

Teaching Technologies for a Successful Hybrid Classroom Experience

The following instructions accompany the live training and video for the classroom A/V operations when using Zoom for hybrid teaching. Shortcut directions are posted in each classroom as well that follow this document.

For technical support on the hardware and software in the classroom contact:

- By phone - call 217-244-0812
- By email - helpdesk@business.illinois.edu,
- Drop-in - visit 3044 BIF during normal business hours

For creating teaching plans, Compass2g course design, recording audio and video for the asynchronous parts of your class contact:

- eLearning [Support Request Form](#)
- Office hours 9-11 am Monday through Friday in Zoom

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Classroom Configuration Basics

If you are familiar with the classroom A/V operation as it has been in the past, please take note of some differences as we move into the fall. These changes have been made to support consistent hybrid teaching during COVID-19. To fullest extent possible, the feature set in all rooms have been made equivalent.

The primary difference is that the BIF tiered classrooms will only use two screens. This way the visual experience is the same as the flat classrooms. The classrooms in Wohlers Hall will use a split screen to provide the same functionality as the two-screen BIF classrooms. In all classrooms one screen will always be used to display the same content to both students on and off campus through Zoom's Share Screen feature.

Hybrid Classroom: Zoom Always On!

With the hybrid classroom we will use during current COVID-19 precautions, you will always have students joining you remotely via Zoom while you are teaching in a classroom. This means you must have Zoom started prior to the start of the class period. At the end of the period you will stop the Zoom meeting with the red "END" button on the left side of the Zoom toolbar.

If you want to continue the informal discussion after class, you will need to start up a session on another device such as your phone. An Office Hours Zoom meeting ID for your class would be perfect in this situation. Be considerate of the instructor that follows you in that classroom.

Using Zoom with Students in the On-campus Classroom

To get the most out of Zoom, both the in-classroom and off-campus students should be logged in to Zoom. That will allow:

1. All students to see each other face-to-face
2. All students can share their screens and present to each other whether remote or on-campus.
3. Working in small groups using the Zoom Breakout Room feature
(If you are not familiar with Breakout Rooms try this [LinkedIn Learning tutorial](#))

Caution When Using On-campus Student Audio

Using Zoom in the classroom on the students' computers creates the opportunity for audio feedback loops. There are simple steps in Zoom the students must follow to avoid depending on how the meeting is joined:

- **When Joining from the Zoom application**
When in-classroom students start Zoom they should NOT join audio. This is handled by checking the box labeled **Don't connect to audio** when passing through the **JOIN MEETING** dialogue box when joining a meeting through the Zoom application.

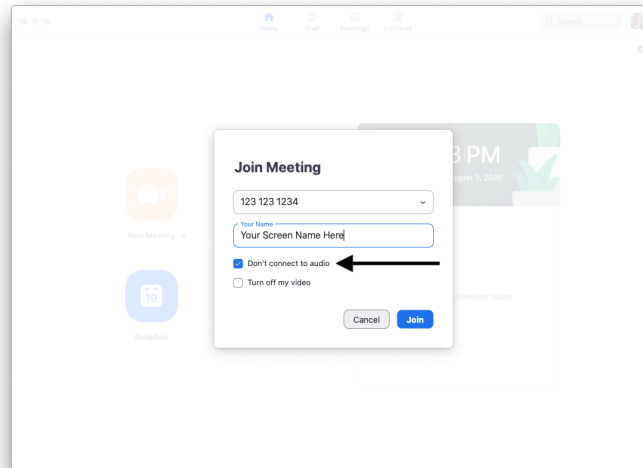


Figure 1 DON'T CONNECT TO AUDIO checked for students joining the Zoom meeting while in the on-campus classroom to avoid feedback problems.

- **When Joining a Zoom meeting from a URL in Compass2g, an email, or calendar, etc.**
On the way into Zoom from a URL the participant will come to the dialogue box labeled **Choose ONE of the audio conference options**. Close that window by clicking the RED button in the upper left corner to enter the Zoom meeting without joining audio.



Figure 2 Cancel joining audio when students enter meeting from a URL

Audio Must Be Turned on for Breakout Rooms

To allow in-classroom and online students to speak to each other while in Breakout Rooms, the in-classroom students must **JOIN** audio after entering their assigned Breakout Room. In-classroom students join audio by clicking the **JOIN AUDIO** button from the left end of the Zoom toolbar. There they can **JOIN WITH COMPUTER AUDIO** with the blue button in the same dialogue box shown in Figure 2 above.

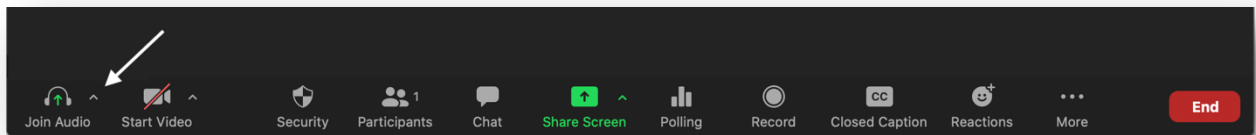


Figure 3 Join Audio for Breakout Room participation

When the Breakout Room activity is over, the students in the on-campus classroom will need to **LEAVE COMPUTER AUDIO** to prevent audio feedback. This shuts down their audio just as they did at the beginning of the Zoom meeting.

