

You may want to call Amy Mitchell, Tech Director for Southgate school districts,
<https://www.southgateschools.com/departments/technology>

As a K-12 school and academic librarian, I've used both ceiling mount and portable projectors. My current small public library uses a portable projector with a large screen that attaches to their light-weight, movable whiteboard. My director said she hasn't had any problems with people connecting their devices to it, although she does have a laptop on hand, too, and probably some cables that are compatible with either PC or Macs. It's simple and it works.

I recently experienced a *wireless* projector used by an instructor teaching anatomy from his Smart phone. The projector worked flawlessly, while the instructor logged into his 3-D anatomy tool, tapping between images and zooming in and out with his phone's touch screen. The projector looked like a standard-sized model, and the instructor just used a light-colored wall for his presentation. I think it all depends on your needs, but you are on the right track thinking about the tools that you will need, from a device that's compatible with your projector to a display surface where you're most likely to use it.

We worked with *Sound Planning Communications* located in Redford to install our system. In our case, we have two ceiling-mounted projectors, screens, lecterns, and a ceiling-mounted audio system. Our system works independent or tandem, in the case where our community rooms are opened up into one larger room. It is managed via a server located in the mechanical closet off the community room. Our projectors, screens, and audio system all operate from the lecterns. Your presenter has the ability to plug in to the system from the lectern in order to project both audio and visual. It is quite costly, but we have found it to be well worth the investment.

Here is a link to their site in case you want to get a quote from them, or talk to them about your specific needs:

<https://www.soundplanning.net/>

We finally (after 20 years) made this move and we love it. We replaced our mostly non-working sound system and our projector (on a cart). We worked with MDIS, <https://mdisnow.com>. They replaced our sound system, added HDMI and USB inputs to the wall in our Community Room and replaced our cart based projector with a new ceiling mount. In our sound system enclosure, we have a small notebook

computer that staff can run powerpoint, etc. from with a bluetooth keyboard and mouse. Staff and/or public can also use a notebook in the Community Room, hooked up to the HDMI and USB inputs. This has made it much easier to get things set up for a meeting/program. Now, we don't have to crawl on the floor to hook up everything in a floor box. We're not getting any younger here and it was starting to get difficult for some of us (myself included) to get up off the floor. This was a pricey project for us, but we really enjoyed working with MDIS as they were willing to work around our Community Room schedule. We've worked with them since to add a Digital Display Kiosk in our lobby.

We had those and with our new renovation we are adding 86 inch tvs instead. They were much cheaper and do all of the same work!

We have a ceiling projector that is hooked up to an outlet in our ceiling and then is also hardwired, I believe, to a media box/center off to the side of our community room. There is a DVD player, audio inputs, and a whole bunch of other stuff in there as well. This was all added as part of our addition back in 2016/2017 so much of it was done during construction. I know a pretty penny went into it, but it allows us to use it for presentations, to show movies, to enhance audio for events, etc. We use it almost on a weekly basis and it comes with a dedicated tablet that allows us to control volume from outside the room (like when we need to turn it up or down for a movie we are showing). It was definitely an investment for us, but we felt it was an enhanced service we could offer our community.

I do know there are other options that are less expensive and less thorough. One of my previous libraries had one installed that they also used for presentations and movies. While the sound wasn't as great, it served its purpose and was used fairly often.

I realize this is not what you are asking, but we got rid of our projector, in favor of a large screen TV. It's much easier to connect to computers (we use a wireless HDMI transmitter) and the clarity and brightness is much better than our old projector. We also added a sound bar for those presentations that require good sound. It was expensive as the room can seat up to 100 and we needed a large 80" screen but we are set for years to come. It works particularly well for Zoom conferences.

Our projector hooks up by HDMI cord to laptops. We do not have a dedicated laptop for it - occasionally I will use our staff laptop when running programs that use the projector, otherwise the room user will use theirs.

Definitely worthwhile for us.

Basic

It can be as easy as running an HDMI cable from the projector and terminating it to an HDMI wall plate jack for a clean installation, preferably near an electrical outlet for the convenience of whoever is using it. HDMI is not really meant to go further than 15 feet, but you can possibly get away with a 25-foot HDMI cable if it is “wall rated”, shielded to protect it from electrical interference. Realistically, for many longer HDMI runs you’ll want to use an [HDMI over Cat6 Ethernet adapter](#) to prevent signal loss and frustration. For sound, maybe you can get away with the speaker built into your projector, but depending on how people use it, external speakers are nice for a room of any significant size. This would be a very basic bring your own device setup.

Most laptops have settled on HDMI as the standard output. We keep a kit at the reference desk for checkout that contains anything people might need to connect to HDMI, including a HDMI cable, VGA to HDMI converter for older laptops, and a micro-HDMI to HDMI adapter. At our library, people usually bring their own laptop to use here. We have a laptop for check out that is meant for people using the rooms, and a Blu-ray player that can be checked out from our library of things if they need a quick way to show a movie.

