

CAE VimedixAR™

with HoloLens 2

User Guide

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CAUTIONS AND WARNINGS

AC Adapter Safety

Failure to take the following precautions can result in serious injury or death from electric shock or fire or in damage to the device. To select an appropriate power source for your HoloLens 2:

- Use only the power supply unit and AC power cord that was provided with your HoloLens 2.
- Do not use non-standard power sources, such as generators or inverters, even if the voltage and frequency appear acceptable. Only use AC power provided by a standard wall outlet.
- Do not overload your wall outlet, extension cord, power strip, or other electrical receptacle. Confirm that they are rated to handle the total current (in amps [A]) drawn by the HoloLens 2 (indicated on the power supply unit) and any other devices that are on the same circuit.

On devices where the AC prongs may be folded for storage, before plugging the AC adapter into a power outlet, make sure its prongs are fully extended. On devices where the AC prongs are removable and where the power supply uses a universal adapter, before plugging the AC adapter into a power outlet, make sure the prong assembly is of the proper configuration for the power outlet and fully seated into the adapter.

Battery Safety

The HoloLens 2 contains a 9V at 2A built-in battery. The battery in the HoloLens 2 is not user replaceable. Improper use or disposal of the battery may result in explosion.

Do not heat, open, puncture, mutilate, or dispose of the product in fire.

Do not leave the HoloLens 2 in direct sunlight for an extended period of time. Extreme sunlight exposure can cause battery damage.

Potentially Explosive Atmospheres

Areas with potentially explosive atmospheres are often, but not always, posted and can include fueling areas such as:

- Below decks on boats
- Fuel or chemical transfer or storage facilities
- Areas where the air contains chemicals or particles such as grain dust or metal powders

In fueling areas, sparks can occur and cause an explosion or fire. When you are in a fueling area, turn off your HoloLens 2 and do not remove or install battery chargers, AC adapters, or any other accessory.

Heat Related Concerns

The HoloLens 2 may become very warm during normal use. HoloLens 2 complies with the user-accessible surface temperature limits defined by the International Standard for Safety of Information Technology Equipment (IEC 60950-1).

To reduce heat related concerns, follow these guidelines:

- Allow for adequate air circulation under and around the device.
- Use caution when operating your device with a pillow, blanket, hat or other soft material contacting the device because the material can block the airflow which may result in the device overheating.
- If your device gets uncomfortably warm, remove it and allow it to cool.

Photo Sensitive Seizures

A very small percentage of people may experience a seizure when exposed to certain visual images, including flashing lights or patterns that may appear in virtual environments.

The risk of photosensitive epileptic seizures may be reduced by taking the following precautions:

- Use the HoloLens 2 in a well-lit room.
- Do not use HoloLens 2 when you are drowsy or fatigued.
- If you or any of your relatives have a history of seizures or epilepsy, consult a doctor before using HoloLens 2.

Even people who have no history of seizures or epilepsy may have an undiagnosed condition that can cause these “photosensitive epileptic seizures” while watching virtual simulations.

These seizures may have a variety of symptoms, including light-headedness, altered vision, eye or face twitching, jerking or shaking of arms or legs, disorientation, confusion, or momentary loss of awareness. Seizures may also cause loss of consciousness or convulsions that can lead to injury from falling down or striking nearby objects.

Immediately stop using the HoloLens 2 and consult a doctor if you experience any of these symptoms.

Skin Irritation

The HoloLens 2 is made of materials commonly used in wearable consumer electronic devices. However, certain people may develop skin irritation due to allergies or sensitivities.

To reduce the risk of skin irritation:

- Wipe your device dry with a cloth if it gets wet.
- Avoid using lotions or other products under the portions of HoloLens that contact your head.
- Do not wear over injured skin.
- Adjust the headband only until snug – avoid tightening the headband uncomfortably.
- If your skin becomes irritated, stop using the HoloLens 2 device.
- If symptoms are severe or persist, consult your physician.

HELPFUL LINKS

- **HoloLens 2 Hardware:**
<https://docs.microsoft.com/en-us/hololens/hololens2-hardware>
- **HoloLens 2 fit and comfort FAQ:**
<https://docs.microsoft.com/en-us/hololens/hololens2-setup>
- **Charging HoloLens 2:**
<https://docs.microsoft.com/en-us/hololens/hololens2-setup>
- **HoloLens 2 LED Lights:**
<https://docs.microsoft.com/en-us/hololens/hololens2-setup>
- **Turning HoloLens 2 ON or OFF:**
<https://docs.microsoft.com/en-us/hololens/hololens2-setup>
- **Setup HoloLens 2:**
<https://docs.microsoft.com/en-us/hololens/hololens2-start>
- **Using Gestures:**
<https://docs.microsoft.com/en-us/hololens/hololens2-basic-usage>
- **Connect to Miracast:**
<https://docs.microsoft.com/en-us/hololens/hololens-connect-devices#connect-to-miracast>
- **Environment considerations for HoloLens 2:**
<https://docs.microsoft.com/en-us/hololens/hololens-environment-considerations>
- **Caring for and cleaning your HoloLens 2:**
<https://docs.microsoft.com/en-us/hololens/hololens2-hardware>
- **Additional instructions and references:**
<https://docs.microsoft.com/en-us/hololens/>

EQUIPMENT OVERVIEW

The Microsoft HoloLens 2 provides a more immersive, untethered experience with more options for collaborating in mixed reality.

What's Included

- HoloLens 2
 - Visor
 - Headband
 - Brow pad
 - Overhead strap
 - USB-C Cable
 - Power supply
 - Microfiber cloth
- Documentation

Equipment Features

The table below lists the basic equipment features included that will aid you in using the HoloLens 2.

Component	Description
Visor	The visor can be lifted up while wearing the HoloLens 2
Headband	Tighten or expand the headband by turning the adjustment wheel on the back to the right or left
Power button	Located on the back, right side; displays a LED battery level indicator
Brightness buttons	Located on the left side
Volume buttons	Located on the right side
Overhead strap	Attach for comfort when wearing the HoloLens 2 for an extended period
USB-C Cable	Connect to power supply for charging or connect to a computer
Power supply	18W charger, 9V at 2A
Microfiber cloth	Use to clean the visor

For more information about the HoloLens 2 hardware, go to this link:

<https://docs.microsoft.com/en-us/hololens/hololens2-hardware>

INTRODUCTION

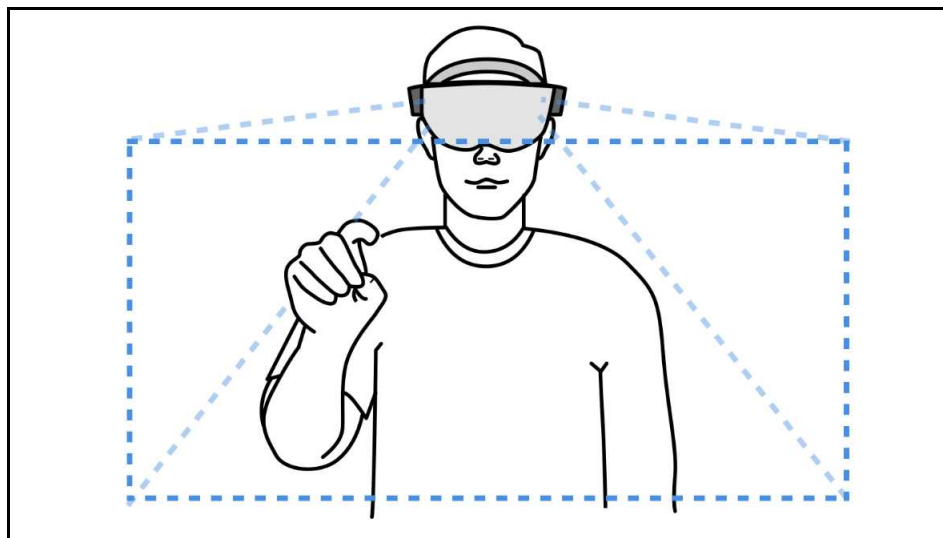
Prior to beginning setup, it is important to understand some basic concepts and environmental considerations to ensure a safe and productive learning experience.

Using Gestures

The Microsoft HoloLens 2 utilizes several gestures that users should become familiar with to properly operate the device. This section will explain these gestures to help orient yourself in using the HoloLens 2.

The Gesture Frame

HoloLens 2 has sensors that can see a few feet to either side of the user. When gestures are used, they must be kept inside that frame for HoloLens 2 to detect them. As the user moves around, the frame moves with them. When the user's hand is inside the frame, the cursor will look like a ring. When HoloLens 2 cannot see the user's hand, the cursor changes to a dot.



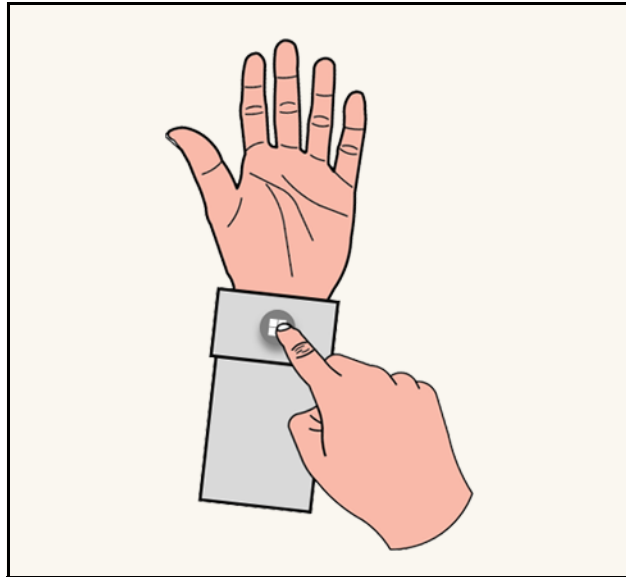
Gesture Frame

Summon Menu Gesture

The Summon Menu gesture, also referred to as the Start gesture, is used to open the Start menu and navigation menus. If a user is uncertain of what to do, the Summon Menu gesture is a good way to get reoriented.

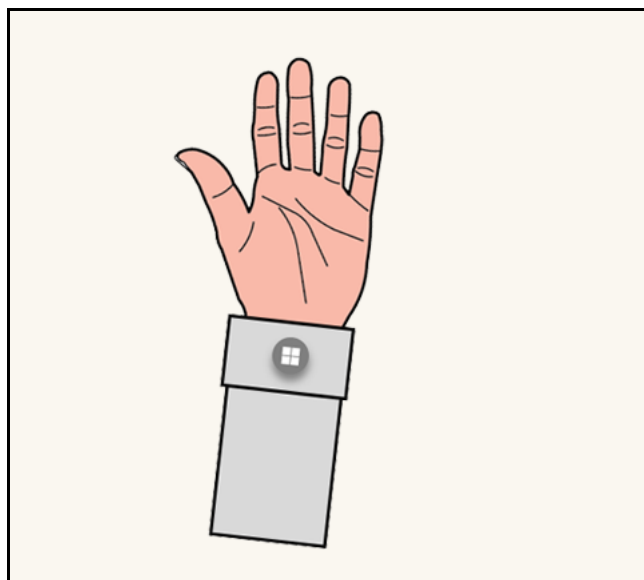
To summon the Start menu or navigation menu:

1. Hold out your hand with your palm facing you.
2. You will see a wrist button appear over your inner wrist. Tap this wrist button using your other hand.



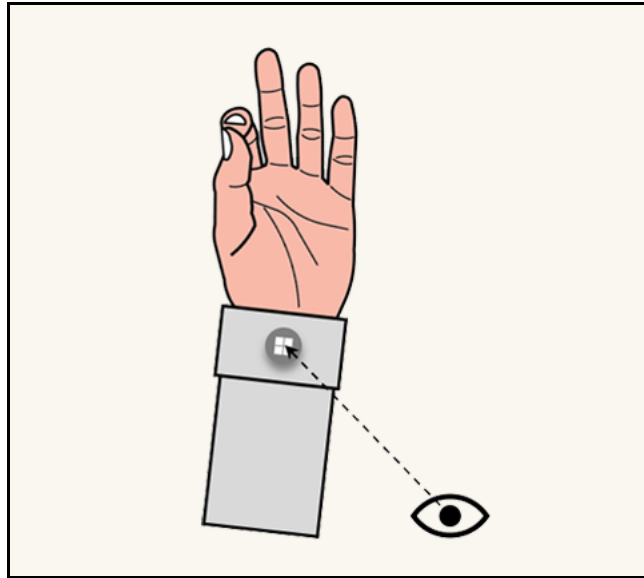
Wrist Button

3. The Start menu or navigation menu will open.
4. To close the menu, repeat the **Summon Menu** gesture while the Start menu is open. You can also look at the Start menu and say, "Close".



Summon Menu Gesture

5. You can also open the Start menu with only one hand by using the Summon Menu gesture and Gaze at the wrist button. Pinch your thumb and index finger together while keeping your eye on the wrist button.