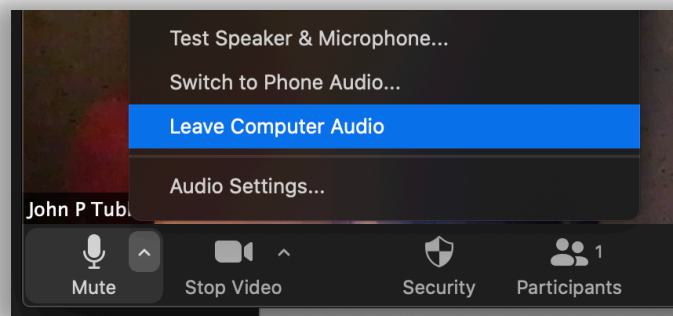


Figure 4 Leaving Computer Audio at the end of Breakout Room activity

The sections that follow will discuss the multiple steps needed to get ready each time you start to teach in the hybrid classroom in BIF or Wohlers Hall.

Step One: The Podium Room Control

1. Open the podium cabinet with your I-Card.
 - Screen will drop
 - Computer will awaken
2. From the Crestron control panel select between the three options to share your content on the projector to both the local students and via Zoom Screen Sharing to remote students simultaneously:

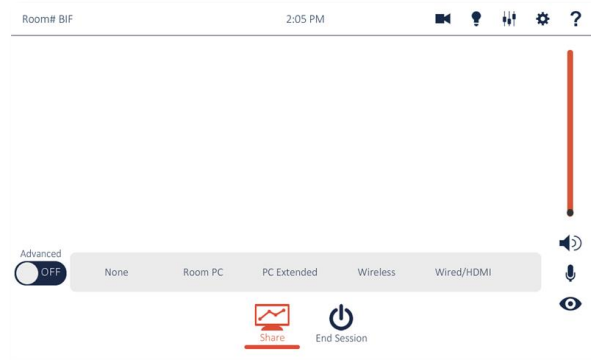


Figure 5 Crestron Main Control Panel

- **Room PC** – when projecting and sharing content on the podium computer
 - **Wireless** – for iPad/iPhone, Android Tablet/Phone, Windows Tablet, or any laptop connecting wirelessly through WiFi.
 - **Wired/HDMI** – for cabled connection to the document camera on the podium or your device with an HDMI video output. That cable is available on the podium. You must disconnect the HDMI cable from the document camera to connect to your device.
3. On the Crestron panel there are controls for the audio in the hybrid classroom. Two volume sliders are displayed after clicking the button shown below on the top right of the screen.

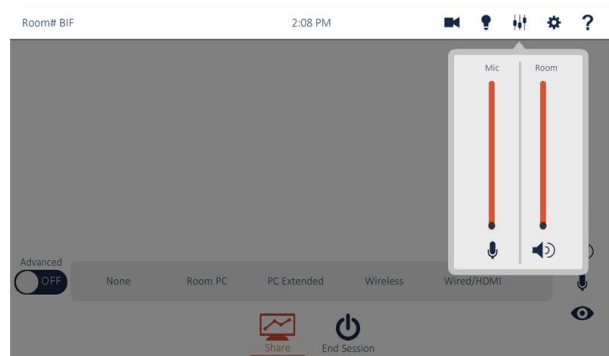


Figure 6 Crestron Control Panel Volume Sliders

- The **MIC** slider controls the volume of the lapel mic you are wearing. This adjusts the volume in the Zoom session and a small amount of voice reinforcement in the local classroom.
- The **ROOM** slider controls the volume on the sounds that the podium computer makes that are heard by you and the in-classroom students.
- The icon below each slider is a **MUTE** switch for the **MIC** and **ROOM** respectively. The muting of the **MIC** and **ROOM** can also be found in the lower right corner of the main Crestron screen.

Step Two: Get Wired for Sound

Each instructor will be receiving a personal microphone to keep for yourself. You must bring that mic to class every time you teach and connect it to the transmitter you will find in the podium cabinet.



*Figure 7 Podium Cabinet Open
Showing Transmitter*



Figure 8 Mic Transmitter Pack



Figure 9 Mic cable and transmitter jack showing pins to be lined up

1. Make sure to line up the pins when plugging the cable in to the transmitter.
2. Clip the mic 3 on your clothes buttons down from your neck. Do not hold the mic in your hand when speaking, it will create distracting noise in Zoom and in the classroom.
3. Try to tuck the cable inside a jacket, sweater, etc. to keep the cable out of your way while teaching.
4. Turn the mic on and off with the switch next to the cable jack.
5. At the end of class turn off the transmitter.
6. Release the cable from the transmitter by pressing the black button on the side of the mic jack.
7. Return the transmitter to the podium cabinet and close the cabinet.

