

# QUANTUM II

Infrared Sound Field System



TeachLogic  
FOR SOUND LEARNING



# QUANTUM II *Infrared Sound Field System*

Quantum II is a completely self contained sound system for use in the classroom or similar environment.

It is equipped with a powerful 30 Watt amplifier and two infrared receivers to facilitate simultaneous use of two wireless microphones. In addition, it features an auxiliary line level input, vocal clarity control and a variable line level output.



## Quantum II Features

- Built-in infrared sensor for full 180° reception
- Two channel infrared receiver for simultaneous use of two infrared wireless microphones
- Auxiliary line level input for DVD, computer, video projector, VCR, iPod®, or other media device
- Efficient full range speaker
- Two external sensor inputs for additional infrared coverage
- External speaker output (8Ω) for companion speaker
- Aluminum enclosure for enhanced sound quality
- RoHS compliant



## Easy Access Front Panel Controls and Inputs

- Two volume controls for two IR channels
- Tone control for improved vocal clarity
- Line level input for an auxiliary device
- Volume control for the auxiliary input
- Line output for an Assistive Listening System
- Line output control to match the ALS input

## Easy Installation

### Free Stance in Room or Mobile Use

- Mount column onto speaker stand (SS-350)
- Position system anywhere in room
- Install and plug in power supply
- Turn "on" and commence operation

### Speaker Stand (SS-350)

Folding stand for mobile application. Can extend to 4 1/2 ft. high and collapse to 20" x 4".

### Wall Mount Installation

- Install wall mount bracket (included)
- Mount power supply onto bracket
- Install into bracket
- Plug in power supply
- Turn "on" and commence operation

### Companion Speaker ▶ (UQS-301)

The UQS-301 will distribute the sound more evenly throughout the listening area. Includes bracket and 25 ft. of cable.



## Dual Drop-In Charger (BRC-202)

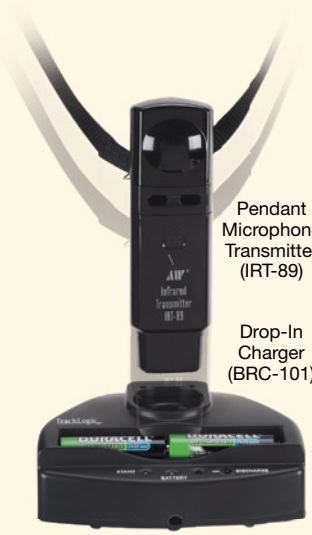
- Convenient drop-in insertion
- Charge pendant and handheld mics simultaneously
- Optimized charge rate for NiMH batteries
- Recycle function to extend battery life
- Auto protect circuit to prevent recharging non-rechargeable batteries
- Auto full charge maintenance



Pendant Transmitter (IRH-30)

Pendant Transmitter (IRT-89)

Drop-In Charger (BRC-101)



Pendant Microphone Transmitter (IRT-89)

Drop-In Charger (BRC-101)



Safety Clasp  
Easy to engage – pull to break away



Pendant Transmitter with Plug-in Microphone

## Single Insertion – Dual Function Drop-In Charger (BRC-101)

- Drop-in either Pendant or Handheld
- Recharge slot for two "AA"
- Optimum NiMH charge rate
- LED function indicators
- Recycle function – extend battery life
- Auto protect to prevent charging non-rechargeable batteries
- Full charge maintenance

## Pendant Transmitter (IRT-89) with optional Plug-In Mic.(LM-300)

- Small and lightweight
- Powerful infrared output
- Dual internal microphones
- Mic input jack – Center / Top
- Battery level indicator
- Power switch
- A / B channel switch
- Volume control
- Rechargeable batteries
- Convenient charger drop-in
- Adjustable lanyard with breakaway safety clasp

Optional: Plug-in mic (LM-300) for enhanced performance

## Lapel Microphone (LM-835)

A small capsule, unidirectional microphone mounted on a spring clip. Can be worn away from the face, however, it is vulnerable to feedback when used near a speaker.



## Collar Microphone (CM-835)

The collar microphone is flexible and formed around the neck. The microphone can be oriented upward near the mouth. The close proximity of mouth to microphone establishes very good vocal clarity.



## Headband / Boom Mic (HBM-935)

The HBM-935 renders the best vocal quality and is very efficient. It is less prone to feedback and maintains optimum voice reproduction regardless of head orientation.