Gaze at Wrist Button then Pinch

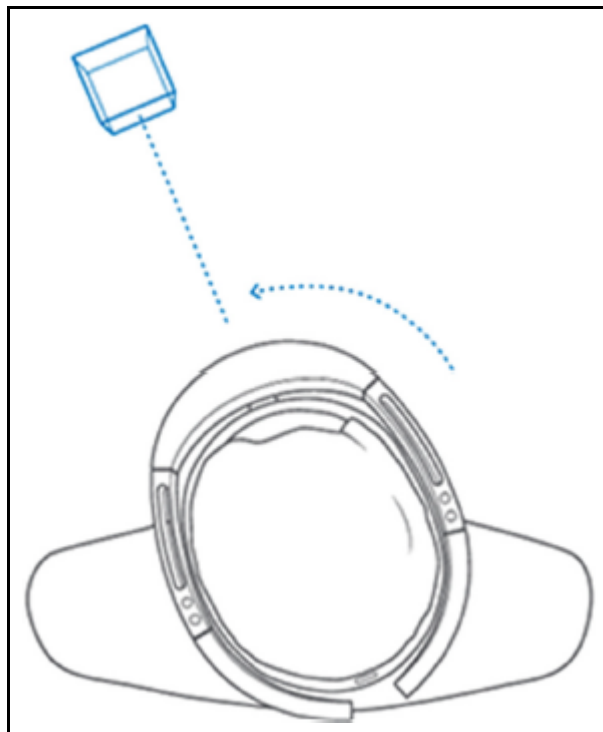
Note: This applies to all menus. Each time you need to open a menu, use the Summon Menu gesture. This gesture is shown at the following link:

<https://docs.microsoft.com/en-us/hololens/hololens2-basic-usage>

Gaze

Gaze can be used to move the cursor and highlight apps and other holograms for selection. The cursor follows whole head movements as opposed to simple movement of the eyes.

Holograms are highlighted when they are available to be selected.



Gaze

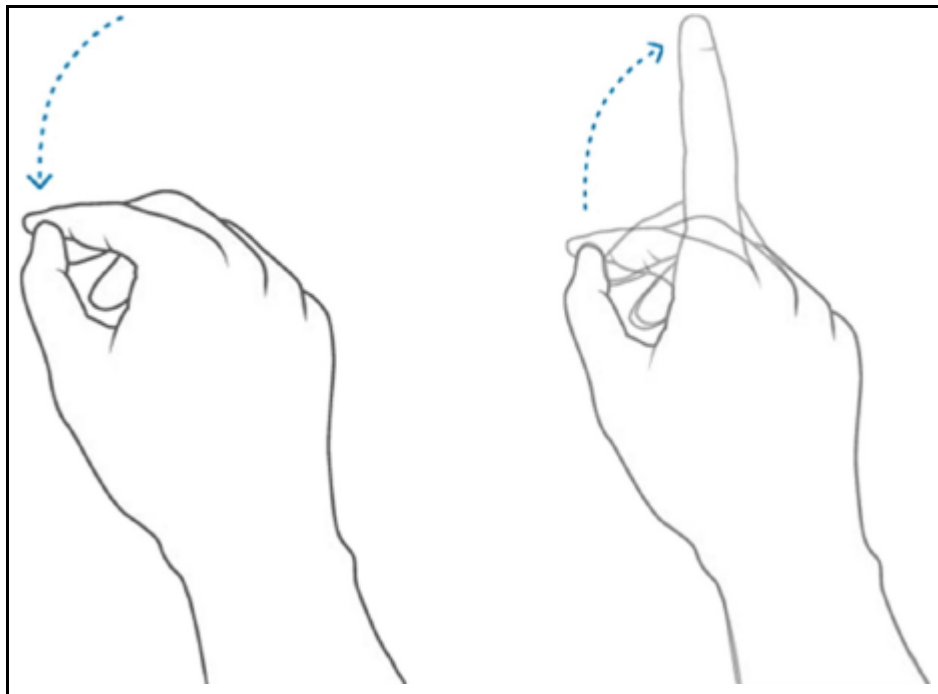
Air Tap Gesture

Use Air Tap along with Gaze to select apps and other holograms.

To use Air Tap:

1. Gaze at a hologram.
2. Hold your hand straight out in front of you in a loose fist.
3. Point your index finger straight up toward the ceiling.
4. Point your thumb straight out, forming an "L" with your index finger.

5. Keep your elbow low and comfortable.



Air Tap

6. Tap your finger down, then quickly raise it back up again.

Air Tap and Hold Gesture

To Air Tap and hold, start with an Air Tap but hold your finger down instead of raising it back up. This is also referred to as a pinch.

Use Air Tap and hold to:

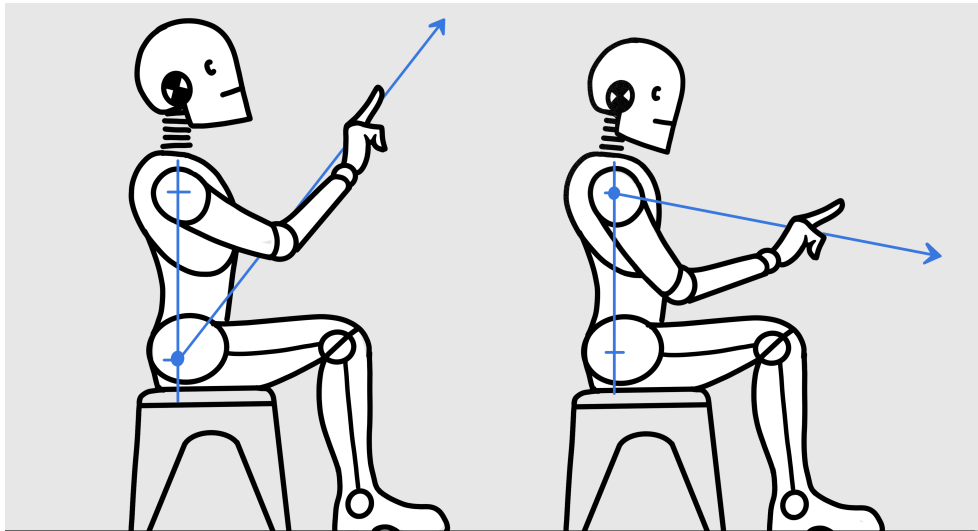
- **Drag:** Air Tap and hold on an icon, window, or 3D hologram then slowly move your hand up and down or side to side to drag it to the desired location.
- **Pin, unpin, or uninstall an app:** Air Tap and hold the app icon in the Start menu or in the All apps menu, then Air Tap pin, unpin, or uninstall. Air Tap again to pin or unpin it to the desired location, or Air Tap uninstall to uninstall the app.

Hand Ray Gesture

The hand ray gesture allows you to interact with holograms or menus out of reach, also known as far field manipulation. It is used to interact with menus and content in the application.

To use the hand ray, place your palm forward facing you with your elbow relaxed, and draw an imaginary line from your shoulder to your palm. As the hand ray moves over objects, a white line will

appear between your index finger and thumb, and the cursor in the application. When the line is white, you can interact with the object in the distance by performing an Air Tap.



Hand Ray Gesture

Note: To show or hide hand rays, say “Hide hand rays” or “Show hand rays”.

Use Air Tap to perform the following actions with hand ray:

- **Scroll:** On the app bar, select the Scroll Tool. Air Tap and hold until the tool appears, then slowly move your hand up and down or side to side. To scroll faster, move your hand farther from the center of the tool.
- **Grab:** Grab an app window or hologram to target the app title bar or hologram with the hand ray gesture and then Air Tap and hold. One or both hands can be used to perform these actions.
- **Open context menus:** Air Tap and hold with the hand ray gesture.

The hand ray gesture is shown at the following link:

<https://docs.microsoft.com/en-us/hololens/hololens2-basic-usage>

Zoom and Rotate

You can move, resize, and rotate app windows and 3D objects using the pinch or grab and hold gesture with hand ray. One or both hands can be used to perform these actions.

Zoom:

- **Zoom IN:** Pinch or grab and hold, then slowly move your hand(s) towards you.
- **Zoom OUT:** Pinch or grab and hold, then slowly move your hand(s) away from you.

Rotate:

- **Rotate CLOCKWISE:** Pinch or grab and hold, then slowly move your hand(s) towards the left.
- **Rotate COUNTERCLOCKWISE:** Pinch or grab and hold, then slowly move your hand(s) towards the right.

Resizing Holograms and App Windows:

- **Resize holograms:** Pinch your index finger and thumb on the hologram or face your hand down and close your fist over it. Grab the resize handles that appear on the corners of a 3D hologram and push or pull to resize it. Release your fingers to place it. You can also use the resize controls (up, down, left, right arrows or the rotate arrow). One or both hands can be used to perform these actions.
- **Resize app windows:** Pinch your index finger and thumb on the hologram or face your hand down and close your fist over it. Grab the resize handles that appear on the sides and bottom edges of an app window and push or pull to resize it. Release your fingers to place it. One or both hands can be used to perform these actions.

Note: These gestures are shown at the following link:

<https://docs.microsoft.com/en-us/hololens/hololens2-basic-usage>

Follow Me, Stop Following

Holograms and app windows by default will remain where you placed them. The HoloLens 2 allows these holograms and app windows to follow you as you move around if you prefer. To ask an app to start or stop following you, select **Follow me** in the top right corner of the app window next to the Close button.

Voice Commands

In addition to hand gestures, you can use your voice with the HoloLens 2 to perform many actions.

Built-In Voice Commands

Speech recognition is enabled to allow interaction with supported voice commands. This setting can be confirmed by navigating to **Settings**, then **Privacy**, and then **Speech**.

Note: For best performance, keep Online speech recognition turned Off since the HoloLens 2 will not have access to the Internet.

Note: Voice commands for VimedixAR, such as 'Vimedix, Face Me', are still available with HoloLens 2. In some cases, the application menu might get lost. One option is to say, "Vimedix, Face Me", to

summon the menu. The other option is to turn your non-dominant hand toward you. A floating button will appear. Air Tap this button to summon the menu.



Hidden Button for Vimedix, Face Me

The following list contains a description for each voice command:

Voice Command	Description
"Select"	Bring up the Gaze cursor; turn your head to position the cursor as needed and say "Select" again
"Go to Start"	Opens the Start menu
"Close"	Closes the Start menu
"Go to Start", then "Mixed Reality Home"	Leave an immersive app
"Show hand ray" / "Hide hand ray"	Show or hide hand ray
"What can I say?"	See list of available commands
"Vimedix, Face Me"	Summons the application menu

For more information on voice commands, go to this link:

<https://docs.microsoft.com/en-us/hololens/hololens-cortana>

Environmental Anchoring

The stability of the anchoring is highly impacted by the knowledge the HoloLens 2 has of its environment. It is important to scan your surroundings when using the HoloLens 2 in a new room. This prevents the hologram from drifting causing the device to lose its tracking.

Prior to launching CAE VimedixAR, walk around with the HoloLens 2 on your head so it can map the surroundings. Microsoft suggests doing this for between 5 and 10 minutes, to look at the ceiling, the floor and other objects from all sides. This step is important so the holograms stay grounded in the world preventing the device from "getting lost". One trick is to finger tap in the air while looking around. This directs the device to return visual feedback on its spatial mapping, drawing green triangles on the surfaces it knows about.

Note: The HoloLens 2 continuously tracks its surroundings to maintain its position in the World. Below are examples of things that can confuse the device. None of them is critical by itself but combined they can create a bad experience where the device may lose its tracking ability.

- Windows, mirrors
- White empty walls (posters help)
- No furniture
- Looking at a display monitor (ex: having a large TV in the field of view when looking at the manikin)

Note: You may see a warning icon with the text: **Poor environment for tracking! Holograms may shift in position** at the top left corner of your field of view during a VimedixAR simulation. This message is an indication that the HoloLens 2 is having difficulty tracking the environment. Ensure that you are taking the environmental conditions listed above into consideration and scan your environment with the HoloLens 2 until the warning disappears from your field of view.

Know Your Surroundings

Getting around HoloLens 2 is a bit different from using Windows on other devices. Instead of moving the cursor with a mouse, you use your gaze instead of moving a mouse and hand gestures instead of clicking or tapping.

Use in Safe Surroundings

When using the HoloLens 2 you will move your body and walk around the mannequin to change your field of view and viewing angle. Be sure to use the HoloLens 2 in a place that is free of obstructions and tripping. Clear the area of any tripping hazards and provide enough clear space to move freely.

About Your Environment

- Use HoloLens 2 in a room with adequate light and plenty of space. Avoid dark spaces and rooms with a lot of dark, shiny, or translucent surfaces.
- Avoid spaces with a lot of motion, as this may cause distraction and interfere with HoloLens 2 calibration.

