



User Manual

Radiography Desktop Usage Instructions

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How it Works

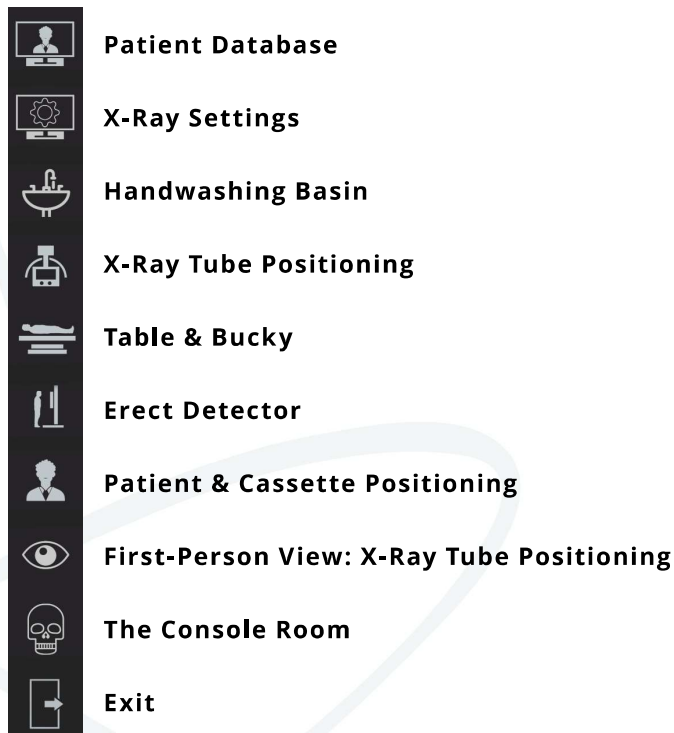
Navigation

The navigation bar at the bottom left of the screen highlights all the different viewpoints and controls that can be accessed in the Radiography simulation. Selecting a view point will take the user to a view focusing on the appropriate controls and make those controls interactable. While it is possible to navigate the room manually only the controls related to the specific viewpoint will be interactable. In the event that manual manipulation of the camera takes you away from the associated controls you can double click the viewpoint to reset the view back onto their associated controls.

Note: The simulation will automatically load a room with either the table & Bucky or the erect detector depending on what is required. The other option will therefore be greyed out as shown below.



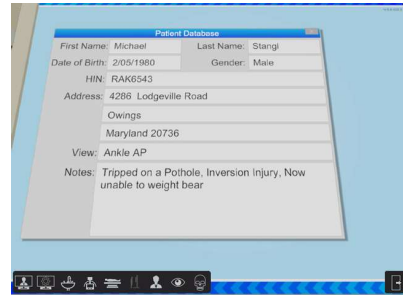
Here is a quick overview of the navigation bar:





Patient Database

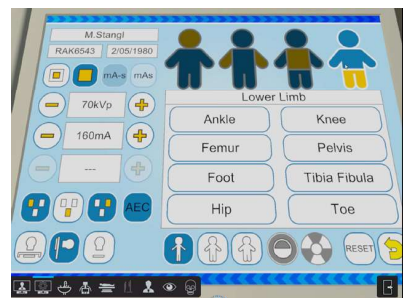
Review the patient's information such as their name, date of birth, gender, and health industry number. Also double check the radiographic image requested and any relevant patient notes to take into consideration when positioning the patient and x-ray tube for the radiographic imaging.



X-Ray Settings

On the X-Ray control panel, you can control all the exposure settings of the X-Ray Tube

For **Practice Mode** a range of preset exposure settings are available for each radiographic view is available by initially selecting the body area being imaged in the top right side of the X-Ray settings console and then navigating the options below.

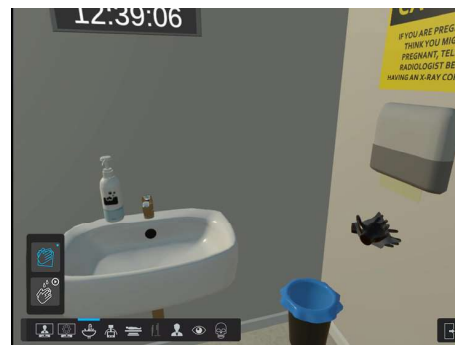
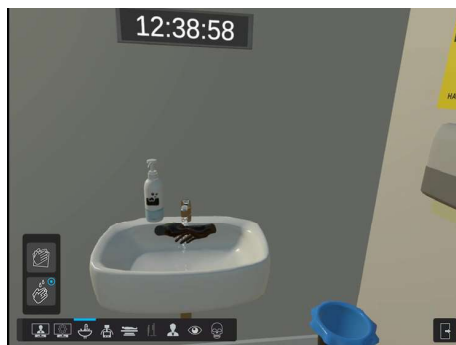


Self-Assessment these presets are disabled but all other functions remain enabled to encourage the students to learn their exposure settings.

