similar specs can be supplied with a 24” operators screen





The price of the display system (including all displays, cabling, video distribution, etc) and the display system installation is given below.

Prices for optional laptop or PC is also provided

A full breakdown of pricing is provided in the Bill of Materials.

Option	Price
Display system and all display installation	£13,426
OPTIONAL New «Gaming» laptop (budgetary)	£799
OPTIONAL New tower PC (budgetary)	£950

Halls

Upper Hall Sound System

Audio Mixer/Amp

The Studiomaster C3 12 channel, 1U compact mixer will combine all the different audio sources and adjust the required levels.

This will include the two mics, aux inputs for laptop/phone and a Bluetooth adaptor.

Additional sockets will be available to plug in additional mics, smartphones, or even a piano/guitar if needed.

The sound from the mixer will be sent to the amplifier.

Two Adastra 90w slave amplifiers will be used to drive the speakers and will easily fill a hall.

Optional upgrade may include inbuilt BluRay player and Loop System. Prices available on request



Example Hall AV System installed at
Dunblane Cathedral including
BluRay and Loop Amplifier

Radio Mics – JTS RU-8000 Combo Pack

The JTS RU-8000 Combo pack provides a handheld and tieclip system in a single 2-channel receiver.

This is a high quality radio mic system with all metal/rugged construction of the handheld and tieclip transmitters.

This is an ideal solution for providing introductions or hosting speakers on longer lectures/speeches.

This will be supplied as 823-865Mhz frequency band allowing for legal use in the UK with no licence requirement.



Loudspeakers: FBT Canto 5CT

FBT Canto Coaxial Speakers

3 WAY COLUMN LOUDSPEAKER

- 5" Mid/Woofer
- 1" Coaxial Tweeter
- 60W RMS
- Note: Supplied in White or Black



Upper Hall Projector

Projector Overview

There is a requirement to install a new projector in the hall.

Due to the dimensions of the hall and the roof, we recommend an “Ultra Short Throw” projector.

Ultra-Short-Throw projectors are very sensitive to screen distances and flatness. For the best performance, these projectors should be paired with tensioned, fixed frame screens which provide accurate setup and no flex in the picture.

We recommend installing a 120” fixed frame screen providing a visible picture of 266cmx149cm.

We have selected an Epson 5,000 lumen ultra-short throw laser projector to give a bright picture filling the full screen area.

The Epson projector has a “laser light source” which has a life of 30,000 hours.



Epson EB-800F

This is an Ultra Short Throw Projector which is fixed upon the wall directly above the projector screen. This will be paired with a 120" fixed frame (needed for ultra short throw) screen providing a viewing area of 266cmx149cm.

It has a high light output at 5000 lumens.

The Epson EB-800F has 3 HDMI inputs. These will be connected as follows:

- Wall HDMI input
- Amazon Fire Stick

Audio from the projector will be wired into the hall sound system so that any audio is amplified throughout the hall.



Example Short Throw Projector



Installed at Mossneuk Parish, East Kilbride

Approx Sizing of Screen



Trolley TVs

Media Kart TV Trolleys

- 65" Smart 4K Ultra HD HDR LED TV
 - Models vary from time to time, but we recommend Samsung or LG
 - Smart 4k TV
 - All streaming services via WiFi – includes accessing the YouTube service livestream
 - Supports windows wireless casting
- SAMSUNG HW-S50B/XU 3.0
 - 140w – sufficiently loud for classrooms and hall



Trolley Mounting

An alternate, and commonly more flexible solution to projectors, is to mount a TV on a Trolley Stand. This allows for the TV to be moved easily between rooms and events and can be a much more flexible solution for churches.

The screen will be mounted on “Unicol” heavy duty wheeled stands. These are heavy duty “Industry Standard” stands as used in Schools and Universities with exceptionally long life.

The trolley provides an integrated shelf for placing a laptop or DVD player as needed



Mobile TV and soundbar trolley stations
used at Kirkintilloch Baptist Church

The following summary prices are provided for the halls.