Be Physically Capable

Make sure your balance and physical abilities are sufficient for any movements while using HoloLens 2. Take breaks periodically and stop and rest if you get tired, sore, or experience any discomfort.

Stay Comfortable

Some people may experience discomfort such as nausea, motion sickness, dizziness, disorientation, headache, fatigue, eye strain, or dry eyes when using mixed or virtual reality, particularly as they

adjust to using it. Typically, motion sickness and related symptoms occur when there is a mismatch between what you see and what your body perceives. If you are prone to motion sickness in other situations, are afraid of heights, get migraine headaches, have an inner ear disorder, or other health conditions, you may be at increased risk of discomfort.

Certain Situations Can Increase Your Risk of Discomfort

For example:

- Being a new user - symptoms tend to decrease as your vision system adapts
- Display not calibrated, or headset not oriented correctly on your head. Make sure HoloLens is properly calibrated and that it is properly aligned by using the Calibration application.
- Certain types of content, particularly games or movies that make you feel as if you are moving through space or looking down from high, or interactions that involve tracking moving objects
- Using HoloLens 2 for extended periods without a break
- Using HoloLens 2 in a completely dark environment that keeps you from seeing visual cues with your peripheral vision

Consider Keeping Your First Sessions Brief

Start slowly and look around to get a feel for how the virtual objects and the outside world interact. For most people discomfort should decrease as you get more practice over your first few sessions.

Take Periodic Breaks

Take breaks periodically and stop and rest if you experience any discomfort. The timing and length of breaks may depend on the individual user and what you are doing with HoloLens 2.

If You Experience Discomfort

If you experience discomfort, stop using HoloLens 2 and rest until you feel better. Sitting still in a well-lit environment can help speed recovery from disorientation. If you feel disoriented, avoid activities that require balance, coordination, or other capabilities until you recover. Be sure the display is properly calibrated. Take note of the type of content you were viewing and other aspects of the situation in which the discomfort occurred so you can adjust or ease into the situation next time. People differ in the time they take to adapt. Consider taking more frequent or longer breaks.

If symptoms are severe or persist, consult your doctor. Viewing AR or Mixed Reality is not known to harm vision development or cause binocular vision disorders. If you are not able to view the AR effect clearly and comfortably, consider consulting an eye doctor, as you may have an undiagnosed binocular vision disorder.

SETUP PROCEDURE

Prior to using the HoloLens 2 and simulator exercises, it is necessary to follow these steps.

Setup Procedure	
1	Charge the HoloLens 2
2	Adjust HoloLens 2 Fit
3	Power on CAE VimedixAR
4	Power on the HoloLens 2
5	(Optional) Connect to Miracast
6	Establish the Network Connection
7	Start CAE VimedixAR Pathologies

Step 1: Charge the HoloLens 2

Connect the power supply to the charging port using the included USB-C cable. Plug the power supply into a power outlet to charge the HoloLens 2.

NOTE: Put the HoloLens 2 in sleep mode by briefly pressing the **Power** button.

The battery indicator shows the battery level in increments when the HoloLens 2 is on. While the device is charging, the battery indicator will light up to show the current charge level. When only one of the five lights is on, the battery level is below 20%. If the battery level is critically low when you power on the device, one light will blink briefly and then stop.

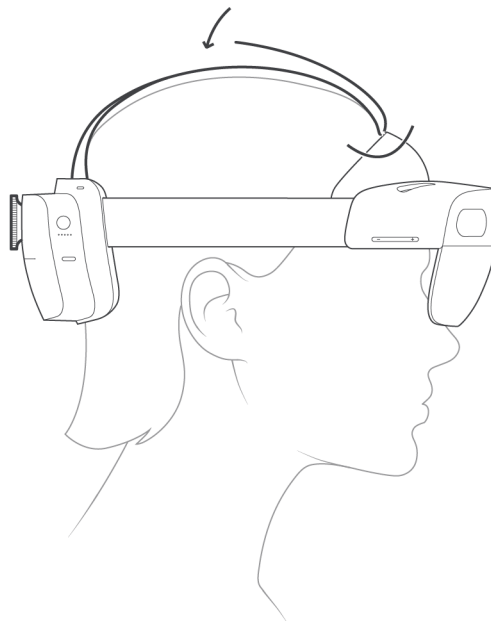
Battery LEDs

LED Status	Indication
All on at once	HoloLens 2 is turning On or waking up
All turn off at once	HoloLens 2 has gone into Standby mode
Turning off one at a time	HoloLens 2 is shutting down
Some or all on	HoloLens 2 is On (battery life is shown in 20% increments)
Some or all on and next level blinking	HoloLens 2 is On and Charging (battery life is shown in 20% increments)
One blinking quickly - then off	Battery is Critically Low - HoloLens 2 needs to charge

Step 2: Adjust HoloLens 2 Fit

To adjust the fit of the HoloLens 2:

- a. Place the HoloLens 2 on your head. The brow pad should rest comfortably on your forehead. The back band should rest in the mid-back of your head.
- Note:** If you wear eyeglasses, leave them on.
- b. To expand or loosen the fit, turn the adjustment left or right then loosen the overhead strap.



HoloLens 2 Overhead Strap

Attach and Detach the Overhead Strap

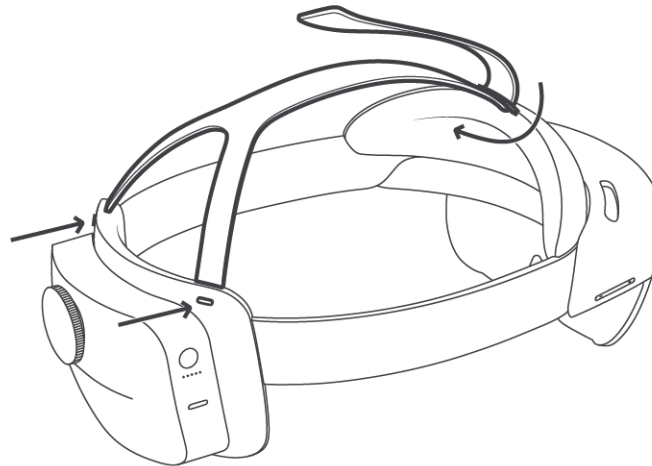
The overhead strap is not required, however it can aid in comfort when wearing the HoloLens 2 for long periods of time.

To attach the overhead strap, pull out the retractable loop and slide the strap through it.

To detach the front of the overhead strap, unhook the strap and slide it through the retractable loop on the brow pad.

To attach the back of the overhead strap, push the connection tabs into the slots until they click.

To detach the back of the overhead strap, press the button below each connection tab and gently pull the strap out.



Attaching and Detaching the Overhead Strap

Step 3: Connect the HoloLens 2

Prior to beginning this process, start with the router and HoloLens 2 powered off.

To connect the HoloLens 2:

- a. Plug in the power supply and turn on the wireless router.



5 Ghz Wireless Router

- b. Connect the network cable between any of the blue ports on the router and the Ethernet port of the computer.

Step 4: Power on the HoloLens 2

To power on the HoloLens 2:

- a. Press and hold the **Power** button down for one second. Allow it to boot up.

Note: LED lights near the power button indicate the current battery level. For more information on the battery LED light indicators, see *Charge the HoloLens 2* section of this user guide.

- b. Use the **Summon Menu** gesture to open the Start menu.

Step 5 (Optional): Connect to Miracast

You can share what's on your HoloLens 2 device to an HDTV or monitor with a Microsoft Wireless Display Adapter (not included).

To connect to Miracast:

1. Do one of the following:
 - a. Open the Start menu and select the display icon.
 - b. Say "Connect" while gazing at the Start menu.
2. Select an available device from the list of devices that appears.
3. Complete the pairing to begin projecting.

For more information on how to connect to Miracast, go to the following link:

<https://docs.microsoft.com/en-us/hololens/hololens-connect-devices#connect-to-miracast>

Step 6: Establish the Network Connection

The HoloLens 2 is preconfigured to connect to CAE Vimedix. If the network does not match the desired simulator, see the *Troubleshooting* section of this guide.

Step 7: Start CAE VimedixAR Pathologies

To start CAE VimedixAR Pathologies, select and start one of these 16 augmented reality supported Pathologies:

- PathologyCardiacEFast
- PathologyCardiacNormal3
- PathologyOBGYN20WeeksCleftLip
- PathologyOBGYN20WeeksGastroschisis
- PathologyOBGYN20WeeksNormal
- AorticDissectionTB
- AorticStenosisV
- FreeFluid_HRRMorisonsPouch_M
- FreeFluid_SplenoRenalR_L
- MHI_EbsteinsAnomaly_ASD
- MHI_FloatingPulmonaryEmbolism
- MHI_MitralValveProlapse
- RAMyocardialInfarctionPE
- RightPleuralEffusion
- Tamponade
- ThrombusInTransitPFO

CAE VIMEDIXAR USER INTERFACE (UI)

The CAE VimedixAR User Interface (UI) is divided into the following three main sections:

- Interactive Panel
- Ultrasound Panel
- Hologram Control Buttons



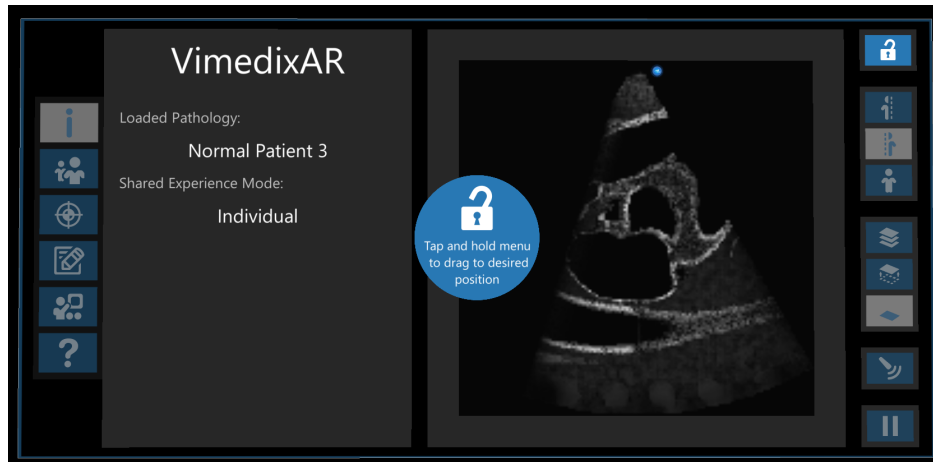
CAE VimedixAR User Interface (UI)

The UI is controlled by five buttons in the Interactive Panel along the left side, and nine Hologram Control buttons along the right side. They can be selected by using Air Tap along with Gaze. The following information in this section explains the functionality of each button.

Moving the User Interface

The **Adjust Menu** button unlocks the UI so that it can be dragged to another location. Once you unlock it, Air Tap and Hold the UI to drag it to the desired location. Tap the **Adjust Menu** button again to lock the UI in its new location.

Note: The unlocked UI will be boxed in orange when it is in your grasp and boxed in blue when it is not in your grasp.



Unlocked UI Enabled for Transition



Unlocked UI in Transition

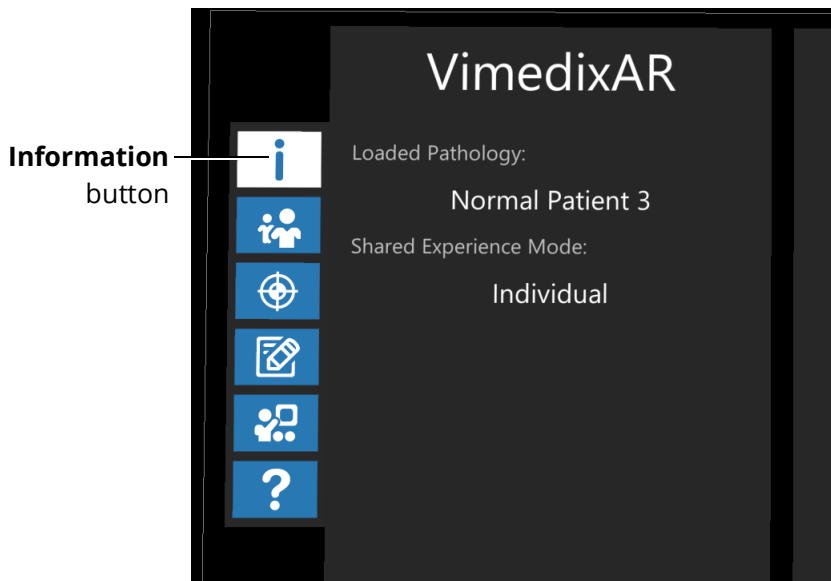
Interactive Panel

The Interactive Panel is located on the left side of the UI and is controlled by the following buttons along its left side:

- Information
- Multi-user
- Calibration
- Exercises
- Demo
- Help

Information Menu

The Interactive Panel displays the Loaded Pathology (e.g. E-FAST_Template or Normal Patient 3) and the Shared Experience Mode (e.g. Individual, Instructor or Student) when the **Information** button is selected and there are no warnings to be displayed.

