

## LOCATIONS

### Australia

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Fortitude Valley Qld 4051  
toll-free: 1 800 PHONIC  
tel: + 617 3250 0385  
fax: +617 3250 0386  
web: www.gofrontrow.com

### Canada

FrontRow  
6950 Creditview Road, Unit 1  
Mississauga, ON L5N 0A6  
toll-free: 800.340.9894  
tel: 905.461.5300  
fax: 905.677.7760  
web: www.gofrontrow.com

### Europe/ASIA

Phonic Ear A/S  
Kongebakken 9  
2765 Smørum  
Denmark  
tel: +45 3917 7101  
fax: +45 3927 7900  
web: www.gofrontrow.com  
www.phonicear.com

### New Zealand

Oticon New Zealand Ltd.  
142 Lambton Quay  
P.O. Box 9128  
Te Aro, Wellington  
toll-free: 800 OTICON  
toll-free fax: 00800 FAX OTICON  
web: www.oticon.co.nz

### United Kingdom

PC Werth Limited  
Audiology House  
45 Nightingale Lane  
London SW12 8SP  
tel: 020 8772 2700  
web: www.soundfield.info

### USA

FrontRow  
Corporate Headquarters  
2080 Lakeville Highway  
Petaluma, CA 94954-6713  
toll-free: 800.227.0735  
tel: 707.769.1110  
fax: 707.769.9624  
web: www.gofrontrow.com



frontrow™

# Product Specifications

classroom amplification systems

## Which system fits your needs?



	ToGo	Symbio	Lasso	Pro Digital
<b>Installation-Free &amp; Portable Voice Amplification</b>				
Indoor Use	Yes	Yes	Yes	Yes
Outdoor Use (not weatherproof)	Yes	No	No	No
Integrated DuO Speakers	Yes	No	No	No
Battery Power Option	Yes	No	No	No
Installation-free	Yes	No	No	No
Carry Case Available	Yes	N/A	N/A	N/A
<b>Upgrade to Voice Amplification</b>				
Existing Amplifier and Speakers Required	No	Yes	No	No
<b>Installed Amplification for Voice and Intensive Multimedia</b>				
Audio Inputs	1	1 (through mic)	4	2
Page Override Option	No	No	Yes	No
Rack Mountable	No	No	Yes	No
Podcast Outputs	1	No	1	1
Separate Volume Control for Inputs	Yes	N/A	Yes	Yes
Stereo Sound	No	No	Yes	Yes
<b>Installed Amplification for Voice and Typical Multimedia</b>				
Feedback Suppression	No	No	No	Yes
OptiVoice Speech Clarification	Yes	No	No	Yes
Integrated Sensor	N/A	No	No	Yes
<b>Features</b>				
Number of Systems per School	16*	Unlimited	Unlimited	Unlimited
Energy Star	No	Yes (Power Supply)	Yes (Full System)	Yes (Full System)
One-touch Operation	No	No	Yes	Yes
Lead Free/RoHS Compliance	Yes	Yes	Yes	Yes
SmartCharge Fail Safe Battery System	Yes	Yes	Yes	Yes
Microphone Channels	2	2	2	2
External Sensor Inputs	N/A	3	3	3
Optional Student Microphone	Yes	Yes	Yes	Yes
Transmission Technology	FM	Infrared	Infrared	Infrared
Platform	Analog	Analog	Analog	Digital
Warranty	5 Year	5 Year	5 Year	5 Year

## Technology for student achievement



**Adapto Digital Platform.** 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.



**Save money (and maybe the planet).** FrontRow products use significantly less energy — up to 63% less — than other systems. They're a smart choice for schools and the environment.

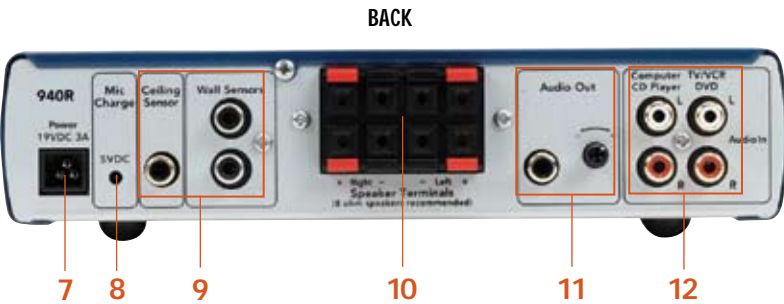
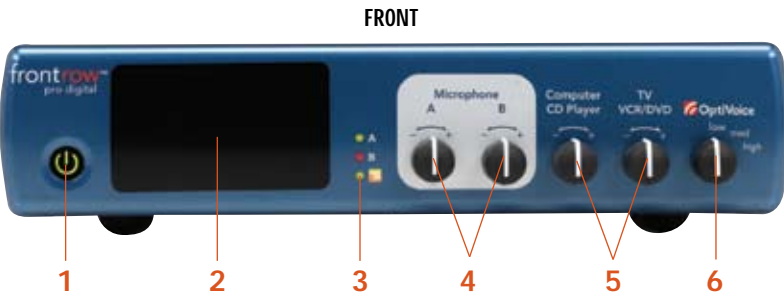


