



# Roger SoundField for Education:

Solutions for Dynamic Classrooms

A Sonova brand

**PHONAK**  
life is on

# Agenda

1. Meet your Phonak support team
2. Importance of classroom soundfield systems
3. Unique features of Phonak's Roger SoundField
4. Roger SoundField portfolio
5. Resources



Meet your Phonak  
support team

# Our pediatric field team



**Sarah Benner**  
Pediatric Territory  
Manager  
AK, N CA, ID, MT,  
OR, WA and WY  
x 9648



**Evan Claytor**  
Pediatric Territory  
Manager  
DE, NJ, NY, E PA  
x 9635



**Lisa Dyre**  
National Pediatric Clinical  
Trainer / Territory Manager  
AR, LA, MO, NM, OK  
and TX  
x 9632



**Stacy Michels**  
Pediatric Territory  
Manager  
IL, IA, KS, MN, NE,  
ND, SD, and WI  
x 5171



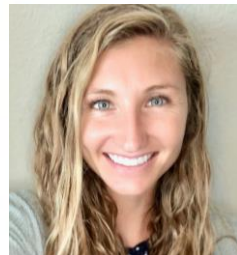
**Kathryn Pegan**  
Pediatric Territory  
Manager  
AL, FL, GA, MS, SC  
W. TN AND PR  
x 9778



**Patty Shappell**  
Pediatric Territory  
Manager  
AZ, CO, HI, NV, UT,  
S. CA and Guam  
x 5003



**Dana Ulakovic**  
Pediatric Territory  
Manager  
CT, ME, MD, MA,  
NH, NC, RI, VT,  
VA and DC  
x 9568



**Morgan White**  
Pediatric Territory  
Manager  
IN, KY, MI, OH, W. PA,  
E. TN and WV  
x 9524



**Cybill Johnson**  
Pediatric  
Inside Sales  
Manager  
x5293

## Director of Pediatric Sales



**Dawn Aerts**  
Director of  
Pediatric Sales  
x5275

First.Last@Phonak.com

# Phonak School Desk

## Customer Service



**Margie Locke**  
Specialty Customer  
Care Manager  
x 9558



**Lindsey Taylor**  
Specialty Supervisor  
Customer Care  
x 5212

## School Desk Customer Care Team



**Mike Jacobs**  
SR Customer Care  
Representative  
x 9608



**Starlita Abrams**  
Customer Care  
Representative  
x 5091



**David Amato**  
Customer Care  
Representative  
x 5183



**Sinetra Lee**  
Customer Care  
Representative  
x 9658



## Important Phone Numbers

**888-777-7316**

**School Desk**

option 1 Customer Service

**Audiology Tech Support**

option 2

**800-679-4871**

**Consumer questions**

on Bluetooth and Roger connectivity

# School Desk email contact information

Provides better order tracking

- schoolquotes@phonak.com – email exclusively for quote requests
- schoolorders@phonak.com – email exclusively for orders
- schoolhelpdesk@phonak.com – all other questions and needs



# Importance of classroom soundfield systems

# Classroom acoustic considerations

High ceilings



Hard walls

Windows

Hard floors



# Current challenges of classrooms

- Classroom acoustics are less than ideal
- Distance between the teacher and students
- Teachers experience increased vocal strain
- The effects of Covid
  - Social-distancing
  - Speech attenuation of up to 12dB
  - High frequency speech sounds are affected the most



# Classroom soundfield systems – Benefits for students



Quicker acquisition of reading, writing and numeracy skills

Easier deciphering of language in early learning years

Expanded seating options for students with attention deficit issues

Better understanding of teacher for non-native speakers

Increased student attention, interaction and participation

Improved sentence recognition ability

# Classroom soundfield systems – Benefits for teachers

Improved in-class mobility

Less stress

Aids class instruction and management

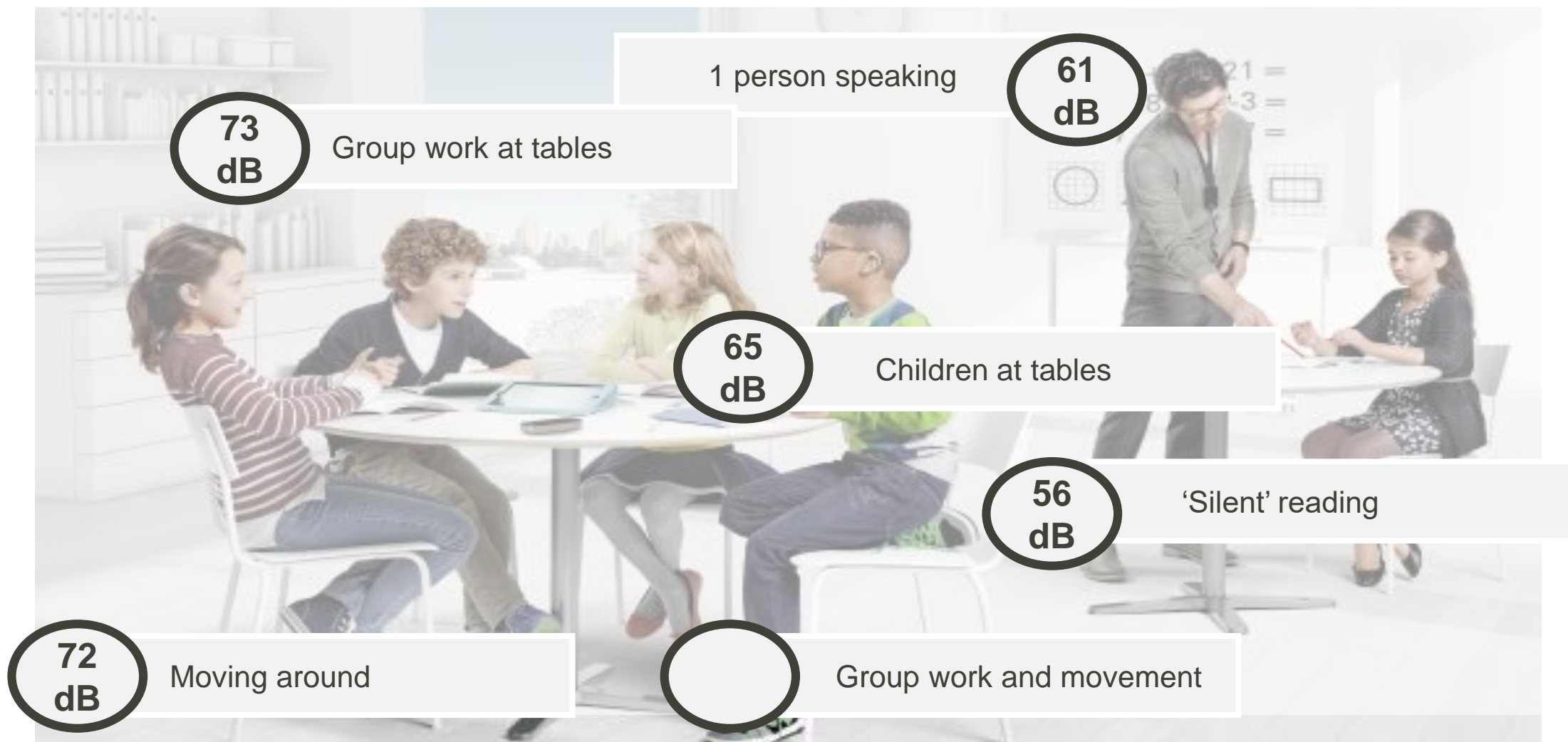
Fewer discipline problems through improved voice-control of students

Teacher absences due to vocal strain and voice fatigue decreased from 15% to 2-3 % in one year (MARRS, 2005)



