St Luke's Church, Goostrey
Proposed new Pure AV Audio-Visual system description

The Pure AV schematic drawing provided shows how the system works and how it will be connected. Datasheets for the projector, electric screen and push button controller are provided for reference.

The system works as follows:

There will be 2 x HDMI inputs: one at the rear of the Church and one at the front. These inputs feed into an auto switch which automatically selects the last connected device. So, if someone plugs a laptop into the front HDMI input plate, this will show on the projector. If someone then plugs their device into the rear HDMI input plate, then their laptop would now show on the projector. If they then disconnect, the laptop plugged into the front HDMI input will once more be shown on the screen. The reason for including this auto switch is that the Epson projector has 1x HDMI input and 1 x DVI-D input. If we used the DVI-I input then we would not need the switch. However, there can be issues with audio when using DVI-D as not all devices support it. So rather than propose a system that potentially could have issues, albeit slight, we would prefer to install a system that is 100% stable.

There are then 2 x Audio Switches. The first one determines which set of speakers the audio will come out of i.e., the organ speakers or the PA speakers. The second option of the PA speakers will also send the audio through the induction loop. The second audio switch determines what sound is heard through the organ system. This will generally be the sound from the video/presentation being shown on the projector with the second option being the cable which people can attach their phones to.

The Extron push button controller, as its name suggests, controls the whole system. On pressing the ON button, the projector will switch on and default to one of the two HDMI inputs and the screen will lower (the default HDMI input can be set to either of the 2 inputs). The push button panel can then be used to switch to the other HDMI input and also control the volume of the audio. On pressing the OFF switch, the projector will switch off and the screen will rise up.

With regard to the electric screen, it will be painted with a custom colour for the case and support structure to match the wall colour.

A further Pure AV drawing is provided to show the following:

Equipment Positions and Cable runs.

Equipment Positions

Position A Equipment:
Electric screen. This will be mounted above the existing timber panelling by means of a Unistrut support which will be fixed to the walls at both ends with M10 bolts.
Audio selector switch. To switch between the projector audio and the auxiliary audio i.e. phone audio cable. The output of this switch feeds into the organ sound system.
HDMI Transmitter. This converts the front HDMI input into a signal which can be transmitted via Cat 6 cable.

Position B Equipment:
Epson Digital Projector on ceiling projector mount (described below).
AV Button Controller. This switches the system On and OFF and selects what is to be shown on the screen i.e., front HDMI input or rear HDMI input
Audio selector switch. To switch between the projector audio going to the organ system or the PA system.
Rear HDMI input plate.

Position C Equipment:
Front HDMI input plate. This will be positioned at low level on the front of the panel in front of the first pew.

Position D Equipment (on balcony):
HDMI Receiver. This converts the signal sent from the HDMI transmitter back into HDMI to go into the projector.
HDMI auto switch. This selects the last connected input to be shown on the screen.
Network switch. This provides power for the AV button controller.

Cable Runs

Position A to Position B
2 x FST (Green: screen control, Purple: Audio). One of these cables is for audio from the projector to the organ sound system and the other is for the electric screen control.

Position A to Position C
1 x HDMI cable (Blue)

Position A to D
1 x Unikat cable (Red). This carries the converted HDMI signal from the front HDMI input plate to the projector.

Position B to D
1 x HDMI (Blue). Rear HDMI input plate to projector (via auto switch)
1 x Network cable. (Pink)

Cabling containment

The cable runs going from the front of the church to the rear will be made alongside the slightly raised pew and alter areas as per the attached diagram. The cables will be hidden underneath the carpet and not visible.
It is proposed that the cables needed for the electric screen (mains and control) will be run behind the existing wooden panelling if possible. If this is not possible, due to horizontal braces, it is proposed to surface mount these cables with adhesive and then paint to match the wall.
At the rear of the Church, where we need to get cables from the input plate up to the projector, we will use a trunking which will be colour matched to the wooden panelling or wall.

Projector Mount

The projector mount consists of three parts: ceiling mount, pole and projector mount.

The proposal is to drill a 50mm hole through the lath and plaster ceiling and through the floorboards on the balcony. The pole will pass through these and then attached to the ceiling mount, which will be inverted and screwed to the floorboards. The cables required to be plugged into the projector will run inside of the pole.

It is important to note that all installation works will be fully reversable. This means that with the rapid advancement of AV technologies and systems, the Church could be reinstated back to its original state. The Jay Ashall Partnership Drawing provided shows how the installation will affect the fabric of the building.