

3D In the Classroom

USING THE ROVER: GETTING STARTED INSTRUCTIONS

You will need:

- a DARK room with a blank wall or screen
- the A/V Rover
- Active 3D Viewing Glasses (25 pairs are in the drawer of the A/V Rover)
- Keyboard and mouse (optional; both in the drawer of the A/V Rover)
- 8-10 FEET of space around the person interacting with the Rover (if using interactive)
- A/V Rover How to video <https://www.youtube.com/watch?v=o9GYAJ9M4jU#t=12>
-

The A/V Rover drawer: To open the Rover drawer, push down on the handle.

Screen/Room: Any screen or white wall can be used; you will need to adjust the projector for the proper projection ratio after you get it powered up. The room must be dark.

1. PLUG IN THE ROVER. Steps 1-4 are covered in the image.



2. COMPUTER: Turn it on first. It is a tiny button.

3. PROJECTOR: Turn it on after the computer (button on TOP of Rover, towards the back of the large button). The projector takes a few minutes to warm up. (If you will be using it more than once in a day in the same location, it is ok to turn off the projector but leave the computer on. DO NOT LEAVE THE PROJECTOR ON WHEN IT IS NOT IN USE. Make sure to turn off EVERYTHING (including stereo) on the Rover before unplugging - see Power Down instructions)

4. SOUND (optional, turn it on if needed)



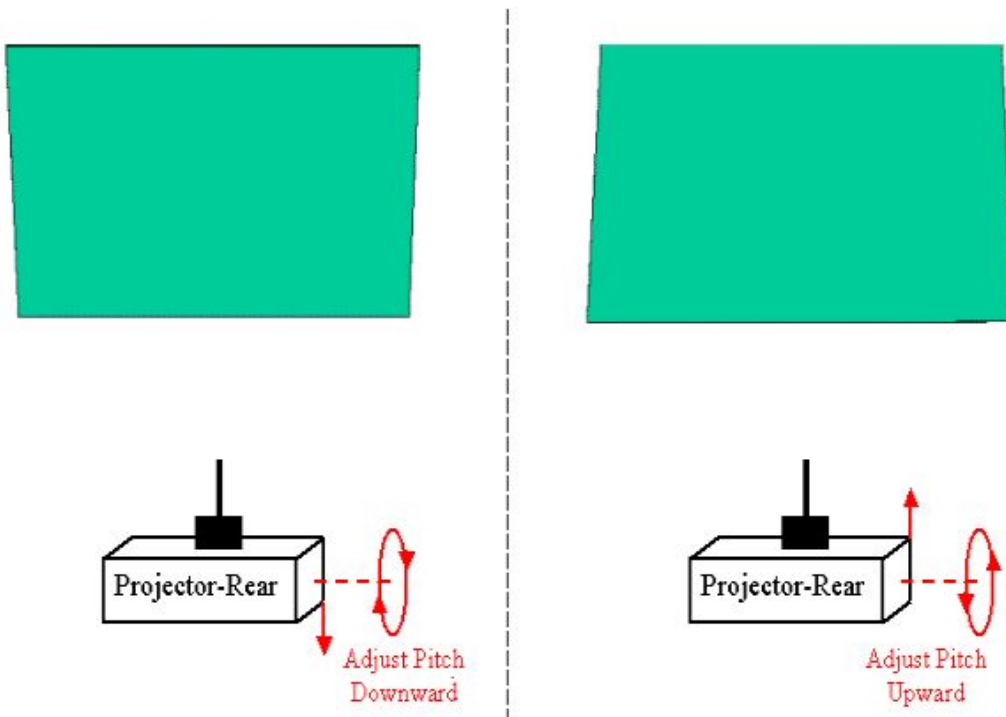
For
Learning &
Training | Collaborate.
Innovate.
Engage.

Technical College
Fay, Portal Manager, 2015

5. LENS CAP!

6. ALIGNING THE PROJECTOR (You may not need to complete all of these)

- **Manually adjust the projector by moving the projector's unit forward/back and side to side** squaring up the image as much as possible (it may not be completely square)
- **Turn the lens ring until text and desktop icons are in focus.**
- Adjust the height of the computer using the string and clip on the right side to fix the **perspective (see below for how to fix the most common situations).**



- **On top of the projector are buttons to fix the ratio (keynoting).** Use these to make any final corrections.
- Continue this process until the desktop squared and/or images are clear enough to view.

7. 3D CONFIGURATION

- **Distribute glasses and put on your glasses. Push the button on the side frame.**(Note: if you place the glasses down on the table or in their lens bag, they will turn off and you will need to turn them on again).
- **Open the 3D content that you will be showing using its library,** e.g., Eureka, CyberScience, etc. Each library has some built-in tools to help ensure the 3D experience works, so it is the easiest way to open content.
- **Red /Blue Eye :** If the library opens a Left (Red), Right (Blue) eye menu:



Center for
Teaching &
Learning

Collaborate.
Innovate.
Engage.

