
Advanced Control Systems

Houses of Worship



With increasing demands on resources, budgets, and the rapid adoption of IP and distributed production, Facilities are more reliant than ever on tools that allow them to remain focused on creating great content.

The Control Landscape

Today's media facilities comprise more disparate technology than ever before and all these systems need to be networked, managed, and controlled in fundamentally new ways. With the increasing adoption of IP and changes in production comes the need to find ways to maximise these assets alongside the ability to hide increasing system complexity from operators.

To achieve this, media facilities need enhanced scalability, highly reliable performance and dramatically simplified upgradability with minimal downtime, allowing them scale to and adapt the system as requirements change.

A focus on Houses of Worship

Many AV-led facilities rely on out-sourced operators to support their productions.

Each company has its own workflow and challenges to address, and users need to be armed with the knowledge on how they can optimise the full capabilities of their systems. When designing a complex system for the customer, the vendor or system integrator must start with understanding their needs and the key challenge they are trying to solve, to then help operators and engineers understand how a control system can be configured to provide added value functionality. This provides the autonomy they need to have complete ownership of the system and their job becomes much easier. A unified and fully owned system driven by the end customer will deliver the professional output needed, all whilst avoiding expensive support calls for simple modifications.



Control Application & Functions

By deploying a control system in a modularly resistant manner, the a House of Worship production can each have dedicated local intelligence to manage local devices, operating entirely independently of each other, whilst communicating status and sharing resources across facilities.

Typical Third Party Interfaces:

- Control REST API Device
- BMD HyperDeck
- Elemental
- AJA KIPRO PLUS
- Snell Router
- EVS maXS and maXS HD
- Hybrid Router Sirius 840 – to manage crosspoints and names.
- GVG KX Multiviewer – to provide tally and names.
- Kahuna Switcher 2/3/4ME variants – for reading crosspoints and tally, sending button labels automatically calculated from current signal routing.
- CCU's and PTZ Cameras – to provide tally. and camera control.



Advanced Control Functions

▶ **Studio delegation – ability to assign a Studio to any PCR and provide Tally, Names and Routing control from the current PCR to the Studio.**

▶ **Failover – Ability to failover control to another PCR/Studio and copy current routing from the previously active PCR/Studio to the new current PCR/Studio.**

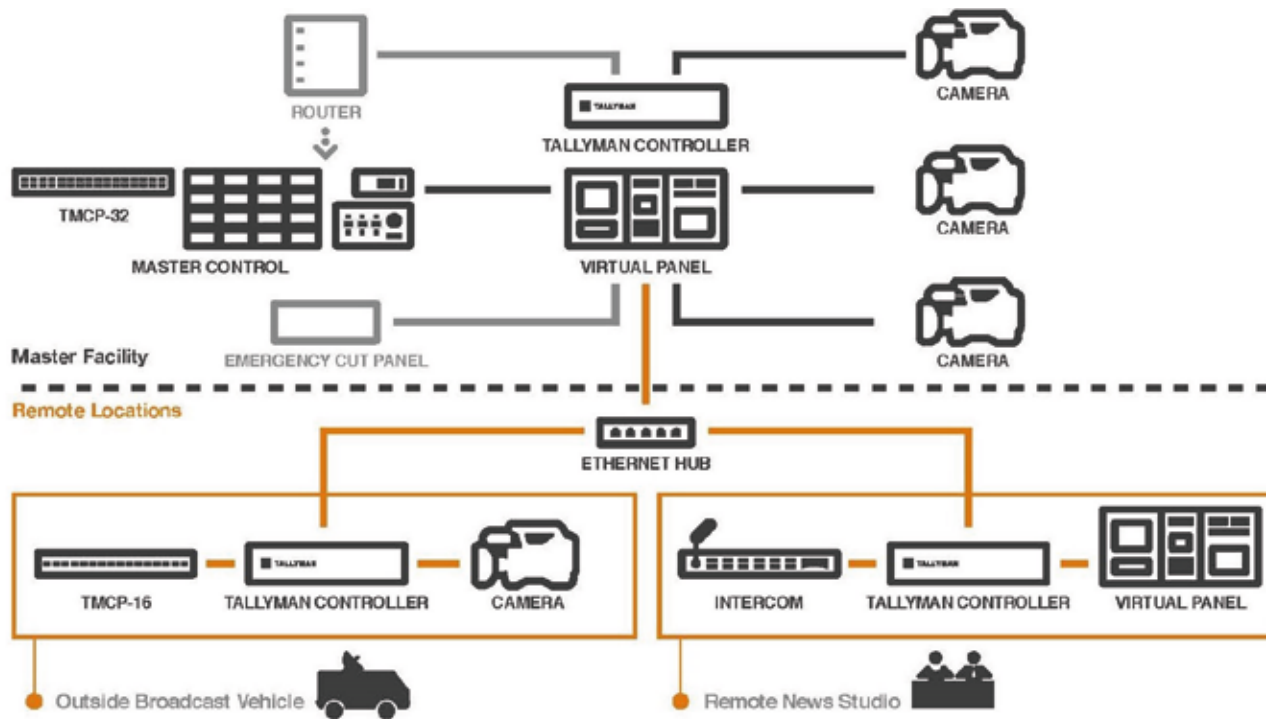
▶ **Name management – Automatically rename incoming sources on Multiviewer displays and Switcher buttons to follow routing changes.**

