

# LANCASTER BAPTIST CHURCH

## Media and Technical Q&A - SLC 2017

### Livestream Control Room

#### Equipment:

*Production Switcher:* .....Blackmagic Design ATEM 2ME  
*Stream Encoder (Uploader):* .....*livestream.com* Pro  
*Intercom System:* .....Clear-Com RM-702  
*Low-Compression Recording:*.....AJA KI Pro (to Apple ProRes 422)  
*Compressed Recording:*.....Blackmagic Design Media Express (to H.264)  
*Audio Mixer:*.....Yamaha LS9-32  
*Graphics:*.....ProPresenter 5 / Mac Pro via Alpha Key Module  
*Cameras:*.....Panasonic AJ-HPX300 (x5) / BT-LH80WU Monitor (x2)  
*Tripods:*.....Libec LS-55M (x2)  
*Robotic Head / Controller:* .....Panasonic AW-RP400  
*Jib Crane / Underslung Robotic Head:* .....ProAm HD750 / Libec REMO30

#### Process:

Quad-shield RG-6 (SDI) lines run to each camera for video feed along with Cat5 Ethernet for remote controlling and XLR for communication. These lines run through an underground conduit to our livestream room where they enter the Blackmagic Design switcher, our robotic control board, and our Clear-Com units. From there, a clean feed (no overlay graphics) is run to the lobby and interior side TVs in the Worship Center. All other feeds on campus display overlay graphics such as verses, lyrics, and other lower-third titles generated from ProPresenter. Three additional lines remain for streaming and recording. One enters the Blackmagic H.264 Pro encoder where it is optimized and uploaded for streaming to *livestream.com*. The second is used for low-compression recording to the AJA KI Pro. The third is recorded to our iMac podcast station where it can be quickly uploaded to Youtube, iTunes, and *preaching.lancasterbaptist.org*.

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### Recording Studio

#### Equipment:

*Cameras:* .....Sony a7s / Panasonic GH3  
*Monitor/Recorder* .....Atomos Ninja Assassin  
*Cards:* .....SanDisk SDXC UHS-1 Extreme  
*Tripods:* .....Manfrotto 501 / 701  
*Rigs:* .....Glidecam HD-2000 / JAG35 Shoulder Rig  
*Teleprompter:* .....PrompterPeople Ultralight / Teleprompt+ App  
*Lights:* KinoFlo Bar Fly (Backlights) / Diva 401 (Key/Fill) / Mega Bank (Screen Wash)  
*Audio Recorder / Mic:* .....Zoom H4n / Sennheiser MKH416  
*Voiceover Mic:* .....Audio-Technica AT2020  
*Intercom to Livestream:* .....Clear-Com KB-702GM Wall Panel

#### Software:

*Editing:* .....Adobe Premiere Pro CC  
*Motion Graphics and VFX:* .....Adobe After Effects CC

#### Process:

We use our recording studio for various projects ranging from testimony videos to audio recordings. The studio is mainly used to record service greetings with Pastor Chappell, baptism and stewardship testimonies, and livestream pre-shows. Scripts are loaded onto the Teleprompter via Google Docs. After recording, the footage is imported to our archive server where it is ingested into Premiere Pro. The best takes are cut, and the footage is processed for graphics in After Effects. After processing, it is placed into a new Premiere Pro sequence where SFX and music are added for the final export. The file is then moved to the server where it can be accessed for playback in the service.

