



Speakerphone Applications Guide

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Scope

This note is offered to provide background information and guidance for when to best apply the unique speakerphone capabilities of the:

- 2410 integrated speakerphone
- 2420 integrated speakerphones

The context within which the above choices can be applied considers that the current user desktops may be equipped with an adjunct speakerphone module. These modules provide similar functionality and potentially better speakerphone quality, but under some use case scenarios the integrated speakerphone capabilities of either the 2410 or 2420 may be a more cost effective alternative.

Optimal Environment for Speakerphone Use

Although each set of office and work station conditions can not be totally optimized for the sole purpose of speakerphone operation, each desktop will experience improved operation if the following environmental conditions can be recognized:

- Try to keep objects away from close proximity to the lower right side of the telephone. This is the area where the microphone resides which picks up your voice. Objects placed in close proximity to the microphone will result in reduced speakerphone performance. Objects placed too near your microphone at your telephone may cause the far end user to experience an echo when speaking.
- Place the telephone at least a foot from any wall.
- Avoid placing the telephone in a partly enclosed area, such as underneath a bookcase.
- Speakerphones should be used in relatively quiet environments. For example, optimum performance should be expected in a single person office with walls and a closed door. In environments where background noise is relatively loud (for example, machinery such as copiers and printers or motor noises such as air conditioning ducts, etc.) the speakerphone can not be expected to operate properly. In general, position the telephone as far a possible from interfering noise sources such as a personal computer, fan or air conditioner. As a general rule, your speaking position should be closer to the speakerphone than any potential interfering noise source.
- You should position yourself about arm's length from the telephone and converse in a natural tone for optimum performance.
- Your speakerphone performs better when the volume is set more to the middle and lower ranges. Set to this level of operation, you can more easily break into the conversation (talk over the received voice signal) than when your speakerphone volume is set at maximum.
- In large teleconferencing environments (i.e., conference rooms), it is best to use an audio-conferencing speakerphone which is designed specifically for that application.

Use Case Scenarios

The 2410 model includes an integrated speakerphone capability that has an omnidirectional microphone. As such, the microphone will pick up speakers whether in front or otherwise situated around the terminal. Thus, if placed on the desk top with a few parties around the phone within the typical arm's length distance, all of their voices will be picked up. However, when considering the surrounding environment and placement of this model, take into consideration that this microphone will also pick up interference from all surrounding sources noise. The 2410 model is aimed at providing desktop speakerphone capability for an office worker with a low noise, open desktop area, and can offer informal small group (2-4 people) calls when the terminal can be placed in the middle of the group, for example on the center of the desk with members sitting around it.

The 2420 model includes an integrated speakerphone capability that has a directional microphone. This translates to less sensitivity to noise interference from the desktop surrounding area, but also will not be as sensitive to voices from people not directly in front of the telephone. This model does have a switching algorithm that delivers a smoother transition between transmit and receive, and thus a higher quality feeling of full duplex operation. The 2420 model is designed for a single person that uses the speaker a good deal. Unlike the 2410, it will not serve well as a small group speakerphone.