

# Cisco IP Communicator and Plantronics Software

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In this document we will look at the way in which a Plantronics headset controlled by Plantronics Software interacts with Cisco IP Communicator (CIPC).

## Audio Modes

CIPC defines three audio modes that describe the source and destination of the incoming and outgoing audio streams.

### *Speakerphone Mode*

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Speakerphone mode is the default mode used by CIPC. In other words, if you place or answer a call using the controls on the CIPC UI then the speakerphone device (usually the PC speakers and microphone) will be used for incoming and outgoing audio. Speakerphone mode activated when you click on the speaker icon in the CIPC UI or if you enter a phone number in the CIPC US and hit enter.

Speakerphone mode assumes that both the microphone and the speakers will be placed nearby so CIPC engages echo suppression in speakerphone mode. This prevents audio feedback.

See the “Using Your Computer as a Speakerphone” section of the Cisco IP Communicator Online Help document for more details.

### *Headset Mode*

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In this mode CIPC directs audio to a “dumb” headset attached to your computer’s sound card. Headsets plugged into the soundcard have no hook switch control. Headset mode is activated when you click on the headset icon in the CIPC UI.

Note that the only real difference between Headset mode and Speakerphone mode is the use of echo suppression in the latter.

See the “Using a Headset” section of the Cisco IP Communicator Online Help document for more details.

### *Handset Mode*

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This mode is used by CIPC when a device with speakers, a microphone and a hook switch button is attached to your computer and registered with CIPC when you run the Audio Tuning Wizard.

See the “Using a USB Handset” section of the Cisco IP Communicator Online Help document for more details.

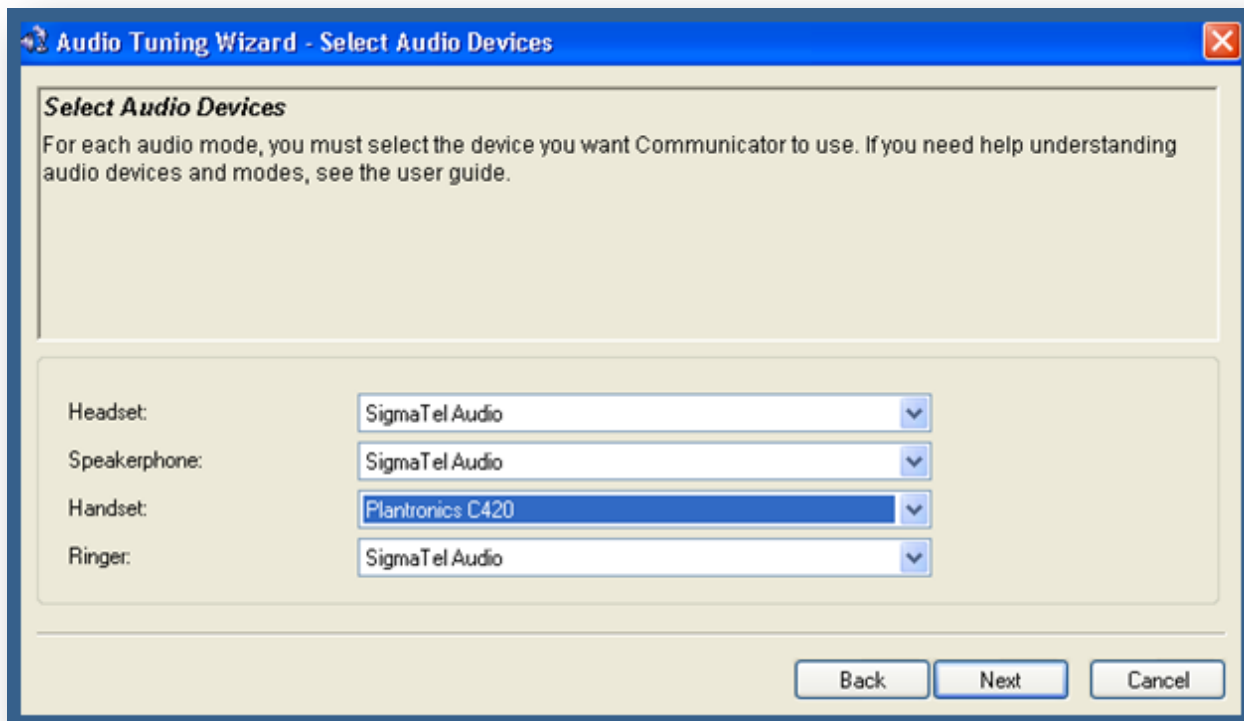
This mode is assigned to the device that you want to use to alert you when you have an incoming call. CIPC will send ring tone audio to this device.