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### Soundbooth

#### Equipment:

*Mixer:* .....Yamaha M7CL  
*Pulpit Mic:* .....Sennheiser MZH3062 (neck) / ME35 (cap)  
*Piano Mics:* .....DPA 4090  
*Orchestra Mics:* .....Shure SM137 / SM81  
*Vocal Wireless Handhelds:* .....Sennheiser EW 135 G3  
*Vocal Wired Mics:* .....Sennheiser e835 / Sennheiser e865  
*Wireless Bodypack Transmitter:* .....Sennheiser EW 300 bodypack  
*Wireless Mic (Pastor's):* .....DPA FID88 Directional Headband  
*Wireless Mic (lapel worn):* .....Sennheiser ME2  
*Wireless Mic (ear worn):* .....Countryman e6

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### Projection Room

#### **Equipment:**

*Projectors:* .....Christie WX10K-M

*Scaler:* .....Roland V-1 SDI Video Switcher

*Graphics:* .....ProPresenter 6

#### **Process:**

Feed from the iMac is sent to a video switcher that sends an SDI feed to the projector, and is converted at the projector to HDMI. The switcher is capable of “freezing” the inputs, allowing changes to be made without disturbing what’s live on screen. The switcher can also switch between a dedicated center camera feed for baptisms, or the produced livestream feed for special music. The presentation software, ProPresenter, contains a database of all music to display for congregational songs or larger choir specials. Sermon outlines and other graphics are then added into the service playlist in ProPresenter, and can be advanced by simply clicking each slide in the list.

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## Networking Components

### **Some basic information on the components and systems used here at Lancaster Baptist Church and West Coast Baptist College**

*Storage:* ..... Synology DS815+, RS2516+ raid 5 arrays  
*Network:*..... Dell Power Connect switches and N series switches  
*Graphics:* .....ProPresenter 6  
*Servers:* .....Dell Power Edge  
*Wireless:* .....Ubiquiti Wireless Access Points (AP's)  
*Operating systems:* .....Mac OSX, Windows 7 pro, Window 10 pro, Windows Server 2008, Windows Server 2012, Windows Server 2016  
*Phones:* .....Digium VoIP phones (D40, D65, etc)  
*SPAM filtering:* .....Barracuda systems SPAM gateway  
*Security:* .....SonicWall NSA firewall  
*Virus Protection:* .....AVAST for Mac and Windows  
*Email:* .....MS Exchange, Google Gmail  
*Signage:* .....RPI signs  
*Worker* ..... Clockin apps: ADP  
*Wayfinding:* .....Rasberry pi and custom scripts  
*HR systems:* .....ADP  
*Campus Management:* .....CampusVUE  
*Church Management:* .....Shelby Arena  
*Communications:* .....Confluence Wiki, RT tracking, Cachet Status page and All Staff email lists.  
*Backups:* .....R1soft

User Management: .....Windows Active Directory

We back up all our critical systems hourly or daily. We use storage servers and network servers to centralize as much of our storage as possible and to enable us to backup more consistently and reliably.

Our most frequent IT challenges: We have about 1 major incident (defined as a critical system that is used or needed by a large group of people) occur about once a month. Something like a print server failing or phones going down or wifi / internet not reachable. Usually this are resolved within an hour if it's an onsite issue. We try to have as much redundancy as possible by having backups and some spare equipment on hand (an extra wifi access point, an extra hard drive, a spare phone, etc.)

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### Lighting:

*Stage LED Color Par Light:*.....Chauvet Color Dash Hex-12

*Video LED Color Par Light:*.....Chauvet SlimPAR

*LED Color Wash Light:*.....CHAUVET DJ COLORstrip

*Stage Conventional Lighting:* .....ETC Source Four 750W

*Video Lighting:* .....Genaray SpectroLED Bi-Color Lights

### Recording:

*Production Video Camera:*.....Sony A7S

*Field Video Recording:*.....Atomos Ninja Assassin 4K HDMI Monitor/Recorder

*Field Audio Recording:* .....Zoom H1

*General Room Audio Recording:*.....AudioBox USB 96

*MultiTrack Audio Recording Hardware:*.....AudioBox 1818VSL

*MultiTrack Audio Recording Software:* .....Studio One 3

## Staff Bios

### **Larry Chappell - Livestream Director**

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### **Jeremy Lofgren - Media Department Director**

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