



REQUIRED HARDWARE

You'll need the following hardware in addition to a large TV or projector with screen. If you don't have particular pieces of equipment, you can arrange to borrow them through our Knave Kit Equipment Loan Program. See the Classrooms page at <http://playtheknave.org> to learn more.

- 1) A gaming PC computer that runs Windows 8 or 10. Most "gaming computers" will work, but the following are recommended specs:
 - 64 bit (x64) processor
 - 8 GB Memory
 - Intel i7 3.0 GHz (or higher)
 - Built-in USB 3.0 host controller (Intel or Renesas chipset).
 - DX11 capable graphics adapter (see list of known good adapters below)
 - ATI Radeon HD 5400 series
 - ATI Radeon HD 6570
 - ATI Radeon HD 7800 (256-bit GDDR5 2GB/1000Mhz)
 - NVidia Quadro K1000M
 - NVidia Quadro 600
 - NVidia GeForce GT 640
 - NVidia GeForce GTX 660
- 2) A Kinect v2 motion sensor device (ASIN# B00YT168WA), the camera used for the Xbox One. Microsoft has stopped manufacturing these, but you can still find them through various distributors online.

*** Make sure you have the Kinect v2, not Kinect v1, which will not work ***



- 3) A Kinect v2 adapter. E.g ASIN# B07LH1V4XP. Note that Microsoft has stopped manufacturing these adapters, but all the non-Microsoft brands have worked for us.



Note: Your TV or projector will need an HDMI connection. If you have only a VGA input, you will need an HDMI to VGA adapter.



INSTALLING GAME SOFTWARE

1. Download a copy of the game from our website's download tab at <http://playtheknave.org>.
2. **Right click on the .exe file and select Properties. If there is a button or checkbox that says "Unblock," select it, click apply, and close the properties window.**
3. Follow along with the installer instructions, selecting the default options.
4. Double-click the game's icon on the desktop shortcut to launch it. After it loads, press the ESC key once and wait for the main menu to appear. (This can take several minutes.)

If you have problems launching or running the game for the first time after installing the software, see the troubleshooting section below on "Troubleshooting Software Installation."

SETTING UP YOUR HARDWARE

1. Place the Kinect camera at the edge of a table or surface in front of your TV or screen, with its sensor facing toward the players. Make sure there is a power outlet nearby.
2. Place your computer near the Kinect.
3. Connect your computer to your TV or projector.
4. Make sure that there is sufficient space for the players to move around in front of the TV or screen.
5. Connect your computer to the Kinect camera by using the Kinect adapter. Notice that there are three ports on the adapter, each with its own dedicated cable:
 - a. A port for the cable that connects the adapter to a power outlet.
 - b. A port for the cable that is attached to your Kinect camera.
 - c. A port for the cable that connects the adapter to your computer's USB 3.0 port.

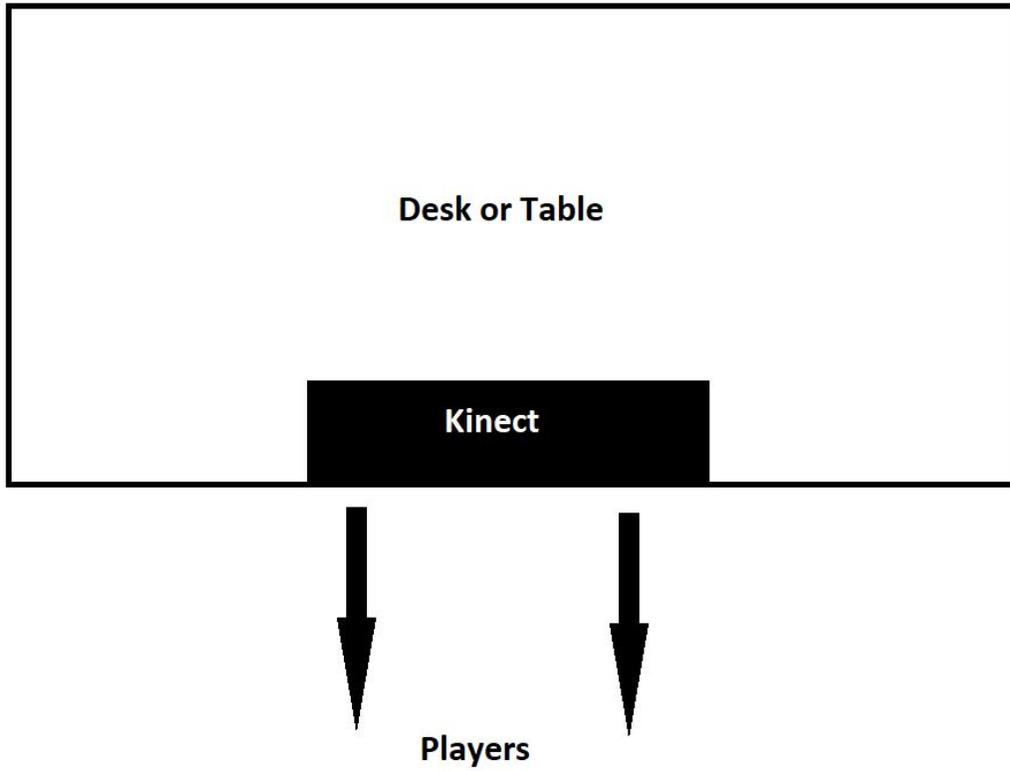
Make sure all your input plugs are connected tightly to their sockets.