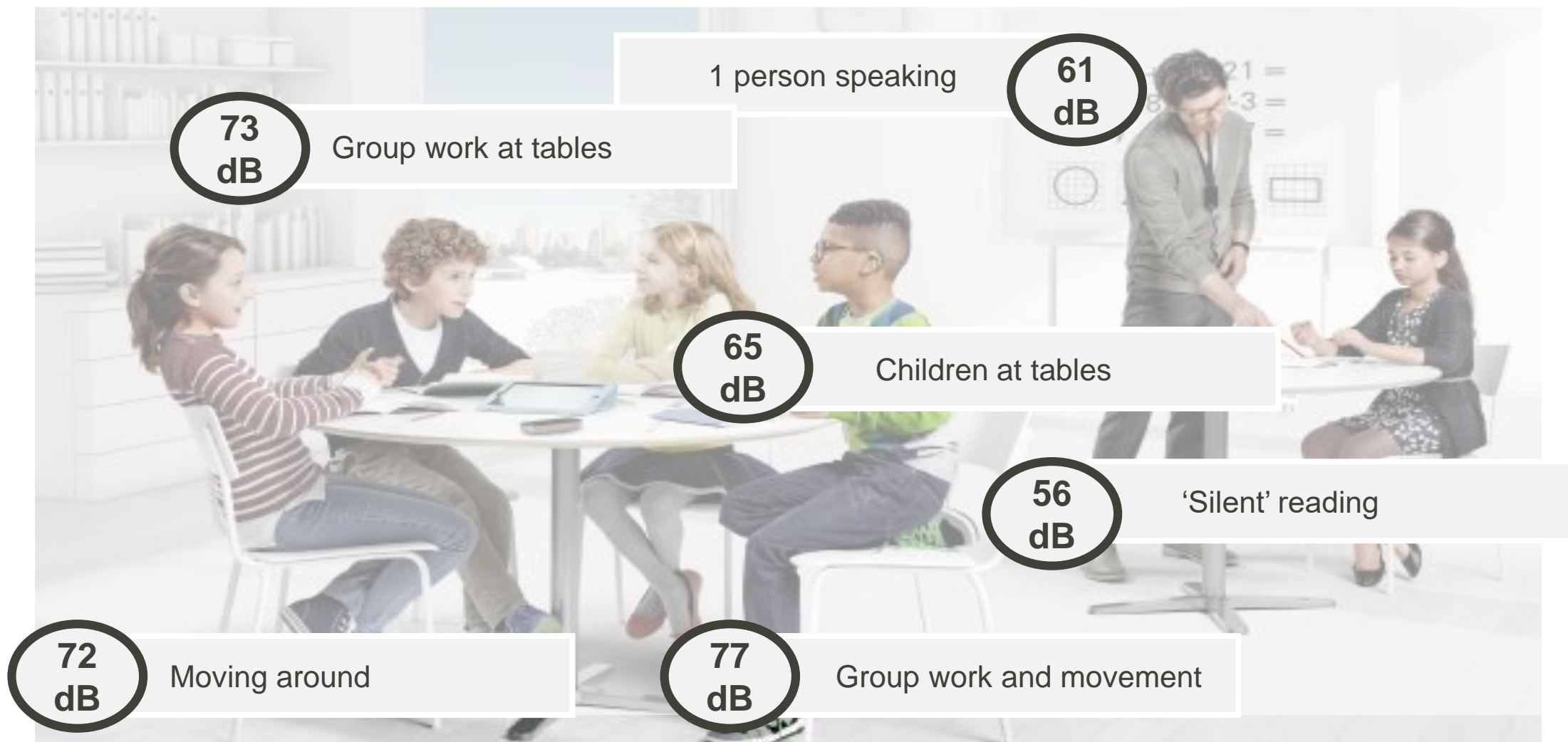
# Unique features of Roger SoundField

# Typical classroom noise levels



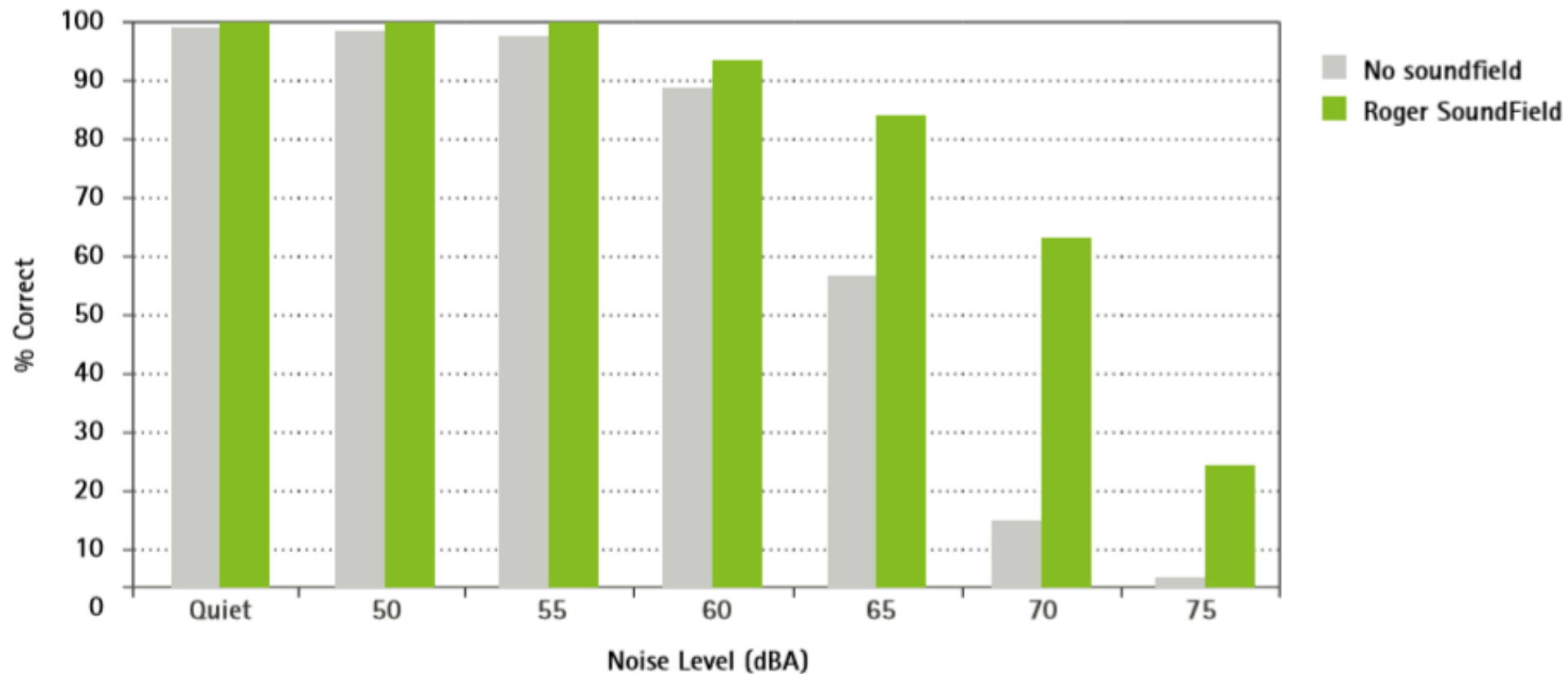
Results of internal noise surveys in 140 classrooms

# Typical classroom noise levels



Results of internal noise surveys in 140 classrooms

# A class of its own: Roger SoundField



Average speech recognition scores across noise conditions for normal hearing children with no soundfield compared to with Roger SoundField system.

