# Everything About Zoom

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Zoom is software that enables you to hold a video or audio only conference with any group of people you invite. These conferences are called meetings. This handout serves as a reference for the screen reader user.

## Joining Meetings

In Zoom, a conference, whether it’s a video conference or audio only group discussion is called a meeting. Each meeting has a host and that’s a person with a Zoom account.

You don’t need an account to join a meeting however. You can join using your computer, smartphone or an ordinary telephone. You need the Zoom software on your computer to join for full functionality, but you can actually join from your browser as well. If you get a meeting link, it will open a web page that invites you to download the app or join from your browser. If the app is already installed, you can simply choose “open in Zoom”.

Meetings always are identified by a meeting ID. Many people also choose to require a password – sometimes called a passcode if it is all digits. Meetings sometimes have a waiting room, where you loiter until the host admits you.

A meeting invite will often include telephone numbers as well. These let you dial in on an ordinary phone.

If you see a one-tap mobile number, this lets you join via phone call–no app is needed. The difference between the one-tap mobile and the call-in number is that the one-tap mobile often includes the touch tones necessary to enter your user ID and password automatically.

## The Zoom Window

When you are not in an active meeting on your computer, there is only one Zoom window. It has tabs for home, chat, contacts and meetings. Each of these have sub-sections but you can move your keyboard focus to anything in this window by pressing tab, or in an area with multiple tabs, pressing the arrow keys. Closing the window with the mouse, or the keyboard -- ALT-Space C or ALT-F4 doesn’t close the Zoom program. Once you are in a meeting, another window for that meeting is open. It can either be in full-screen mode or in a mode where a toolbar appears with your meeting controls.

Low-vision users often have trouble locating the meeting controls visually, which are usually at the bottom of the screen. (If someone is sharing a screen, those controls move to the top. This can confuse users with low vision, so take your time to find these buttons if you need to work with your mouse.) When it’s a full screen, the remainder of the screen is taken up with either the gallery or the speaker view.

In the gallery view, a separate square is devoted to each participant. More participants make each square smaller. In the speaker view, the entire screen is devoted to the video for that speaker. You can toggle between speaker and gallery view and you can also toggle between full screen and just the meeting controls toolbar. If a speaker is sharing a screen, their video is also there, beside the video from their camera. If a participant has their video off, their profile picture and name appear.

The meeting controls are where you raise your hand, mute or unmute yourself, switch video on or off, toggle between gallery or speaker view, read meeting information and perform other actions. They can all be accessed with the tab key. You can keep a meeting window open and close the Zoom main window without your meeting ending. This can help if you find it frustrating to have too many windows open at once.

Zoom-text users are advised to configure their application settings specifically for Zoom. For example, if a low-vision user prefers reverse video for text, they may not wish to see people’s faces in reverse video if they intend to focus on the gallery or speaker view.

## Shush!

The most common way for a JAWS user to kill speech is to enable a mode called “Speech on Demand”. This mode tells JAWS to speak when a JAWS keystroke is pressed so the user can continue to read the screen.

But it silences any automatic speech. To toggle “Speech on Demand”, hold the Insert and press Space. This tells JAWS the next keystroke is intended solely for JAWS. Then press the letter “S”. JAWS will say “Speech on Demand” or if you are toggling out of that mode “Full Speech”. So the keystroke is holding Insert and pressing and releasing Space, then releasing Insert. Then pressing the letter “S” on its own.

NVDA works similarly. Holding Insert and pressing the letter “S” rotors between three states, “Speech On”, “Speech Off” and “Speech Beeps”. When NVDA is set to beep it’s a fairly unobtrusive sound, and it’s a setting that lets the user know NVDA has something to say, but didn’t say it!

You can kill JAWS altogether by holding Insert and pressing F4 or going to the JAWS window and choosing Exit. If you are not a regular JAWS user and need it gone, this method is for you.