If you are borrowing a Knave Kit from us, consult the kit instructions.

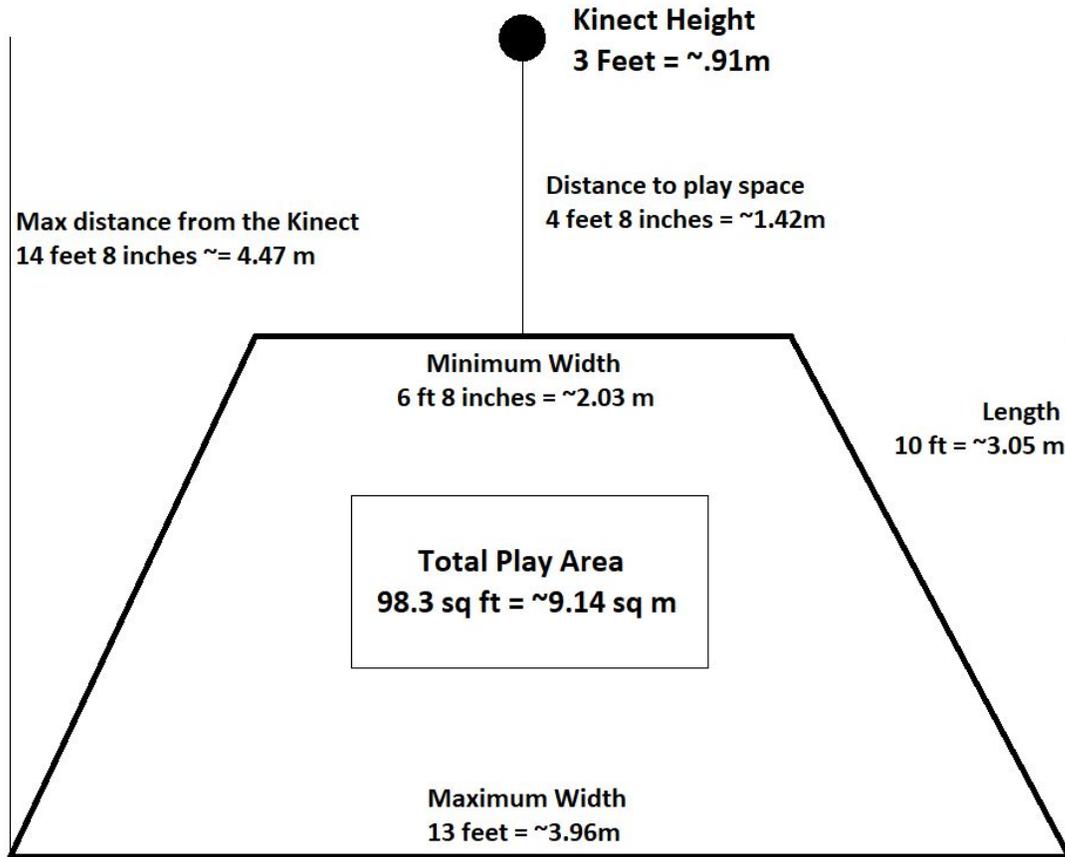
TIPS FOR A GOOD GAME:

1. Position the Kinect so that its front edge is directly on top of table's front edge. [See "Kinect Positioning" illustration.] The surface can be anywhere between 2 and 6 feet of the ground. Adjust the angle of the camera by tilting it up if the camera is lower or tilting it down if the camera is up high.
2. You will need a good amount of open space (minimum 6 feet) in front of the Kinect. The Kinect will search for people who are its optimal zone, shown in the diagram [See the "Play Space" illustration]. So it is best to clear space on the sides of the playing area as well. The more space you have, the more your players can move around. The more players you have, the more space you will need.