**SmartCharge™ peace of mind.** The greatest killer of electronics is accidental recharging of alkaline batteries. SMARTCHARGE technology only charges batteries that are safe to charge — protecting your investment for years to come.



**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.

# PRO DIGITAL 940R RECEIVER/AMPLIFIER



## SPECIFICATIONS

- Transmission type: Infrared
- Receiving frequency: 2.3MHz & 2.8MHz
- Frequency response: 50Hz to 20kHz
- Signal-to-noise: >65dB (system)
- TDH: <1% @ 1kHz into 8Ω
- Maximum audio output power: 2 x 10w (8Ω), 2 x 20w (4Ω)
- Power supply: 19VAC at 3.16A
- Size (wxhxd): 21.5 x 4.75 x 19cm/8.5 x 1.75 x 7.5in
- Weight: .94kg/2.11lbs
- Operating range: 18.5m/60ft line-of-sight (typical)
- Reception area: 163m<sup>2</sup>/1225ft<sup>2</sup> (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)

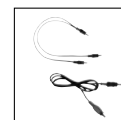
## 940R ACCESSORIES



receiver power supply



AC power cord (for power supply)



transmitter charge cord aux-out cord



Aux-in cord



receiver wall mount

### 1 one-touch operation

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

### 2 talk without dropout

Three built-in sensors with advanced optics ensure consistent signal pick-up

### 3 feedback suppression

The ADAPTO light reassures you it is automatically suppressing feedback – before it starts

### 4 two channels for more dynamic teaching

Encourage student participation with a pass-around mic; or amplify two teachers at the same time

### 5 easy audio control

Quickly and easily adjust the volume level of streaming audio and video content, CDs and MP3 files

### 6 optimize speech clarity

OPTIVOICE (patent pending) is specially designed to emphasize critical speech sounds, so kids comprehend even more

### 7 power jack

### 8 easy recharging

Up to two transmitters can be charged directly from the receiver

### 9 external sensor ports

Get great signal pickup in almost any classroom with convenient ceilings or wall sensors

### 10 simple speaker hook-up

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

### 11 auxiliary output and volume control

Connect to computer to record all audio content for podcasting, or connect personal FM systems for the hearing impaired

### 12 complete tech integration

Easily connect a computer or other technology to integrate true stereo audio into lessons

## SYMBIO 5201R RECEIVER

### FRONT



### BACK



- 1 power switch**
- 2 classroom-friendly color**  
Helps make the product less intimidating for teachers
- 3 two channels for more dynamic teaching**  
Encourage student participation with a pass-around mic; or amplify two teachers at the same time
- 4 microphone indicator lights**  
Offer clear visual confirmation of signal reception
- 5 power on, ready light**
- 6 external sensor ports**  
Get great signal pickup in almost any classroom with convenient ceiling or wall sensors
- 7 audio out jack**  
High quality 1/4in jack for connection to practically any standard amplifier
- 8 mic/line switch**  
Match your amplifier's level requirements instantly
- 9 DC input**



### SPECIFICATIONS

**Transmission type:** Infrared

**Receiving frequency:** 2.3MHz & 2.8MHz

**Frequency response:** 50Hz to 10kHz

**Signal to Noise:** > 65dB (system)

**THD:** < 1% @ 1kHz

**Power Supply:** 12V @ 500mA

**Size (wxhxd):** 14 x 4 x 19.25 cm/5.5 x 1.62 x 7.75 in

**Weight:** 766g/1.7lbs.

**Mic level out:** 0V to 100mVrms at maximum volume & maximum deviation (typical)

**Line level out:** 0V to 1Vrms at maximum volume & maximum deviation (typical)

#### User controls:

- Power
- Microphone A volume
- Microphone B volume
- Output level

#### Inputs/outputs:

- Input power jack
- 3 RCA jacks for external sensor connection
- 1/4in audio out jack