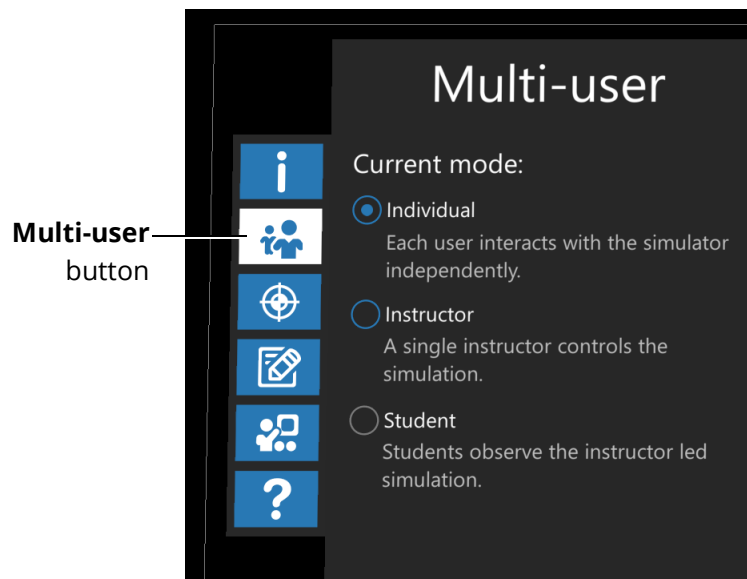


Interactive Panel - Information Menu

Multi-User Menu

The Interactive Panel displays the following three Shared Experience Mode options when the **Multi-user** button is selected:

- Individual
- Instructor
- Student



Interactive Panel - Multi-User Menu

Please refer to the *Shared Experience Modes* section of this guide for more information about each Shared Experience Mode in VimedixAR.

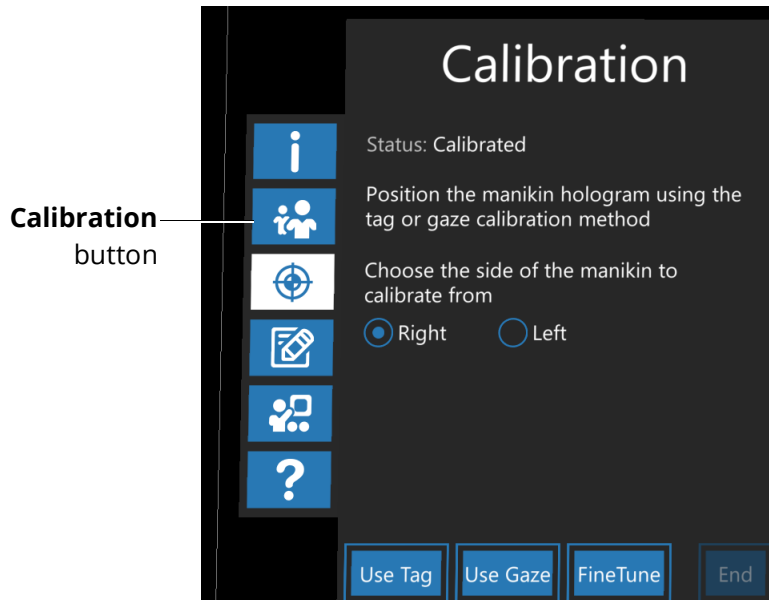
If the Shared Experience Mode is set to Individual, control is given over the other HoloLens by selecting the Instructor option.

If your Shared Experience Mode is set to Instructor, control is released over the other HoloLens by selecting the Individual option.

It is not possible for a user to select the Student option. When a user becomes the Instructor, all other users will become Students in which case the Student option will automatically be selected for them and the other Shared Experience Mode options will be disabled.

Calibration Menu

The Calibration menu displays the calibration status (e.g. *Not Calibrated* or *Calibrated*) and an overview of the calibration procedure steps when the **Calibration** button is selected. You must choose which side of the manikin you want to calibrate from.



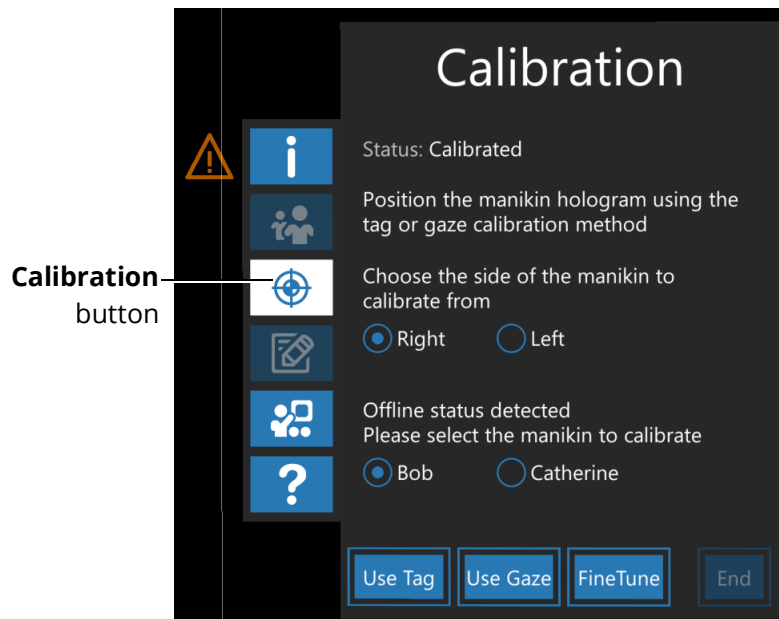
Interactive Panel - Calibration Menu

The calibration status will be *Not Calibrated* during the calibration process and *Calibrated* at all other times.

The Calibration menu also provides you with the option to calibrate the position of the Hologram manikin relative to the Physical manikin. See the following steps for instructions:

- To start calibration by using Tag, Air Tap the **Use Tag** button at the bottom of the Calibration menu.
- To start calibration by using Gaze, Air Tap the **Use Gaze** button at the bottom of the Calibration menu.
- To end the calibration, Air Tap the **End** button at the bottom of the Calibration menu.

Note: When connected to Vimedix, this calibrates the manikin of the pathology that is running. When offline, you must choose the manikin you want to use and which side of the manikin you want to calibrate from.

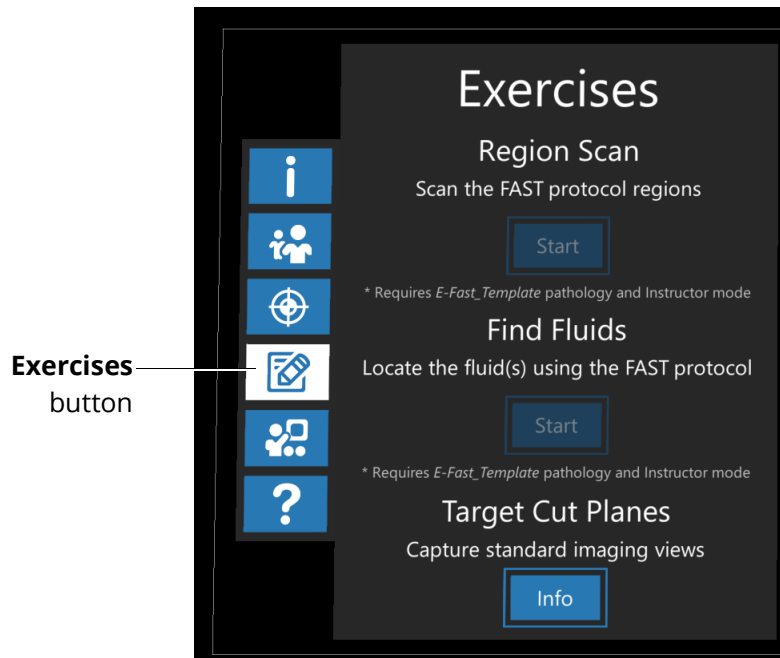


Interactive Panel - Calibration Offline

For more information about the calibration process in CAE VimedixAR, see the *Calibration Procedure* section of this user guide.

Exercises Menu

The Interactive Panel displays three exercises when the **Exercises** button is selected: Region Scan and Find Fluids.



Interactive Panel - Exercises Menu

If your Shared Experience Mode is set to Instructor, you will only have access to the Region Scan and Find Fluids exercises.

To begin the setup that is required prior to starting the Region Scan or Find Fluids exercise, select the **Start** button located directly below the description of the respective exercise in the Interactive Panel.

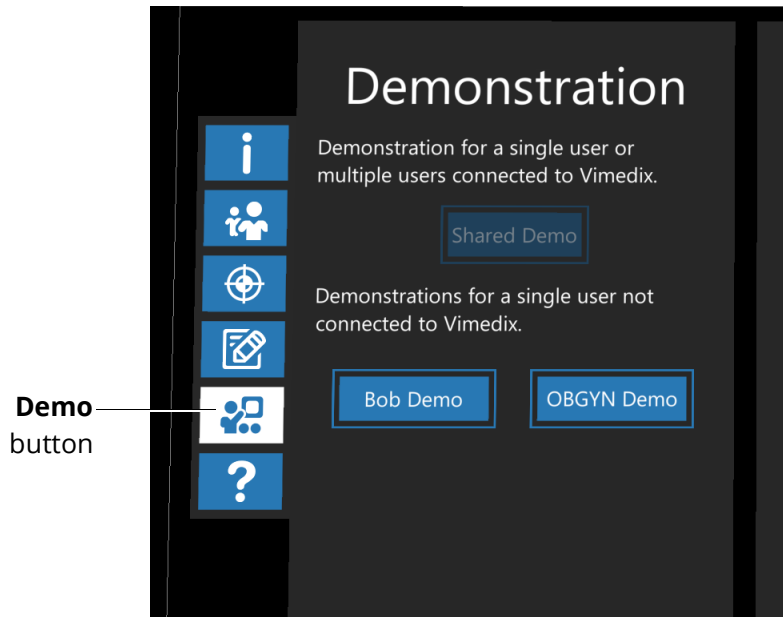
Note: If your Shared Experience Mode is set to Individual or Student, the Start buttons of both exercises will be disabled and the "*Requires Instructor Mode" message will appear.

For more information about the available exercises in CAE VimedixAR, see the *Exercises* section of this user guide .

Settings Menu

The Interactive Panel displays three options when the **Demo** button is selected:

- Shared Demo
- Local Demo: You must choose to run the Bob Demo (cardiac pathology) or Catherine Demo (OBGYN pathology)



Interactive Panel - Demonstration Menu

To start the Shared Demo, select the **Shared Demo** button on the Interactive Panel.

Note: The **Shared Demo** button is only enabled when your Shared Experience Mode is set to Instructor.

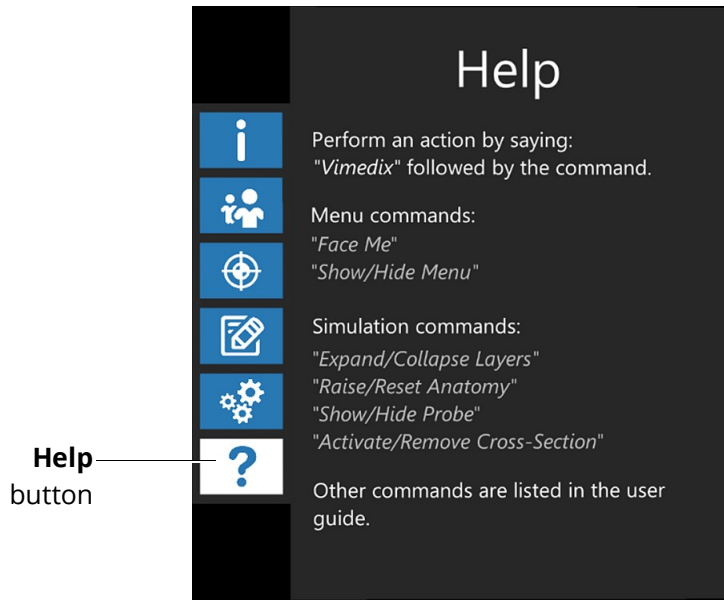
To start the Local Demo, select the **Local Demo** button on the Interactive Panel.

Note: The Local Demo button will only be enabled if your Shared Experience Mode is set to Individual.

For more information about the demo modes in CAE VimedixAR, see the *Demo Modes* section of this user guide.