More advanced

There’s probably any number of different ways to do this. When we finished our renovations in 2019 we added a projector or TV, plus screensharing technology to every meeting room. We wanted a bring your own device solution that would work with a wide variety of patron hardware with ease of use. We hired it out to a company that specializes in AV setups, and this is what they came up with for our larger meeting rooms:

- Ceiling mounted BenQ projector with two HDMI inputs and a serial port for a hard-wired remote control.
- Da-Lite motorized screen with wall-mount control panel. Simple up/down buttons, not connected to any of the other equipment.
- Extron audio [amplifier](#). Fairly small, sits up with the projector.
- Extron [MediaLink](#) control system. Hard-wired controls that remotely turn projector on/off and selects the projector HDMI input with labeled buttons. Adjusts the volume on the Extron amplifier.
- QSC ceiling mounted speakers wired to the Extron audio amp.
- 1st HDMI input is run to a wall mounted HDMI receptacle.
- 2nd HDMI input is connected to a wePresent [WiCS-2100](#), located up with the projector. This is an older model now. There must be a newer type of device like this. This has wireless presentation capabilities. Accepts wireless screensharing connections via Apple AirPlay, Google Cast, and “MirrorOp” program for Windows laptops. Has a built-in WiFi access point. Using wireless screen-sharing requires input of a 4-digit code displayed on the screen, preventing pranksters from connecting from another room.

We love our ceiling mounted projector! It was wired so that people can plug into the unit via connections on the wall. We use it for our own programs/events but also make it available as an add on with our meeting room rentals.

We have a ceiling mounted projector in our lower level meeting room. The model we have is wired through the drop ceiling. The wires travel to a cabinet mounted on the wall where we house controls for the speaker system and a DVD/Blu-Ray player, VHS player, etc. We have plugs for connecting laptops as well. I think it is worth it because we use it to show movies and a lot of presentations.

You might have to shop around for a service to sell you the projector and installation. We used Automation Design & Entertainment in Kalamazoo, but you probably have to find a home theater store in your area.

We do not have a ceiling projector. Instead we have a large monitor TV on the wall. We connect a laptop to it and use the wi-fi to present it on the monitor. That is the way to go and may even be cheaper.

We have a ceiling mounted projector in our large meeting room. Between library programs and public meetings, it is used a lot. We worked with TelSystems out of Ann Arbor (<https://thalner.com/>). Our system has several components:

- 1) Wall mounted control panel. From here you turn on the projector & screen, choose if you're projecting from a computer or using the DVD/CD player, and volume.
- 2) The main control box is located in the meeting room's closet. This is the guts of the system and the DVD/CD player.
- 3) The ceiling mounted projector.
- 4) The in-ceiling screen (drops down when the projector is turned on).

We use the system on average once a week.

- Many of the groups that meet here use it. They bring in their own laptops or use a thumb drive with our laptop.
- We play music during storytimes and other kids events to welcome the children.
- We do some hybrid adult programs. The speaker is on Zoom, and people can either use Zoom from their homes, or view the presentation at the library.

- We show movies with it.
- I use occasionally at our monthly board meetings
- I use it for our monthly staff meeting

I could go on, but you get the idea. All in all, very useful and worth the \$\$\$.

Please don't hesitate with any follow up questions, or come out to see it in action.

We have five ceiling mounted projectors in various spaces, all connected to wall plates with HDMI ports, and all connected to a wall mounted controller for power and volume control. Three have relatively low-tech controllers, but our two larger meeting rooms have wall mounted tablets with more advanced controls. We hired outside vendors to recommend equipment and perform the installations. One of the vendors closed up shop and coincidentally, passed their client list on to the second vendor. The large meeting room projects were pretty pricey, but we received a grant from our local public access cable station to help subsidize the project.

The vendor still standing is Tel Systems / Thalner. <https://thalner.com/>

I've been through this entire thing.

There are a lot of third party solutions to help make the connections—and I've tried them—but I suggest the following:

1. You have a physical connection with a VGA or HDMI cable from the projector down to a cable or plate in the wall
2. Miracast is a magical wireless protocol which does wonders for connecting for us anymore—that doesn't require a separate connection to a traditional WIFI connection. We use some [variant of this Microsoft product](#)

(https://www.amazon.com/Microsoft-Wireless-Display-Adapter-Hdmi/dp/B01C9YTI9S/ref=sr_1_3?crid=50KOEZLR2C9D&dib=eyJ2IjojMSJ9.A9S69ex6sfrl3_Nwh-dHxQ.Zgt2gwzASCnoRApIyGu6q8jiQdzcySvYCiRL28O3odU&dib_tag=se&keywords=B01C9YTI9S&qid=1708552100&srefix=b01c9yti9s+%2Caps%2C91&s_r=8-3)

that plugs directly into the project and hangs from the ceiling. The connect feature built into laptops/tablets/android phones easily hooks to these

3. Your mileage may vary, but usually Apple laptops have an HDMI port, but iOS doesn't support the Miracast protocol.
4. For Apple or non-device people, I have Surface tablets at the ready to use.