HOWARD™
TECHNOLOGY SOLUTIONS

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frontrow™
pro digital

infrared active learning system

Adaptive intelligence makes FRONTROW PRO DIGITAL the most time-saving, energy-saving, hassle-free way to improve learning in every classroom

DESCRIPTION
Infrared wireless sound system built on a digital platform designed to evenly distribute the voices of the teacher, individual students and multimedia audio throughout the classroom, ensuring clear communication no matter where children sit

APPLICATION & BENEFITS
Increase speech intelligibility in general education classrooms to foster a successful learning environment. Increase student comprehension, attentiveness, participation and test scores, while significantly reducing behavior referrals. Significantly enhance ESL instruction and pre-reading exercises in phonemic awareness. Significantly increase teacher vocal comfort and reduce teacher absenteeism due to vocal fatigue

KEY FEATURES
- Powerful ADAPTO® digital platform optimizes sound quality, power use and suppresses feedback before it starts
- Standby mode uses 73% less energy than comparable analog systems and allows "one-touch" operation
- Auxiliary audio inputs and output allow for seamless integration with other audio-visual equipment and enables Podcasting

RECEIVER
- ADAPTO® digital platform
- One-touch operation
- 2 microphone channels
- 2 stereo aux-inputs
- 1 mono aux-output
- Integrated infrared sensor
- OPTIVOICE enabled
- ENERGY STAR® qualified
- Lead-free construction

PENDANT MICROPHONE
- Lightweight and comfortable
- Excellent sound quality
- Easy-to-reach mute button
- 2 integrated directional mics
- 2 channel (switchable) IR transmitter
- SMARTCHARGE, failsafe charging
- Lead-free construction

TYPICAL PACKAGE
- Receiver
- Pendant microphone
- Wall/ceiling sensors
- Four wall/ceiling speakers
- Optional student pass-mic

Technology for the sake of teaching

Digital intelligence. Faster than the speed of thought — a blistering 500 times per second on the VC5502™ processor by TEXAS INSTRUMENTS — the ADAPTO platform automatically adjusts sound quality, power usage, and other complex details. ADAPTO adapts so teachers can teach.

OptiVoice™ clarity. A powerful tool for test-taking, directions, and ELL instruction. Fragile consonant sounds carry about 75% of the meaning in speech but are easily destroyed by background noise. OPTIVOICE strengthens these critical sounds, doing the work of a 12-band equalizer with a single switch.

SmartCharge™ peace of mind. The greatest killer of electronics is accidental recharging of alkaline batteries. SMARTCHARGE technology only charges batteries that are safe to charge — protecting your investment for years to come.

ENERGY STAR saves money (and maybe the planet). Products that earn the ENERGY STAR® — strict energy efficiency standards set by the US Government — use up to 50% less energy.

Earth-friendly design. FrontRow's design and manufacturing practices keep lead, mercury, PBDE and other toxins out of its products — and out of the environment.

FDA
FDA CLEARED
Suitable for use with normal hearing and hearing impaired children
ISO 9001:2000 REGISTERED

ISO 9001
DNV
DNV Certification as of REGISTERED FIRM

District Administration 2002

EdU

frontrow™
for active learning
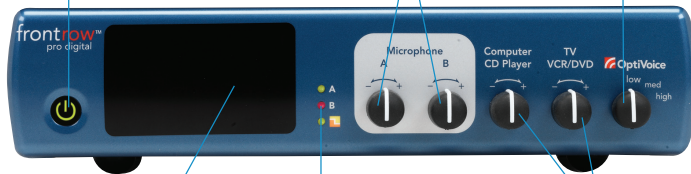
940R RECEIVER

one-touch operation
Teachers need only turn on the mic to start teaching. The receiver automatically wakes up from it's energy-saving sleep mode and goes to sleep when the mic is turned off.

two channels for more dynamic teaching
Encourage student participation with a pass-around mic; or amplify two teachers at the same time

optimize speech clarity
OPTIVOICE is specially designed to emphasize critical speech sounds, so kids comprehend even more

Adapto | DSP TEXAS INSTRUMENTS TECHNOLOGY | OptiVoice | ENERGY STAR | Lead Free

talk without dropout
Three built-in sensors with advanced optics ensure consistent signal pick-up

feedback suppression
The ADAPTO light reassures you it is automatically suppressing feedback – before it starts.
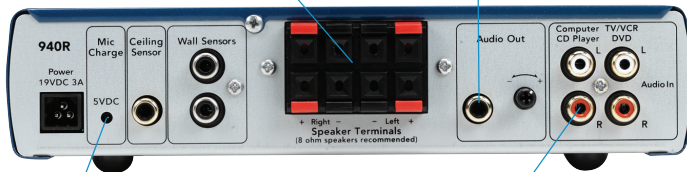
easy audio control
Quickly and easily adjust the volume level of steaming audio and video content, TV/DVD/VCR, CD's and MP3 files.