Help Menu

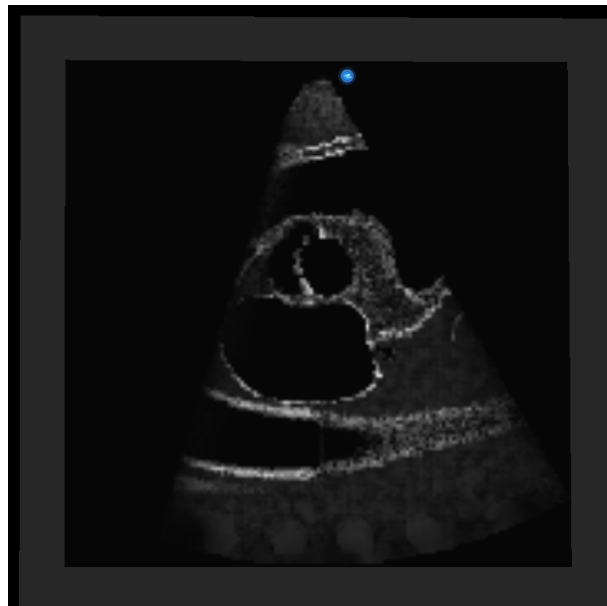
The Interactive Panel displays the most useful voice commands that are compatible with CAE VimedixAR when the Help button is selected. Air Tap the **Help** button to open the Help menu.



Interactive Panel - Help Menu

Ultrasound Panel

The Ultrasound Panel displays the real-time ultrasound image.







Ultrasound Panel







Hologram Control Buttons

The UI is controlled by the following Hologram Control buttons along its right side:

- Adjust Menu - Lock/Unlock
- Left Cross Section
- Right Cross Section
- No Cross Section
- Show Layers
- Raise Anatomy
- Normal
- Probe Visible
- Pause Probe

The following table contains a description for each hologram control button:

Button Icon	Button Name	Description
	Adjust Menu - Locked	Pins the object or menu in place
	Adjust Menu - Unlocked	Unpins the object or menu, allowing it to be moved
	Left Cross Section	Displays a cross-sectional view of the hologram anatomy based on the position of the ultrasound beam cut plane Note: the cross-sectional view is displayed on the opposite side of probe
	Right Cross Section	Displays a cross-sectional view of the hologram anatomy based on the position of the ultrasound beam cut plane Note: the cross-sectional view is displayed on the opposite side of the probe

Button Icon	Button Name	Description
	No Cross Section	Removes the cross-sectional view of the hologram anatomy
	Show Layers	*Expands the different anatomical systems into layers above the Physical manikin
	Raise Anatomy	*Raises the anatomy selected in the Structures Visibility menu on the Vimedix system above the Physical manikin so that the anatomy is 10 cm below eye level; also unlocks the zoom, rotation and displacement gesture
	Normal	*Displays the anatomy selected in the Structures Visibility menu on the Vimedix system at the current Calibration position of the Hologram manikin relative to the Physical manikin; this is the Default selection when Shared Experience Mode is set to Student mode
	Probe Visible	Displays/Hides the virtual probe
	Pause Probe	Freezes the AR and Ultrasound displays on the last scanned cycle and loops the cycle on the displays; useful for analyzing cut planes

*Button is disabled if Shared Experience Mode is set to Student mode

CALIBRATION PROCEDURE

CAE VimedixAR supports the following two methods to calibrate the position of the Hologram manikin relative to the physical manikin:

- Calibration by Tag
- Calibration by Gaze

Note: Calibration by Tag or Gaze can always be repeated if the physical manikin is moved.

Regardless of which Shared Experience Mode is selected or which form of calibration is used, access to the following buttons during calibration are enabled: **Information**, **Calibration**, **Adjust Menu**, and **Help**. All other buttons including **Hologram Controls** are disabled during calibration.

Calibration by Tag

To start Calibration by Tag:

1. On the Interactive Panel, select the **Calibration** button.
2. Select the **Use Tag** button at the bottom of the Calibration menu.

Once the **Use Tag** button is selected, a small target symbol appears at the top left corner of the field of view with the message "Place the hologram using the tag." Now place the provided "T" button on the table below the right ear of the Physical manikin with the arrow facing the head. When the HoloLens 2 recognizes the tag, it places a holographic image of the tag on top of it with the Hologram manikin not far from it. You must then move the tag to change the position of the Hologram manikin to match the Physical manikin.

Select the **End** button at the bottom of the Interactive Panel to end the calibration by tag.

Calibration by Gaze

To start a Calibration by Gaze:

- a. On the Interactive Panel, select the **Calibration** button
- b. Select the **Use Gaze** button at the bottom of the Calibration menu.

One the **Use Gaze** button is selected, a small target symbol appears at the top left corner of the field of view with the message, "Air Tap to place the hologram." With your Gaze, move the Hologram manikin to match the position and Air Tap the Hologram manikin to anchor it in place.

Select the **End** button at the bottom of the Interactive Panel to end the calibration by Gaze.

Fine-Tuning a Calibration

Fine-tuning of the calibration can be performed using the **Calibration Gizmo**.



A small target symbol appears at this point at the top left corner of the field of view with the message, "Air Tap on arrow to adjust placement" if calibrating by Gaze.

Gaze and Air Tap to select the arrow controls of the calibration gizmo to move the Hologram manikin 1 cm left, right, up, down, in the direction of its head, or in the direction of its feet.

Gaze and Air Tap to select the stand control symbol of the calibration gizmo to incline the Hologram manikin at a 45° on its left side to match the inclination of the physical manikin when it is configured with both stands. To remove the 45° inclination, select the calibration gizmo symbol again.

USING CAE VIMEDIXAR

The CAE VimedixAR application enhances the simulation learning experience through the use of augmented reality and allows learners to gain a deeper understanding of the manikin’s physiology during clinical scenarios.

Launch the CAE VimedixAR App

1. Use the **Summon Menu** gesture and tap the icon on your wrist once to view the Start menu.
2. Verify that the HoloLens 2 is connected to the **VMDX####** wireless network.
3. Air Tap the VimedixAR button to launch the application.


The welcome screen will appear. Adjust the four corners of the Fitbox and Air Tap to continue.









Hologram Control Buttons


The UI is controlled by the following Hologram Control buttons along its right side:

- Adjust Menu - Lock/Unlock
- Left Cross Section
- Right Cross Section
- No Cross Section
- Show Layers
- Raise Anatomy
- Normal
- Probe Visible
- Pause Probe

The following table contains a description for each hologram control button:

Button Icon	Button Name	Description
	Adjust Menu - Locked	Pins the object or menu in place

Button Icon	Button Name	Description
	Adjust Menu - Unlocked	Unpins the object or menu, allowing it to be moved
	Left Cross Section	Displays a cross-sectional view of the hologram anatomy based on the position of the ultrasound beam cut plane Note: the cross-sectional view is displayed on the opposite side of probe
	Right Cross Section	Displays a cross-sectional view of the hologram anatomy based on the position of the ultrasound beam cut plane Note: the cross-sectional view is displayed on the opposite side of the probe
	No Cross Section	Removes the cross-sectional view of the hologram anatomy
	Show Layers	*Expands the different anatomical systems into layers above the Physical manikin
	Raise Anatomy	*Raises the anatomy selected in the Structures Visibility menu on the Vimedix system above the Physical manikin so that the anatomy is 10 cm below eye level; also unlocks the zoom, rotation and displacement gesture
	Normal	*Displays the anatomy selected in the Structures Visibility menu on the Vimedix system at the current Calibration position of the Hologram manikin relative to the Physical manikin; this is the Default selection when Shared Experience Mode is set to Student mode
	Probe Visible	Displays/Hides the virtual probe

Button Icon	Button Name	Description
	Pause Probe	Freezes the AR and Ultrasound displays on the last scanned cycle and loops the cycle on the displays; useful for analyzing cut planes

*Button is disabled if Shared Experience Mode is set to Student mode

Demonstration Modes

CAE VimedixAR supports the following two Demo modes:

- Shared Demo
- Local Demo

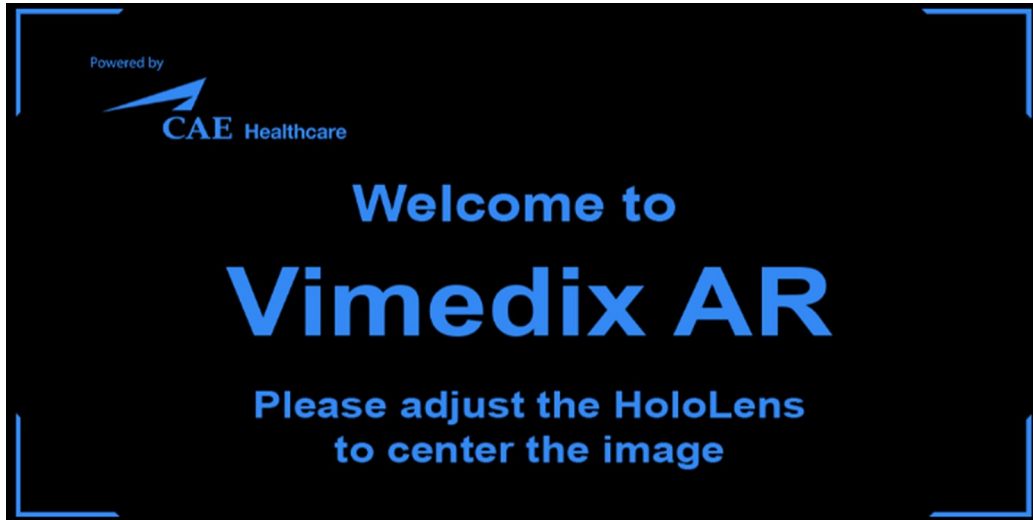
Regardless of whether you are the Instructor or the Student, all menu buttons and Hologram Controls are disabled during the Shared Demo and the Local Demo.

Shared Demo Mode

The Shared Demo mode option is only enabled if a user’s Shared Experience Mode is set to Instructor and they are connected to CAE Vimedix. This mode gives the Instructor the opportunity to demonstrate the features of CAE VimedixAR.

To start a Shared Demo, the Instructor must select the **Shared Demo** button on the Interactive Panel under the Settings tab.

Once a Shared Demo is initiated, a FitBox appears in the field of view for the Instructor and the Student. It is important that each HoloLens is calibrated so that all four corners of the Fitbox are visible.

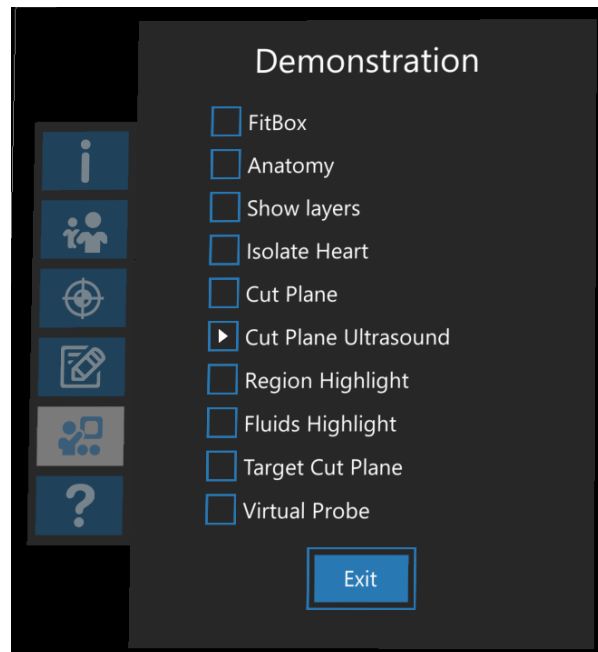


FitBox

The FitBox disappears from each user's field of view when the Instructor selects any of the Shared Demo options shown in the table below, excluding the FitBox option.

Target Cut Plane shows what appears in Vimedix if a target cut plane is active.

Virtual Probe allows you to manipulate a 3D holographic probe with your hand to generate the cut plane.



Settings Menu - Shared Demo Options

The Instructor selects the **Exit** button at the bottom of the Interactive Panel to exit the Shared Demo.

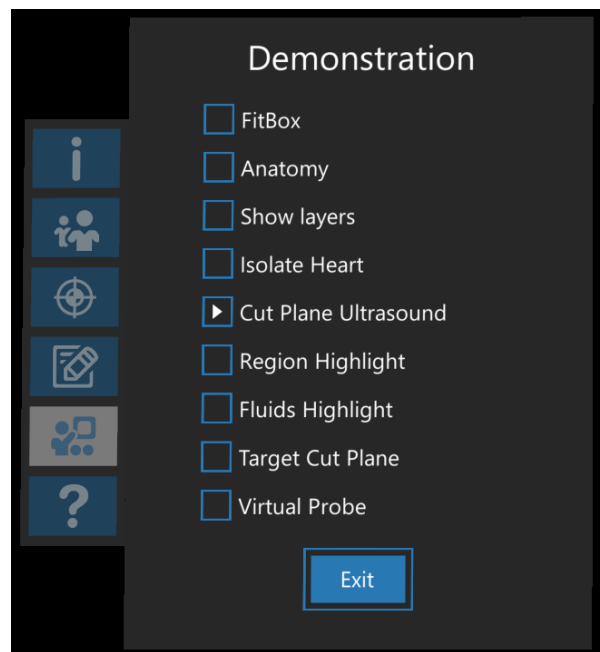
Local Demo Mode

The Local Demo mode option is only enabled for users whose Shared Experience mode is set to Individual and may or may not be connected to the CAE Vimedix system. The Local Demo mode provides Individual users with the opportunity to become acquainted with some of the features of CAE VimedixAR even if they are not connected to the CAE Vimedix system.