▶ **Tally delegation – Delegate Tally from each PCR specifically to its assigned Studio.**

▶ **Show presets – ability to save and recall presets for shows live**

▶ **Centralised control and override of Studio-PCR assignment in the MCR**

▶ **Technical signage including On Air Status, Studio/PCR assignment status, clocks and Branding in all of the studio areas.**



The Business of Open-Architecture Advanced Control:

- Integrating with existing equipment protects existing investments.
- Incorporating new equipment that streamlines processes increases efficiencies minimises expenses and increases profitability.
- By maintaining tried and proven existing workflows and integrating new workflows that support time-accurate delivery of quality product, staff productivity and training efficiency are maximised.
- Improves system reliability, supports system expansion, and simplifies system maintenance while minimising short-term and long-term cost of ownership
- Can be scaled to fit any application and budget
- Provides peace of mind - no more custom boxes, one-off solutions, or custom software that relies on extensive support and training contracts.

Tally Management

Within the system architecture, the system controllers manage tally to the Studio Cameras, receiving tally information from any production room system controllers and exclusively passing through tally from the assigned PCR to their destination i.e. the camera.

When a PCR takes control of a studio, all return feeds are automatically routed from the PCR to the studio and tally passes through from the PCR. At this point, the studio can be locked out and unavailable to other PCRs and further protected by a local password engineering override.

Additionally, when a PCR takes control of a studio, all studio camera feeds are automatically routed to the PCR, and PCR return feeds will be routed to the studio. Meanwhile, the system interfaces to the Studio, PCRs and MCRs video switcher to retrieve tally and crosspoints and manage button labels, whilst also interfacing with the main facility router to manage routing and names. The multiviewer displays are updated and button labels pushed to the switcher.

“I like the TSL Control Systems due to its ease of operation and quick learning curve. Being a rental facility our builds are never the same twice with the ability to reconfigure the system to meet our changing products is essential. I have used several control and tally systems and find the TSL by far the easiest to modify and teach my employees. While working with TSL we have required support and service and have found there service and engineering support to be top rate.”

Robert Brunelle, National Director of Engineering Broadcast/Systems at PRG/VER.





Universal Control Panels

'Plug & Go' Integration

Able to perform powerful actions without the need to invest in a system controller, universal control systems can quickly and cost-effectively plug in to any infrastructure or workflow, allowing you to:

- Bridge systems to achieve that key bit of functionality required without performing any programming.
- Adapt and extend systems as control requirements change.
- Avoid being locked in to expensive and complex control solutions.
- Give operators the controls they need over the devices they use.
- Maintain the value of existing investments by interfacing between old and new equipment.

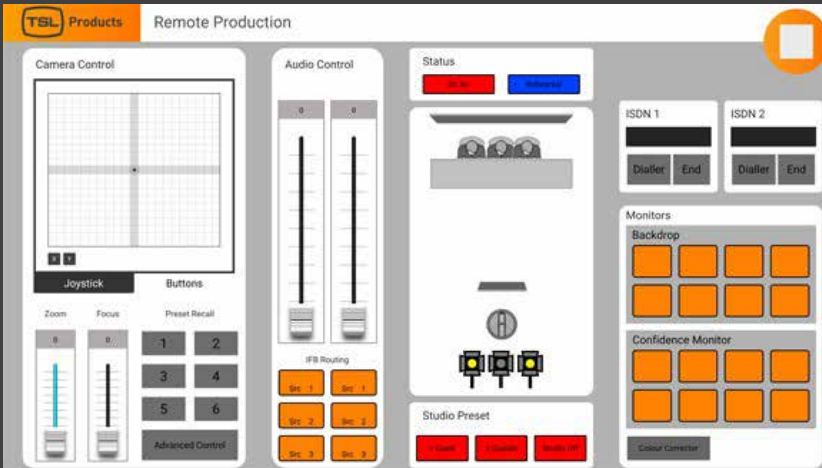
Visual & Virtual Control Interfaces

Virtual Panels are a software-based control surface that interfaces to any control system and allows customers to visualise their workflows to effectively and intuitively manage their systems.