Step Three: Load Your Content

Prior to starting Zoom load your slides, browsers, docs or other screen content. To make for a quick and smooth transition it's recommended to have your materials stored in a cloud service such as BOX or OneDrive in Microsoft Office 365 – both of these are campus run services.

*Here's a quick tip – learn the **ALT-TAB** keyboard shortcut. It's for switching between currently running programs. It will speed things up as you move between applications.*

1. *Hold down the ALT key – that works best with your left thumb.*
2. *Then tap the TAB key. Each tap will cycle you through the currently running applications.*
3. *When you land on the application you want to use, release both keys and you will be left at that application.*
4. *This is especially helpful when you can't quickly find that program window you were looking for.*

Step Four: Start Zoom

Each course should have a Zoom meeting ID that you create. It's a recommended best practice to have this Zoom meeting URL posted in your Compass2g course site for your students. However, it's faster for you to type the meeting ID number into the Zoom application on the classroom computer. This allows you to start Zoom without taking the time to open Compass2g. Use the table below to write down the pertinent Zoom meeting information.

Course Name:	
My Class' Zoom meeting ID:	
My Class' Zoom meeting password:	
My Class' Zoom URL for Compas2g	

Course Name:	
My Class' Zoom meeting ID:	
My Class' Zoom meeting password:	
My Class' Zoom URL for Compas2g	

Course Name:	
My Class' Zoom meeting ID:	
My Class' Zoom meeting password:	
My Class' Zoom URL for Compas2g	

To get the Zoom class meeting started, open the Zoom application. From the classroom podium computer, it can be found on the Desktop or in the Windows Start menu. Once open the **JOIN** button in the Zoom main menu is found on the top right in the group of four buttons.

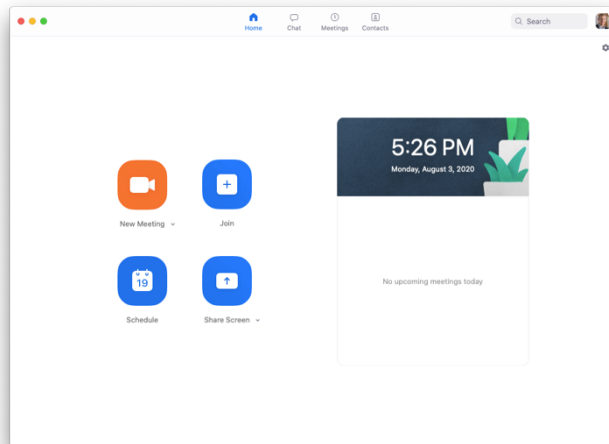


Figure 10 Zoom opening menu

After clicking **JOIN**, type the **Meeting ID** number, amend your screen name to something appropriate and make sure to leave both checkboxes blank. Complete starting the meeting by clicking the **JOIN** button.

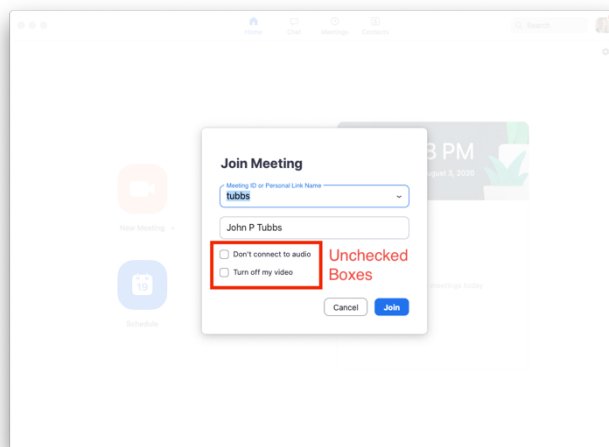


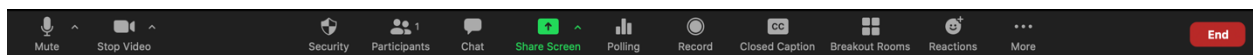
Figure 11 Zoom join meeting window

Step Five: Sharing Visual Content from the Classroom Podium Computer

To allow class participation from outside the classroom those students must see the same projections that the in-classroom students see. This requires the use of Zoom's **Share Screen** feature. There are three ways to do this:

1. Using the classroom podium computer.
2. Using the document camera on the podium.
3. Using a tablet device wirelessly

All screen sharing starts from the green **SHARE SCREEN** button in the middle of the ZOOM toolbar.



Screen Sharing the Podium Computer

The applications running on the podium computer are the easiest to share. Zoom's **SHARE SCREEN** function on the **BASIC** tab will allow you to select any of the current running applications or the entire screen of the classroom computer as your visual source. Your shared screen will appear on the projection screen behind the podium in the classroom and in Zoom for the online students.