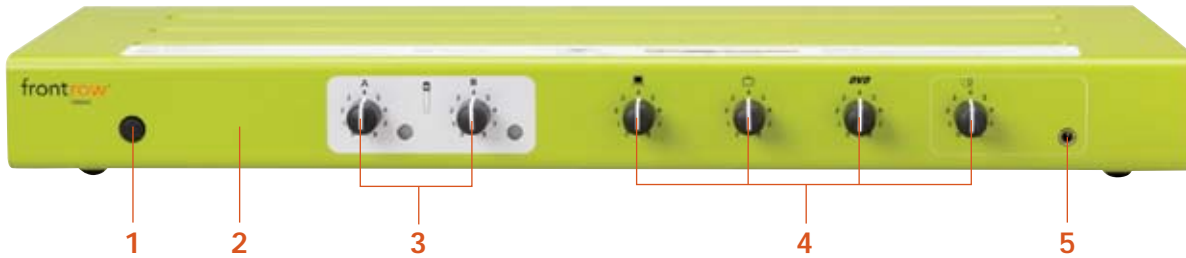
### 5201R ACCESSORIES



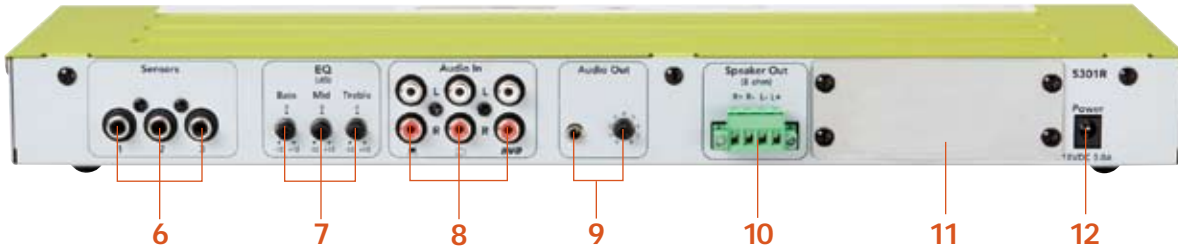
receiver power supply

## LASSO 5301R RECEIVER/AMPLIFIER

### FRONT



### BACK



#### 1 one-touch operation

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

#### 2 classroom-friendly color

Helps make the product less intimidating for teachers

#### 3 two channels for more dynamic teaching

Encourage student participation with a pass-around mic; or amplify two teachers at the same time

#### 4 easy control for at least 4 different audio sources

Quickly and easily adjust the volume level of streaming audio and video content, CDs and MP3 files

#### 5 stereo quick connect for MP3 players

#### 6 external sensor ports

Get great infrared signal pickup in almost any classroom with convenient ceiling or wall sensors

#### 7 3-band equalizer

#### 8 stereo inputs for external audio

#### 9 auxiliary output and volume control

Connect to computer to record all audio content for podcasting, or connect personal FM systems for the hearing impaired

#### 10 simple speaker hook-up

Captive screw terminals make speaker connection quick and easy

#### 11 page override module expansion bay

Simply install the optional module to mute all audio whenever an announcement is made over the school's public address system

#### 12 power jack



### SPECIFICATIONS

**Transmission type:** Infrared

**Receiving frequency:** 2.3MHz & 2.8MHz

**Frequency response:** 20Hz to 20kHz

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

**TDH:** <1% @ 1kHz into 8Ω

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

**Power supply:** 18VAC at 3A

**Size (wxhxd):** 43.7 x 18.4 x 4.3cm/17.2 x 7.3 x 1.7in

**Weight:** 1.83kg/64.5oz

#### User controls:

- Power
- Microphone A volume
- Microphone B volume
- Four auxiliary audio volume
- Audio out volume

#### Inputs/outputs:

- Input power jack
- 3 RCA jacks for external sensor connection
- Captive screw speaker terminals
- RCA audio out jack
- 3 RCA stereo audio in jacks (with stereo sound output)
- 1 3.5mm stereo audio in jack (with stereo sound output)

### 5301R ACCESSORIES



receiver power supply



AC power cord (for power supply)

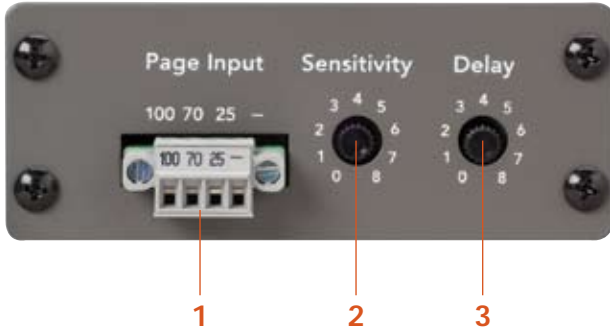


Aux-in cord



receiver wall mount

## PAGE OVERRIDE MODULE (LASSO ONLY)



### SPECIFICATIONS

**PA input:** Captive screw terminal (25V, 70V, 100V, ground)

**Input impedance:** 10k $\Omega$

**Sensitivity range:** -20dBu to +20dBu

**Delay range:** 500msec to 5 sec

- 1 easy connection for 25, 70, and 100V PA systems
- 2 sensitivity control
- 3 delay control



