

Package Definition and Brief Functionality Document

Pat Santucci, Chair, A/V Committee

Purpose of this Document

This document defines package divisions of the 2009 A/V System project and offers suggested equipment which could fulfill the functional requirements of those divisions. It is intended for two audiences:

- The stakeholders of MVUUF can use it to consider which functional packages we value, and once we have vendor input, make informed decisions as to how to fund all or some of the packages. If you are reading this document as a stakeholder, the 'Benefits to MVUUF' sections will be of greatest interest; you don't need to worry about the details in the 'Requirements' and 'Suggested Equipment' sections if they are not interesting to you.
- Vendors can use this document as a starting point to make proposals, evaluate our needs, offer estimates and determine which packages best fit their business models. If you are reading this document as a vendor, you may have additional points to offer as 'Benefits to MVUUF', but will be primarily interested in the 'Requirements' and 'Suggested Equipment' sections.

MVUUF intends to choose the best solution(s) in negotiations with vendor(s). The suggestions in this document may be over or under engineered and we are willing to listen to other suggestions.

Package(s) are independent of each other and can be purchased or not without without disrupting functionality of other packages, except:

- Package 1 is required by all other packages
- Package 7 (surround sound) is of minimal use without video projection, and thus requires package 2.

Package Definitions

Package 1: Main Front Of House Audio System

Benefits to MVUUF:

- Substantially better overall sound quality, including reduced echo, greatly reduced chance of feedback, and increased frequency range.

- Greater flexibility in microphone placement, including more space for bands and opening the favorite downstage center (close to the seats and directly in front of the rose window) position for presenters.
- Greatly increased ease of operation and setup, opening sound operation to a wider range of volunteers and allowing experienced operators the tools for truly professional music event coverage.
- Improved recording with a new dedicated microphone and separate record out.

Requirements:

- New full range speaker coverage for the sanctuary
- New amplifier(s) to drive those same speakers
- New mixing console (or combination of mixers/processors) with at least these features:
 - 24 XLR analog mic/line inputs
 - per – channel independent gate, compressor, and limiter
 - per-channel EQ, at least 4 bands
 - at least 8 discrete output mixes available
 - Whole-board instant preset and recall
 - Per-channel effects, EQ and parameter preset and recall
- Permanently mounted dedicated ambient recording microphone(s)
- Ability to easily switch from standard front of house presenters to center of the room 'in the round' presenters.
- Provide mono analog feed for our existing distant room amplification systems.
- Provide suitable digital feed for our recording computer.

Suggested Equipment:

- 10x Tannoy DI8DC installation Loudspeakers
- 2x Tannoy VS15HL Subwoofers
- 3x Crown CDi 2000 power amplifiers
- Behringer Europower 1500 power amplifier (MVUUF furnished)
- Yamaha LS9-32 mixing console
- RODE NT4 microphone

Package 2: Video Projection

Benefits to MVUUF:

- Allows convenient use of video projection during services and for events
- Minimal to no setup time for video projection
- In service uses include pictures for Stories For All Ages, special announcements, guest presenters, and sing-along hymn lyrics
- Event uses include greatly enhanced film series, guest lectures, parties, and memorial services
- Compatible and easy to use with all known and foreseeable video sources

Requirements:

- Motorized Screen to suit our Sanctuary
- RS-232 controllable HDCP compliant projector with at least 1x VESA, 1x S-Video, 1x HDMI and 1x DVI-D (w/HDCP) or additional HDMI(w/HDCP) inputs installed to suit our Sanctuary

- Switching and cabling to support sources from either stage left (near our lectern) or AV booth

Suggested Equipment:

- Canon REALiS SX80 Projector
- Da-Lite Tensioned Cosmopolitan Electrol #79027
- Onkyo PR-SC886P preamp/switcher
- Kramer FC-31 VGA- DVI-D converter
- 2 x Crestron DM-TX1-1G HDMI Wall Plate transmitter
- 2 x Crestron DM-RX1-1G HDMI Wall Plate receiver
- Peerless mount

Package 3: Wedding Mics

Benefits to MVUUF:

- Allows the use of 3 simultaneous wireless lapel microphones
- Useful for wedding couple and officiant at weddings, or three speaking parts for dramatic presentations

Requirements:

- Microphone Transmitters, receivers, and elements compatible with our existing receivers

Suggested Equipment:

- 2x Sennheiser ew 112 G2 Wireless mic package
- 2x Sennheiser ME 3 headworn mics

Package 4: Choir Mics

Benefits to MVUUF:

- Enhances live sound and recordings of the choir. Currently, there is no sensible way to mic the choir.
- Enhances live sound and recordings of the piano.

Requirements:

- Permanently installed Choir Mics suitable to our room and mixing console
- Suitable mics for our grand piano

Suggested Equipment:

- 2x Shure MX202 ceiling mics
- 2x Shure Beta 91 surface mount mics

Package 5: Music Monitors

Benefits to MVUUF:

- Provides a separate mix and quality sound for live performers, allowing them to be at their best.
- Can be used as portable PA systems for small events

Requirements:

- Powered monitors suitable to our space and use.

Suggested Equipment:

- 2x Fender Audio 1270P floor monitors
- Mackie SRM150 mic stand monitor

Package 6: Integrated Control

Benefits to MVUUF:

- Integrates control of all audio and video devices in a single touchscreen interface
- Allows remote control via computer connection on LAN or over the Internet
- Makes 'safe mode' events possible - using sound and video with no operator for simple events
- Security shutdown prevents wasted lamp life of the video projector, wear on audio systems
- Future expandable to control lighting and HVAC

Requirements:

- Industry standard control system with installed control panel
- Must be able to control mixing console - likely via MIDI
- Cabling and installation to be provided by vendor - MVUUF to supply programming

Suggested Equipment:

- Crestron AV2 control processor
- Crestron CAGE2 Expansion Module
- Crestron CNXMIDI expansion card
- Crestron C2ENET-1 ethernet card
- Crestron APAD LCD Panel control interface
- Crestron CNX-BF12 Button panel interface

Package 7: Surround Sound (requires package 2)

Benefits to MVUUF:

- Enhances film events with full cinema-quality sound and High Definition video source

Requirements:

- Blu-Ray player
- Speakers and power amp channels to fill any of the 7.1 spots not covered in package 1

Suggested Equipment:

- Panasonic DMP-BD80 Blu-ray Disc Player
- 5x JBL Control 6 speakers
- ART SLA-4 4 channel power amp
- ART SLA-1 single channel power amp