# What makes Phonak's Roger Dynamic SoundField unique?

- Developed by scientists, engineers, and audiologists at Phonak to address problems that exist with other classroom soundfield systems
- Extensive loud speaker array containing no less than 12 individual, high-quality speakers
- Much less reverberation due to cylindrical sound waves emitted in the important speech frequencies
- Ensures positive signal to noise ratio through system analysis of the environment and automatic adjustments of projection signal volume
- Future-proof: Periodic, non-mandatory firmware updates available to improve functionality and compatibility





# Dynamic vs. Fixed-gain: Four key differences



Volume/Gain



Compatibility



Placement



Feedback

# Dynamic: What's the difference?

## GAIN/VOLUME



### Phonak Dynamic Soundfield

Dynamic approach to projected signal volume

### Fixed-gain soundfield (other manufacturers)

Volume is static and stays at one level unless changed manually

## COMPATIBILITY



Seamless integration with other Phonak Roger for Education technology used in classroom

Not compatible with other amplification systems & teacher may have to wear multiple microphones

## PLACEMENT & INSTALLATION



Placement in room is not permanent. Can be moved depending up how the space is being used *\*No professional installation required*

Some soundfield systems can be moved, while others are professionally mounted in the ceiling or high on the wall

## FEEDBACK



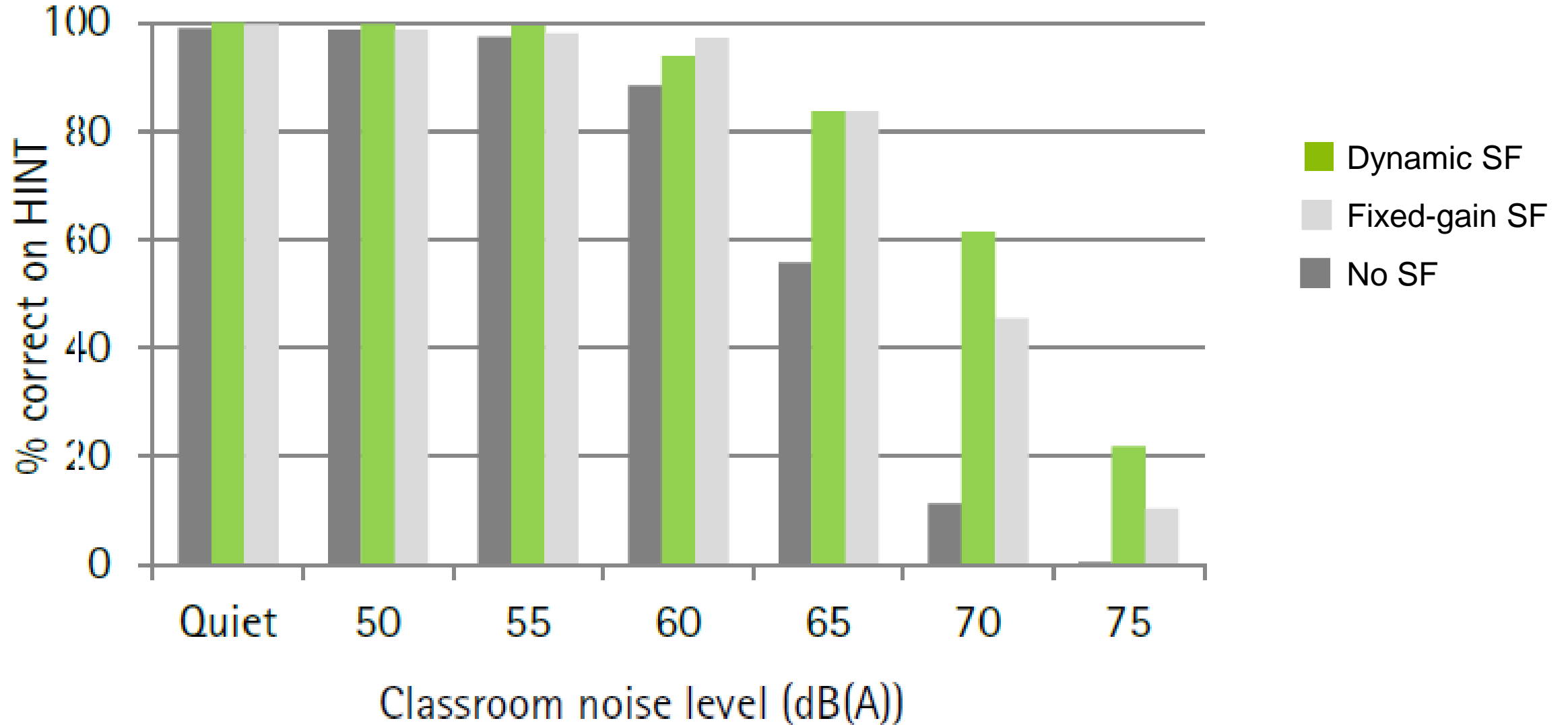
Sophisticated feedback management system that reduces microphone feedback.

Feedback likely to occur more often due to position in room (i.e. ceiling, mounted high on wall)

The cylindrical design and projection also helps reduce echo and interference

Loudspeaker can add to overall noise in the classroom, especially when multiple speakers are used in classroom

# Roger SoundField vs. fixed-gain soundfield



# Roger SoundField portfolio

# Roger offers a variety of solutions to support diverse teaching methodologies and needs

**Roger Touchscreen** provides versatility with lanyard mode for lectures and small group mode for group discussions and activities



**Roger Pass-around mic** ensures all students can be involved in the discussions, learn incidentally, and stay engaged



**Roger Multimedia Hub** gives easy access to audio-visual technologies used by the class or by an individual student.



**Roger Digimaster 5000 / 7000s** improve acoustic environments by providing soundfield amplification of speech sounds

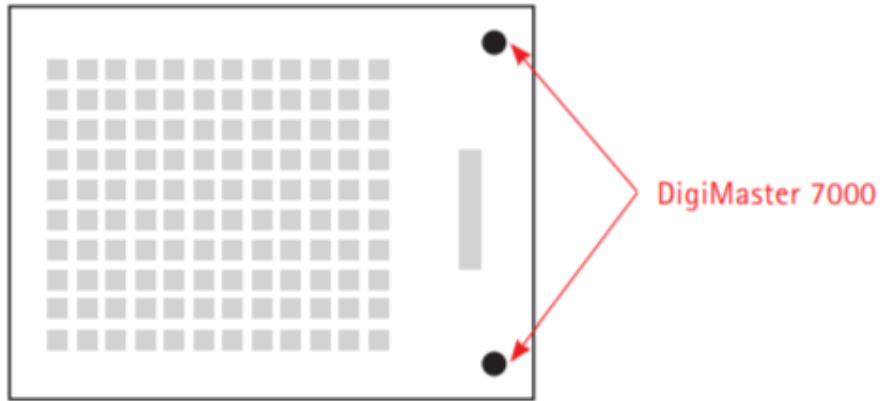
# Roger DigiMaster 5000

- Adaptive behavior to signal
- 12-loudspeaker array
- One DigiMaster 5000 per classroom
- For normal-sized classrooms:  
up to 1076 ft<sup>2</sup>
- Floor stand, tripod stand, or wall mounted
- Microphone choices:
  - Roger Touchscreen
  - Roger Touchscreen SoundField only

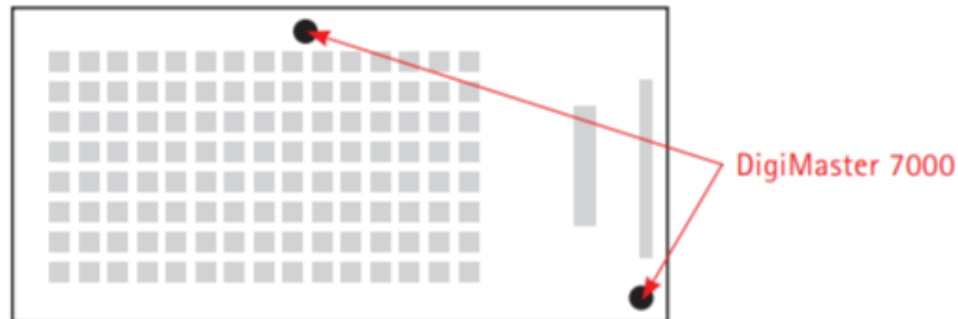


# Roger DigiMaster 7000

Option 1



Option 2



- Adaptive behavior to signal
- 15-loudspeaker array
- Can connect multiple DigiMaster7000s in one room
- For larger rooms up to 3230 ft<sup>2</sup>
- Floor stand or wall mounted; does not work with tripod stand
- Microphones:
  - Roger Touchscreen
  - Roger Touchscreen SoundField only