NVDA can be removed from memory in the same way. Its keystroke however, is Insert-Q.

If you want JAWS running but are only using Braille, or you just don’t want any speech at all, hold Insert and press CTRL-S. You’ll see a list of speech profiles, and the last choice, “No Speech”, is what you need.

Note that for both JAWS and NVDA, if you don’t have an Insert key because you are on a laptop, use the Caps Lock instead.

If you are on a Smartphone using the Zoom app, temporarily shutting off your screen reader’s speech is really the only way to silence alerts. For example with Voice Over, tap twice with three fingers which toggles its speech off and on.

Not only do you need to silence speech at times, but you need to silence yourself. Background noise in your home or office can be quite annoying for others on the conference. The mute key by default is ALT-A or you can tab to the mute button and press space. On the Mac hold the shift and command keys and press the letter “A” to toggle mute. Holding space can also temporarily unmute you, should you only need to speak occasionally. There’s also a mute toggle in the Smartphone app, though its location has changed with various versions of Zoom. Currently it is in the lower right hand corner. On a telephone call, press the Star key followed by the number 6. Think of 6 as the letter “M”.

I personally have gone in to my settings and configured Zoom to always keep me muted when I join a meeting. This way I only have to unmute when I wish to speak and never worry about my background noise being overheard or disturbing others.

Video is also off by default on your computer or smartphone. You can adjust your settings so it is on by default, but it will never be on unless you decide it should be.

In most meetings, you will be asked to raise your hand if you wish to be called on to speak. The keystroke for this is ALT-Y on Windows, or Option-Y on the Mac. On your smartphone, locate the “More” button which causes a menu to pop up. There, you can select a “Raise Hand” button. On your telephone, press the Star key on your touchtone keypad followed by the digit 9.

When the host calls on you, he will send you a pop-up message asking you to unmute. You can locate that message and press the unmute button which appears with that pop-up, or you can simply use your regular keystroke for unmuting yourself. Note that the Zoom keystrokes only work on a computer and not on a smartphone. On a telephone with only a touchtone keypad, your only two inputs are Star 6 for the mute toggle and Star 9 for the raise hand toggle.

Another slightly confusing prompt for computer users is the “Join with Audio” button which you might encounter when first joining a meeting. By default, you will join with audio if you ignore this button, but its purpose is to let you join with video on your computer and keep the meeting audio off. Sometimes people join with both a phone and a computer, and if they forget to mute their telephone or smartphone app, audio from both sources will cause obnoxious echoing and feedback. You can hear the same feedback in meetings when people fail to mute on their telephone.

If you must turn off the meeting audio on your smartphone, it’s under the “More” button and its button is towards the bottom of the screen. You would typically only turn off meeting audio if you were joining additionally with another device.

Other Features

Zoom lets user’s text chat, share their screen, share their audio, use a whiteboard, toggle video and switch microphones within a meeting. The tutorial links at the end of this document can help you get up to speed with these features should you need them. Viewing shared screens or the whiteboard is not accessible to speech or Braille. However you can easily share your own screen or type on the whiteboard if you use Braille or speech. The text chat feature is accessible though at times somewhat cumbersome.

If you are a beginner, you don’t need to worry about anything other than learning how to raise your hand and mute and unmute your audio.

## Alerts

A relatively new feature in Zoom is “Screen Reader Alerts”. It is listed under Settings on the Accessibility Tab. Any update after August 4 contains this setting. It contains a list of messages that Zoom displays in a way that a screen reader voices immediately. Each alert can be checked or unchecked.

For example, if you don’t want to hear alerts when people enter or leave a room, you can uncheck those alerts. If you are hosting a meeting you may wish to have all the alerts enabled so you’ll know when people raise their hands or enter your waiting room.

But suppose you missed an alert you did want to hear. A new JAWS feature reads the last alert, no matter what program generated it. Hold Insert and press space, release Insert and press the letter “N”. Think of “N” for notifications.