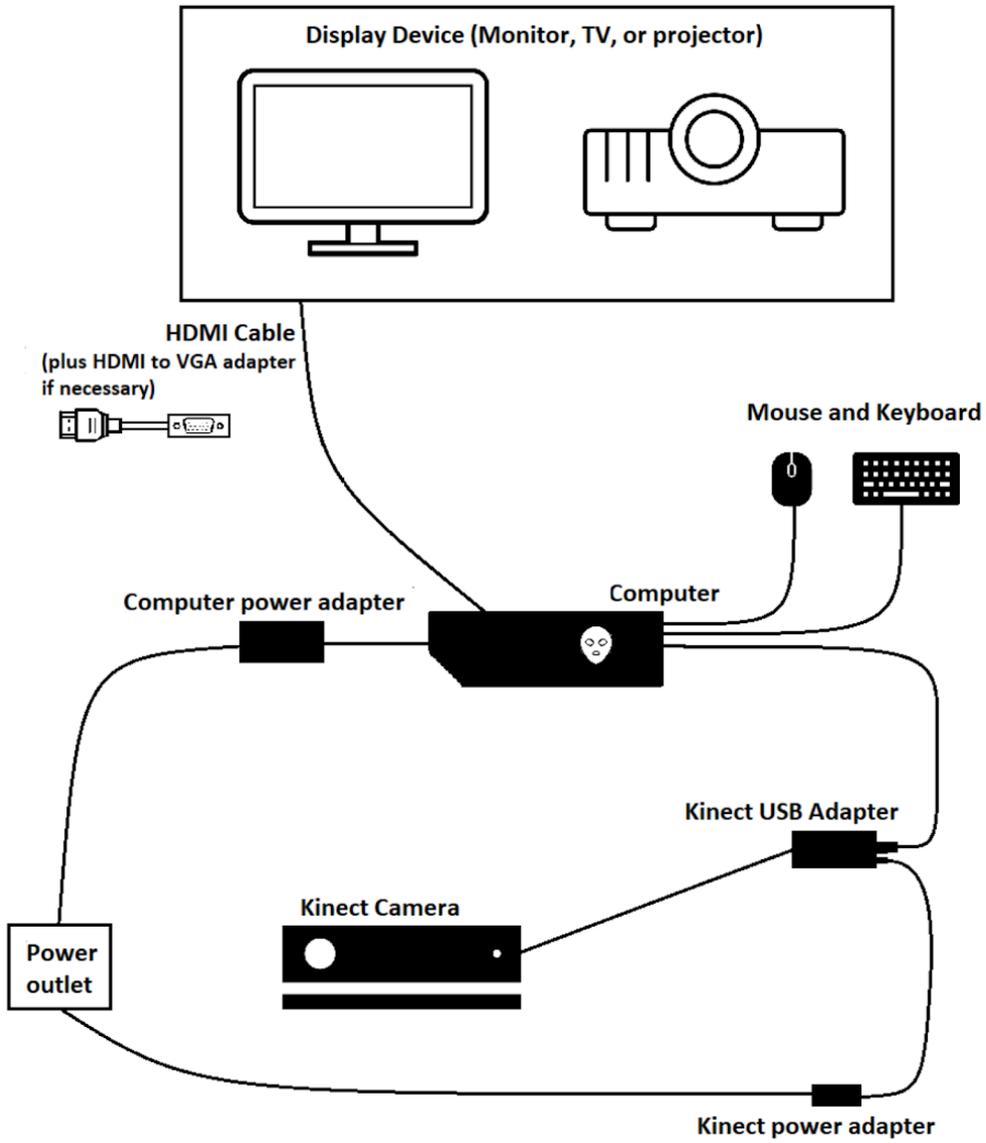
Kinect Positioning



Play Space



Play The Knave Setup



(Optional) If you'd like to get your Kinect camera's feedback to help you set up your play space, you can install an optional software program from Microsoft.

- a. Download [Kinect 2.0 SDK](#) from Microsoft's Download Center, following all installation instructions.
- b. Place your Kinect in the optimal position and connect it to your computer and a power outlet (see above)
- c. When the download is complete, click "Kinect Studio."
- d. Select the "Monitor" tab and click the "Connect to Service" button.
 - i. If everything is working, you should see a live stream of the Kinect's depth camera on the right-hand side. You can use this view to adjust the Kinect angle, check the play area boundaries, and preview the skeleton tracking.
 - ii. If you do not see anything after clicking "Connect to Service," double-check the cable connections between the Kinect and the PC and restart Kinect Studio.