# Digimaster Stand Options



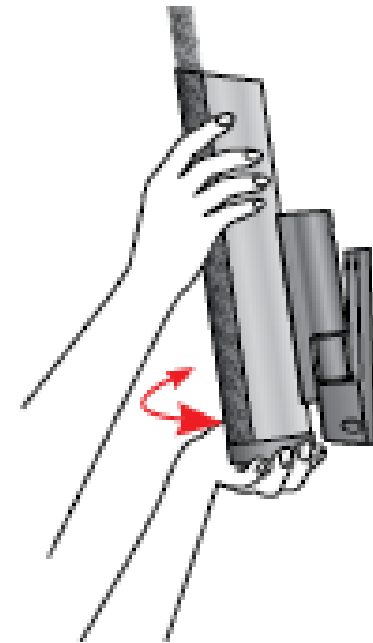
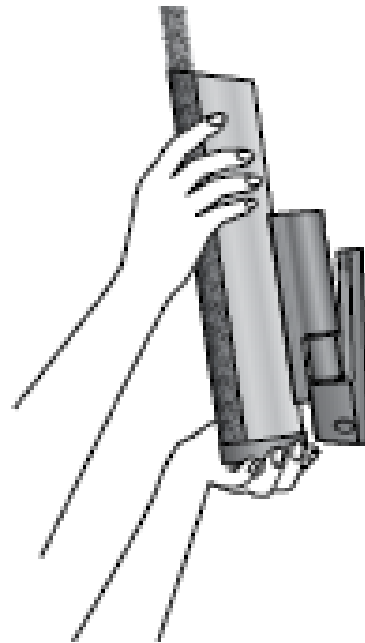
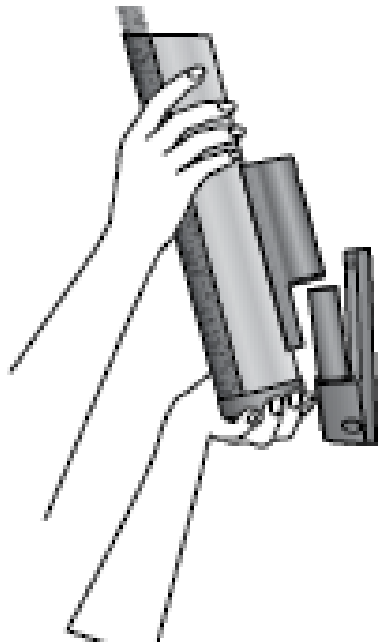
Digimaster 5000 stand  
(included with purchase)



Tripod stand  
(not included with purchase & not available  
for Digimaster 7000)



# Digimaster 5000 & 7000 wall mount



# Digimaster SoundField Installation Guide


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The following materials are included (if any are missing):

DigiMaster 5000/7000 package

**A**

**A** DigiMaster loudspeaker (1x)



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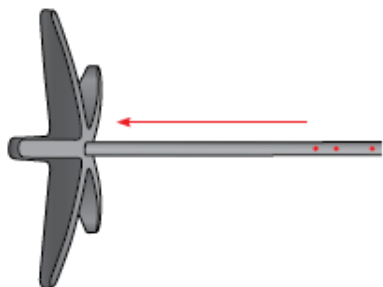
## Installation instructions


### Dynamic SoundField

#### 2. Installation

##### 2.1 Mounting the DigiMaster on its stand

- 1) Take the assembled stand plate, stand tube, black M8 screw and M8 washer.
- 2) Gently place the 'screw thread' end of the tube stand in the center of the plate (see picture below). The three holes are on the upper side of the stand. Fix the tube from the underside of the plate, using the screw M8, washer and hex wrench 6. Place the stand on the floor.
- 3) Take the DigiMaster and the tube connection. Hold the tube connection behind the DigiMaster, where the 4 holes are situated. The two finners of the tube connection should fit into the two
- 4) Push two black hex screws into the upper part of the stand tube. Screw the DigiMaster featuring the tube connection to the tube using hex wrench 5.
- 5) Attach the power cable to the power adapter. Plug the power cable into the mains and the 19 Volt jack into the socket on the bottom of the DigiMaster. Your DigiMaster is now ready to be paired with






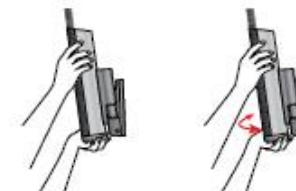
## Installation instructions

### Dynamic SoundField

... fixation on the DigiMaster by using the two black hex wrench 5.



... the DigiMaster [A] to the wall support and turn it over of the class.



**OPTION** Wall support (1x)

**OPTION** Array fixation (1x)

**OPTION**



# Roger Microphones

# Roger microphones for use with Phonak Roger Dynamic SoundField



Roger Touchscreen  
Roger Touchscreen SoundField Only



Roger Inspiro  
Roger Inspiro Soundfield Only  
(Discontinued: not available for purchase)

# Compatibility

	Roger DigiMaster 5000, 7000 & DigiMaster X	Roger Pass-around Mic	Roger Multimedia Hub	Roger Touchscreen SoundField Mic	Roger Touchscreen Mic	Roger receivers
Roger Touchscreen SoundField	✓	✓	✓	✓	✗	✗
Roger Touchscreen Mic	✓	✓	✓	✗	✓	✓

# Roger Touchscreen: Fully automatic microphone modes

## **Touchscreen mic** – All in one solution

- Automatic switching
  - Lanyard mode
  - Pointing mode (if enabled)
  - \*Small Group mode
- A system of three intelligent embedded microphones
- Accelerometer activation based on position and movement in automatic mode
- Manual modes available by tapping the Mic mode icon

## **Touchscreen Soundfield Only mic** – Soundfield solution


- Differs by color and accessibility
- Back of device is black to differentiate it from Touchscreen mic
- Cannot connect to Roger receivers
- Less icons on screen



# Roger Touchscreen Mic hardware



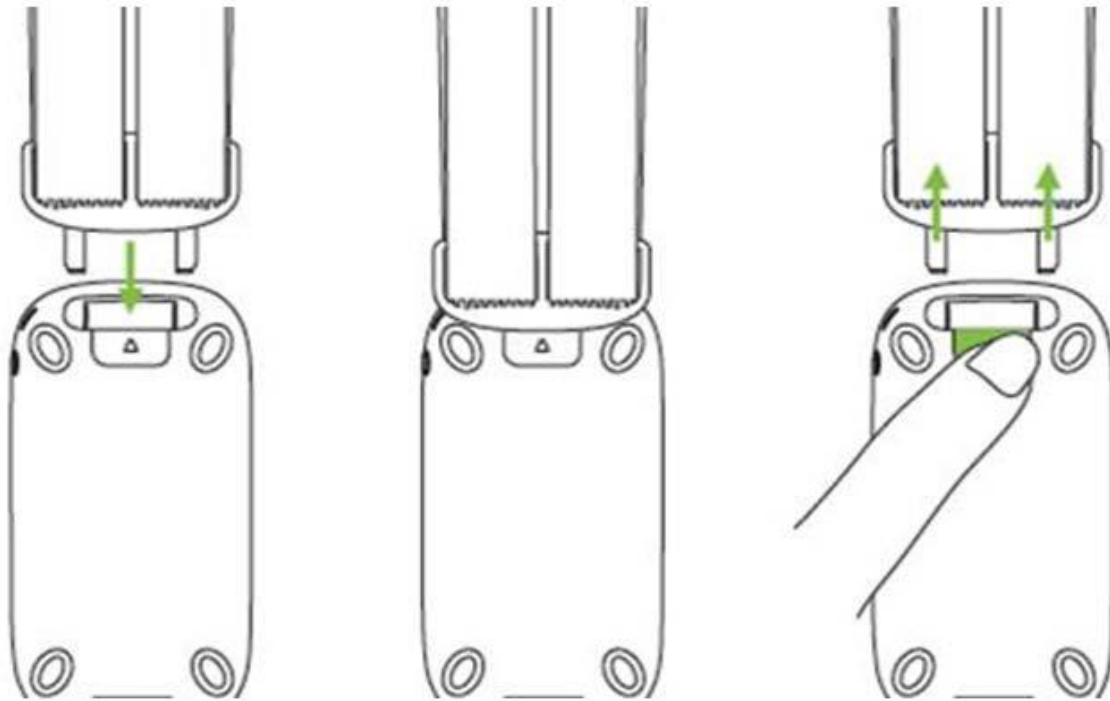
# How to connect Roger devices

1. Turn on Roger devices
2. Hold Roger Touchscreen mic within 4 inches of other device (Digimaster speaker, Pass-around mic, Multimedia Hub, receivers)
3. Tap “Connect” icon on Touchscreen mic 
4. Connection confirmation message will appear on the Touchscreen microphone if/when the device has been successfully connected





# Touchscreen Mic and lanyards



**Attaching and removing the lanyard:** Simply click the lanyard into slots on the back of the Touchscreen Mic. To remove: press the button on the back and pull down on the microphone at the same time.