A full breakdown of pricing is provided in the Bill of Materials

Outline costs – Halls

Option	Price
Upper Hall Sound System	£3,309
Upper Hall Projector, screen and installation	£5,839
Portable trolley TV stations (each)	£1,509

References – Bruce Memorial Church

Toasty Audio undertook a complete overhaul of all AV systems at Bruce Memorial Church, Cambusbarron.

The audio system was based on the FBT Vertus column line array coupled with a Presonus digital mixing desk.

Visuals included a new HDMI distribution system and twin 86" monitors mounted either side of the pulpit.

Streaming was provided using a Toasty TVV NDI camera hooked to their existing OBS.

All cabling was discretely installed through walls and under floorboards where possible.



References – Streaming System Dunblane Cathedral

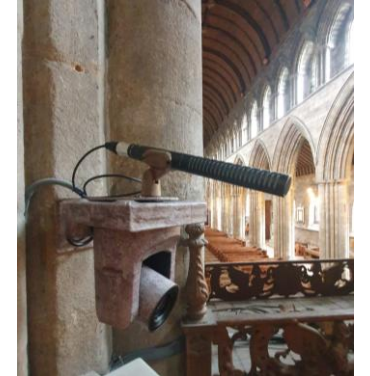
Contact: admin@dunblanecathedral.org.uk

Toasty Audio completed the installation of an extensive video streaming system with upgraded audio capabilities at Dunblane Cathedral in June 2023. With portions of the structure dating back to the 11th century, Dunblane Cathedral holds immense historical significance and is managed by Historic Environment Scotland (HES). This collaborative project between Toasty Audio, Dunblane Cathedral, and HES was six months in planning and design, placing paramount importance on designing a system and cabling that seamlessly blended into the building without compromising its integrity.

Following meticulous design work, our team diligently worked to install over 5 kilometres of cabling, cameras, microphones, and a custom-built AV desk within the Cathedral. Our attention to detail was comprehensive, going as far as capturing photos of the existing stonework and creating custom vinyl wraps for the cameras, ensuring they blended in with the surround stonework. All cabling was discreetly concealed in the roof spaces and carefully color-coded and hidden within the building's columns' small grooves.

To capture the audio faithfully, we installed multiple broadcast-quality microphones strategically placed in the nave, choir stalls, and near the Flentrop Organ. Additionally, we upgraded the existing sound system with a state-of-the-art digital mixer and seamlessly integrated the legacy speaker controller. This integration allows for "surround sound" control, enabling us to adjust the audio delays for each speaker, effectively "moving" the sound source to different parts of the Cathedral.

To enhance operational efficiency, the Cathedral commissioned a hand-crafted oak control desk for the new operators' position. This bespoke desk seamlessly integrates the entire system into a single keypad, providing easy access to video, cameras, sound, graphics, and titles, streamlining the operation.



Your Team



Alaistair Deacon: AV System Design, Configuration, Commissioning and Training

Alaistair is the owner of Toasty Audio, a specialist AV installer who specialises in church solutions as well as bespoke audio products and projects.

Alaistair has worked on, designed and installed church AV for over 35 years, with the last 6 of these operating as Toasty Audio.

Prior to starting Toasty Audio, Alaistair was Chief Technologist with one of Scotland's largest IT groups providing global solutions to some of the world's biggest airports, airlines and air traffic control




Alan Rue: AV Installation Specialist and Electrician

Alan is a freelance AV installation specialist and fully qualified electrician with over 25 years experience.

Alan specialises and prides himself on discrete and hidden cabling system.

As well as installation activities, Alan supports large events, especially power distribution for many of Edinburgh's key outdoor festivities.

T&Cs and Excluded Items

Terms

- 50% deposit on order
- Remainder on final commissioning and handover
- If possible, an asbestos inspection certificate should be provided prior to work commencement

Exclusions

- An internet connection with a minimum 6mb upload speed (recommended 8-10mb) at the AV desk is required to stream.
- We will minimise any damage to walls, floors, access points, etc. wherever cables are being installed. However, some minor repainting may be required when we have accessed behind a panel
- AV Desk furniture
 - We have not included any costs for furniture, desks, etc. required at the Sanctuary mixing desk location
 - Where possible, a clear desk location should be made available for the streaming workstation