Virtual panels can replicate full studio controls, camera controls, routing panels, signal flows, pre-sets and source names, all configured by the user with minimal training.

The easiest way to achieve this is by using virtual panels to:

- Maintain clear and intuitive actions for the operator.
- Present just the controls they need.
- Customise design for best fit individual processes.
- Create common interfaces.
- Easy to use drag and drop design, with ability to make changes on the fly.
- Access equipment webpages for configuration and trouble shooting.



Complex Timers ● World Clocks ● Branding ● System Data ●
 Production Timers ● Streaming Media ● Real-Time Data ●

Macro, Cut, Trans ● Device Commands ● SNMP
 Preset Tally ● Key Mapper ● GPI
 IP
 SERIAL

REAL-WORLD APPLICATIONS

Jacksonville Baptist Church

Jacksonville, FL, June 20, 2019 – In order to achieve a flexible tally communication between its legacy and new production equipment, First Baptist Church of Jacksonville, FL (FBC JAX) recently integrated TSL Products' TallyMan control system into its control room upgrade.

With four distinct campuses across the city, FBC JAX was specifically looking for a means of integrating a new Ross Ultrix 12G Router with the facility's 12-year-old Sony MVS switcher. According to Ballard, the TallyMan's "single box solution" and extensive interface library spanning modern IP and legacy serial protocols provided an immediate means of achieving interconnectivity between older and new equipment.

TallyMan's intuitive interface enables users to establish seamless communication between all production equipment on a single, unified layer. It provides a diverse array of control resources, capable of acting as a standalone solution for small facilities or part of a multi-controller system for an infinitely expandable solution.

For live production, Ballard says that TallyMan provides his team with "far better insight" than ever before, especially with six cameras operating at all times. Ballard also highlights the user-friendly nature of TallyMan, with reusable, multi-level actions easily grouped into a simple control surface.

"Our volunteers love the new capabilities of our system, and they don't have to understand the underlying technology that makes it possible," says Ballard, who has more than 30 years of Pro AV/L experience. "Additionally, we no longer have to re-label every input and output on a route change, which equates to faster and more dependable configuration changes."

While FBC JAX installed TallyMan from a tally integration perspective, Ballard says the ability to interface with numerous data protocols, as well as analog interfaces, has revealed additional capabilities of the system that can help to further streamline the facility's workflow. "TSL will definitely be on our list for consideration for any future projects," says Ballard.

TallyMan was built to be independent, universal, configurable and infinitely scalable, allowing its customers to achieve interoperability between equipment routed through analog, IP or hybrid networks, regardless of differing manufacturers and format specifications. This flexible approach to total control ensures a seamless shift from traditional broadcast environments to complete IP production and delivery in a remote setting.

TallyMan's Virtual Panel Interface allows for an easily configurable process. With intuitive, drag-and-drop controls, users can customize production setups to

fit specific needs. With everything pre-configured prior to the production, TallyMan presents a simplified workflow that requires minimal labor and training to operate effectively, resulting in a substantial decrease in the potential for mistakes and increase in operational cost savings.



Central Christian Church

Central Christian Church supports four satellite campuses located around the Metro-Phoenix area from our central facility in Mesa. Like most churches, they rely heavily on volunteers, so when thinking about implementing new technology or simplifying workflows, they have to consider the end-user, typically a person who, more than likely, has no prior TV production experience. So it's an absolute necessity that any solution we choose be fool-proof and easy-to-operate.

Every week the church simultaneously record sermons onto multiple Blackmagic HyperDecks, one for each campus plus one for redundancy, and then distributes them to the satellite campuses via portable hard drive. They chose this method because it's the most cost effective and efficient way to deliver high-quality video; however, it takes lots of hands-on individual set-up and device control to pull it off. The decks don't retain audio/ video input settings and each has its own record button. It's impossible for a lone individual to manually put five or six decks into "record."

The team were specifically looking for a device capable of triggering all the record decks simultaneously and control equipment over an IP network. There were lots of different options to explore, but most required developing a web browser interface and writing software and the customer didn't want to task a volunteer operator

with logging onto a computer and navigating around a menu driven GUI.

By a happy coincidence, the team were walking by the DNF Controls (now TSL Products) booth and noticed they were controlling a HyperDeck with one of their devices. Dan Fogel, DNF's CTO, and Fred Scott, VP Sales & Business Development, walked them through the IP Control Buddy and demonstrated its ability to send commands over a network. The team were impressed and knew they had found the right solution. It literally couldn't be any easier. A volunteer need only press one button at the right time and the job's done!