Touchscreen Mic lanyard [055-3005]  
Roger inspiro lanyard [004-3179-001]

## Things to consider: Roger and masks



1. Roger use while wearing a face mask will provide the known benefits of Roger for hearing in noise and over distance
2. Sound quality may be perceived differently as a result of high-frequency attenuation
  - Type of mask worn
  - The position of the mask
  - The speaker's voice
3. Internal tests with Roger Touchscreen Mic
  - Lanyard/lapel mode is less impacted by the presence of a face mask than a boom microphone
  - Wear the boom mic outside of the mask an inch away from the mask to avoid noisy contact cues
4. Extra counseling may be in order to help patients cope with the loss of visual cues

# Additional Touchscreen mic wearing option

- **Belt Clip:** Use with optional boom mic
- **Picture Descriptions:** Back view of the Touchscreen Mic with the belt clip / belt clip alone / Touchscreen Mic plus belt clip and boom mic side view
- **Part numbers:**
  - Boom Mic 055-3009
  - Belt Clip 004-4031



# Roger Pass-around

# Roger Pass-around

- Great for group reading or question and answer time
- Provides access to peers' answers
- Encourages participation from students
- Light-weight and smaller than previous model
- Helpful indicator lights
- Safe and secure table stand



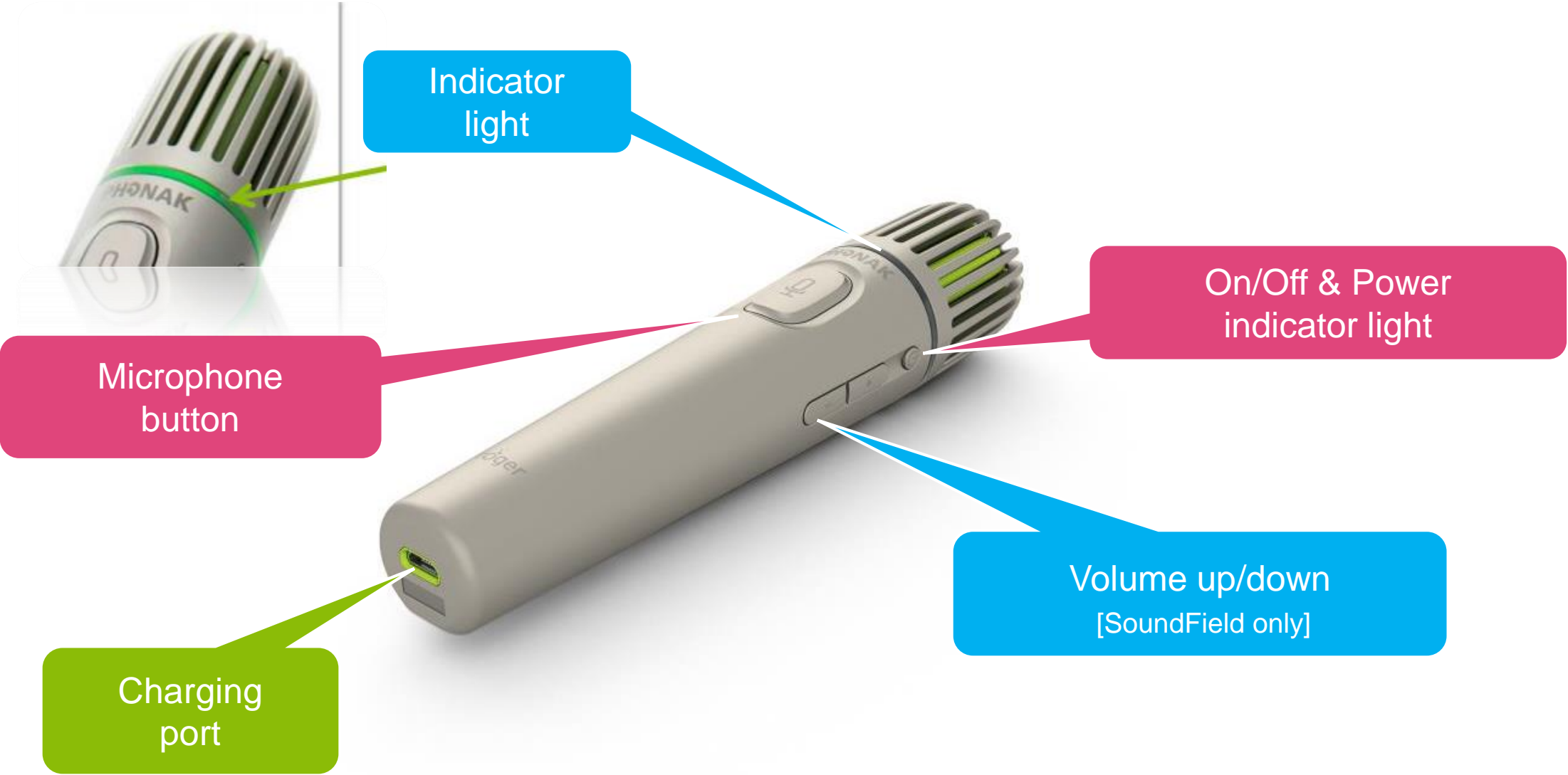
# Pass-around Mic: Table stand

When placed in the table stand...



- Accelerometer recognizes the position and lack of movement
- Automatically increases the sensitivity (voice pick-up)
- Ideal for reading and signing

# Roger Pass-around hardware



# Thinking outside the box

WAUKESHA CO. SPEC ED CO-OP

“This is what I have done with my Pass-arounds. We have not knocked out anyone yet and the kids love it.”