Note: Before starting a Local Demo, make sure that the Shared Experience mode is set to Individual.

To start a Local DeOnce a Local Demo is initiated, a FitBox appears in the field of view. It is important that the Hololens is adjusted so that all four corners of the FitBox are visible. The FitBox disappears from the field of view when any of the Local Demo options are selected.

To exit the Local Demo, select the **Exit** button.



Settings Menu - Local Demo Options

Exercises

CAE VimedixAR supports the following two exercises:

- Region Scan Exercise (Instructor and Student Modes)
- Find Fluids Exercise (Instructor and Student Modes)

Regardless of whether you are in Instructor or Student mode, access to the following buttons during Exercises are enabled: **Adjust Menu**, **Left Cross Section**, **Right Cross Section**, **No Cross Section**, and **Pause Probe**. All other buttons including **Hologram Controls** are disabled during Exercises.

Region Scan Exercise

The objective of the Region Scan exercise is to allow a user to perform a thorough FAST (Focused Assessment with Sonography for Trauma) ultrasound examination in the shortest time possible.

The Region Scan exercise is only performed by the Instructor and is observed by the Student(s).

Region Scan Exercise, Instructor Mode

In the Region Scan exercise, the following actions must be performed:

- a. Select the FAST protocol region(s) to be scanned.

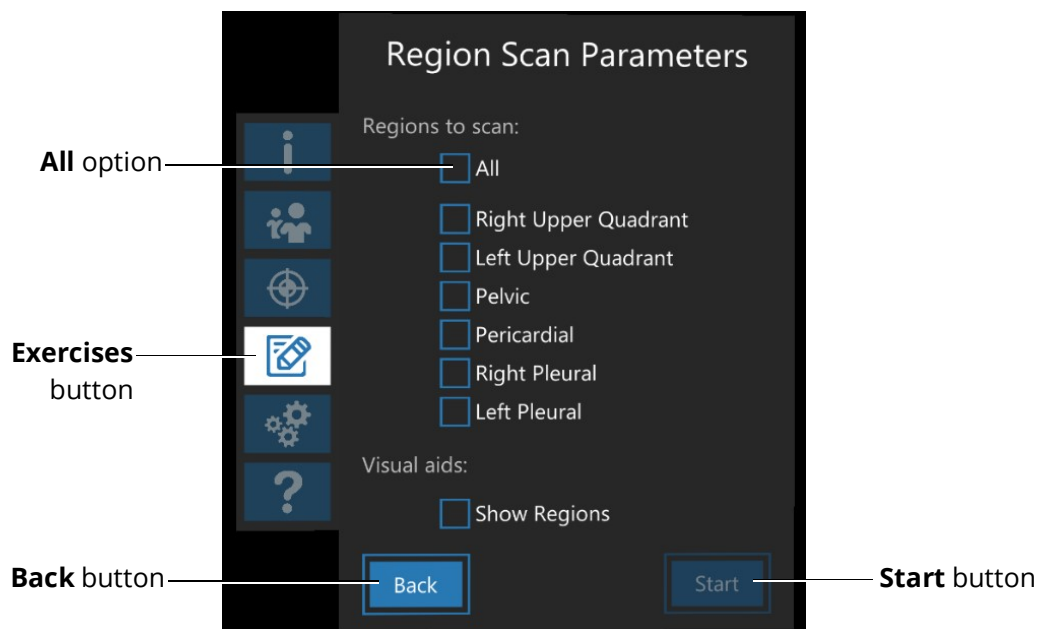
- b. Scan the selected region(s) with or without visual aids representing the selected region(s).
- c. Review the metrics and visual feedback that will be displayed in simulation once the Region Scan exercise has been completed.

To start the Region Scan exercise:

1. Air Tap the **Start** button.

The Interactive Panel displays the Region Scan Parameters options panel, which include the following FAST protocol regions:

- Right Upper Quadrant
- Left Upper Quadrant
- Pelvic
- Pericardial
- Right Pleural
- Left Pleural



Interactive Panel (Instructor Mode) - Region Scan Parameters

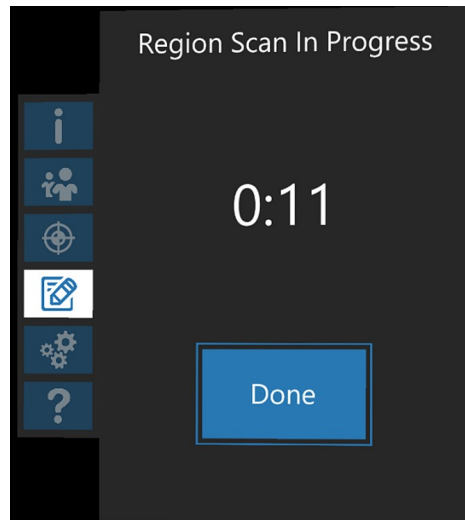
2. Air Tap one or more regions to scan. To scan all regions, select the **All** option.

Note: The panel also includes the option to enable visual aids representing the selected region(s). Air Tap the **Show Regions** option at the bottom of the menu to enable these visual aids.

3. Air Tap the **Back** button on the bottom of the menu to change the exercise.

- Air Tap the **Start** button on the bottom of the menu to begin the Region Scan exercise.

The timer starts when the Region Scan exercise begins and is visible in the middle of the Interactive Panel.

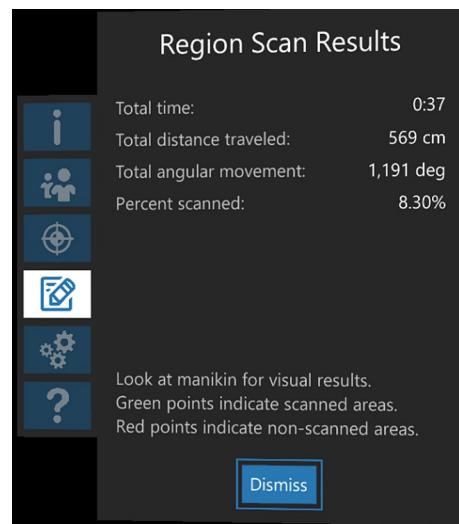


Interactive Panel (Instructor Mode) - Region Scan Exercise Timer

- After scanning the selected region(s), Air Tap the **Done** button.

The Interactive Panel then displays the Region Scan Results, which include the following metrics:

- Total time
- Total distance traveled (cm)
- Total angular movement (deg)
- Percent scanned (%)



Interactive Panel (Instructor Mode) - Region Scan Exercise Results

Per the instructions near the bottom, the Region Scan Results also include the cloud of points on the Hologram manikin representing the percentage of a region that was successfully scanned.

Note: Green points indicate scanned areas. Red points indicated non-scanned areas.

The visual aids representing the selected FAST protocol regions will also appear at this point regardless of whether they were enabled during the setup of the Region Scan Exercise. Use Gaze to select a region to view its name and the percentage scanned (%).

6. Select the **Dismiss** button at the bottom to exit the Region Scan exercise.

Note: The Region Scan Results can be accessed once the exercise has been exited.

Region Scan, Student Mode

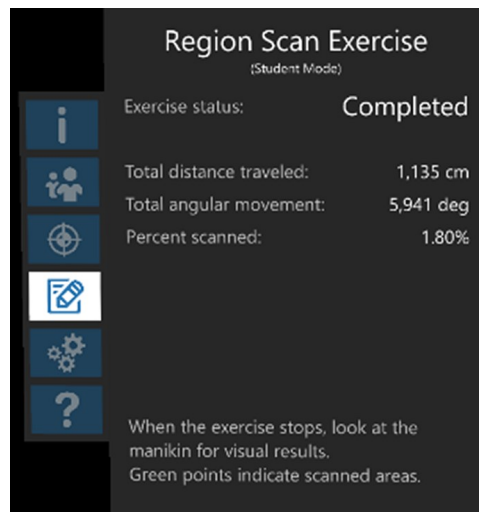
During the Region Scan exercise, the same holograms as the Instructor will be seen but the display on the Interactive Panel is different. The Exercise Status is based on the Instructor's exercise progression. For example, the status will generate one of the following results:

- a. **Setting Up** - occurs when the Instructor is setting up the Region Scan Parameters
- b. **In Progress** - occurs when the Instructor starts the Region Scan exercise and the exercise is running
- c. **Completed** - occurs when the Instructor completes the Region Scan exercise and is now reviewing the Region Scan Results

If the Instructor enabled the visual aids representing the FAST protocol regions they selected prior to starting the exercise, they will be visible on the Hologram manikin when the Exercise Status is *In Progress*.

When the Exercise Status is *Completed*, the Interactive Panel displays the Instructor's Region Scan Results which include the following metrics:

- Total distance traveled (cm)
- Total angular movement (deg)
- Percent scanned (%)



Interactive Panel (Student) - Exercise Status: Completed

Per the instructions near the bottom, the Region Scan Results also include the cloud of points on the Hologram manikin representing the percentage of a region that was successfully scanned.

The visual aids representing the selected FAST protocol regions will also appear at this point regardless of whether they were enabled during the setup of the Region Scan exercise. Use Gaze to select a region to view its name and the percentage scanned (%).

Note: Green points indicate scanned areas. Red points indicated non-scanned areas.

The visual aids representing the selected FAST protocol regions will also appear at this point regardless of whether they were enabled during the setup of the Region Scan exercise. Use Gaze to select a region to view its name and the percentage scanned (%).

Air Tap the **Dismiss** button at the bottom to exit the Region Scan exercise.

Note: The Region Scan Results can be accessed once the exercise has been exited.

Find Fluids Exercise

The objective of the Find Fluids exercise is to allow a user to perform a FAST (Focused Assessment with Sonography for Trauma) ultrasound examination to locate free fluid in the shortest time possible. This exercise is only performed by the Instructor and observed by the Student(s).

Find Fluids Exercise, Instructor

In this Find Fluids exercise, the following actions must be performed:

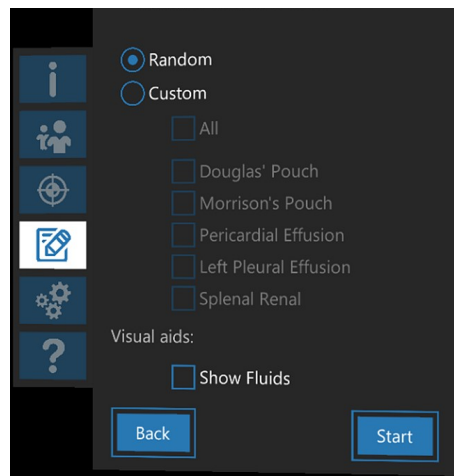
- a. Select the free fluid location(s) to be scanned.
- b. Scan to locate the free fluid(s) with or without visual aids representing the free fluid(s).
- c. Input the region(s) where the free fluid is located.
- d. Review the metrics and visual feedback that will be displayed in simulation the Free Fluids exercise has been completed.

To start the Find Fluids exercise:

1. Air Tap the **Start** button.

The Interactive Panel displays the Find Fluids Parameters options panel, which include the following free fluid locations:

- Douglas' Pouch
- Morrison's Pouch
- Pericardial Effusion
- Pleural Effusion
- Splenal Renal



Interactive Display (Instructor) - Find Fluids Parameters

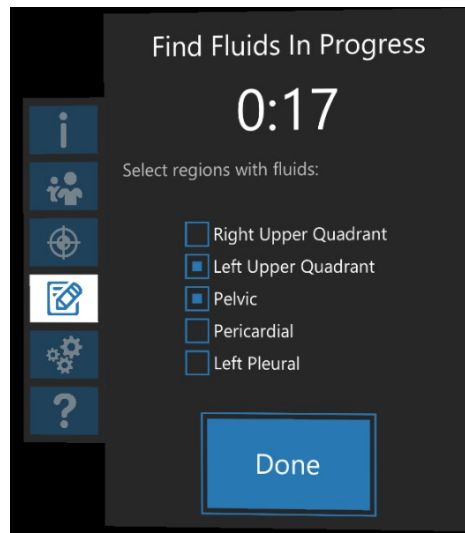
The **Random** option is selected by default. In this case, the simulator randomly selects none, one, or several free fluid locations.

Selecting the **Custom** option allows for the selection of one or several free fluid locations. To scan all free fluid locations, select the **All** option.

The Find Fluids Parameters also include the option to enable visual aids representing the free fluid at the location(s) selected.

1. Select the **Show Fluids** option at the bottom of the menu to enable these visual aids.
2. Select the **Back** button on the bottom of the menu to change the exercise.
3. Select the **Start** button on the bottom of the menu to begin the Region Scan exercise.