SPECIFICATIONS

Transmission type: Infrared

Receiving frequency: 2.3MHz & 2.8MHz

Frequency response: 50Hz to 10kHz

Signal-to-noise: >65dB (system)

TDH: <1% @ 1kHz into 8Ω

Speakers: 8Ω

Maximum audio output power: 2 × 10w (8Ω), 2 × 20w (4Ω)

Power supply: 19VAC at 3.16A

Size (wxdxh): 21.5 × 23.5 × 2.25cm/8.5 × 8.3 × 1.75in

Weight: .94kg/2.11lbs

Operating range: 18.5m/60ft line-of-sight (typical)

Reception area: 163m^2/1225ft^2 (typical)

User controls:
• Power
• Microphone A volume
• Microphone B volume
• Two auxiliary audio volume
• OPTIVOICE™

Inputs/outputs:
• Input power jack
• 1.3mm mic charge jack
• 3 RCA jacks for external sensor connection
• 4 quick-connect speaker terminals
• RCA aux out jack
• 2 RCA stereo aux in jacks (with stereo sound output)

simple speaker hook-up
Color-coded stereo push terminals make speaker connection quick and easy

auxiliary output
Connect to computer to record all audio content for Podcasting, or connect personal FM systems for the hearing impaired.

easy recharging
Up to two transmitters can be charged directly from the receiver

complete tech integration
Easily connect a computer, TV/DVD/VCR or other technology to integrate true stereo audio into your lessons.
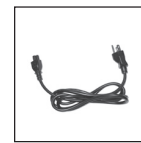
940R ACCESSORIES
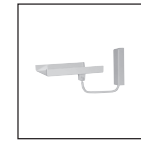
receiver power supply

AC power cord (for power supply)

transmitter charge cord aux-out cord

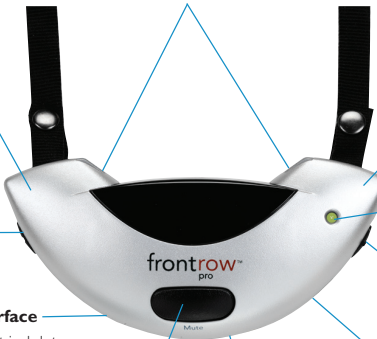RCA/RCA Aux-in cord RCA/3.5mm Aux-in cord

receiver wall mount

940TM TRANSMITTER/MICROPHONE

SmartCharge **Lead Free**

totally wireless
Combination transmitter/ microphone design eliminates the need for any cords

amazing sound quality
Dual-mic system ensures natural sound quality (patent pending)

maximum comfort
Efficient single-cell battery design is 25-40% lighter than competitor models

A/B channel selector

4-way indicator light

on/off switch

portable audio interface
A 3.5mm auxiliary input jack lets you use the transmitter/microphone to transmit audio from any secondary source, such as a TV, DVD, CD or computer

auxiliary microphone input
For teachers who prefer boom mics

smart charge security
SMARTCHARGE technology protects against charging incompatible batteries. Alkaline batteries may be used in an emergency, but the microphone will only charge the "silver-sleeve", auto-sensing battery that comes with your microphone.

audio mute switch
A convenient mute switch allows for private conversations

SPECIFICATIONS

Transmission type: Infrared

Transmitting frequency: 2.3MHz & 2.8MHz (switchable)

Microphones: dual uni-directional cardioid

Battery life: minimum 8 hours

Battery type: single AA, 2500mAH rechargeable NiMH)

Operating range: 18.5m/60ft line-of-sight (typical)

Size (wxhxd): 11 x 6 x 2.5 cm/4.5 x 2.5 x 0.9 in

Weight: 85g/3.0oz (with battery)

User controls:
• On/off
• mute
• channel A/B

Inputs/outputs:
• 2.5mm mic input
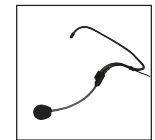• 3.5mm aux input
• 1.3mm DC charge jack

940TM ACCESSORIES

SMARTCHARGE NiMH rechargeable battery

aux-in cable

boom mic

940H TRANSMITTER

SmartCharge **Lead Free**

durable and easy to use
Handheld microphone is ideal for passing around to students for reading aloud, giving reports or even team teaching

on/off switch

smart charge security
SMARTCHARGE technology protects against charging incompatible batteries. Alkaline batteries may be used in an emergency, but the microphone will only charge the "silver-sleeve", auto-sensing battery that comes with your microphone.