**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

**1 totally wireless**

Combination transmitter/microphone design eliminates the need for any cords

**2 amazing sound quality**

Patented dual-mic system ensures natural sound quality

**3 maximum comfort**

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

**4 a/b channel selector**

Conveniently switch between microphone channels

**5 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, computer, or MP3 player

**6 audio mute switch**

A convenient mute switch allows for private conversations

**7 auxiliary microphone input**

For teachers who prefer boom mics

**8 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.

**9 4-way indicator light**

**10 on/off switch**

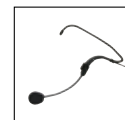
**940TM ACCESSORIES**



SMARTCHARGE NiMH rechargeable battery



aux-in cable



boom mic

## 950H PASS-AROUND MICROPHONE AND DROP-IN CHARGER



### SPECIFICATIONS

**Transmission type:** infrared

**Transmitting frequency:** 2.3MHz & 2.8MHz (switchable)

**Battery type:** single AA, 2500mAh rechargeable NIMH

**Battery life:** minimum 5 hours

**Operating range:** 12.2m/40ft, line of sight (typical)

**Size (wxhxd) (mic):** 14.6 x 2.8 x 3.5 cm/5.7 x 1.1 x 1.4 in

**Weight (mic):** 74g/2.6oz (with battery)

**User controls (mic):**

- On/off
- Channel A/B
- Mic gain – 3 settings

**Inputs/outputs (mic):**

- 3.5mm aux input, stereo summing
- 1.3mm DC charge jack

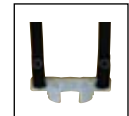
### 950H ACCESSORIES



SMARTCHARGE NIMH rechargeable battery



charger power supply



lavaliere clip

### 950H MICROPHONE

#### 1 fits kids' small hands

Less than 15cm/6in tall, this durable kid-sized mic is much easier for students to use

#### 2 comfortable hands-free option

Easy, comfortable lavaliere clip makes reading in front of class simple and lets the 950H double as a very lightweight teacher mic

#### 3 3-way indicator light

#### 4 on/off switch

#### 5 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.

#### 6 a/b channel and mic gain selectors

(inside battery compartment)

#### 7 name plate

#### 8 optional charge input jack

#### 9 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, computer, or MP3 player

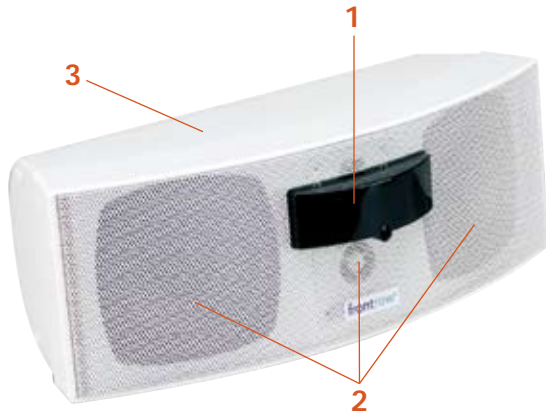
### 950C CHARGER

#### 10 energy efficient drop-in charging

Charges both the 940TM and 950H microphones neatly and securely. Powered by an ENERGY STAR® qualified battery charger.

#### 11 3-way charging indicator lights

## IR SPEAKER



### 1 integrated sensor

Provides extremely robust IR coverage throughout the classroom

### 2 two 4" woofers, one 1" tweeter

Each cluster gives full range sound quality and twice the coverage of a single speaker

### 3 cut installation time in half

Install only two IR speakers per classroom – same coverage as four speakers and two sensors with half the labor