After receiving a demo unit to evaluate the product's quality and assess its sustainability, the IP Control Buddy was quickly setup, placed into operation and became the new normal. Instead of dealing with software developers and having to hire people with skills beyond their own areas of expertise, the team went with something very simple and easy for staff to configure, install and integrate into their workflow.

The IP Control Buddy adopted has four buttons, although only three of them are used. The first sends a command that configures all the devices for the task at hand. Certain devices take video inputs and others, perhaps, take a different audio input, and they don't natively remember what they're supposed to do. Now, through automatic configuration, every

one of the devices go through IP Control Buddy's Button #1. Button #2 is set to start them all recording and Button #3 stops everything. All of our control rooms are sequenced, everything turns-on by itself and in the correct order, red-up and ready to go.

Although triggering all the recording activity was the first application, the customer has been able to push the Control Buddy's capabilities even further and have installed one in each of our other campuses for a total of five.

Operators no longer have to go to a rack unit somewhere within the facility to play or stop a piece of equipment; they have been able to put the controls right in front of them and taken IP control technology beyond recorders and playback devices, turning projectors on and off in all venues as well.

The IP Control Buddy came with a user manual that explained how to configure the device. and is easy to set up with minimal experience and specific mounting solutions were created to fit particular needs.

Lutheran Church of Hope

Marlow, UK – 8th November 2017 – Leading broadcast equipment manufacturer, TSL Products, today announced the Lutheran Church of Hope, a megachurch in Des Moines, Iowa, has purchased a TallyMan broadcast control system as part of an overhaul of its AV operations.

The Lutheran Church of Hope caters to the spiritual needs of a large and diverse congregation, which includes 20,000 members across 6 campuses. The Church's message is delivered through a variety of 21st century means: traditional services with liturgy and hymns, streamed sermons, online webcasts, contemporary services supported by a 10-piece rock band, YouTube videos, and an exhaustive list of programs and services.

Chief Systems Engineer, Jim Sheppard, challenges his team to keep up with the demands required to support these productions. They are in the process of revamping much of the Church's AV infrastructure to accommodate a transition from SD to HD, as well as the demands of on-demand content infrastructure and streaming.

"We were looking to put in place a system that would allow us to stream to our multiple locations at the push of a button, while keeping the process simple and manageable for all our volunteers who are not necessarily AV experts," said Sheppard.

Every week multiple sermons are streamed directly to all the satellite campuses from the technical core of the church's infrastructure, which is located at the West Des Moines broadcast campus.

"In particular, we were looking for a control system that would help us coordinate all our critical components to ensure that our volunteer operators are aware of and can easily instruct all the relevant systems at pertinent times throughout the production," added Sheppard.

To help with this endeavour, Shepherd chose a TallyMan broadcast control system from TSL products. The new system will be able to interface with a wide range of equipment from different manufacturers that include routers, switchers and multiple audio and video monitors, and multiviewers.

Sheppard is creating an essential and customizable user interface for each position. The engineering team will be able to automate and simplify complex multi-step operations into simple push button control for their teams of volunteer (non-engineer) operators. This frees up Jim's team, professional engineers, to focus on technical triage and the task at hand, without worrying about the underpinning systems.

Thanks to TallyMan's cross-platform capability, it will be able to integrate with the different types of

routers that the Church has in the different campuses.

"From the operator's perspective, it's the same interface. It makes it look the same even if the back end is different. That's why we didn't want to use a proprietary tally system," added Sheppard.

The fact that the TSL control system is designed to be configured and commissioned by the end user engineer (with a minimal amount of training) creates a great deal of expansion and multi-use potential for systems like this around the globe in the future.

About TallyMan

With more than 1000 systems in use worldwide, TallyMan is recognised as the most reliable solution to real-time, user-oriented control and dynamic data display, providing best-fit control for best-of-breed systems. The core software continues to evolve, incorporating the advanced access capabilities and automated workflow functionality that its users demand. A key part of the TallyMan functionality is the ability to design virtual control panels, usually implemented on touchscreen PCs. The latest release of tools allows operators to create multi-take buttons, which achieve multi-device, precisely time-aligned salvos of commands. The design platform now includes a new range of sliders, rotary encoders and X-Y control, which can be applied to anything from positioning robotic cameras to adjusting audio levels to colour correction.

Questions? Contact our International Team

Whether you work in live production, at large broadcast facilities, OB broadcast remotes or post production studio environments, our powerful Audio Monitoring, Advanced Broadcast Control, Technical Display Systems and Power Management Solutions help to simplify workflows so that you can focus on making great content.



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