### Layers

This JAWS feature that begins with Insert-Space is called a layered keystroke. JAWS has gotten so complex that it ran out of hotkeys it could safely use, so pressing Insert-Space toggles on the JAWS layer which means the next keystroke issues a JAWS command. This feature is confusing for beginners but expect more layered keystrokes to be added in the future to accommodate user demand.

## Hotkeys

Another Zoom setting that can be very useful is its keyboard shortcuts. Each can be changed, but sticking with the defaults is best if you are expecting help from others. More experienced Windows users know the default for Mute is ALT-A and ALT-Y toggles raised hands. (On the Mac, it is more confusing: Mute/unmute is command shift A and Raise-Lower hand is Option-Y.)

You can also check a box to enable a key to be a global hotkey which means you can use it when you focus away from the Zoom window. For example, if you make the unmute/mute hotkey global, you can activate it while viewing a PowerPoint or your in-class assignment in Word. Another reason to change a hotkey from the defaults is if it is hard to press – for example, while recovering from hand surgery, I changed my mute key to F1 which I could press with one finger.

## Etiquette

There is nothing more annoying in a meeting when you can hear people breathing in to their microphones or you hear feedback. Echo cancellation, the ability for Zoom to work over a speaker but not rebroadcast that output is only truly available on the Mac or PC. If you use a telephone or smartphone app, the echo cancellation is minimal at best. So if you are not muted, all the noise in your environment, plus the conversation in the meeting, are broadcast and will interfere with everyone’s listening. Please be sure you know how to keep yourself on mute so you will be a polite attendee.

Another way to insure you are welcome is to raise your hand when you wish to speak and wait to be called on. In some meetings, people are encouraged to just talk when they have something to say, but this typically happens only with a small group. In any medium or large meeting, a host is usually assigned to watch for and call on raised hands.

The default keystroke on the PC is ALT-Y, and to raise your hand on the mac, press Option with the letter “Y”. On your smartphone you will need to locate the More button and under a menu which appears after More is pressed, you can locate a Raise Hand button. On your telephone, you’ll need to press Star 9 on your touchtone keypad.

## Scripts

Screen readers also have scripts or add-ons which can improve the experience in Zoom. Though Zoom is perfectly accessible, these scripts make it more efficient for a screen reader user, especially when one depends on Zoom on a daily basis. Scripts included with JAWS have the following hotkeys:

To enable or disable alerts, press ALT+Windows+S.

To hear the most recent alert, press ALT+Windows+A.

To be reminded of whether alert announcements are enabled or disabled, press Insert+Tab.

To review the last 10 alerts or messages, press Control+1 through to Control+0. Press twice quickly to virtualize.

To only allow chat messages when pressing Control+1 through to Control+0 press control+F5.

To hear who is currently talking, press CTRL-SHFT-T.

None of these keystrokes are global; that is they do not work when you are not focused on Zoom or a meeting window. JAWS also announces various states, such as when a recording or screen share is started or stopped. It also automatically voices when the state of the mute key is toggled.

Professional JAWS scripts are available for purchase from Hartgen Consultancy in the U.K. priced around $50 depending on the current value of the British pound. They give much more control over what is and is-not voiced and also what gets displayed in Braille. They also make it easier to read or copy and paste from the chat window and in general fly around the Zoom interface faster. I can personally vouch for their effectiveness; for me using Zoom for hours at a time, they were worth every penny I spent.

For NVDA, a new add-on has similar functionality, giving fine-grained control over the reading of alerts, notifications and messages. Add-ons are manually downloaded and “added on” if the user wishes to have them incorporated in to NVDA.

Once you have enabled the add-on, holding the NVDA key, which is either Insert or Caps Lock, plus the Shift key and the letter “A” toggles between four states. They are: No Alerts, All Alerts, and Beep for Alerts and Custom Alerts. Beeping for Alerts is useful if you want to know about them but do not want them interrupting you.

