

## A/V Systems Commissioning Services Explained

Audiovisual systems commissioning is essential to ensure successful results. Each A/V system is composed of products from dozens, if not hundreds, of different A/V equipment manufacturers and is custom-designed to match the architecture and Owner's needs. Commissioning ensures end users will enjoy the performance and operation of the system as it was intended.

Commissioning services involve extensive measurements and adjustments of the sound and video signals within the various components of each system. This maintains the highest quality performance without degradation and assures optimum performance. Commissioning also allows for a detailed observation of the installation to result in accurately determining any remaining work to be completed by the Contractor. ADG prides itself not only on the design of systems but also producing the finest results for our clients.

Typically, two ADG staff travel to the project site near the completion of the system installation. Necessary test equipment accompanies the staff. For a typical performing arts center, for example, sound system commissioning includes a minimum of the following:

- Examine electrical grounding and AC power
- Loudspeaker tests including impedance measurements, "rattles", correct wiring, and polarity
- Measure, adjust, and document signal levels through system from inputs to outputs
- Test signals through every wire and component in the system
- Test each microphone wire for correct wiring and polarity
- Set acoustic levels for each loudspeaker
- Adjust equalizers for all loudspeaker systems for smooth, natural response
- Fine tune system alignment using narrowband (notch filter) equalization
- Align the acoustic timing of multiple loudspeakers
- Configure audio compressors
- Set up and equalize wireless microphones, floor microphones, choir microphones, etc.
- Test production intercom system
- Setup and test the Assistive Listening System
- Equalize stage monitor loudspeaker system
- Document system settings
- Set up mixing console including identifying suggested control settings
- Test operation and signal quality from program source devices such as CD players
- Verbal and written Owner instructions
- Assistance during system first use
- Review of Operation/Maintenance manuals which will include manuals for all equipment and system drawings
- Prepare punch list(s) and verify completion

In addition, the following services are provided when a video component is added:

- Converge and align each video projector for each signal source
- Prepare conceptual control system touch screen layouts
- Verify operation of control system

## A/V Systems Commissioning Services Explained (continued)

- Test operation of video playback equipment such as sources from a laptop computer and DVD player
- Set up backstage video monitor camera

The installation of the AV systems is always last to be completed, typically leaving very little time for commissioning prior to the Owners first use. ADG involvement at this crucial time provides additional manpower and technical expertise. This allows the Contractor to complete the installation and attend to critical punch list items. An ADG commissioned system has never missed an opening.

Commissioning also provides great insight into the challenges facing each Contractor. Each subsequent design is continually improved to adapt to technological development to result in the most efficient and cost-effective system possible.

These commissioning services related more to construction than design and often become a portion of the Contractors' bid. This does raise some eyebrows, especially from a "conflict of interest" viewpoint as the system designer is now a subcontractor to the firm that is installing the systems. However, ADG functions completely independently of the Contractor, focusing specifically to the best needs of the Owner. ADG makes sure the Contractor dots every "i" and crosses every "t".

Fees are based on an 8 hour day but typically 10+ hours/day are spent on site.

In summary, ADG commissioning services provide an essential benefit to the Owner. A properly commissioned system ensures all components are operating as intended and that there will be no surprises when a particular feature or function is first used. In addition, the Owner has a system that is operating to its full potential.