See the “Selecting an Audio Mode” section of the Cisco IP Communicator Online Help document for more details.

## Audio Mode Management

### Assigning Audio Devices



Assigning physical devices attached to your computer to the CIPC audio modes is a required step before you can begin to use CIPC. Mode assignment happens via the Audio Tuning Wizard. This process must be performed each time a new device is added.



In this case, we have mapped the headset, speakerphone and ringer modes to the computer’s built-in sound card. The handset mode has been mapped to the Plantronics C420 headset.

## Switching Between Modes

### Answering an incoming call

1. Activate headset mode by clicking the  button on the CIPC UI. This will answer the call and direct audio to the headset device (i.e. to the computer's sound card without using echo cancellation). The headset button will light up.
2. Activate speakerphone mode by clicking the  button on the CIPC UI. This will answer the call and direct audio to the speakerphone device (i.e. to the computer's sound card with echo cancellation active). The speakerphone button will light up.
3. Go off hook with the handset (Plantronics headset) by pressing the talk or hook switch button on the device. This will answer the call and direct audio to the Plantronics headset. Note that when the handset is active neither the headset button nor the speakerphone button will be lit.

If at any time you wish to transfer the audio from the current device to a different one you can do so by clicking the appropriate button. Once a device has active audio, a subsequent button press on the same device button will end the active call.

It is important to note that assigning a device to a particular mode will not make that device behave differently. For example, if I assign the Savi Office device to be the headset and not the handset then clicking the headset button in the CIPC UI will answer the call and direct audio to the device but the RF link will not come up and you will not be able to end the call with the talk button. This is because CIPC does not expect a headset device to go on or off hook.

### Placing an outgoing call

It is important to note that by default CIPC uses speakerphone mode (you can read more about it in the "Using Your Computer as a Speakerphone" section of Online Help). This means that if you enter a number by clicking on the keypad and then click the Dial button or press enter on the keyboard, audio will be routed to the speakerphone. Once the call is underway you can transfer the audio to any of the assigned devices as you could with an incoming call.

## Summary


It is important to understand the way Cisco IP Communicator routes the call audio to various devices depending on the way those devices are mapped. Making the appropriate device assignments in the Audio Tuning Wizard and user training is key to making CIPC work well.

# Plantronics Recommended CIPC Setup and Training

## Audio Tuning Wizard

Set Plantronics device to CIPC Handset mode and set computer sound card to all other CIPC audio modes.

## Training Tips

1. Instruct the user to never use the headset button in the CIPC UI.  The headset button in the UI does NOT direct the audio to the USB headset but rather directs the audio to the device defined in the CIPC Headset Mode (the computer sound card when using the recommended settings above).
2. Instruct the user to utilize the Answer button in the CIPC UI or the call control button on the headset to answer calls. Do not attempt to answer using the headset button in the UI. This will lead to confusing system behavior.
3. Instruct the user to utilize the End Call button in the CIPC UI or the call control button on the headset to terminate the active call.
4. To place outgoing calls, user should type in the number they wish to call, press enter and then press the call control button on the headset to direct audio to the headset. CIPC is designed to default to the speakerphone so pressing the call control button on the headset is a required step to redirect the audio.

If the user does not press the call control button on the headset in this scenario, the audio will be sent, by default, to whatever device is mapped to the speakerphone in the Audio Tuning Wizard. If the headset is mapped to the speakerphone, the audio will go to the headset. However, the headset call control button must be pressed twice in this case to end the call; the first call control press “reroutes” audio to the CIPC Handset device. The second call control press ends the active call from the CIPC Handset device.

The user can see that the audio is going to the speakerphone by looking at the CIPC UI. The speakerphone button will be highlighted. While the audio is being directed to the speakerphone the Mute synchronization between the CIPC UI and the Plantronics headset will not work. The mute synch will only work when the audio is directed to the handset (which is the Plantronics headset).

## Known Issues

Cisco IP Communicator can provide remote call control with Plantronics headsets with or without Plantronics Spokes software installed. However, when Plantronics Spokes software is not installed, if you wish to listen to some PC audio (e.g., music) and press the talk control button on the headset, the required radio link between the headset and its USB adaptor does not get established as it should. The temporary workaround for this issue is to install Plantronics Spokes software from [www.plantronics.com/software](http://www.plantronics.com/software). The issue will be resolved in the next version of Cisco IP Communicator so that this use case works properly even if Plantronics Spokes software is not installed.