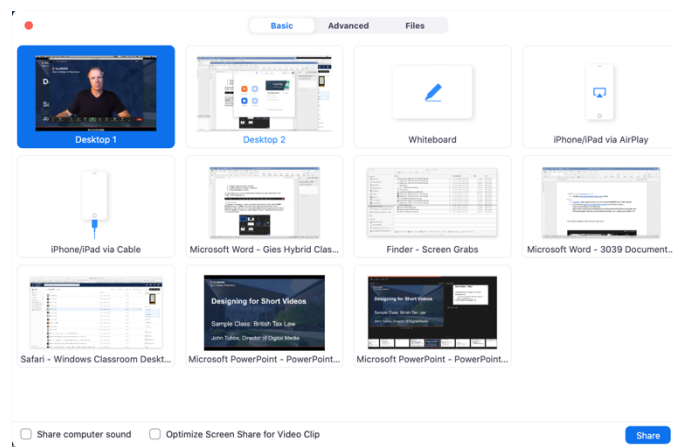


Figure 12 Zoom Share Screen BASIC tab

If you are sharing an application that has sound, make sure to check **SHARE COMPUTER SOUND** and **OPTIMIZE SCREEN SHARE FOR VIDEO CLIP** if you are showing a video. Click **SHARE** to start showing your selected screen to the Zoom audience.

Option for Stylus Annotation: Connecting a USB Stylus Tablet

If you do not have an iPad, Android or Windows tablet you can connect an inexpensive stylus tablet to the podium computer via USB. IT Partners recommend tablets come from the Wacom Intuos family of products. These tablets start in the \$80 range.

This tablet will be especially useful if using the Zoom Whiteboard found in the **SHARE SCREEN BASIC** tab but will also work for annotating in other applications such as Excel.

Rather than using the stylus on a screen, directly on the image you are annotating or drawing, the stylus “point” shows up on the computer’s screen. This is similar to a computer’s trackpad but uses a more accurate touch/draw tool with the stylus and a much larger surface. This type of tablet takes some getting used to – much like the first time you used a computer mouse.

These tablets connect to the podium computer. The software installation is already taken care of by IT Partners – all you need to do is plug the Wacom in to the USB connectors on the podium.



Figure 13 Wacom Intuos tablet and stylus

Screen Sharing with a Tablet or Your Own Computer

It's recommended to use the wireless connection if you are using iPads/iPhones, Android tablets/phones, or Windows tablets. iPads/iPhones can connect with their own built in *Screen Mirroring* feature. Windows devices will need the *Mersive Solstice* software installed that is available from the Mersive website. (see below for further instructions)

Sharing iPad/iPhone

For basic screen sharing an iPad/iPhone can connect natively to the Solstice system using the iOS SCREEN MIRRORING feature.

1. Select **WIRELESS** on the Crestron control panel.
2. Have your app and file loaded on the iPad/iPhone.
3. Select **SHARE SCREEN** from the Zoom toolbar at the bottom of the podium computer screen then **ADVANCED** from the next window.

4. Choose the **CONTENT FROM 2nd CAMERA** and if there will be sound or movies from your iPad/iPhone check the appropriate boxes.

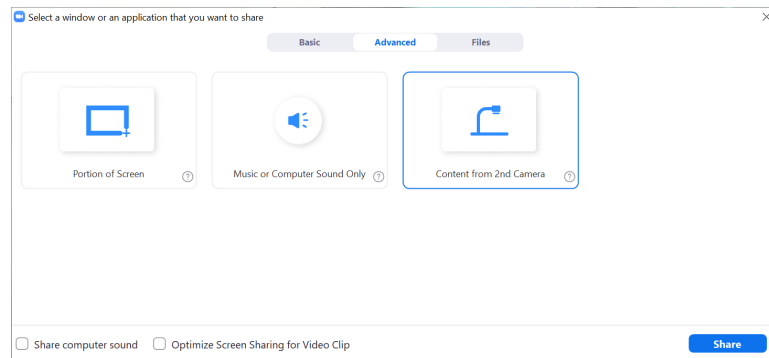


Figure 14 Advanced screen sharing tab in Zoom

5. The next screen on the podium will be waiting for your iPad to connect. The screen will be unique to the room that you are in. Notice in the lower left corner a four-digit number – that is the digital key to connect the iPad.

