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VIDEO SWITCHERS: A CLOSE LOOK AT 5 BRANDS

Video Switchers: A Close Look At 5 Brands

By David Leuschner

IN TODAY'S DEMANDING production environment, video switchers are a must.

Most churches are using cameras to bring their congregation closer to the platform and allow the visuals to help lead into an atmosphere of worship.

If you hit the market and start doing research on switchers, though, you will find that you will be drowned in a multitude of options.

Leaving you with the question: *What switcher do you choose?*

In this piece, I will focus on five different switcher manufacturers: Sony, Panasonic, Grass Valley, Ross Video and Blackmagic.

Of course, there are many more options on the market. But when I visit churches and review their audio, video and lighting systems, these are the companies whose gear I see the most often that are included in those systems.

First, I want to start with Sony. Gateway Church, which has six campuses in the Dallas/Fort Worth area, exclusively uses Sony camera and switching products. We believe they give us the most flexibility as well as the best support. If you are in the market for a switcher and you need something to grow with you, providing you training and support along the way, then I would deem Sony to be your best option.



For members of the congregation, there are benefits to utilizing visuals to help lead them into an atmosphere of worship. Along with the video switchers that are used at Gateway Church in the Dallas/Fort Worth area, Grand MA Lighting consoles, as shown here, are among the tools that can be used by churches.



When trying to get a jump on doing research pertaining to video switchers, you could find that you will be overwhelmed by the array of them exhibited on a conference floor.

ON THE COVER: A picture of the Sony MVS-3000 video switcher recently being used at one of the satellite campuses of Gateway Church in the Dallas/Fort Worth area.

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For instance, among Sony's line of professional, cost-effective switchers for churches of all sizes and budgets, are the very popular MCS-8M up to the flagship XVS-8000 IP Live, 4K and HD production center.

The MCS-8M, for example, is the go-to-switcher at the campuses of Life.Church, Church of the Highlands and many more. The 8M offers **simple audio mixing** with **audio-follow-video**, and depending on if you are in SD or **HD mode**, it allows for a myriad of HD and SD inputs as well as **DVI outputs**. This unit also has a dedicated output for a multiview, allowing you to see all of your sources on a monitor, without having to buy a secondary unit to do so.

One cool feature on the 8M is the AUX MIX function, which allows video from the auxiliary outputs to be transitioned with a **FADE effect**, instead of the traditional video **CUT effect**. This gives you the ability to manage two different switches. As an example, many churches have a web stream and IMAG. This feature can help assist with giving one of those feeds a different look. As an example, you can provide to your web stream wide shots, audience shots and angles that show off the room. At the same time, for IMAG, you would be just be showing tight shots.

Then for Sony's new line of XVS switchers, they are proving to be the future today for churches that want HD, but know 4K is becoming more readily available. The XVS-6000, for example, is in the same Sony family of switchers as the 8000, and is being used at the Mosaic Church in Los Angeles. It's running in 4K, but can still record in HD, while also being able to deal with the tasks of IMAG, and the web.

Then there is the latest generation XVS-8000 **multiformat video switcher**, which delivers huge benefits in terms of flexibility and operability for top end production, giving you the ability to realize a powerful mixed environment with SDI and IP. The XVS-8000 provides incredibly powerful 4K capabilities. The advanced features and **operational flexibility** of the XVS-8000 make it Sony's most advanced flagship production switcher, offering ultimate quality combined with a significant return on investment.

If you are not looking for a switcher on par with Sony's flagship switcher, but the MCS-8M is also too limited for you, then you might consider the MVS-3000, which Gateway Church uses at their remote campuses. We find this powerful, but affordable, solution is easy to train volunteers on, gives us the keying, mixing, outputs, inputs and effects that we need, while at the same time not being a



During a service at the Church of the Highlands in Birmingham, Ala., a Sony MCS-8M video switcher, as shown in the foreground, is among the pieces of equipment being used by the church's tech team.



The Sony XVS-8000, the flagship video switcher produced by the Japanese manufacturer.



A rear view of the Sony MCS-8M, for a close look at the various HD and SD inputs and DVI outputs that the video switcher provides.

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budget buster.

Gateway Church is exclusive to Sony in terms of video switching. For instance, the main campus uses the MVS-8000g switcher. Even though this is an older Sony switcher (dating back to 2007), they have maintained support and allowed us to operate at the cutting edge while this switcher provides output feeds for a broadcast switch, IMAG switch on five large screens, separate web broadcast and two separate sermon **video switch feeds** for every single remote campus.