## Ultra Lite Mic (ULM-835)

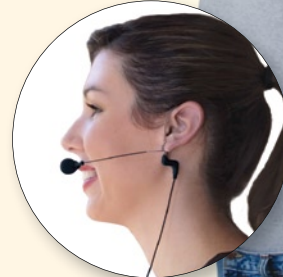
A miniature element on a very small boom gives this microphone several virtues – lightweight, high performance, comfort, and low visibility. Available in Tan or Black.



Body-Pack shown with Ultra Lite Microphone

## Plug-In Microphone (LM-300)

The LM-300 plugs directly into the top of the Pendant and Body-Pack transmitter. Its uni-directional pickup pattern extends its sensitivity and renders excellent vocal reproduction.



Handheld Wireless Microphone Transmitter (IRH-30)

Body-Pack Transmitter (IRB-30)

## Drop-In Charger for Handheld (IRH-30) and Body-Pack (IRB-30)

- Convenient drop-in insertion
- Positive battery contact
- Optimum charge rate for NiMH battery.
- Charging mode indicator – Red LED.
- Full charge indicator – Green LED
- Recycle function – extend battery life
- Auto protect to prevent charging non-rechargeable batteries
- Full charge maintenance

## Handheld Microphone Transmitter (IRH-30)

- Transmitter with dynamic mic element.
- Ten high powered emitting diodes.
- Power on / off switch.
- Rechargeable NiMH batteries.
- Battery level indicator – LED

## Body-Pack Transmitter (IRB-30)

- Ten high powered emitting diodes
- 180° high level infrared transmission for reliable performance.
- Volume control for mic
- Power on/off switch
- External mic input, 3.5mm

## Quantum II System Models:

IRQ - 3000	Column sound system with <b>Body-Pack</b> transmitter (IRB-30) with choice of microphone (C) collar, (H) headband, (L) lapel, (P) plug-in, or (U) ultralite (additional cost), boom microphone, rechargeable batteries (NiMH-Duracell), and drop-in battery charger (BRC-30)
IRQ - 3100	Column sound system with <b>Pendant</b> transmitter (IRT-89) including plug-in microphone (LM-300), rechargeable batteries (NiMH-Duracell), and drop-in battery charger (BRC-101)
IRQ - 3500	Column sound system with <b>Handheld</b> (IRH-30) and <b>Body-Pack</b> (IRH-30), with choice of microphone - (C) collar, (H) headband, (L) lapel, (P) plug-in, or (U) ultralite (additional cost), and battery charger (BRC-30)
IRQ - 3600	Column sound system with <b>Handheld</b> (IRH-30) and <b>Pendant</b> transmitter (IRT-89), with plug-in microphone (LM-300), and dual battery charger (BRC-202)
USQ-301	Unpowered <b>Companion Speaker</b> with mounting bracket and 25' cable
IRC-320	<b>Quantum with Amplifier</b> , infrared receivers, speaker, and mounting bracket

### Additional Accessories

IWS - 50	Infrared wall-mount sensor with 15 receiving diodes for extended IR reception, includes 50 ft. cable with RCA connectors
CC - 300	Soft carrying case case to house the Quantum, speaker stand, charger and microphones
CC - 300	Folding tripod speaker stand for Quantum, extends from 20" to 4.5 feet high

## General Specifications for Drop-In Chargers (BRC-30), (BRC-101), (BRC-202)

Charging Rate:	Optimized for NiMH Battery
Charging Mode:	Switching
Charging Current:	1700 mA $\pm$ 10%
Discharge Rate:	350 ma
LED Indicators:	
Red LED -	Batteries being Charged
Green LED Indicator -	Batteries are Fully Charged
Yellow LED Indicator -	Batteries being Discharged
Recycle Button (Black):	Press to Commence Recycle
Auto Charge Maintenance:	Full Charge Maintenance
Auto Protect (Flashing LEDs)	Non-Rechargeable Batteries
Charging Time:	1.5 - 3 Hrs.
Power Supply:	12 VDC / 1.0 Amp (12 Watt)

### Drop-In Charger (BRC-30) for Body-Pack and Handheld

Charging Ports:	Two Body-Pack and Two Handheld Two Slots for Two "AA" Each
Constant Red LED:	Batteries Being Charged
Audible Alert:	Full Charge - Intermittent Buzzer
Dimensions:	6.5"W x 3.25"D x 1.5"H
Weight:	12.2 Oz.