The timer starts when the Find Fluids exercise begins and is visible in the middle of the Interactive Panel.



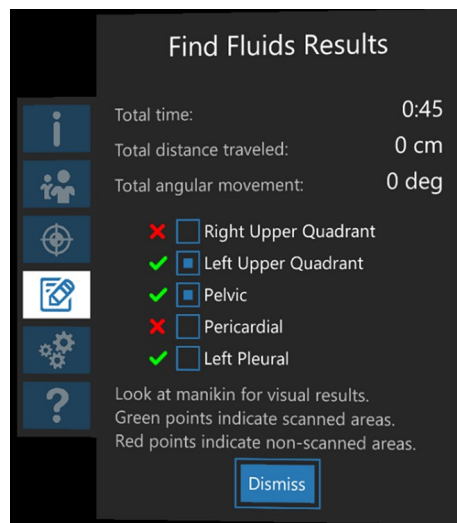
Interactive Panel (Instructor Mode) - Find Fluids Exercise Timer

4. After locating the free fluid(s), select one or several of the following region(s) where the free fluid may be located:
 - Right Upper Quadrant
 - Left Upper Quadrant
 - Pelvic
 - Pericardial
 - Pleural
5. Air Tap the **Done** button to complete the Free Fluids exercise.

When the Exercise Status is completed, the Interactive Panel displays the Instructor's Find Fluids Results which include the following metrics:

- Total time
- Total distance traveled (cm)
- Total angular movement (deg)

Note: A green check mark represents a correct answer and a red X represents an incorrect answer.



Interactive Panel (Instructor) - Find Fluids Results

Per the instructions near the bottom, the Find Fluids Results also include the cloud of points on the Hologram manikin representing the percentage of a region that was successfully scanned.

Note: Green points indicate scanned areas. Red points indicated non-scanned areas.

The visual aids representing the selected FAST protocol regions will also appear at this point regardless of whether or not they were enabled during the setup of the Find Fluids Exercise.

Select the **Dismiss** button at the bottom to exit the Find Fluids exercise.

Note: You will not be able to access the Find Fluids Results once you have exited the Find Fluids exercise.

Find Fluids Exercise, Student

In this Find Fluids exercise, the same holograms as the Instructor will be seen but the display on the Interactive Panel is different. The Exercise Status is based on the Instructor's exercise progression. For example, the status will generate one of the following results:

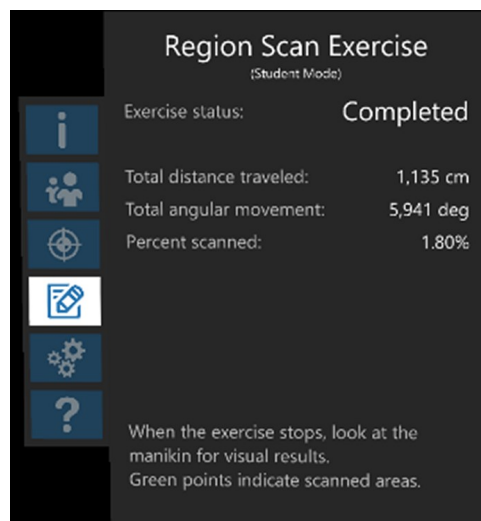
- Setting Up** - occurs when the Instructor is setting up the Find Fluids Parameters

- b. **In Progress** - occurs when the Instructor starts the Find Fluids exercise and the exercise is running
- c. **Completed** - occurs when the Instructor completes the Find Fluids exercise and is now reviewing the Find Fluids Results

If the Instructor enabled the visual aids representing the FAST protocol regions they selected prior to starting the exercise, they will be visible on the Hologram manikin when the Exercise Status is *In Progress*.

When the Exercise Status is completed, the Interactive Panel displays the Instructor's Find Fluids Results which include the following metrics:

- Total distance traveled (cm)
- Total angular movement (deg)
- Affected region(s)



Interactive Panel (Student) - Exercise Status: Completed

Per the instructions near the bottom, the Find Fluids Results also include the cloud of points on the Hologram manikin representing the percentage of a region that was successfully scanned by the Instructor.

Note: Green points indicate scanned areas. Red points indicated non-scanned areas.

The visual aids representing the free fluid(s) in the selected regions will also appear at this point regardless of whether or not they were enabled during the setup of the Find Fluids Exercise.

End the Simulation

To end a CAE VimedixAR simulation with the HoloLens 2:

- a. Use the **Summon Menu** gesture to access the VimedixAR Start menu.
- b. Air Tap the **Home** icon at the bottom of the Start menu.
- c. Air Tap the **Remove (x)** icon in the upper-right corner of the VimedixAR Startup window to exit and close the window.
- d. Glance around the environment and verify that all virtual windows have been closed.

Power Off the HoloLens 2

You must power off the HoloLens 2.

To power off the HoloLens 2:

- a. Press and hold down the power button on the head band until the HoloLens 2 says, "Goodbye."
- b. Plug the power supply into the HoloLens 2 and allow the unit to recharge.

SOFTWARE UPDATES

An Azure Active Directory Account is created when you purchase the CAE VimedixAR application. This account will allow you to access the CAE Healthcare tab on the Microsoft Store website, where you can install and update the application from the HoloLens 2. The password is account specific and will be used to login automatically with HoloLens 2. If you require assistance, contact CAE Customer Service.

When an CAE VimedixAR application update is released, a notification is sent to all customer sites that use that application. Since software used on the HoloLens 2 does not update automatically, the user must follow the steps below to update the CAE VimedixAR application.

Note: Prior to checking for updates, ensure the HoloLens 2 is connected to a WiFi network with Internet access capabilities.

Software Updates Procedure	
1	Establish an Internet Connection
2	Update the Operating System
3	Download Updates from Microsoft Store
4	Check for CAE VimedixAR Application Updates
5	Manage Network Connections
6	Configure the Start Menu

Step 1: Establish an Internet Connection

To establish an Internet Connection:

- a. Use the **Summon Menu** gesture and tap the icon on your wrist to view the Start menu.
- b. Air Tap to select the **Settings** icon.
- c. Air Tap to select the **Network & Internet** icon.



Settings Window - Network & Internet Icon

- d. Choose a displayed WiFi network with Internet capabilities and Air Tap **Connect**. If required, enter a password for the network.
Note: Use care when selecting characters on the virtual keyboard.
- e. Once the connection is made, Air Tap the **Go back** arrow in the upper-left corner of the Settings window to return to the main Settings menu.

Step 2: Update the Operating System

The HoloLens 2 operating system and Microsoft Store should be updated whenever new CAE applications are to be installed. Install Windows operating system updates before installing Microsoft Store updates.

Note: An operating system update can take several hours to complete depending on the speed of your WiFi network connection. Prior to starting the update process, ensure that the HoloLens 2 is charged.

To update the HoloLens 2 operating system:

- a. Air Tap to select the **Update & Security** icon.
- b. Air Tap the **Check for updates** button even if it says, "You're up to date." If any HoloLens 2 operating system updates are available, they will begin the download and install process.

Note: This step could take more than 20 minutes to complete.

- c. After the download is complete, Air Tap the **Restart now** button to complete the installation.

Note: This step could take more than 20 minutes to complete. While the HoloLens 2 is restarting and installing software, you may connect the HoloLens to power.

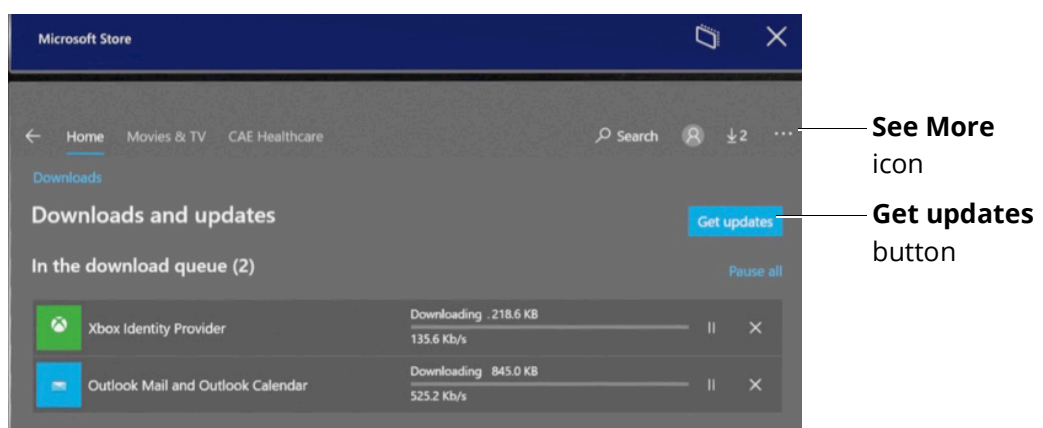
DO NOT place the HoloLens 2 upside-down.

- d. Repeat all steps listed in Step 1 and steps a through c listed here in Step 2 until there are no more HoloLens 2 operating system updates to download and install.
- e. Air Tap the **X** in the upper-right corner of the window to close.

Step 3: Download HoloLens 2 Updates from Microsoft Store

To download HoloLens 2 application updates from the Microsoft Store:

- a. Use the **Summon Menu** gesture to open the Start menu.
- b. Air Tap the Microsoft Store icon.
- c. Air Tap the **See More** icon (three horizontal dots) near the upper-right corner of the Microsoft Store window.
- d. Air Tap **Downloads and updates**.
- e. Air Tap the **Get updates** button.



See More Icon and Get Updates Button

Note: It may take a few minutes for the available updates to be displayed and downloaded. If there are no updates, it will indicate, "You're good to go."

- f. Air Tap the **See More** icon again. Select **My Library**.

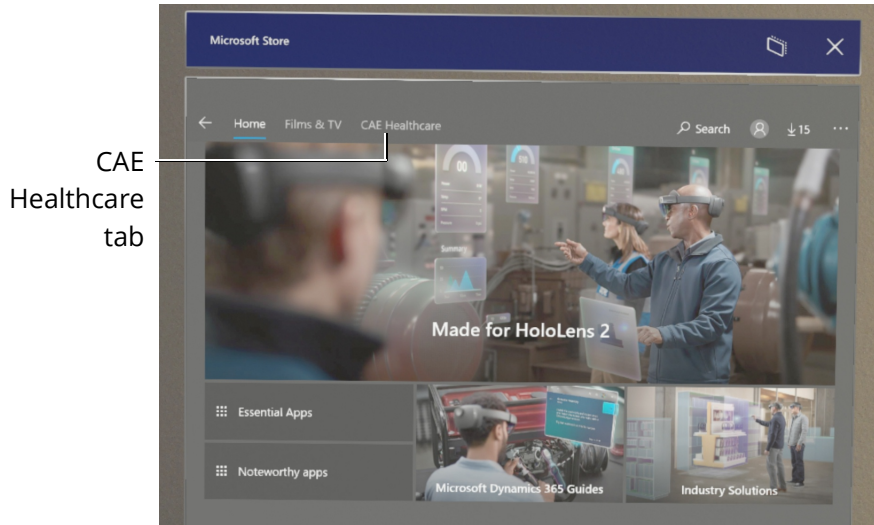
- g. Install Microsoft Store or other HoloLens 2 related apps if indicated.

Note: Do not install Candy Crush, Twitter, or any other non-essential apps that may appear.

Step 4: Check for CAE VimedixAR Application Updates

To download CAE Healthcare AR applications and updates:

- a. From the Microsoft Store, Air Tap the CAE Healthcare tab. All applications in your Azure account will be listed here.

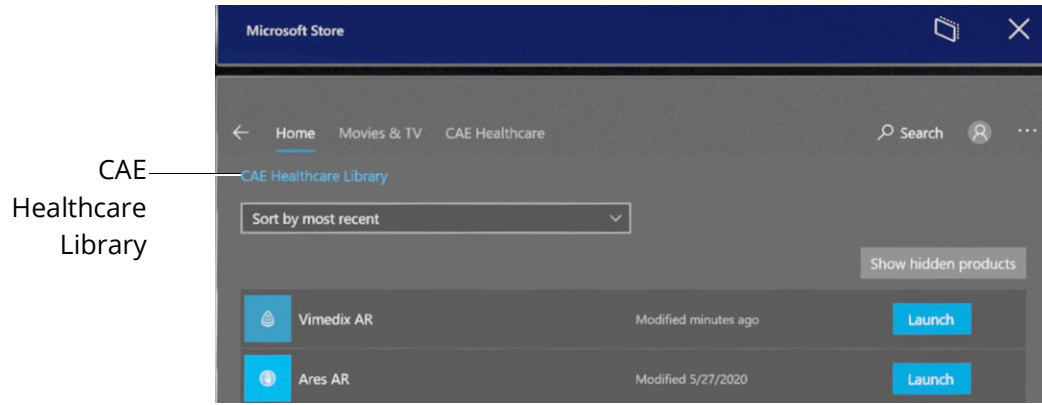


Microsoft Store - CAE Healthcare Tab

- b. Air Tap the VimedixAR App, and pause for approximately 10 seconds. If there is an update available, it will begin to download to the HoloLens 2.
- c. Air Tap **X** in the upper-right corner to exit the store and close the window.