If you are thinking video, Sony is a partner worth investigating, and you can check them out at www.sony.com/faith.

Next up are Panasonic video switchers. (<http://business.panasonic.com/products-avtechnology-professionalvideo-mixersswitchers-switchers>) Panasonic offers a few switchers that have basic feature sets, but still deliver functionality suited for most churches. The negative aspect relating to them is that you are not going to be able to configure these switchers to do everything you need. But if your needs fall within their set of capabilities, you will have a nice switcher with budget-friendly benefits. For example, the AW-HS50N is a very affordable switcher (available for around \$3,500 online) that can handle your very basic need of switching between a couple of sources. It is very compact (just 8.25 inches wide by 6.9 inches deep), simple to operate and is pretty much plug and play.

Panasonic offers a few other mid-range and high end products. What I like the most about Panasonic is they do seem to understand the church market's basic needs, which often translates to savings. But if your worship facility is one that is growing at a rate where it is looking to have high demands with multiple M/E's (**Separate Mix Switch Effects** inside each switcher), fades on aux, keys and flexibility of positioning buttons or **fader bars**, then Panasonic may be too limiting to invest in for a new switcher.

If you are looking for a brand that offers



Among the features of the Sony MCS-8M is the AUX MIX function, exhibited in use on screen in the multi-view in the bottom row.

As part of the family of video switchers offered by Sony, is the XVS-6000, can run in 4K, but also can operate in HD.



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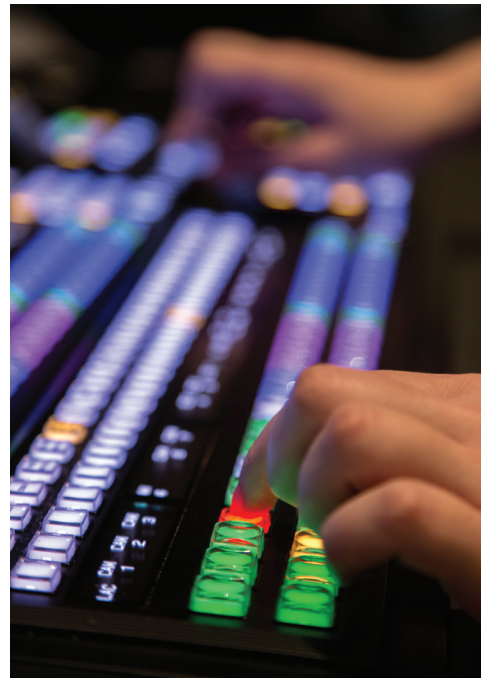
a wide variety of options, then it would be wise to also take a closer look at Grass Valley. It is probably Sony's competitor in terms of switching (<https://www.grassvalley.com/products/maincat-switchers>), particularly since they offer solid high, medium and low-end switchers. My experience with them, though, is more sports related, to where I think Sony makes switchers more flexible to the entertainment market that also work well in church tech setups. Even so, this by no means discounts Grass Valley. They make powerful switchers that could handle just about any church market need.

Then there is Ross Video, a company that is becoming a very strong player in the worship market with their switchers and other products (<http://www.rossvideo.com/production-switchers/>). With the growing number of Ross switchers I am seeing installed in churches, and that I don't hear of many complaints, I would recommend you check them out.

You may ask why Gateway didn't opt to purchase Ross for their switchers.

At Gateway, we needed a switcher that could grow with us and one that can accommodate the fact that our services change almost every weekend, with the ability to flex to those changes. Such a switcher must have a ton of **Key Re-size** abilities, virtual M/Es, be one big switcher with three **control surfaces** for six different applications.