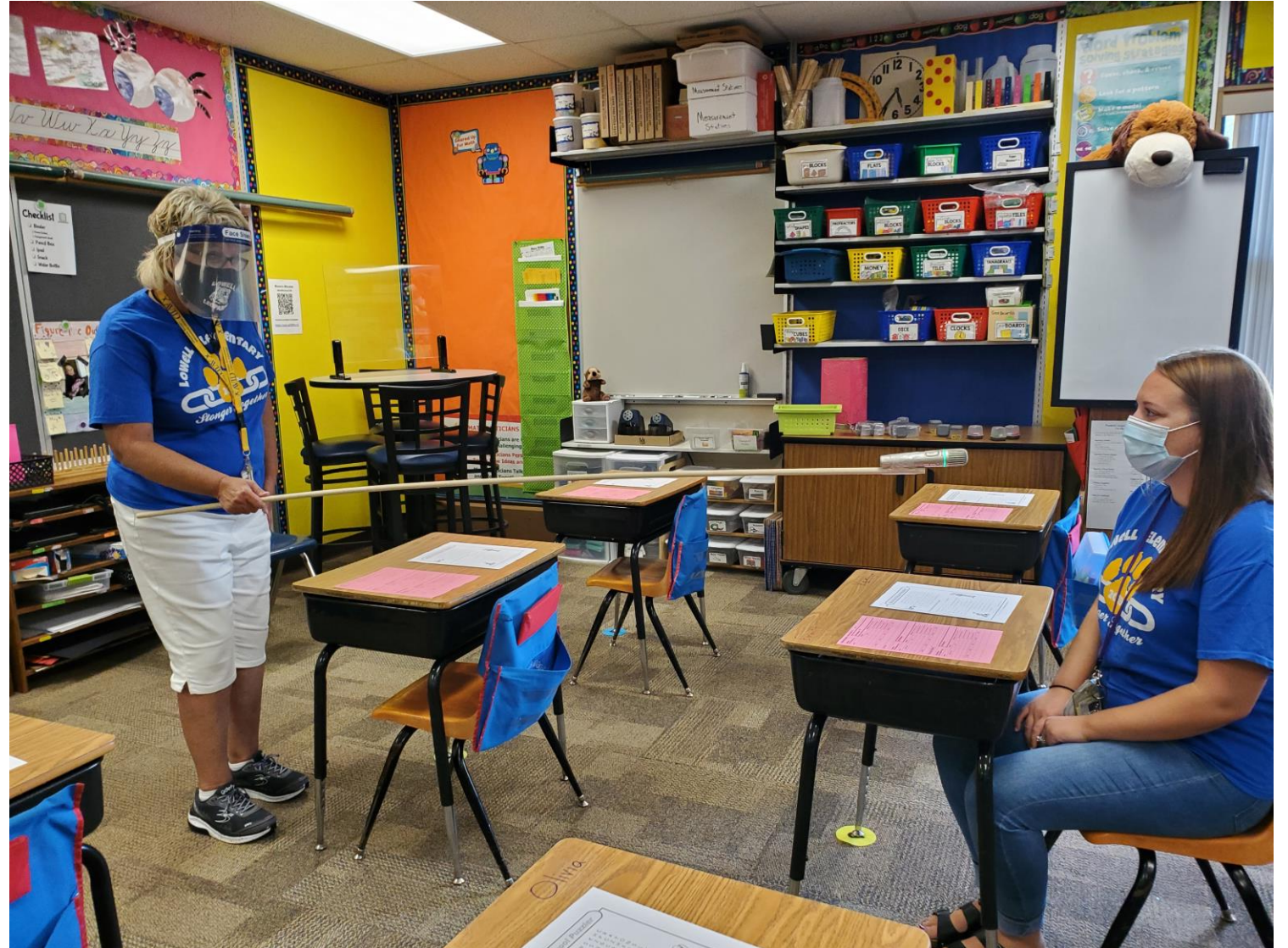




# Thinking outside the box

WAUKESHA CO. SPEC ED CO-OP

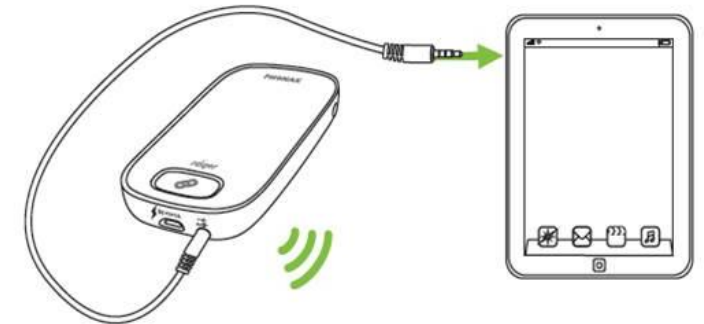
“This is what I have done with my Pass-arounds. We have not knocked out anyone yet and the kids love it.”



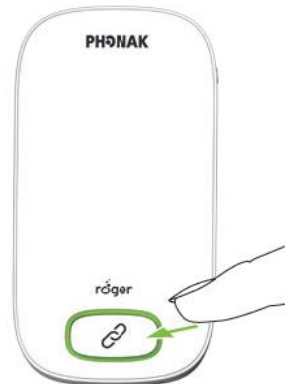
# Roger Multimedia Hub

# Roger Multimedia Hub

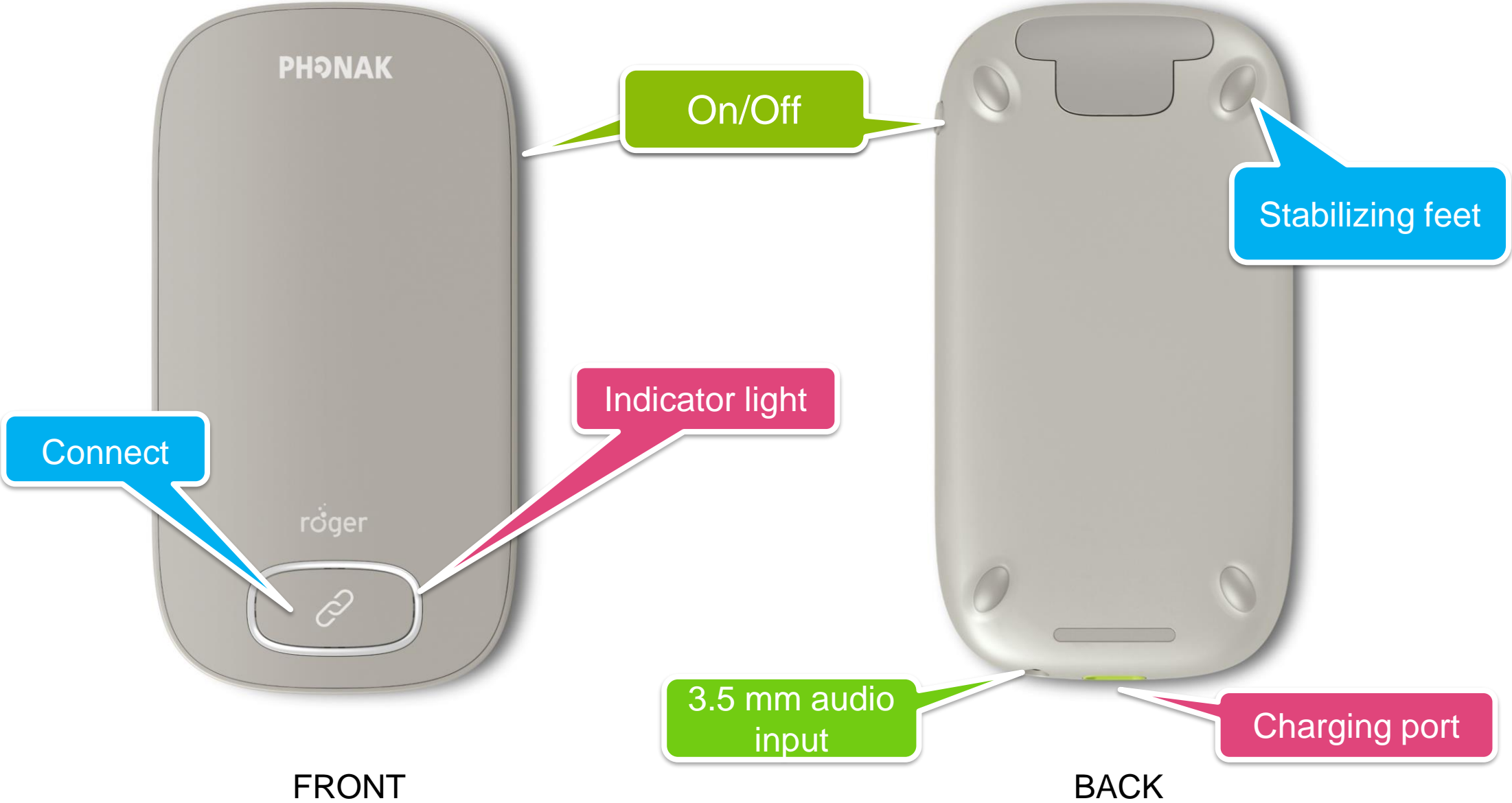
- Secondary transmitter for media signal, such as videos, music, and more
- Can be used to integrate smartboard technology with Roger
- Works with primary Roger Touchscreen Mic or directly with ear-level Roger receivers for independent listening
- Students have improved understanding of the words with music



0-10 cm  
0-4 inches



# Roger Multimedia Hub hardware



# Signal mixing

- Two signals can be transmitted at the same time, ex:
  - Two Touchscreen Mics
  - Touchscreen Mic and Pass-around
  - Touchscreen Mic and Multimedia Hub
- Allows a smooth transition between talkers for true team teaching
- Default setting for Roger Touchscreen Mic