TROUBLESHOOTING SOFTWARE INSTALLATION

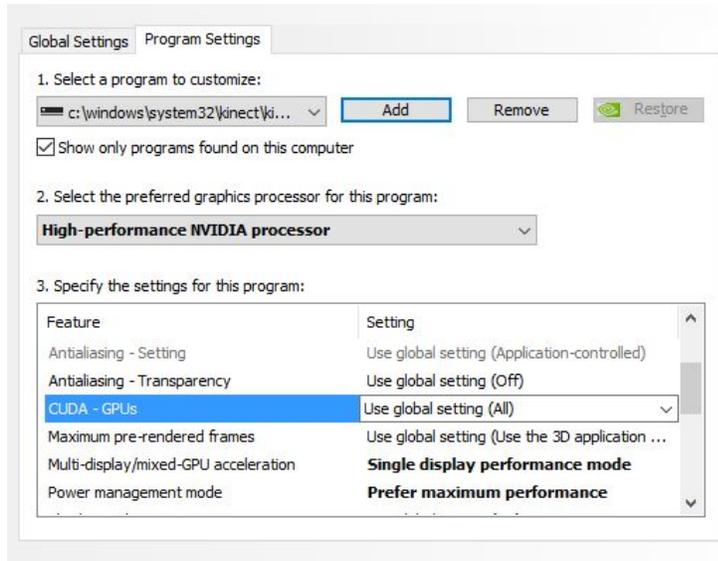
If the solutions above do not work, it's possible the software installation was not successful. Below are some known problems that can occur during installation and how to fix them.

I can move through the game menu, but when I try to play for the first time, the screen goes black and the game stalls.

If you are on a laptop, it's possible that your computer is trying to run the game using its "integrated graphics card" instead of the "dedicated graphics card." Here is how to override this if you have an NVIDIA graphics card:

1. Right click on the desktop, click NVIDIA Control Panel, and go to 3D Settings > Manage 3D settings
2. Click on Program Settings
3. Add the three programs below using the following bolded settings:
 - (Game directory)/**Mekanimator.exe**
 - (Game directory)/bin/**KinectDaemon.exe**
 - C:\Windows\System32\Kinect**KinectService.exe** (if not present)
4. Note: if you move the game's folder or install to a new location, you will have to re-apply the settings above the new executable locations! If, however, you download the latest version and install it to the same location as before, you do not have to change any settings.

If you have an AMD graphics card, the general concept is still the same. You need to specify that **Mekanimator.exe**, **KinectDaemon**, and **KinectService** are all running using the dedicated GPU rather than the integrated GPU.



I followed the instructions above, but it still doesn't work.

You may need to update your Kinect driver. Here's how:

- a. Make sure your Kinect is plugged into the computer's USB 3 port.
- b. Find your "Device Manager" settings on the computer.
- c. In the list of devices, click on the arrow next to the one for "Kinect sensor devices" to expand it. You should see "WDF KinectSensor Interface 0" below.
- d. Click on "WDF KinectSensor Interface 0" and a window will open, with several tabs across the top of it. Select the "Driver" tab.
- e. Click on the option "Update Driver" to update the driver for this device.
- f. When prompted, choose the option for "search automatically for updated driver software." Follow further instructions for downloading the updated driver software.
- g. Restart your computer and try launching the game again.

When I go to my "Device Manager" settings, I do not see the "WDF Kinect Sensor Interface 0" that you mention above. Or I don't see "KinectDaemon" and/or "KinectService" programs you mention.

You need to install the Kinect driver on your machine. Here's how:

- a. Unplug your Kinect sensor from your machine. (Important!)
- b. Visit Microsoft's Download Center to download ["Kinect for Windows Runtime 2.0"](#) and click the Download button.
- c. From the download location, double-click on "KinectRuntime-v2.0_1409-Setup.exe"

- d. When installation is complete, plug your Kinect sensor into your computer's USB 3.0 port, making sure that it is also plugged into a power outlet via your adapter. The drivers should load automatically.
- e. Restart your computer and try launching the game again.

Note: When you plug in the Kinect again, the firmware on the device will be updated. This may result in the "device enumeration" happening repeatedly for a few minutes. (A pop-up window will keep appearing, asking what you want to do with the Kinect, and when you click on the pop-up window, it shows that the driver is still uploading.) Let this process go on for a while, but if it hasn't stopped after 10 minutes, restart your computer and try running to the game again to see if you're set.

Acknowledgements:

Some of the icons used in this manual are taken from the Noun Project, used by permission of their creators:

Kinect v2 (on Required Hardware) by Juraj Sedlák
Kinect v2 (on Setup Guide) by Vangos Pterneas, GB
Kinect v1 by FrankChung
Projector by Vectplus
Monitor by Ilaria Bernareggi
HDMI by lastspark
VGA by Iconic
Mouse by flamingo
Keyboard by Pawel Glen
Alien by Joris Millot