### Single Insert Charger (BRC-101) for Pendant or Handheld

Charging Ports:	Either a Pendant or Handheld Front Slot for Two "AA"
Flashing Red LED:	Batteries Being Charged
Dimensions:	5"W x 3.75"D x 1.5"H
Weight:	7.4 Oz.

### Dual Drop-In Charger (BRC-202) for Pendant & Handheld

Charging Ports:	Two Pendant and Two Handheld Two Slots for Two "AA" Each
Flashing Red LED:	Batteries Being Charged
Dimensions:	7.5"W x 3.75"D x 1.5"H
Weight:	14.8 Oz.

## IWS-45 Wall Sensor (Optional)

Operating Frequency:	2 MHz - 2.6 MHz
Operating Range:	20 - 30 Feet - Line of Sight
Connection:	RCA
Number IR Diodes:	Fifteen
Reception Angle:	120° Horizontal / 120° Vertical
Power Indicator:	Red LED
Dimensions:	Round - 2.5"D x 1.25"T
Weight:	160 Grams

## IRC-320 Quantum II

### General Specifications

Signal Reception:	Infrared Carrier
No. of IR Channels:	Two
Receiving Range:	60 Foot Line of Sight
Transmission Frequencies:	Channel A: 2.08 MHz Channel B: 2.54 MHz
Infrared Wavelength:	850 nm
Modulation:	FM wide-band
De-Emphasis:	50 $\mu$ S
Frequency Response:	50 Hz - 15 kHz
S/N Ratio:	>65 dB
THD:	1% @ 1 kHz
Nominal Deviation:	10 kHz
Maximum Deviation:	25 kHz
Line Input Level:	1 V / 1 K $\Omega$
Line Output Level:	0 - 2.5 V / 47 K $\Omega$
Line Output Connection:	3.5 mm Mini Jack
External Sensor Input:	Two (RCA)
Amplifier Output Power:	30 Watts
External Speaker Output:	15 W @ 8 $\Omega$
External Speaker Connection:	Two Terminal Phoenix
Power Supply:	12 V / 3.5 A (42 Watt)
Size:	6.25"W x 14"H x 4.75"D
Weight:	4 lbs.

## General Specifications for IR Transmitters (IRB-30), (IRH-30), (IRT-89)

Transmission Carrier:	Infrared Light Ray
Carrier Frequency:	Channel A: 2.08 mHz Channel B: 2.54 mHz
Frequency Select Switch:	Field Serviceable
Modulation:	FM Wide-Band
Pilotone Frequency:	32.768 kHz
IR Wavelength:	850 nm
Peak Deviation:	$\pm$ 25 kHz
No. of Emitting Diodes:	Ten
Comander Circuit:	Yes
Pre-Emphasis:	50 $\mu$ S
Current Consumption:	330 ma
IR Emitter Location:	Front / Top
Range:	30 - 40 Ft.
Power Switch:	Slide Switch "on / off"
Battery Level Indicator - LED:	Green has Useable Charge Red Requires Charge
Rechargeable Batteries:	NiMH, "AA" (Duracell, 2650 mAh)
Battery Life:	Approx. 7 Hrs. / Charge
External Charging Contacts:	Drop-In Charger Compatible

### Pendant IR Transmitter (IRT-89)

Break Away Lanyard:	Adjustable with Safety Clasp
Transmission Angle:	180°
IR Emitter Location:	Front / Top
External Microphone Input:	Top / Center
Microphone Input:	3.5mm Jack, Lo-z
Waist Band Clip:	High Tension Wire
Dimensions:	5.25"H x 1.5"W x 1"D
Weight:	4.0 Oz. with Batteries

### Body-Pack IR Transmitter (IRB-30)

Break Away Lanyard:	Adjustable
Transmission Angle:	180°
IR Emitter Location:	Front / Top
External Microphone Input:	Top / Center
Microphone Input:	3.5mm Jack, Lo-z
Waist Band Clip:	High Tension Wire
Dimensions:	4.375"H x 2.625"W x .75"D
Weight:	4.8 Oz. with Batteries

### Handheld IR Transmitter (IRH-30)

Hand Ergonomics:	Tubular Shape
Transmission Angle:	360°
IR Emitter Location:	Bottom of Housing
Microphone Element:	Unidirectional, Dynamic
Housing:	Painted Aluminum
Dimensions:	9.5"L x 1.5"D
Weight:	11.4 Oz. with Batteries

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