# Optimal classroom set up for teachers and all students



**1. Roger Touchscreen Mic**

**2. Roger DigiMaster 5000**

**3. Roger Multimedia Hub**

**4. Roger Pass-around Mics**

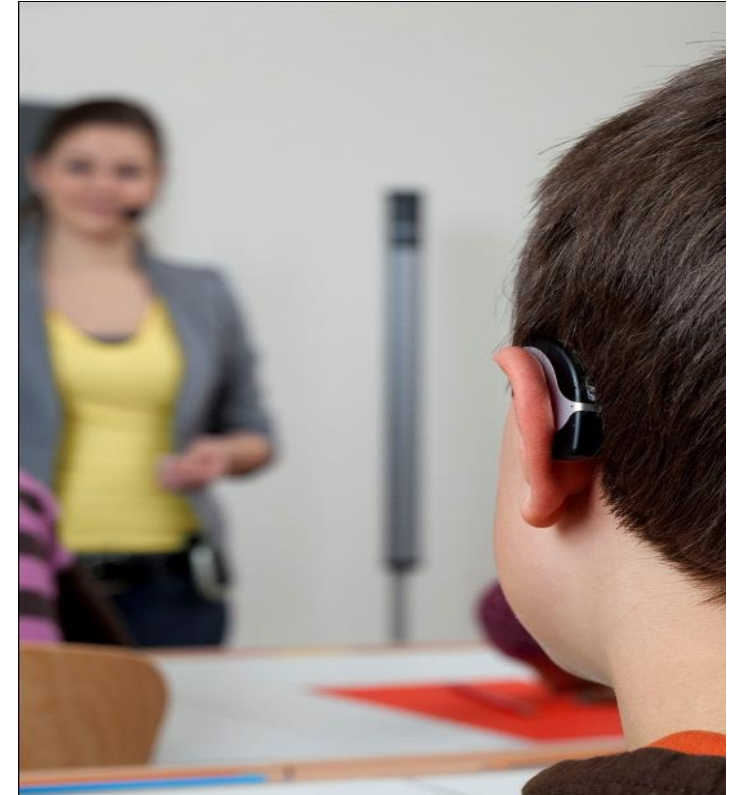
# Soundfield is for every listener

**In schools across the world, three trends are converging more and more often:**

1. Children with hearing loss are being integrated more into mainstream schools
2. Greater numbers of children with hearing loss are using FM hearing systems
3. More schools are adopting soundfield technology for normal hearing students

## **The challenge....**

How do you combine soundfield and HAT signals effectively?



# Roger DigiMaster X

Roger DigiMaster X is a Roger receiver for an classroom amplification system

Brings Roger performance to non-Phonak soundfield systems – compatibility between different manufacturers

Roger DigiMaster X audio output connects via cable into soundfield amplifier

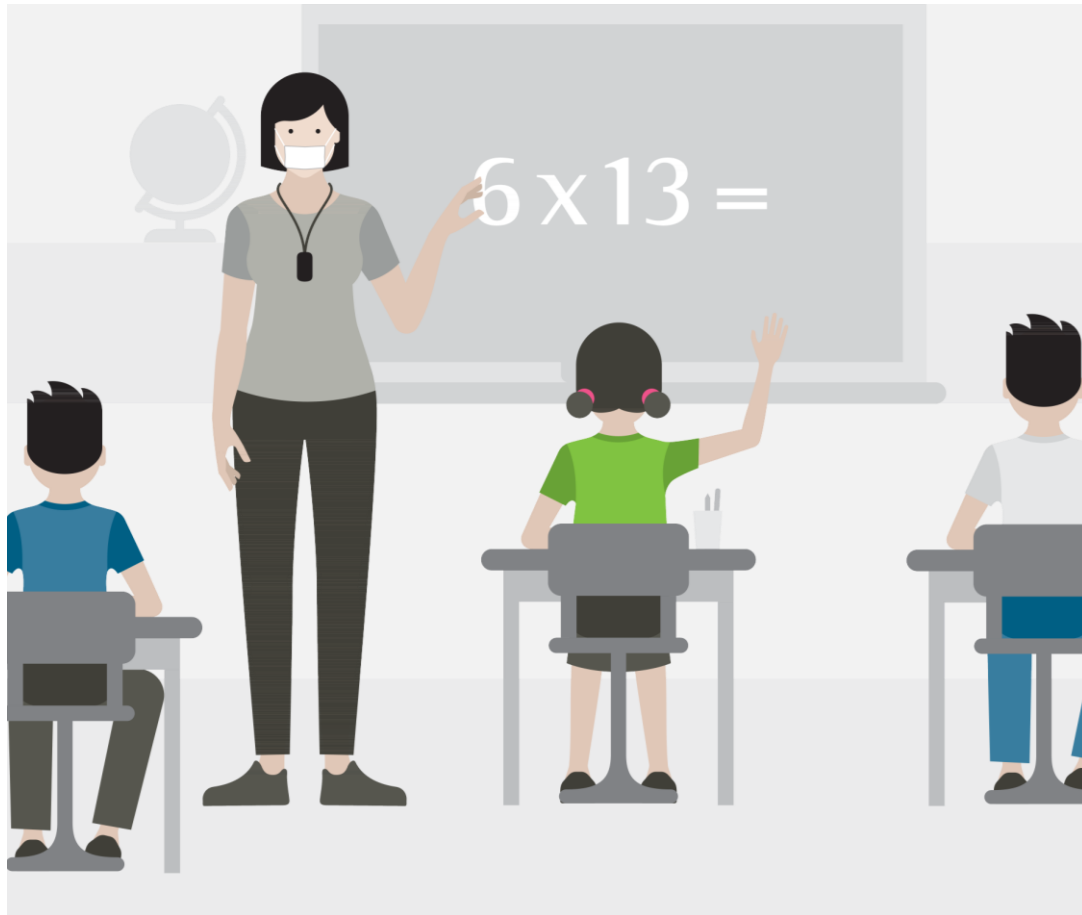
Soundfield system is dynamic. However, the sound quality is dependent on the existing speakers



\*Digimaster X set up instructions to some classroom amplification systems is available upon request.



# Summary of Roger Dynamic SoundField



- ✓ Improves speech understanding up to 50% for normal hearing children
- ✓ Helps children pay attention and improves in-class discipline
- ✓ Improves academic success
- ✓ Reduces vocal strain
- ✓ Reduced teacher absenteeism due to voice loss and reduced replacement-teacher costs



# Resources

# PhonakPro – Product Information

Phonakpro.com > Products > Roger SoundField

The screenshot shows the PhonakPro website interface. At the top left is the Phonak logo with the tagline "life is on" and "for Professionals". A search bar is located in the top center. On the top right, there is a user greeting "Hello. Sign in to Your Account" with a user icon. Below the header is a navigation menu with items: Home, Products (highlighted in green), Store, eSolutions, Support, Training & Events, Marketing, Resources, Clients & Orders, and Covid-19 (highlighted in orange). The main content area features the product title "Roger™ SoundField" with sub-navigation tabs for Overview, Literature, Evidence, and Support. A descriptive paragraph states: "The Roger SoundField is a classroom amplification system featuring high sound performance combined with plug-and-play simplicity." To the right of this text is a vertical image of the Roger SoundField device. Below this is a section titled "Classrooms are noisy places" with two paragraphs of text. The first paragraph discusses the challenges of classroom acoustics, and the second paragraph explains how the Roger SoundField system helps overcome these challenges. To the right of the text is a photograph of a young girl with curly hair, wearing a green shirt, smiling and holding a white object.



