

LSU Health Sciences Center New Orleans (LSUHSC-NO) A/V Standards

This standard promulgates the A/V equipment brands that will be used on the LSU Health Sciences Center New Orleans campus when specifying and implementing Audio/Visual systems. Equipment brands rather than models are being specified in order to allow the flexibility to customize an A/V solution that best fits each project. For example, both the size and shape of a room will affect the model of projector, the screen size, audio requirements, and other attributes of the planned system.

1) **Brand Standards:**

- a) Established using statewide contracts that were bid by the Office of State purchasing
- b) Driven by major A/V installations and multiple smaller installations in every major building on campus
- c) Assure that LSUHSC-NO maximizes the consistency and interchangeability between installations
- d) Aid in providing the highest level of in-house expertise with a limited set of resources

2) **“High-End” Installation:**

- a) A system within a room, hall or auditorium that incorporates an image processor allowing for more flexibility in displaying content.
- b) An auditorium or space that is used by multiple departments and seats a large number of people.
- c) Only certain brands are allowed in “high-end” installations
 - i) These brands may also be used in other applications, but must be used in “high-end” projects in favor of any other brands listed.

3) **Projectors:**

- a) Installed Projectors:
 - i) Christie Digital projectors are specified for most installations; in specific cases, NEC projectors may be used with approval from LSUHSC-NO.
- b) Portable Equipment:
 - i) Christie and NEC are specified.

4) **Screens:**

- a) Mounted Projection Screens:
 - i) Fixed screens are preferred in any room where they are possible
 - ii) If a fixed screen cannot be used (i.e. due to room size or configuration) motorized or manual pull-down screens may be used
 - iii) The fabric will be high-contrast grey or white

iv) Motorized screens must use a low-voltage motor controller

v) Manufacturers:

(1) Draper and Da-lite for standard size screens

(2) Stewart Filmscreens for large, seamless custom sizes

b) Portable Projection Screens:

i) Da-Lite and Draper are preferred if the size and aspect ratio needed are available

5) Microphones:

a) Shure, Sennheiser, and Behringer

b) USB microphones:

i) Blue, Shure, Vaddio, HuddleCamHD, Anker

c) Analog Audio to USB Interfaces:

i) Shure, Behringer, Vaddio

d) "High-end" installations:

i) Wireless – Shure or Sennheiser

ii) Wired – Shure or Sennheiser

iii) Ceiling - Shure or Sennheiser

6) Speakers:

a) JBL, Behringer, Crestron, or Extron

b) Networked speakers: Shure or Q-Sys

c) "High-end" installations:

i) JBL for standard, Shure or Q-Sys for networked speakers

7) Audio Processors/Mixers:

a) QSC, Crestron, Behringer, Shure, and Extron

b) "High-end" installations:

i) QSC, Crestron, Shure

8) Audio Amplifiers:

a) Crown, QSC, Lea, Behringer, Crestron, JBL, or Extron

b) "High-end" installations:

i) Crown, QSC, Lea

9) Document Cameras:

a) Hovercam (for USB), WolfVision, or AverMedia

b) "High-end" installations:

i) Hovercam (for USB), WolfVision, AverMedia

10) Flat Panel Monitors and Televisions, Touch and Non-Touch:

a) Sharp, Samsung, Christie, Dell, and LG

b) All monitors and televisions must be professional or commercial grade:

- i) This specification also applies to all touch screen, large format monitors, and televisions
 - ii) Professional or commercial grade monitors and televisions are required due to their robust construction and design which allows them to operate in a less-forgiving environment
 - iii) As a general rule, consumer monitors and televisions are not designed to be used in a public or commercial environment and their warranties are considered void if used in such a manner
- c) Monitors must have to ability to accept control from third party controllers via RS-232 or IP

11) Direct LED Walls:

- a) NanoLumens, Christie, or Samsung

12) Image Processor:

- a) Crestron

13) Interactive Displays:

- a) PC monitor based or flat panel based
 - i) Sharp, AVer, Dell, or Samsung
- b) Projection Interactive Whiteboard Systems:
 - i) SMART, Promethean, or Hitachi

14) Control Systems:

- a) Crestron

15) Touch Panel Interfaces:

- a) Crestron

16) A/V over IP:

- a) Crestron DM-NVX, NAX, and NUX series

17) Classroom Capture:

- a) SonicFoundry Mediasite

18) A/V Furniture:

- a) Lecterns, credenzas, etc.
 - i) Marshall Furniture, Middle Atlantic, or Spectrum Industries
- b) "High-End" installations:
 - i) Marshall custom lecterns or Middle Atlantic

19) Racks, Mounts and Carts:

- a) Middle Atlantic or Chief:
 - i) This does not apply to lecterns and credenzas (see A/V Furniture above).
- b) Ceiling mounts for projectors:
 - i) Use the Chief Universal Mount for projectors unless it is impossible in the room configuration.
- c) All wall mounted monitors will be mounted on Chief pull out mounts or Chief Fusion mounts with a pull out accessory.
- d) A/V carts, including their mounts:
 - i) Chief, Middle Atlantic, or Spectrum Industries

20) PTZ Video Cameras:

- a) Vaddio, AVer, Marshall, and Panasonic
- b) “High-End” installations:
 - i) Vaddio and AVer

21) DVD, DVD/VHS Combo Units, Blu-ray decks:

- a) Sony or LG

22) Videoconferencing Endpoints:

- i) LSUHSC no longer uses hardware endpoints; only Webconferencing is used
- ii) LSUHSC’s current standards for Webconferencing are Zoom and Microsoft Teams, but all Webconferencing equipment must be Webconferencing platform agnostic

23) Power Conditioners/UPS Units:

- a) Furman, APC, SurgeX, or Tripp-Lite

24) Cables:

- a) Any cables connected to any Crestron device must be certified by Crestron if such a cable exists; if Crestron does not certify a cable that must be connected to a Crestron device, the cable must be approved by LSUHSC-NO.
- b) Cables for other purposes can be purchased from any manufacturer, although Crestron, Monoprice, Comprehensive, Extron, and Kramer are generally preferred.

25) Digital Signs:

- a) LSUHSC-NO uses FourWinds Interactive (FWi) for digital signs
- b) The hardware for these signs must be a professional display
 - i) Touch capability may be required and may be integrated into the monitor or effected by the use of an overlay
 - ii) The monitor must adhere to the guidelines for monitors listed in this document

26) Accessories and Components:

- a) If something is required that is not in the standards listed above, or if the manufacturer in the above standard does not produce a product with the specifications required for the project, the first vendors that should be used, in no particular order, are:
- i) Crestron, Extron, Vaddio, JBL, Shure, Behringer, QSC, Dell, and Kramer.
 - ii) If these manufacturers do not produce the needed component, the selected component must be approved by LSUHSC-NO

LSU Health New Orleans (LSUHSC-NO) A/V Installation Best Practices

To provide consistent installation standards as well as ease of support, the following best practices will be used:

- All finishes/colors must be coordinated with and approved by LSUHSC-NO.
- All installation must be performed following the manufacturer's specifications.
- To whatever degree possible or practical, signal conversion (e.g.: HDMI to VGA, analog to digital) is to be avoided since it introduces noise into the signal. Maintaining a signal's original format is to be done whenever possible. If signal conversion is required to achieve the system goals, it will be limited to as few conversions as required.
- All infrastructure must be as flexible as possible, allowing for future upgrades without the requirement of installing new infrastructure.
- LSUHSC-NO prefers customizable touch panel interfaces over button panels in most cases due to the flexibility that they offer.
- Included in any bid must be a one-year warranty on equipment and installation and a one-year contract for service and support. Once the integrator reaches substantial completion, the integrator must send a notice in writing to the LSUHSC-NO Purchasing Department stating this and LSUHSC-NO must accept this status. Acceptance will only come from the LSUHSC-NO Purchasing Department in writing to the integrator. The one-year agreements must start from LSUHSC-NO's acceptance of the project.
- Upon acceptance of the project, the vendor will turn over all information related to the project including but not limited to all as-built drawings, uncompiled Crestron code, programs, equipment user IDs and passwords, manuals, remotes, cases, software, warranty information, IP addresses, and spare hardware as well as keys and any special tools included for the equipment. Also, updated code and one line drawings must be provided as changes are made throughout the one-year support period. At the end of the warranty period, the integrator must ensure that current system programming and as-built drawings are delivered to LSUHSC-NO.
- All cables which run through ceiling spaces **must** be **plenum** rated.
- All cables connected to Crestron devices must be Crestron certified (see above).
- All cables must include a minimum of a 10% service loop.

- No permanent wire ties must be used; only releasable wire ties, clips, etc. or hook and loop straps are allowed within the lectern, credenza, or rack.