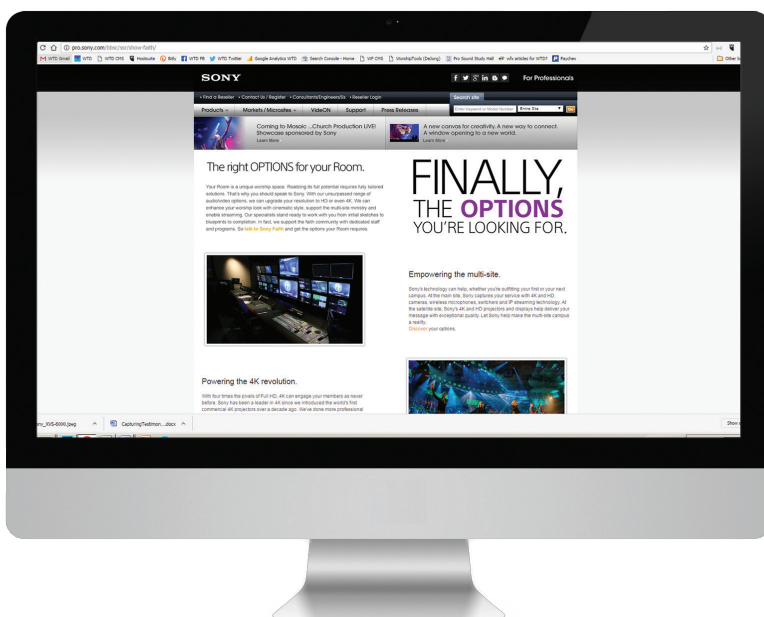
To top it all off, we sought to reconfigure the setup for a left-handed director. Ross, which brings a lot of game



The Sony MVS-3000 in use at a Gateway Church satellite campus recently.

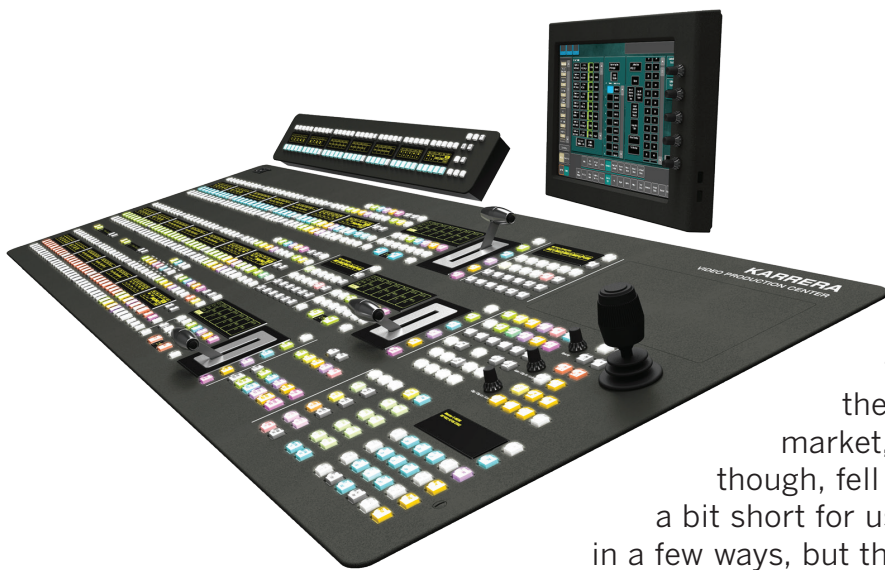


At Gateway Church's main campus, a member of the church's tech team works on the Sony MVS-8000g video switcher recently.



A screenshot for the Sony.com website recently.

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An example of a Grass Valley video switcher includes the Karrera.

to the market, though, fell a bit short for us in a few ways, but this doesn't mean it might not be the right switcher for you.

Ross Video switchers have a ton of features, that I find it very easy for volunteers to learn and operate them. The simple, straightforward design of Ross switchers allow for easy production solutions to meeting high demanding church needs.

Lastly, the Blackmagic ATEM switcher seems to be taking the small church market by storm (<https://www.blackmagicdesign.com/products/atem>). The ability to have a high-end switcher on your laptop is an amazing option. Most churches, though, in my view, are going to demand a physical control interface in their worship space. This means you will probably find yourself immediately upgrading this unit to one of their versions with a control surface.

In fairness, I have not been in a production environment with a Blackmagic switcher, but I have seen them in test environments and in a couple of church installations. I would point back to Panasonic and say these switchers are very similar, but they do allow more growth.

To define growth better, I'm not talking in terms of a church's increase



A view of the Panasonic AW-HS50N video switcher, which offers its share of budget-friendly features.



Among the many options for video switchers in the worship market is the Ross Video Carbonite C1 switcher.

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in the size of its congregation, but instead relating to the ability to get into the switcher market dirt-cheap and then down the road grow to where one can have a control interface or eventually an even larger control interface.