Installation instruction available on [PhonakPro > Products > Roger Soundfield](#)



## Roger Dynamic SoundField

Study shows better speech recognition at higher noise levels

A study by Dr. Jace Wolfe of Hearts for Hearing in Oklahoma found that a Roger Dynamic SoundField system with a single loudspeaker unit resulted in significantly better speech recognition at higher noise levels than a fixed-gain soundfield system with four loudspeakers placed strategically in a classroom. Dynamic SoundField is not a fixed-gain system but adjusts its volume setting automatically depending on the classroom noise level. Furthermore, the patching of a fixed-gain soundfield system with the microphone unit of an adaptive (Dynamic or Roger) personal ear-level receiver system created a significant drop in performance and



Soundfield evidence available on  
[PhonakPro > Products > Roger Soundfield > Evidence](#)



January 8, 2019

Pediatrics, Technology  
Author *Martin Lützen*

### Psst—please be quiet!

Everyday school noise can have a serious impact on the (hearing) health of students and teachers. However, there are solutions to combat acoustic stress in the classroom.

[Read more](#) | No Comments



Classroom acoustics and soundfield systems  
<https://audiologyblog.phonakpro.com/psst-please-be-quiet/>

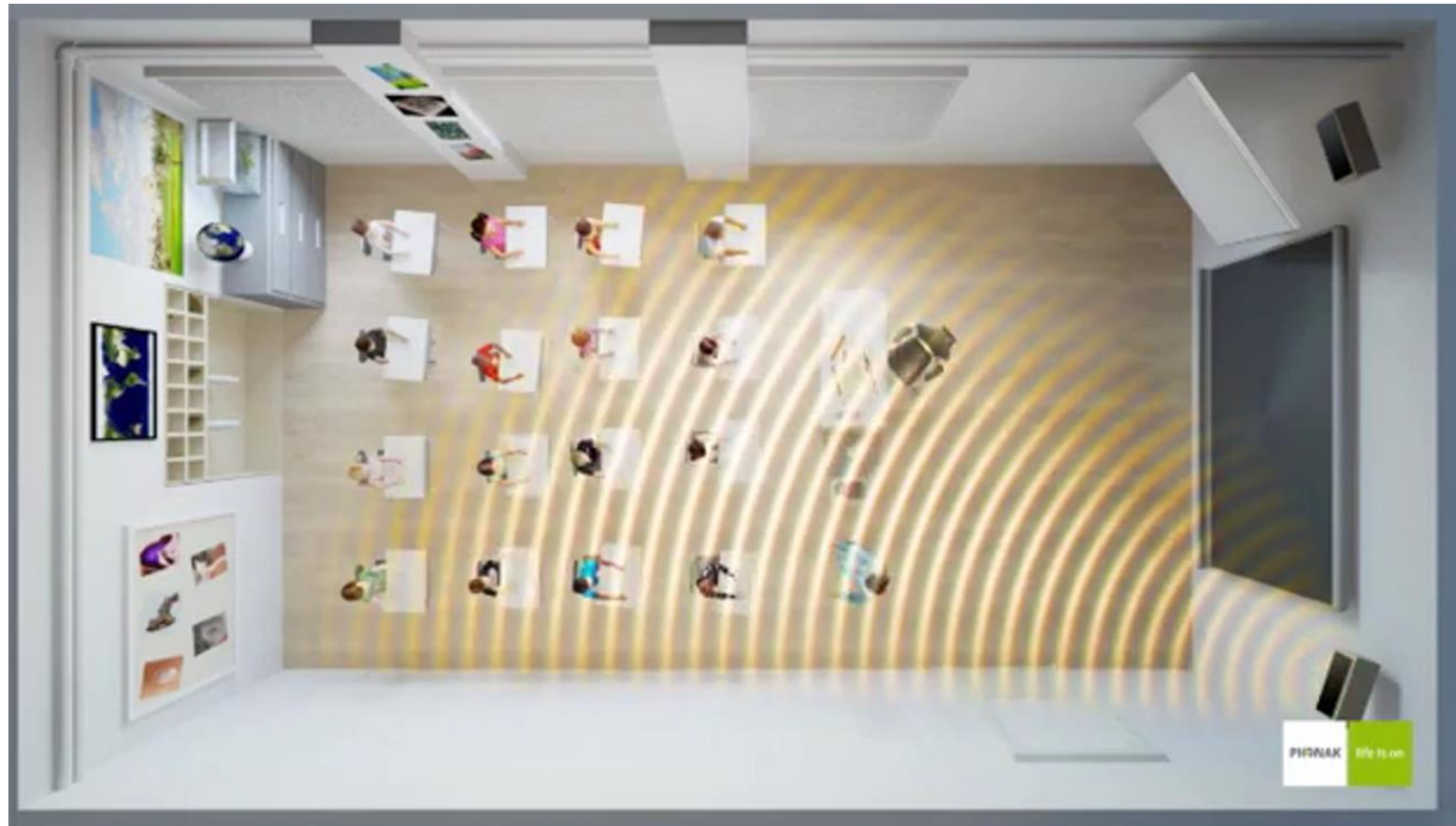
# Compendium: A review of classroom soundfield amplification systems

## Phonak Compendium

A review of classroom soundfield amplification systems



Search: *Introducing Phonak dynamic soundfield*



YouTube informational video: <https://www.youtube.com/watch?v=oXbm24FF7Ng>



*Ask the School Desk about the  
"Hearing and Learning" Bundles for  
details.*



- Reach out to your rep for a technology demonstration
- Try a Roger SoundField system today. All Roger devices ordered have a 60-day return period
- Save 10% on your next purchase of a Roger Touchscreen Mic and SoundField bundle.
- Save 15% if you order 3 Roger Digimaster SoundField speakers.

# Contact information reminder



## Important Phone Numbers

*888-777-7316*

### **School Desk**

option 1 Customer Service

### **Audiology Tech Support**

option 2

*800-679-4871*

### **Consumer questions**

on Bluetooth and Roger connectivity



## Provides faster service and better order tracking

- [schoolquotes@phonak.com](mailto:schoolquotes@phonak.com) – email exclusively for quote requests
- [schoolorders@phonak.com](mailto:schoolorders@phonak.com) – email exclusively for orders
- [schoolhelpdesk@phonak.com](mailto:schoolhelpdesk@phonak.com) – all other questions and needs



## Device advice from “the streets”

New challenges / New  
successes

Offered Tuesdays Nov 10 &  
17, Dec 1 & 8 (Mid-day)

Register on the Training  
page at [Phonakpro.com](https://Phonakpro.com)



# A Sound Foundation Through Early Amplification 2021

8th International Pediatric Audiology Conference  
March 28 — 31, 2021 | San Diego



**Join us!**



Event Information available at [PhonakPro > Training and Events > Events > Sound Foundations](#)

Questions?

# Our peds field team



**Sarah Benner**  
Pediatric Territory  
Manager  
AK, N CA, ID, MT,  
OR, WA and WY  
x 9648



**Evan Claytor**  
Pediatric Territory  
Manager  
DE, NJ, NY, E PA  
x 9635



**Lisa Dyre**  
National Pediatric Clinical  
Trainer / Territory Manager  
AR, LA, MO, NM, OK  
and TX  
x 9632



**Stacy Michels**  
Pediatric Territory  
Manager  
IL, IA, KS, MN, NE,  
ND, SD, and WI  
x 5171



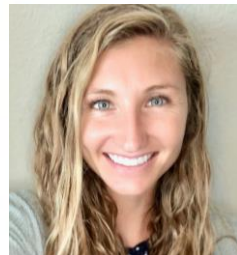
**Kathryn Pegan**  
Pediatric Territory  
Manager  
AL, FL, GA, MS, SC  
W. TN AND PR  
x 9778



**Patty Shappell**  
Pediatric Territory  
Manager  
AZ, CO, HI, NV, UT,  
S. CA and Guam  
x 5003



**Dana Ulakovic**  
Pediatric Territory  
Manager  
CT, ME, MD, MA,  
NH, NC, RI, VT,  
VA and DC  
x 9568



**Morgan White**  
Pediatric Territory  
Manager  
IN, KY, MI, OH, W. PA,  
E. TN and WV  
x 9524



**Cybill Johnson**  
Pediatric  
Inside Sales  
Manager  
x5293

## Director of Pediatric Sales



**Dawn Aerts**  
Director of  
Pediatric Sales  
x5275

Together,  
we change lives