### SPEAKER SPECIFICATIONS

**Speaker type:** Two 10cm/4in woofers;  
2.5cm/1in tweeter

**Impedance:** 4Ω nominal

**Continuous power:** 20W

**Peak power:** 30W

**Frequency response:** 150Hz to 20kHz

**Dimensions (wxhxd):** 355x130x230mm/14 x 5 x 9in

**Weight:** 3.4kg / 7.5lbs

**Mounting:** Wall mounting brackets provided

#### Combo cable incorporates:

**Speaker wire:** 18 AWG 2 conductor UL listed  
CL3P Plenum-rated

**Sensor wire:** 15.25m/50ft RG58/u coaxial cable  
CL3P shielded, UL listed Plenum rated jacket available



### SENSOR 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 photodiodes:** 3

**Power indicator LED:** Green

**Reception area:** 2500ft<sup>2</sup> (typical with receiver sensors)

## DISTRIBUTED CEILING SPEAKER (REQUIRES SEPARATE SENSORS)



- Full range for faithful reproduction of voice and music
- Great sound coverage
- Separate UL listed back enclosure prevents sound from traveling to other classrooms
- Mounts flush with ceiling for neat installation



### SPECIFICATIONS

**Speaker type:** coaxial: 10cm/6.5in woofer,  
2.5cm/1in tweeter

**Impedance:** 8Ω nominal

**Continuous power:** 30W

**Peak power:** 45W

**Frequency response:** 60Hz to 20kHz

**Dimensions (Dia x d):** 21.7 x 7 cm / 8.5 x 2.75 in

**Weight:** 1.1kg/2.5lbs

**Mounting:** UL listed metal tile bridge, UL listed steel  
back enclosure

**Speaker wire:** 18 AWG 2 conductor UL listed CL3P  
Plenum-rated

## CEILING SENSOR



- Easy-to-install bracket allows quick and easy installation
- LED power indicator lets you know when unit is connected properly
- 360 degree 'full-sweep' signal coverage helps prevent signal dropout



### 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 photodiodes:** 6

**Power indicator LED:** Green

**Reception area:** 232m<sup>2</sup>/2500ft<sup>2</sup> (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:** 15.25m/50ft RG59/u coaxial cable CL2P shielded, UL listed

Plenum rated jacket available

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## WALL SENSOR



- Easy-to-install bracket allows proper angling for optimum room coverage
- LED power indicator lets you know when unit is connected properly
- Great for covering rooms with high ceilings, hanging student art, projector mounts, or other challenging obstructions



### 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 photodiodes:** 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:** Two 15.25m/50ft RG59/u coaxial cables CL2P shielded, UL listed Plenum rated jacket available



## TOGO 925C CHARGING STAND



- 1 convenient drop-in charging
- 2 3-way indicator lights



### SPECIFICATIONS

Power supply: AC adaptor (DC 12V / 0.5A)

Recharging time: NiMH (1600mA), 6 hours

Size (wxhxd): 230 x 47 x 135 mm / 9 x 1.9 x 5.3 in

Weight: 360g/12.7oz

## TOGO 925T BODY-WORN TRANSMITTER

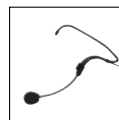


- 1 your choice of mics  
Connect wind-resistant boom or earhook mics or inconspicuous lapel mics
- 2 easy to locate on/off/standby switch
- 3 2-way indicator light
- 4 belt clip
- 5 channel selector

### 925T ACCESSORIES



NiMH rechargeable battery AT0807



boom mic



### SPECIFICATIONS

Carrier frequency range: 216.025 - 216.875 MHz

Modulation: FM (F3E)

Operating range: > 34m / 110ft

RF output: <15mW

TDH: <0.5%

Dynamic range: 100dB

Size (wxhxd): 65 x 90 x 25 mm / 2.5 x 3.5 x 1 in

Weight: 51g / 1.8oz

Controls: on/mute/off/channel selector

Input/output: 2.5mm microphone input jack

Battery type: 2 AA NiMH rechargeable (1600mA) or 2 AA alkaline disposable

Battery life: NiMH rechargeable typically 12 hours, disposable alkaline typically 15 hours

Recharging time: 6 hours

## TOGO 925H HANDHELD MICROPHONE/TRANSMITTER



- 1 2-way indicator light
- 2 on/off switch
- 3 channel selector

### 925H ACCESSORY



NiMH rechargeable battery AT0807



### SPECIFICATIONS

Carrier frequency range: 216.025 - 216.875 MHz

Modulation: FM (F3E)

Operating range: > 34m / 110ft

RF output: <15mW

TDH: <0.5%

Dynamic range: 100dB

Dimensions (dia x h): 54 x 237mm / 2.1 x 9.3 in

Weight: 230g / 8.1 oz

Controls: on/mute/off/channel selector

Battery type: 2 AA NiMH rechargeable (1600mA) or 2 AA alkaline disposable

Battery life: 12 hours (rechargeable), 15 hours (alkaline)

Recharging time: 6 hours