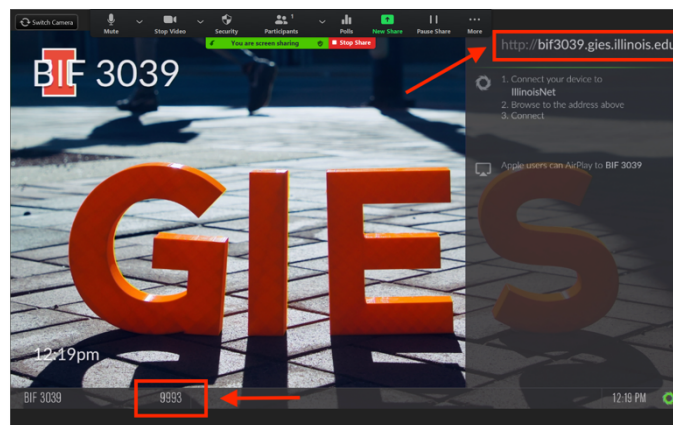


Figure 15 Solstice Screen with four-digit code and room URL

6. Open the **CONTROL CENTER** on the iPad or iPhone. This will depend on the version of the iPad.

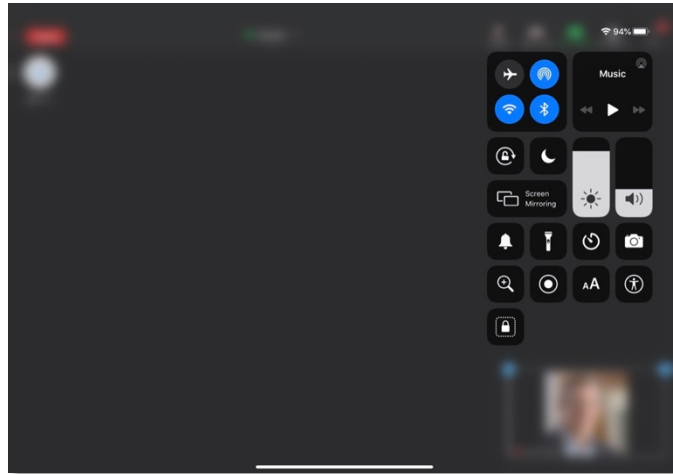


Figure 16 iPad Control Center

- On an iPad with iOS 12 or later, or iPadOS, swipe down from the top-right corner of your screen. Swipe up from the bottom of the screen or tap blurred part of the screen to close the Control Center.
 - On an iPad with iOS 11 or earlier, swipe up from the bottom edge of your screen. Tap the top of the screen or press the Home button to close Control Center
7. Tap the **SCREEN MIRRORING** button.
 8. A list of available rooms to will be displayed to present in. Scroll and select the room you are in.

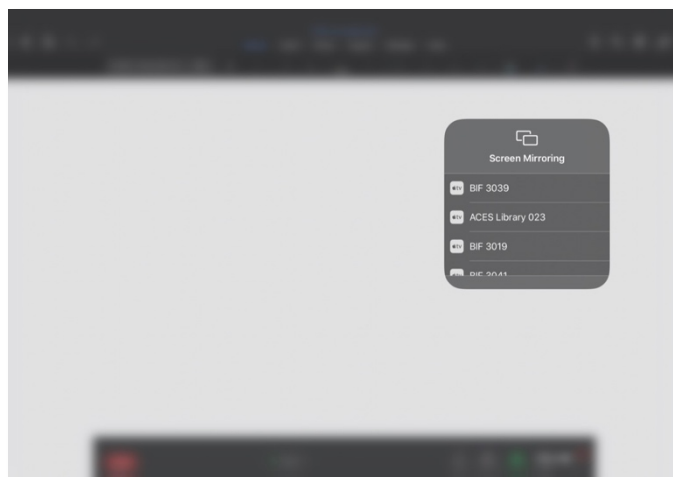


Figure 17 iPad Control Center Screen Mirroring room selection

- The next screen will ask for the **AIRPLAY PASSWORD**. Type in the four-digit key from step #5 and then OK.

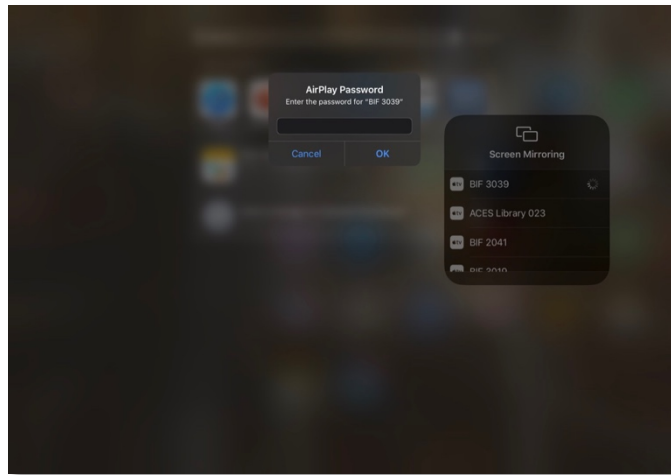


Figure 18 iPad Control Center typing Solstice four-digit key

- Once the four-digit key is accepted, tap anywhere on the blurred background to return to normal iPad/iPhone operations.
- The screen on the podium will now refresh and then show your shared iPad/iPhone screen replacing the screen from step #5. That screen will be shown on one of the room projectors and through Share Screen in Zoom to the online students.