SPECIFICATIONS

Transmission type: Infrared

Transmitting frequency: 2.8MHz

Frequency response: 50Hz to 16kHz

Operating range: 40ft (12m)

Batteries: 1 NiMH rechargeable battery

Size: 9.5 x 2.25 x 2.25 in. (24 x 5.5 x 5.5 cm)

Weight: 11oz (312g)

User controls: on/off

940H ACCESSORIES

SMARTCHARGE NiMH rechargeable battery

charger power supply

CEILING SENSOR

power indicator
Green LED power indicator lets you know when unit is connected properly

easy-to-install bracket
Unique twist-on bracket design allows quick and easy installation; no need to make any holes in acoustic tile drop ceiling

360 degree 'full-sweep' signal coverage
Semi-spherical reception means you can install the ceiling sensor without worries about dropout
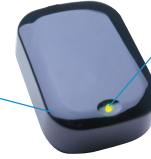
Lead Free

SPECIFICATIONS

Operating frequency: 2.3MHz & 2.8MHz

Operating range: 18.5m/60ft line-of-sight (typical)

Signal/Power interface: RCA-female jack, 8" lead

Number of IR LEDs: 6

Power indicator LED: Green

Reception area: 232m²/2500ft² (typical with receiver sensors)

Dimensions (DIA x H): 13.5 x 3.3 cm/5.1 x 1.3 in

Weight: 224g/7.9oz (with bracket)

Mounting: Drop ceiling acoustic tile or sheetrock ceiling

Sensor wire: 22 AWG CL3P shielded with DR wire, UL listed Plenum rated jacket

WALL SENSOR

easy-to-install bracket
Custom bracket allows quick and easy installation and proper angling for optimum room coverage

power indicator
Green LED power indicator lets you know when unit is connected properly

Lead Free

SPECIFICATIONS

Operating frequency: 2.3MHz & 2.8MHz

Operating range: 18.5m/60ft line-of-sight (typical)

Signal/Power interface: RCA-female jack

Number of IR LEDs: 2

Power indicator LED: Green

Dimensions (WxHxD): 7.9 x 5.1 x 3.0 cm/3.1 x 2.0 x 1.2 in

Weight: 82g/2.9oz

Mounting: wall mount bracket provided

Sensor wire: 22 AWG CL3P shielded with DR wire, UL listed Plenum rated jacket

SENSOR ACCESSORIES

IR sensor cable, 15m/50ft

COMPACT WALL SPEAKER

full range
Wide, smooth frequency response (65Hz-20kHz @ -10dB) for faithful reproduction of voice and music

versatile
Exceptional, natural sound quality for both speech and music

drop & click bracket

easy mounting and completely adjustable
A rotating ball joint allows for customized speaker positioning

SPECIFICATIONS

Speaker type: Bass reflex; 8.9cm/3.5in woofer; 2.5cm/1in soft-dome tweeter

Impedance: 8Ω nominal

Continuous power: 30W

Peak power: 80W

Frequency response: 65Hz to 20kHz -10dB

Dimensions (WxHxD): 2.7 x 22.2 x 14cm/ 5 x 8.75 x 5.5 in

Weight: 1.75kg/3.86lbs

Mounting: wall mounting brackets provided

Speaker wire: UL listed CL3P Plenum-rated

SPEAKER ACCESSORIES

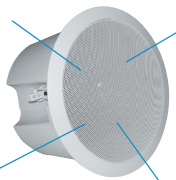speaker wire
2 @ 14.6m/48ft
2 @ 18.3m/60ft

DISTRIBUTED CEILING SPEAKER

great sound dispersion
Offers exceptionally even sound coverage

a seamless solution
Mounts flush with ceiling tiles for a neat, elegant installation

full range
Wide, smooth frequency response (65Hz-20kHz @ -10dB) for faithful reproduction of voice and music

sound stays in your room
Enclosed baffle prevents sound from traveling through plenum to other classrooms

SPECIFICATIONS

Speaker type: coaxial: 6in woofer, .5in tweeter

Impedance: 8Ω nominal

Continuous power: 35W

Peak power: 70W

Frequency response: 65Hz to 20kHz

Dimensions (DIA x D): 203 x 5.7 cm/9 x 2.25 in

Weight: 1.1kg/2.4lbs

Mounting: metal tile bridge

Speaker wire: UL listed CL3P Plenum-rated

SPEAKER ACCESSORIES

speaker wire
2 @ 14.6m/48ft
2 @ 18.3m/60ft