Note: The download status of the CAE Healthcare applications can also be seen on the Downloads and updates - Recent Activity. Air Tap the **See More** icon, then Air Tap **Downloads and updates**.

Additionally, all owned CAE Healthcare applications are shown in the Library. Air Tap the **See More** icon, then Air Tap **My Library**. Filter displayed apps by **CAE Healthcare Library**.



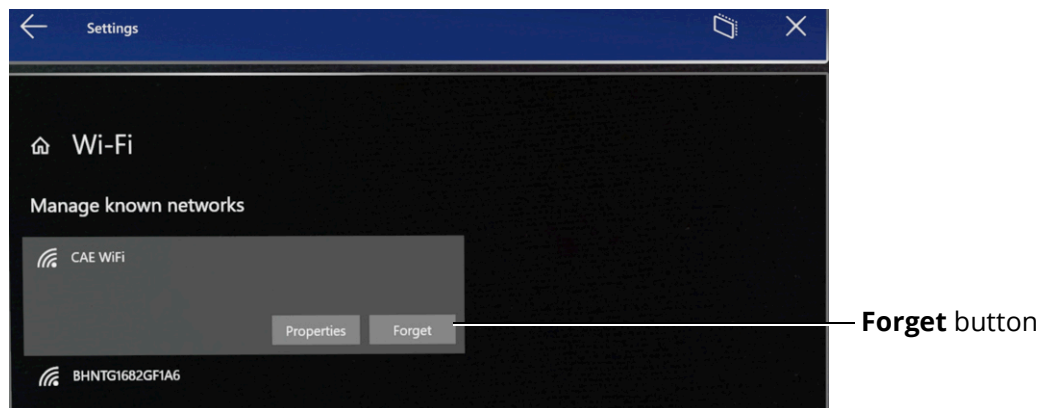
Microsoft Store - CAE Healthcare Library

Step 5: Manage Network Connections

To remove extra networks from the Known Networks list:

- a. Air Tap on the **X** in the right corner to close all open windows.
- b. Use the **Summon Menu** gesture to view the Start menu.
- c. Air Tap the **Settings** icon.
- d. Air Tap the **Network & Internet** icon.
- e. Air Tap the **Manage known networks** option below the list of available WiFi networks.

Note: Scroll to the bottom of the list to see the **Manage known networks** option.



Manage Known Networks Option

- f. Air Tap any network other than your product's WiFi network, then Air Tap the **Forget** button when it appears.

Repeat this step until only your product's WiFi network(s) remain.

- g. To Connect to your desired product's network, Air Tap on its name and select **Continue**.

Note: You may be required to enter a password for the network. Use care when selecting characters on the virtual keyboard. The system's network password is **caadmin**.

- h. Air Tap the **X** in the upper-right corner to close the Settings window.

Step 6: Configure the Start Menu

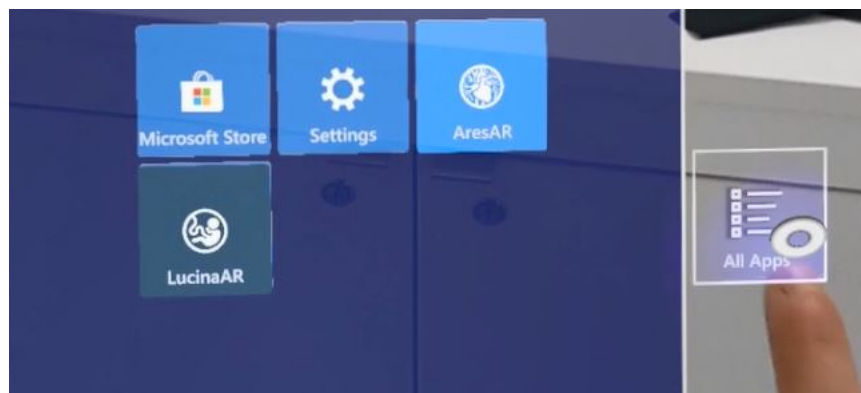
HoloLens 2 operating system updates may alter your Start menu configuration.

If this happens, you can unpin or pin applications to your Start menu by selecting the application with Air Tap and Hold. A dialog box will appear with the available options.

IMPORTANT: Be careful not to select the Uninstall option when unpinning an application.

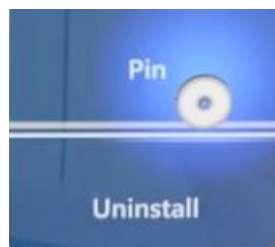
If you don't see the VimedixAR app icon in the Start menu, follow these instructions:

- a. Air Tap the **All Apps** icon to the right of the menu.



All Apps Icon

- b. Air Tap and Hold the VimedixAR icon, then Air Tap the **Pin** button to pin the app to the Start menu.



Pin Button

WARRANTY FOR HOLOLENS 2

The warranty for the HoloLens 2 device is covered by the manufacturer, Microsoft, for one year. CAE Support will only cover CAE AR software applications. Please visit this link for more information:

<https://support.microsoft.com/en-ca/help/4526577/microsoft-hololens-warranty-information>

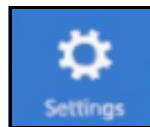
TROUBLESHOOTING

If you encounter problems while operating your CAE VimedixAR, check the common solutions below or contact your IT Department.

Wireless Connection Issue

To connect to the desired simulator network:

1. Use the **Summon Menu** gesture and tap the icon on your wrist to view the Start menu.
2. Air Tap to select the **Settings** icon.



Settings Icon

3. Air Tap to select the **Network & Internet** icon.
4. Choose the displayed WiFi network with the desired product's name and Air Tap **Connect**.
5. If required, enter the password for the network: **caeadmin**.

Note: Use care when selecting characters on the virtual keyboard.

Warnings

If a problem is detected, a warning icon will appear, prompting further action. If the problem cannot be resolved, please contact CAE customer service.



Warning Icon

Warnings are displayed on the Interactive Panel under the Information tab. If the Information tab is not selected when a warning is being displayed, a warning icon appears to the left of the Information tab to prompt you to select the latter and view the warning.

Simulator Not Found Warning

While selecting your experience on the Select Your Experience screen, if the application detects any problem a warning icon may appear like the following:

Air Tap on the button with the warning icon to open the Troubleshooting panel. You will find information about your current issue and appropriate steps to help you solve the problem.

Note: If the UI is not in your field of view when a warning is being displayed, the warning icon appears at the top left corner of your field of view with the text, "Warning! See more menu for more info."

The following table lists possible warnings you may encounter during a CAE VimedixAR simulation with the appropriate resolution:

Warning	Resolution
<p>Could not connect to Vimedix</p>	<p>Potential reasons with solution for each:</p> <ul style="list-style-type: none"> • CAE Vimedix is not connected to the router via the network cable or the connection was not made. Refer to the <i>Setup Procedure</i> section of this user guide for more information on how to connect CAE Vimedix to the router via the network cable. • The HoloLens 2 is not connected to the CAE Vimedix WiFi network. Refer to the <i>Setup Procedure</i> section of this user guide for more information on how to verify this connection. • The current version of Vimedix is not compatible with the current version of VimedixAR. Validate that both CAE Vimedix and CAE VimedixAR are up-to-date. • The Augmented Reality Module is not installed in CAE Vimedix. Check to see if this is the case by following the steps below: <ol style="list-style-type: none"> a. Select the Help icon in CAE Vimedix b. Select the Access tab c. Look for the Augmented Reality Module under the Feature Subscription section. If you see the Augmented Reality Module, it is installed in Vimedix. If you do not see the Augmented Reality Module, contact Customer Service.

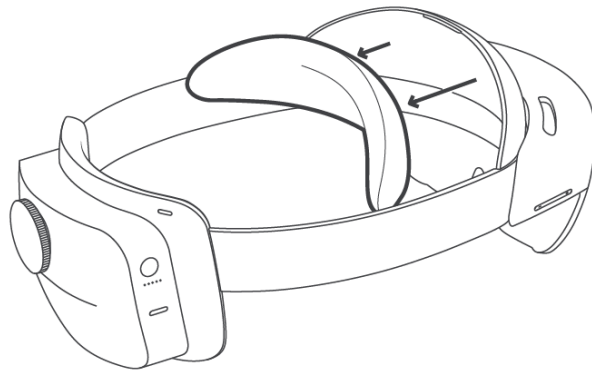
Warning	Resolution
<p>Pathology in Vimedix is not supported by VimedixAR</p>	<p>The pathology that is currently loaded in Vimedix is not supported by CAE VimedixAR. Load one of the following pathologies that are supported by CAE VimedixAR in CAE Vimedix:</p> <ul style="list-style-type: none"> • PathologyCardiacEFast • PathologyCardiacNormal3 • PathologyOBGYN20WeeksCleftLip • PathologyOBGYN20WeeksGastroschisis • PathologyOBGYN20WeeksNormal • AorticDissectionTB • AorticStenosisV • FreeFluid_HRRMorisonsPouch_M • FreeFluid_SplenoRenalR_L • MHI_EbsteinsAnomaly_ASD • MHI_FloatingPulmonaryEmbolism • MHI_MitralValveProlapse • RAMyocardialInfarctionPE • RightPleuralEffusion • Tamponade • ThrombusInTransitPFO <p>If these pathologies are not available in CAE Vimedix, contact Customer Service.</p>
<p>Pathology is loading...</p>	<p>Pathology is loading in CAE Vimedix. Note that the loading process may take a few seconds.</p>

Warning	Resolution
<p>No pathology loaded</p>	<p>This warning message will appear when CAE Vimedix is turning ON or OFF. When Vimedix is running, load one of the following pathologies that are supported by CAE VimedixAR in CAE Vimedix:</p> <ul style="list-style-type: none"> • PathologyCardiacEFast • PathologyCardiacNormal3 • PathologyOBGYN20WeeksCleftLip • PathologyOBGYN20WeeksGastroschisis • PathologyOBGYN20WeeksNormal • AorticDissectionTB • AorticStenosisV • FreeFluid_HRRMorisonsPouch_M • FreeFluid_SplenoRenalR_L • MHI_EbsteinsAnomaly_ASD • MHI_FloatingPulmonaryEmbolism • MHI_MitralValveProlapse • RAMyocardialInfarctionPE • RightPleuralEffusion • Tamponade • ThrombusInTransitPFO <p>If these pathologies are not available in CAE Vimedix, contact Customer Service.</p>

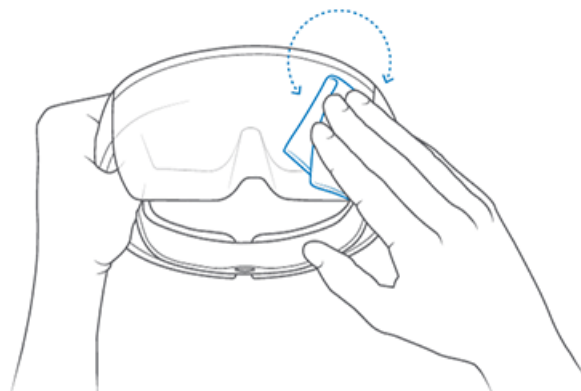
CARE AND CLEANING

Handle your HoloLens 2 carefully to prevent damage by following these tips for care and cleaning:

- Always use the headband to lift and carry the HoloLens 2.
- Keep the HoloLens 2 visor free of dust and fingerprints. Avoid touching the visor when possible as repeated cleaning could cause damage.
- DO NOT use cleaners or solvent. DO NOT submerge in water or apply water directly to the HoloLens 2.
- To clean the visor:
 - Remove the brow pad by pulling gently away.



- Remove dust with a camel or goat hair lens brush or bulb-style lens blower.
- Lightly moisten the included microfiber cloth with a small amount of distilled water and a mild antibacterial soap. Wipe the visor gently in a circular motion.



Cleaning the Visor

Note: Lens cleaners can be abrasive and are NOT recommended.

- To clean the device:
 - Remove any dust by gently wiping with a dry lint-free microfiber cloth.
 - Lightly moisten the cloth with a medical 70% isopropyl alcohol. Gently wipe the surface of the device. Allow the device to dry completely before using.
- To clean the brow pad:
 - Wipe the brow pad with a microfiber cloth moistened with water and a mild antibacterial soap.
 - Replace the brow pad.

Note: Bleach-based wipes are NOT recommended. For more information about cleaning the HoloLens 2 device, go to the link <https://docs.microsoft.com/en-us/hololens/hololens2-maintenance>



For more information about CAE products, contact your regional sales manager or the CAE distributor in your country, or visit caehealthcare.com.

Tel +1 941-377-5562 or 866-233-6384

For customer service, please contact CAE.

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