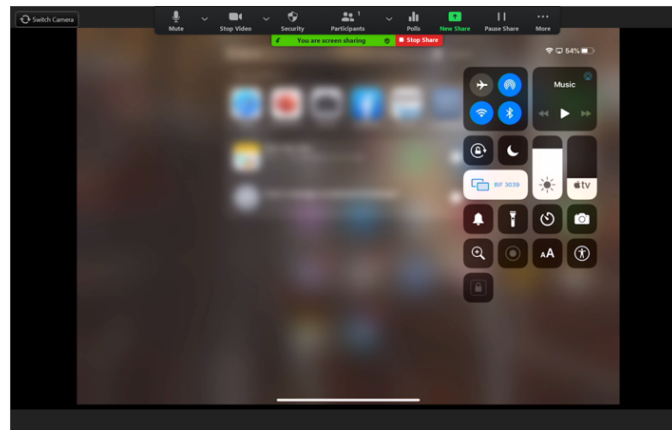


Figure 19 iPad screen showing on the podium computer screen

- Begin using your iPad / iPhone as your projected and shared screen.

Sharing Your Windows Device Using Mersive Solstice Application

When using a Windows tablet device as a shared screen in Zoom you will need to do a one-time install of the **Mersive Solstice** application. It happens the first time you go to share your

Windows device. *It is highly recommended you do this ahead of the first day you teach. Let's walk through this process.*

1. Select **WIRELESS** on the Crestron control panel.
2. Have your app and file that you will be screen sharing and annotating loaded on your Windows device.

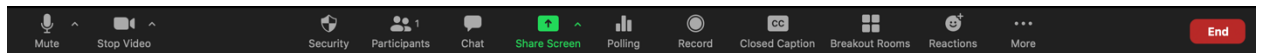
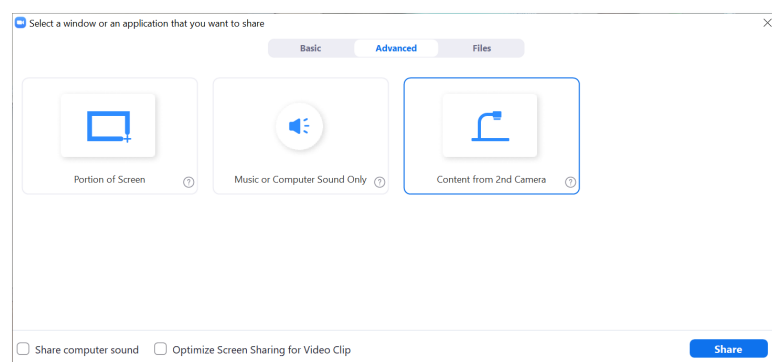


Figure 20 Screen Share in green from middle of Zoom toolbar

3. Select **SHARE SCREEN** from the Zoom toolbar at the bottom of the podium computer screen then the **ADVANCED** tab from the next window.



*Figure 21 Share Screen ADVANCED Tab and
CONTENT FROM 2nd CAMERA selected*

4. Choose the **CONTENT FROM 2nd CAMERA** and if there will be sound or movies playing from your Windows device check the appropriate boxes in the lower left corner.

5. The next screen on the podium will be waiting for your Windows device to connect. The screen will be unique to the room that you are in. Notice the URL (this will also be referred to as the IP number later) in the upper right corner.

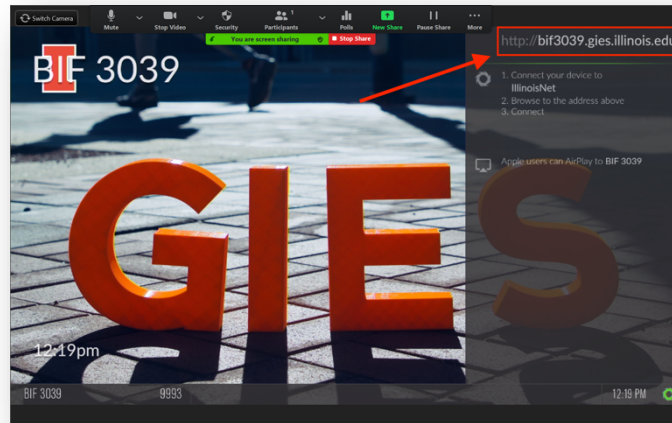


Figure 22 Solstice Screen with four-digit code and room URL

6. Open a browser on your Windows device and enter that URL in step #5. You will be prompted to download the software for Solstice if you've not done so prior. Click the link labeled **GET THE APP & JOIN**. If you have downloaded the software, click the link labeled **ALREADY HAVE THE APP?**

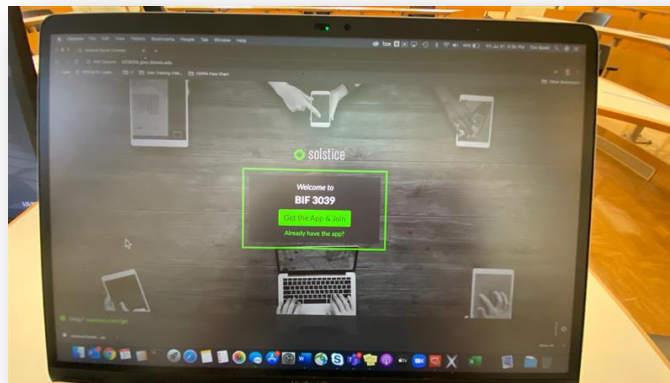


Figure 23 Mersive Solstice software download screen

- Once downloaded, you will be able to find your room from the **DISCOVERED DISPLAYS** tab.

