



## Blog: Drop the Mic!

### Some More Elaboration on Collaboration: **Products**

This month, we explore some of the products that meet the communication needs of today's businesses. This was originally part of an interview that our own Simon LeDuc did with Commercial Integrator and has been repurposed to share with you in this month's blog.

[How are products like the C002E-RF and the C009E-RF omni directional microphones helping modern office spaces meet their communication needs?](#)

The C002E-RF and C009E-RF are great solutions for the huddle rooms and small meeting tables, especially when used in combination with a third-party phantom powered XLR to USB preamp adaptor to connect to a soft codec. Because it's an omni-directional microphone, when you use it in a small huddle room or collaborative room, it is more than enough to cover a 4 feet wide table. It's a simple tabletop solution that can be easily installed without leaving a mark on the table. These are two solutions out of many that Clockaudio offers for today and tomorrow's conference room, whether big or small.

[Are there ways to explain to customers the value of a quality collaboration system without getting too technical? How can you get people to start thinking about collaboration systems as a good idea, and not only just to save money over traveling from office to office?](#)

Sure, you can ask questions such as:

Have you noticed how much longer you can focus on a meeting when it's quiet around you?

Can you recall a conference call, where you had a hard time understanding the person on the other end of the line?

After the call, did you realize that most of your brainpower during the call was used trying to understand the person's message because the sound quality was not good?

Like an audio engineer doing forensic work on a Police TV show, your brain needs to filter out the noise and reconstruct the conversation using pattern recognition, all while maintaining a constructive dialog with the participants in the meeting you are in.

A noisy line, noisy HVAC, reverberant room or bad microphone can interfere with a person's message. This is called hearing fatigue, and this is where intelligibility (or lack thereof) can play an important role between having a successful meeting and having a frustrating one.

Now by changing the HVAC to a more silent unit, by tweaking the acoustics of the room, by changing to a better conference system or by upgrading to a better microphone you can greatly improve the sound quality in your room and provide better intelligibility for participants. This is where a good conferencing setup can make all the difference in the world, and this all starts with choosing the right microphone for the job.

[Are there certain rules of thumb that integrators can follow when choosing boundary microphones, suspended microphones and tabletop microphones to best meet the communication needs of businesses?](#)

First: There are no "bad types" of microphones; every microphone has a specialty it is good at.

For Cardioid boundary microphones (C004E-RF, C012E-RF, CS1S-RF, C008E-RF, CRM102-RF, ARM102-RF, etc.) the "sweet spot" is:

- single person per microphone = 18 inch from the edge of the table
- 2 participants per microphone = 24 inch from the edge of the table
- 2 participants max per microphone capsule:

*Note: If you go with 3 or more people per cardioid capsule, the person in front of the microphone will be much louder than everybody else, creating issues with your gain structure.*

For Omni directional boundary microphones = Put on a table not larger than 4 feet (depending on the acoustics of the room).

- You can cover 3 participants per side of a table (not larger than 4 feet) per microphone.
- Never mix cardioid and omni microphones as their differences in polar pattern will create audio issues when mixed together.
- Remember, omni microphones will capture more room noise than cardioid so keep your microphones close to your participants.

For our triple element suspended C303-RF & C303D-P microphones

- -at 7.5ft from the ground, you can cover a 15ft circle or 10ft square (I find it easier to look at it as a 10ft square when overlapping many C303 in a room).

Are digital technologies, including formats like Dante making the specification and installation of collaboration systems easier?

Of course! It helps cut down on installation and project costs. We calculate a savings of around 35% by leveraging Dante in your video conferencing project.

It also makes it much easier to transport audio and logic over long distances using our CDT100 Dante transporter box.

Our CDT100 Dante Transporter can even let you customize the RGB LED of your Clockaudio touch buttons with up to 16 million color combinations. Even if the norm is red and green for mute & unmuted, using red and blue instead would make your installation "ADA accessible" for people with color blindness. The LEDs, buttons and motorized control can all travel through network with the Dante audio using a single Cat5 cable! This is how easy it has become.

How does Clock Audio foresee the collaboration market evolving over the next few years?

I think we'll continue to see a big rise of the soft codecs (Zoom, Skype for business). Conference rooms and huddle rooms will be more and more BYOD (bring your own devices) spaces with Dante and USB.

"Wireless everything" is just around the corner.