



InterTalk DCS Speakers



PUBLIC SAFETY GRADE SPEAKERS

InterTalk's speakers are specially designed to provide a nearly flat frequency response from 300 Hz to 3300 Hz while attenuating both higher and lower frequencies. This design improves the intelligibility of speech, especially when compared to the standard computer speakers that some other console suppliers use which are made to play high fidelity music over a much wider frequency spectrum. Each speaker has two (2) forward facing, illuminated multi-color indicators. One shows that the speaker is properly connected and is working correctly. The other indicates when there is audio present at that speaker. Each speaker has a weighted bottom and rubber feet to keep it in place on the desktop. Optional physical interconnecting hardware is available should you wish to combine speakers together into a single unit like the "speaker bar" used by some console suppliers.

PARALLEL SYSTEM WIDE VOLUME CONTROL

Each speaker has a small micro-controller fitted inside that reads and reports the setting of the rotary switch used to control the speaker level. This allows the speaker control to act in parallel with other level controls such as the on-screen volume slider. This means that all level adjustments are done in one, optimized place rather than in several locations peppered across the audio chain. This design ensures high audio intelligibility and allows the Automatic Gain Control (AGC) circuitry to work more effectively.

EXTERNAL CLASS-D AUDIO AMPLIFIER

One important feature of InterTalk speakers is that they do not contain internal amplifiers. Instead, a four (4) port, high efficiency Class-D audio amplifier located inside the Audio Exchange (AUDx) console position hardware drives up to four (4) speakers. The Class-D amplifier is very efficient so very little heat is produced inside the AUDx. This means that we do not need forced air fans or special thermal considerations for the AUDx (the AUDx is cooled through convection). Having the amplifier in the AUDx means that our speakers do not need to be powered from an external supply. The power for the speaker's micro-controller is provided by the AUDx. This results in a compact speaker package with minimal wiring to get in the way.



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CONNECT WITH CONFIDENCE

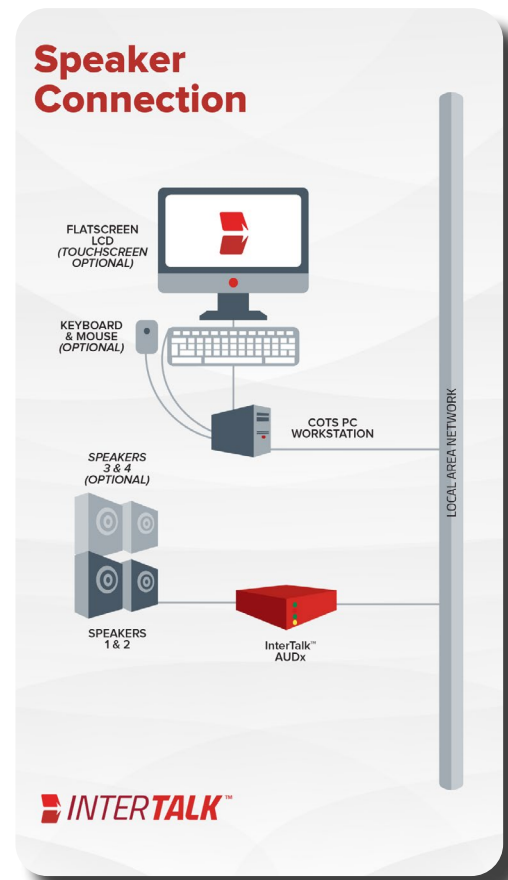
InterTalk speakers use standard RJ-45 style connectors. This type of connector is ubiquitously available, easy to install and well understood by technicians worldwide. The speakers utilize a locking tab to prevent accidental removal and are rugged enough for all normal use. It also has the added feature that when a powerful force is applied to the cable, the plug-in connector is designed to break away rather than damage the entire speaker.

LOW BANDWIDTH REQUIREMENT

The amount of bandwidth required for each console position is a function of the number of speakers present at the position. Each speaker is fed via a 100 kbps stream that flows from the currently “in charge” ILS. For example, a four-speaker console position will require 400 kbps bandwidth downstream from the ILS. Each console position has only one active audio source – either the desk microphone or the headset mic – so only 100 kbps upstream towards the ILS is required.

SELECT AND UNSELECT VOLUME CONTROL

Select and Unselect channels have their own volume controls, and most of the InterTalk DCS’ on-screen resources contain their own volume control. For common system resources (such as radio “Common Resource Blocks” [CRBs], also sometimes referred to as “Modules” or “Resources”) this volume control permits a user to adjust the level of that resource as heard at their console position; this is particularly useful if there are multiple resources mixed in one speaker. The console operator can adjust the mix of the various resources to suit their needs, while not affecting the levels heard at another console position. All volume controls use a logarithmic audio taper algorithm to ensure that changes reflect the natural perception of audio power as heard.



SPECIFICATIONS

Physical dimensions	5h x 3.14w x 3.85d In
Weight	0.8 kg
Frequency Response	300Hz - 3,300Hz
Maximum Output Power	5W (per speaker)
Power Source	AUDx