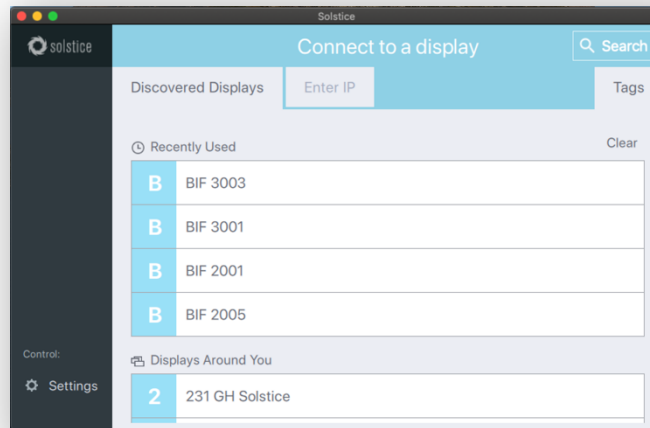


Figure 24 Solstice Discovered Displays - Select your classroom

- If the classroom is not found in the Solstice “Connect to a display” dialogue you can switch to the **ENTER IP** tab and type the URL you located in step #5. (for example: **bif3039.gies.illinois.edu**). IT Partners has replaced the IP number with this URL to make it easier to remember this information.

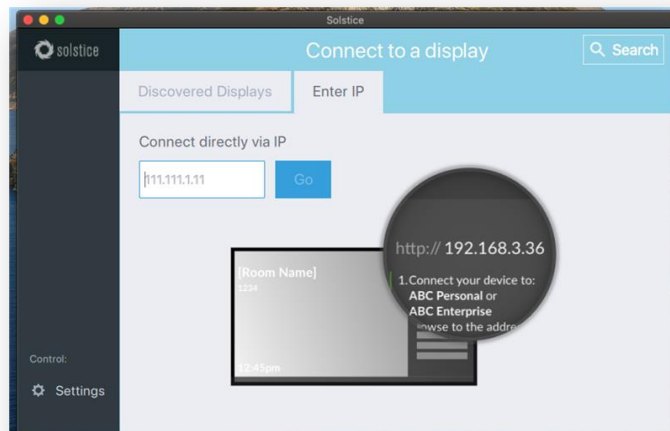


Figure 25 Enter IP (room URL) manually to connect to a display

9. Looking back on the podium computer screen notice the four-digit key in the lower left corner – that is the digital key to connect the Windows device. In the example below the code is 9993. Returning to your Windows device enter this key.

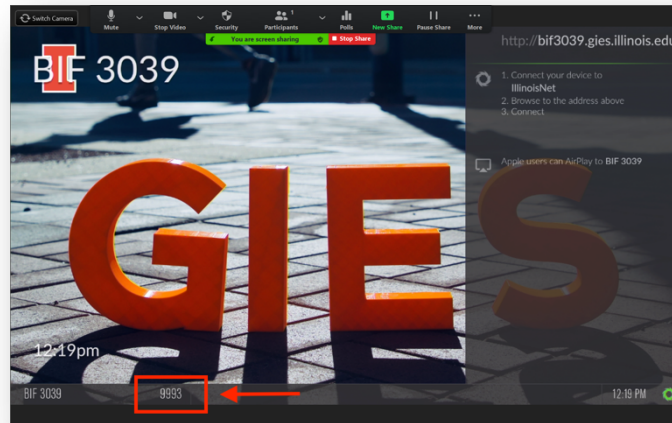


Figure 26 Locate four-digit Solstice key on podium computer

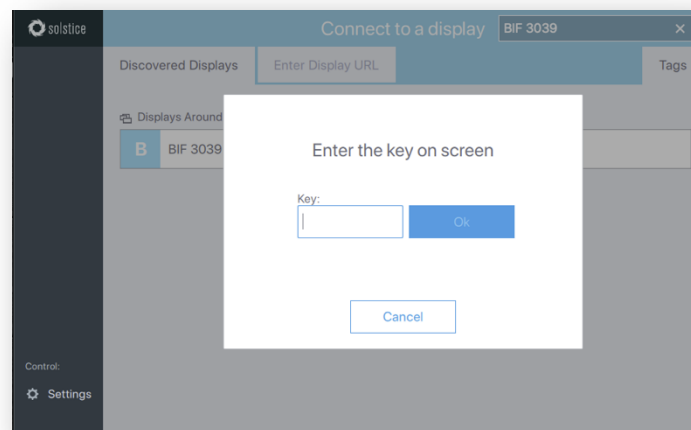


Figure 27 Enter four-digit key on your Windows device

10. Once the digital key has been entered you will be directed to the Solstice window where you select what part of the screen you would like to share. You can select from the desktop (the entire screen), a specific application window (protects from showing a

window or application you DO NOT want to be shared such as your email), or a media file (usually a video) directly by opening it.