There are thirteen other keystrokes for reading alerts separately, which is really only useful if you regularly host meetings and need specific information. In NVDA’s settings you can set up custom alerts and you can also get to these settings for adjusting alerts by holding the NVDA key and pressing the letter “Z”.

## Configuring Zoom

This handout has already mentioned Zoom’s settings for configuring screen reader alerts. Zoom actually has two places where you can adjust settings. There is the settings button which is under the Home tab, and that configures the desktop version of Zoom. It is a multi-tabbed dialog box and if you want Zoom to work a certain way it is worth exploring. There is no OK or cancel button; if you change a setting, it stays changed. Pressing Escape or moving focus to another window automatically makes the settings dialog disappear. You can also find a settings tab on your Smartphone’s Zoom app.

There are also global settings – global that is to your account if you have set up one. You can use Zoom without an account, but if you do set up either a paid or free account, you will have access to settings in the web – what they call the Zoom Portal.

To get to the Zoom portal, under the Settings general tab in Zoom, select the last item “More Settings”. Your browser will open and you’ll be asked to sign in.

That is where you can set up things like recording, authentication, notifications, and calendar integration. These global settings also apply when you join with your Smartphone app. If you never plan to host meetings, or attend them for a job, you likely don’t need the complication of an account. But without an account, you’ll only have local settings which apply only to the app on your computer or your phone.

## Getting It On Your Schedule

A problem all Zoom users have is getting a meeting on their calendar. When you are informed about an upcoming meeting, it is usually via email. The email contains three pieces of information: a link, a user ID and a password. Often, there are also call-in numbers and sometimes a one-tap number.

Each meeting has a user ID and most organizations who host meetings also require passwords. The telephone numbers and the one-tap mobile allow you to phone in, but no video will be associated with the call and due to it going over phone lines, the audio quality is always poorer.

Depending on how skilled a meeting organizer is with Zoom, your email invite may have a link labeled “Add to Calendar”. This supports Google, Outlook, Yahoo and many other calendar applications. If you’re not sure, select Outlook or Other, and a file with an ICS extension will be downloaded to your computer.

It can be opened with your default calendar application and saved as an appointment. If you select it on your phone, most smartphone calendars will automatically recognize the appointment and add it, letting you modify fields in that appointment if you wish.

If your meeting organizer does not include a link to add to your calendar, they will at least have a link to your meeting.

You can save all these individual emails, and when meeting time rolls around you can fire up the Zoom app on your smartphone or computer and type in the user ID and password. You can skip using Zoom and simply put the meetings on your calendar and phone in with the number and password or you can save the emails, put the meeting on your calendar and return to the email to choose the meeting link. In many cases, the password will be embedded in the meeting link so you won’t be prompted for it.

But there is an easier way. If you manage your calendar with your phone, through Google, Yahoo or Outlook, you can put that meeting link into the location field and therefore activate it automatically from the

appointment.

For full calendar and contacts integration, you will need to set that up in your Zoom settings. Under the local settings, a new checkbox “Enable Outlook Integration” was recently added. More robust integration is part of the global settings under the Zoom portal.

But even if you do not fully integrate Zoom with your calendar, you can still choose a Zoom link from an appointment and have the meeting appear without you needing to save every email invite.

Zoom has a plug-in for Outlook that makes this even easier; if you schedule a meeting in Outlook and the plug-in locates the Zoom link in the location field, or if you schedule from Zoom and choose Outlook, it will automatically become an appointment on your calendar with a clickable link to join.

But more often, you attend meetings and this is where thinking ahead can save you hassles. When you get a meeting invitation, create an appointment on your calendar and in the body of the appointment, copy the meeting information. Then select the Zoom link, move up to the location field and paste it there. Press enter to make sure your calendar knows it is a link. If you have enabled the integration, Zoom will then automatically add it to its own list of meetings. But even if you do not do that, it will show up on your calendar, so you can simply pull up the appointment to select the link to join.