If you are doing high impact and fast entertainment that demands quick routing, control or switch changes, I would not recommend the ATEM switcher. But if you have a simple, straight forward worship service that has a very predictable flow, then the Blackmagic ATEM switcher will save your bacon in terms of budget and be a good match for your needs.

With that said, I would never recommend a switcher based solely on it fitting within your budget.

I would rather you list out your switcher needs, including figuring out how many inputs, outputs, keyers, and **aux buses** you need. Determine a growth pattern. For example, if you only need six inputs today, you should also determine how many you will need in a year. Try to plan your switcher growth to either handle that growth on the first purchase or where you would be able to move that switcher to a smaller room after buying a new one from the same manufacturer that will handle the church's growing needs over time.

I highly recommend staying with the same manufacturer, in the interest of making it easier for volunteers and easier for staff relating to training. Once you learn one switcher, it's easy to move around and operate the others produced by the same manufacturer.

At first glance, for some of you, a switcher might seem too complicated to capably understand which unit is the right fit for your church. Nonetheless, I would not let the complication of a switcher deter you. If it is complicated, but it does something you specifically need and no other switcher fills that need, then you may need to go that route. Be confident in that your team will learn the new switcher quickly. As one of my directors once told me, "(The staff and volunteers) would rather have a switcher that is a little harder to learn, but is flexible to every need, than a switcher that is easy to learn, but can't handle all the needs." Having once been a volunteer, he has gone on to be one of our main video directors at Gateway Church.

Knowing that video is a key component to a service, such a component could very well be the one that allows a new visitor who sits disengaged in the back of the room to be brought closer to the service and engage with the



One of the video switcher models offered by Blackmagic is the ATEM switcher.



Among the aspects to consider that are part of a switcher, as shown to the right in this image with this Ross switcher, are the number of keyers that are included.

GLOSSARY

Simple Audio Mixing: The simple process by which multiple sounds are combined into one or more channels. In that process, the volume level for a source, along with its frequency content, dynamics, and panoramic position are manipulated and/or enhanced. In addition, the process can add reverberation and echo.

Audio-Follow-Video: The audio on the video transitions when you dissolve to a different video source with different audio.

HD Mode: High definition resolution that can be realized to provide a clearer and sharper picture, if used in tandem with other HD equipment.

DVI Outputs: Digital Visual Interface is a video display interface fashioned by the the Digital Display Working Group, or DDWG. It is used to connect a video source, such as a display controller to a display device.

emotions, prayer, music and excitement of entering in to an atmosphere of worship. An atmosphere that ultimately helps them interact with the Holy Spirit and points them in a direction that encourages a relationship with Jesus Christ.



David Leuschner serves on the Senior Team as the Senior Director of Technology and Technical Arts at Gateway Church, located in the Dallas-Fort Worth metroplex and is currently averaging 30,000 attendees a weekend. Leuschner has been in the tech industry for more than 20 years. David loves what he does and has a passion for presenting God's Word, Worship and

Teaching in a way that changes lives. Currently David guides and directs more than 500 volunteers, part-time and full-time staff in a mission to facilitate several hundred events a month among all of Gateway's six venues. Before coming to work at Gateway Church, David started volunteering in a local Church at the age of 11, but progressed to working high level events that included working with George H. W. Bush and Walt Disney World. David has been married to his beautiful wife, Nicole, for 10 years and they love their adorable 8-year-old son, Justin. You can also follow him on Twitter and Instagram @davidleuschner.

GLOSSARY (CONT.)

FADE Effect: Creating an effect where the picture looks to fade between the full picture to either a white or black screen.

CUT Effect: A way to create an effect between two video source's content and slice the separate pieces of content for a theme transition.

Multiformat Video Switcher: A piece of equipment that has the ability to handle several resolutions or formats.

Operational Flexibility: Giving the operator many options or choices in doing their tasks with the switcher.

Video Switch Feeds: Signals for different uses.

Separate Mix Switch Effects: Buttons and faders that allow for separate transitions on top of the main buttons and faders.

Fader Bars: Levers located on a video switcher that activate buses and perform mixer operations and effects, such as allowing for fades between sources.

Key Re-size: Effects that allow you to modify the original source and key it or lay it on top of another source.

Control Surface: What the operator uses to modify the sources with the help of a digital workstation.

Aux Buses: Outputs for different devices, where the aux bus that feeds the effects processor is often labeled as a 'send,' and the channel that receives the processor's output is called the 'return.'