Certain radiographic preset configurations enable the AEC function, with the AEC function activated to turn individual chambers on and off as well as the AEC function itself.



Handwashing





X-ray Tube Positioning

The X-Ray tube display shows the most important patient data and exposure settings for quick reference when positioning the X-Ray tube.

Using the controls above the navigation bar down the bottom left of the screen the user can accurately position the X-ray tube to the desired SID, angle of incidence and beam collimation for



Table & Bucky

Allows movement of the imaging table in all 3 dimensions and also the placement of the imaging plate into the Bucky. The image shows the user has put the cassette into the Bucky as indicated by the blue arrow.



Erect Detector

The erect detector can be moved up and down. The blue arrow in this instance shows the presence of a digital grid which can be removed via the other arrow. Green lights indicate that the erect detector is aligned/centered to the x-ray tube. Both the X-ray tube control and the detector display green lights when they are in the detent.



Patient & Cassette Positioning

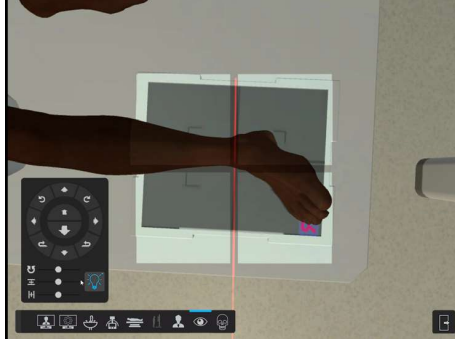
Used to move the imaging cassette, place side marker and adjust patient into the desired position for effective imaging. Use the numbers and arrows on the patient to show you which arrows will rotate each body part. Each radiographic projection will have between two and four movements of the patient you are able to do. Remove any metal jewellery from the patient with





First-Person View: X-Ray Tube Positioning

Shows a view point from the X-Ray tube. This view has all the same movement controls as the third person view but offers additional visual accuracy when aligning the center of the beam and collimated area.



Radiographic Image



Adjust your radiographic exposure and controls for the final steps before taking a radiographic exposure. Ensure that the door to the operating room is closed during exposure.



For any imaging which has body movement, instruct the patient to hold their breath for 15 seconds and to stay still

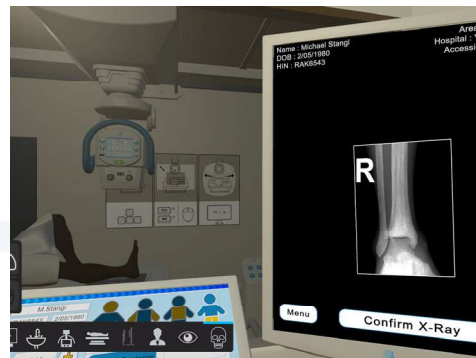
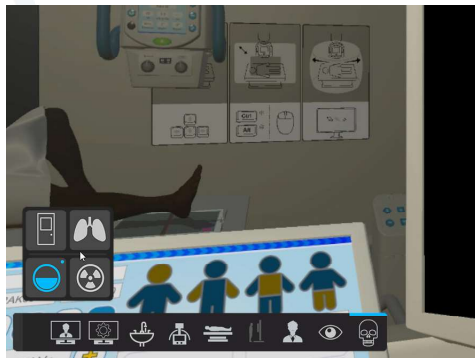


Prepare the x-ray tube



Activate exposure to obtain a radiographic image

Collimation region, contrast, brightness, Rotation and Zoom of the radiograph can all be controlled via the menu button. Each captured EI and image details are shown on the screen. Adjust the patient and settings to obtain a better image if needed.



Troubleshooting Guide

Frequently Asked Questions (FAQs)

1. I can't align the table & Bucky and the tube in desktop mode

In VR this is very easy as you can feel the Tube click into the detent. In Desktop this is harder as there is no feeling. There's a short video [here](#) about this.

2. I can only see limited parts of the room.

Using your keyboard arrows or mouse – click and drag your user view so you can see what you want to. When you are finished just click on an icon to return to that view or simply reverse the drag process.

Visit help.virtualmedicalcoaching.com for more information.



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