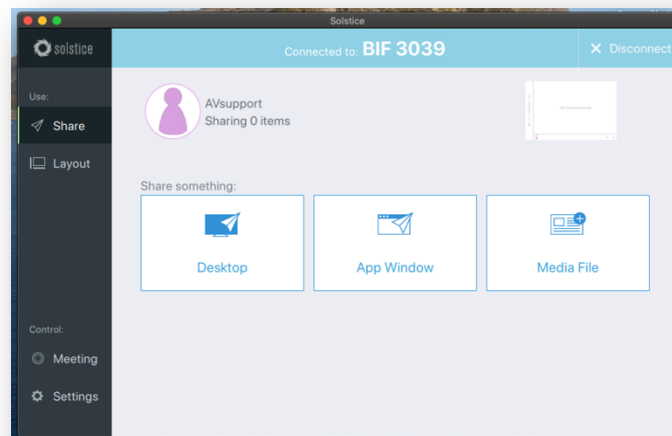


Figure 28 Select content to share from Windows device

Quick Tips

Side by Side View During Screen Sharing

For the best experience, students should use the **SIDE BY SIDE** view during screen sharing. This allows you to see both the shared screen content and the participants. You can toggle between Active Speaker and Gallery view. There will be a sliding vertical boundary between the screen content and the participants that will adjust the size of each respectively.

This is a good suggestion to give to your students.

1. While viewing a shared screen click on **VIEW OPTIONS** and choose **SIDE-BY-SIDE MODE**.

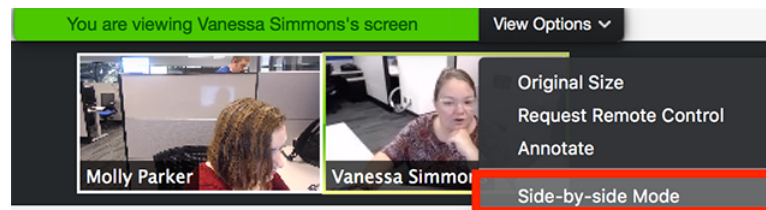


Figure 29 Selecting SIDE-BY-SIDE MODE from VIEW OPTIONS during screen sharing

2. The shared screen will appear on the left and the speaker will appear on the right.
3. Hover your pointer over the boundary between the shared screen and participants' video until your pointer changes to a double arrow and you see a grey line separating both views.

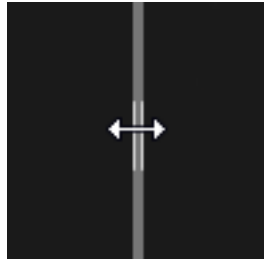


Figure 30 Sliding the divider between each side of the SIDE BY SIDE view

4. Click and drag the separator to adjust the size of each view.
5. Click **SPEAKER VIEW** or **GALLERY VIEW** at the top to switch between the two.
6. To exit Side-by-side Mode, click **VIEW OPTIONS**, then uncheck the **SIDE-BY-SIDE MODE** option.

The video of the speaker will now display at the top of the screen, with the shared screen in the center of the window.

Automatically entering side-by-side mode

1. Sign-in to the Zoom Desktop Client.
2. Click your profile picture then click **Settings**.

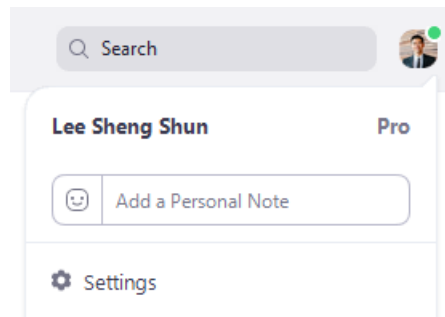


Figure 31 Zoom Settings

3. Click the **Share Screen** tab.
4. Click the **Side-by-Side Mode** check box.
5. Zoom will automatically enter side-by-side mode when a participant starts sharing their screen.

LinkedIn Learning Courses to Understand Zoom to its Fullest

There are many opportunities to add new methods to teaching with compelling on-screen apps and annotations. While most of us are familiar with Microsoft PowerPoint, there is so much more to explore and present to your students.

LinkedIn Learning is free to University faculty, staff and students. This is one of the best tutorial services available. There is not only computer and applications lessons, but also many soft skills courses are offered. **LinkedIn Learning is highly recommended.**

Using a Tablet

Sharing a tablet screen with annotation is covered above but there are many tips in these courses:

- Using the [Apple Pencil with Microsoft Office apps](#) on the iPad
- Overview of Windows tablet usage
 - Switch to [tablet mode](#)
 - Use [touch screen controls](#)
 - Using [OneNote for Windows on a tablet](#) (and any computer)

Using Zoom

- A very thorough [Zoom Course on LinkedIn Learning](#)
- Also the tutorials [from Zoom](#) are helpful.