Shut or cover your left eye. If you see nothing, then you should choose Right (Blue). If you see both, you will need to do some troubleshooting - most likely the glasses are not working. Open some content within the library to make sure you see the 3D aspect. If you do not, see Troubleshooting 3D below. The experience should be the same for all glasses but having the students tell you what they see can be a good check to see if their glasses are working. If any are not working, return them to the CTL.

8. INTERACTIVE / GESTURE BASED (Kinetic / XBox) ONLY : The interactive technology can be controlled through the keyboard with shortcut keys OR using gestures. If you will use the gesture based system you will need about a 8 - 10 foot square “box” of space for the person interacting with the projector.

- Turn on the Xbox
- Make sure your glasses are on
- Open the kinetic content
- Commands
 - Scroll = Reach
 - Left/Right Keys (arrows); Rotate/Move
 - Escape or F12 = Restart
 - F1 toggle between haptic (interactive) and keyboard mode
 - Arrow Keys - Up, Down, Left, Right (navigation in keyboard mode)
 - Mouse to “touch” - slide index and middle fingers simultaneously up and down moves the hand inward/outward

Keyboard based

- Restart (Escape or F12)
- To exit: Right Click> Quit (Xing it does not actually shut it down)
- F1 toggle between haptic (interactive) and keyboard mode
- Arrow Keys - Up, Down, Left, Right (navigation in keyboard mode)
- Mouse to “touch” - slide index and middle fingers simultaneously up and down moves the hand inward/outward

Gesture based

- Make sure the person interacting with the Rover has about 8-10 feet of space.
- Standing closer to the A/V Rover = smaller area of interaction ; however there is a very small dead space area around a person
- Movements:
 - Walk - Walk in place; faster you walk the faster you go



Center for
Teaching &
Learning | Collaborate.
Innovate.
Engage.

- Turn - Lean in 45 degree angle; keep shoulders straight if you want to turn where you are (i.e., not move forward or to side; leaning forward 45 degree angle will move you forward and in direction of shoulder pointing)
- Touch (Handle, pick up, etc.) - Move hand out in front ; further out, move faster
- Show the students the basic movements and then move out of the radius field. Allow the student to then enter the radius.
- Check the lights
 - Flashing green light means that the Xbox is bound to a person - OK
 - Red light - no one is bound
- Restart (Escape or F12) if needed
- Unbind (Kinect bound to wrong person)
 - Function + F1 unbinds ; move person into position and then rebind
- Rebind to the participant (i.e., change participants)
 - Unbind first; if need to change participants
 - Move others outside of the radius field (about 10' x 6')
 - Participant in the radius field “shuffle” steps (walk/move in place) to get locked back to the signal
- To exit: Right Click> Quit (Xing it does not actually shut it down)

SHUTTING DOWN

- If you are using the Haptic (Interactive), Right Click> Quit (Xing it does not actually shut it down)
- Power down the Xbox.
- Power down the Stereo (if on)
- Power down the computer
- Unplug the unit and wrap the power cord up.
- Return the glasses to their bags (they will automatically turn off) and put them back into their drawer. If any are not working, put a post it note on the bag and alert the CTL staff know (email is fine; CTL@athenstech.edu).
- If you reserved the Rover, CTL staff will pick up the Rover at the designated time in the reservation.

Problemsolving (EMAIL: ctl@athenstech.edu)

GLASSES

- Are they on? Push the button on the side frame near the lens.
 - If they are still not working, put them aside with a post-it note on them and return them to CTL. The glasses should sync automatically.



Center for
Teaching &
Learning

Collaborate.
Innovate.
Engage.

- If everyone is having problems seeing the 3D, go through the Troubleshooting 3D (Red/Blue Eye Test; Page Flip).
- Settings to check
 - Aspect ratio and screen resolution - do not change the aspect ratio or screen resolution, just move the projector; it should be set to screen resolution 1028 and 120 Hz
 - Under the viewing method - View - should be Quad Buffered Open GL
 - If in 2D > change to Stereo

Xbox does not recognize participants or recognizes others standing nearby (Red light = no one is bound)

- Restart (Escape or F12) ;
- Unbind first (Function + F1)
- Rebind to the participant
 - Move others outside of the radius field (about 10' x 6')
 - Participant “shuffle” steps (walk/move in place) to get locked back to the signal

Kinetic movements

To reset/ restart: Escape or F12

- Make sure that projector has about an 8 -10 ft of square
- The Xbox recognizes only 1 person at a time so the person interacting should not have others within the radius

Turn:

Move in a 45 degree

- Keep shoulders straight if you do not want to move position while turning



Center for
Teaching &
Learning | Collaborate.
Innovate.
Engage.