## Useful Links

Zoom's support topic on working with screen reader alerts:

[https://support.Zoom.us/hc/en-us/articles/360048870451-Using-screen-reader-alerts](https://support.zoom.us/hc/en-us/articles/360048870451-Using-screen-reader-alerts)

Zoom’s support topic on Hotkeys and Keyboard Shortcuts

 [https://support.Zoom.us/hc/en-us/articles/205683899-Hot-keys-and-keyboard-shortcuts](https://support.zoom.us/hc/en-us/articles/205683899-Hot-keys-and-keyboard-shortcuts)

Zoom’s support topic for integrating your calendar and contacts with Zoom:

 <https://support.zoom.us/hc/en-us/articles/360000488243-Setting-up-calendar-and-contacts-integration-for-the-desktop-client>

Changing Your Video Layout (particularly helpful for low-vision folk who find the screen is too busy)

 <https://support.zoom.us/hc/en-us/articles/201362323-Changing-the-video-layout-Active-Speaker-View-and-Gallery-View-#:~:text=To%20switch%20from%20Active%20Speaker,will%20switch%20into%20gallery%20view>.

Brian Hartgen’s Free Zoom scripts for older versions of JAWS

 [https://hartgen.org/Zoom](https://hartgen.org/zoom)

Brian Hartgen’s Professional JAWS Zoom Scripts for purchase

 [http://www.hartgen.org/Zoompro](http://www.hartgen.org/zoompro)

Official Freedom Scientific training on Zoom:

<https://www.freedomscientific.com/training/freewebinars/archivedwebinars/>

and

[https://www.freedomscientific.com/webinars/hosting-a-Zoom-meeting-with-jaws/](https://www.freedomscientific.com/webinars/hosting-a-zoom-meeting-with-jaws/)

Documentation and Download for NVDA Addon “Zoom Accessibility Enhancements”:

 [https://addons.nvda-project.org/addons/ZoomEnhancements.en.html](https://addons.nvda-project.org/addons/zoomEnhancements.en.html)

University Of Michigan Guide to Zoom accessibility with helpful tips for JAWS users:

 [https://accessibility.umich.edu/Zoom](https://accessibility.umich.edu/zoom)

Jonathon Mosen's book on learning Zoom formerly$35 now free:

 [https://mosen.org/Zoom/](https://mosen.org/zoom/)

Mystic Access demo on Zoom:

 [https://www.mysticaccess.com/free-downloads/download-info/demo-of-the-Zoom-conferencing-platform/](https://www.mysticaccess.com/free-downloads/download-info/demo-of-the-zoom-conferencing-platform/)

Perkins Free webinars on Zoom:

[http://www.perkinselearning.org/technology/blog/Zoom-101-basic-steps-using-Zoom](http://www.perkinselearning.org/technology/blog/zoom-101-basic-steps-using-zoom) Getting Started With Zoom Meetings: A Guide for JAWS, NVDA, and iPhone VoiceOver Users

 <https://carroll.org/product/getting-started-with-zoom-meetings/>

AccessibleWorld’s Intro Voicechat conference on Zoom

 [http://www.accessibleworld.org/content/tek-talk-meeting-Zoom-platform-users-featuring-mystic-access](http://www.accessibleworld.org/content/tek-talk-meeting-zoom-platform-users-featuring-mystic-access)

Zoom on Zoom: American Council of the Blind’s informal Community Training for Absolute Beginners (podcast episodes)

<https://acb-community.pinecast.co/episode/d8a751157bbd432a/Zoom-on-Zoom-september-14-2020>

and

 [https://acb-community.pinecast.co/episode/34098d8d0f534f08/so-you-want-to-host-a-Zoom-call-september-12-2020](https://acb-community.pinecast.co/episode/34098d8d0f534f08/so-you-want-to-host-a-zoom-call-september-12-2020)

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