

## IR-800KIT

Infrared wireless microphone classroom k



TOA's educational classroom system brings classrooms to life by providing clear, interference-free voice transmission through wireless technology. Kit 1 Contains:

### Key features

- 1x IR-820SP Y 4Q (Infrared Wireless Speaker)
- 1x IR-802T CU AQ (Infrared Wireless Tuner)
- 1x IR-300M (Infrared Wireless Microphone)
- 1x IR-200BC (Battery Charger for IR-200M and IR-300M)
- 1x IR-210BT-2 (Ni-MH Battery (1 pair)
- 1x HY-TB1 (Support rails for ceiling speaker (1 pair)
- 1x WB-802 (Wall-mount bracket for tuner)
- 1x CAT-5E (50ft. FT6 Category 5 Ethernet Cable)
- 1x CSTEREO-03 (3ft. 3.5mm Stereo Cable)
- 1x ACG36 (3ft. RCA Stereo Cable)

## Specifications

\*0 dB = 1 V

|                          |  |
|--------------------------|--|
| Power Source             | 120 V AC, 50/60 Hz<br>(supplied AC adapter must be used)   |
| Power Consumption        | 8 W (based on UL standards)<br>Max. 40.8 W (rated output at IR-820SP)  |
| Receiving Frequency      | Teacher (Channel A): 3.100 MHz<br>Student (Channel B): 3.350 MHz   |
| Receiver Sensitivity     | 50 dB or more, Signal to Noise ratio (40 dB $\mu$ V input, 1 kHz modulation, $\pm$ 4.8 kHz deviation)  |
| Signal to Noise Ratio    | Tuner: 60 dB or more (60 dB $\mu$ V input, 1 kHz modulation, $\pm$ 4.8 kHz deviation, A-weighted, Equalization: Centered)<br>AUX: 75 dB or more (A-weighted, Equalization: Centered)   |
| Tone Squelch Frequency   | 32.768 kHz   |
| Input                    | AUX PC: line, -10 dB*, 10 k $\Omega$ , unbalanced, stereo mini jack (internal mixing)<br>AUX DVD/TV: line, -10 dB*, 10 k $\Omega$ , unbalanced, 2P RCA jack (internal mixing)<br>AUX MP3: line, -10 dB*, 10 k $\Omega$ , unbalanced, stereo mini jack (internal mixing)<br>Mute: 25 V line signals of telephone paging from a school intercom system |
| Output                   | ALD (Assistive Listening Device): line, -10 dB*, 10 k $\Omega$ , unbalanced, monaural mini jack<br>Speaker: RJ45 (dedicated terminal for IR-820SP connection)  |
| Audio Frequency Response | Tuner: 100 Hz - 12 kHz, AUX: 100 Hz - 20 kHz   |
| Equalization             | High: $\pm$ 10 dB at 10 kHz<br>Mid: $\pm$ 10 dB at 1.3 kHz<br>Low: $\pm$ 10 dB at 100 Hz   |
| Mute Function            | Muted by 25 V line signals   |
| LED Indicator            | Power (green) x 1, Infrared Reception (yellow) x 2, Mute (red) x 1   |
| Operating Temperature    | -10 °C to +50 °C (14 °F to 122 °F)   |
| Operating Humidity       | 90 %RH or less (no condensation)   |
| Finish                   | Panel: Aluminum, black<br>Case: Steel plate, black   |
| Dimensions               | 210 (W) x 46 (H) x 312 (D) mm (8.27 x 1.81" x 12.28")  |
| Weight                   | 1.8 kg (3.97 lb)   |
| Included Accessories     | AC adapter (DC cord length: 1.8 m (5.91 ft) ...1, AC power cord (2m (6.56 ft) ...1, Volume control cover ...6, Removable terminal plug (2 pins) ...1   |
| Optional Accessories     | Half width blank panel: MB-15B-BK  |

### INFRARED WIRELESS MICROPHONE

|                     |  |
|---------------------|--|
| Battery             | Rechargeable battery for the infrared wireless microphone (option) or AA alkaline dry cell battery (2 pieces). |
| Current Consumption | Typ. 250 mA (2.4 V, Power selector switch: N)<br>Typ. 340 mA (2.4 V, Power selector switch: H)                 |
| Infrared Emitter    |  |
| Wavelength          | 850 nm (AM: Brightness modulation)   |

|                                    |  |
|------------------------------------|--|
| Modulation Method                  | Frequency modulation   |
| Carrier Frequency                  | Channel A: 3.100 MHz<br>Channel B: 3.350 MHz   |
| Transmission Distance              | Approx. 20 m (65 ft) (Power selector switch: H, in an unobstructed space)<br>Approx. 15 m (50 ft) (Power selector switch: N, in an unobstructed space)   |
| Tone Signal                        | 32.768 kHz   |
| Modulation Sensitivity             | ±4.8 kHz (1 kHz, when SPL of 84 dB is input)   |
| Maximum Input Sound Pressure Level | 120 dB SPL   |
| Input Sensitivity Adjustment       | Adjustment range: -9 dB to 0 dB (factory preset: 0 dB)   |
| Microphone Element                 | Unidirectional electret condenser microphone   |
| Frequency Response                 | 100 Hz - 12 kHz  |
| Pre-emphasis                       | 300 μs   |
| Input                              | External microphone input (#3.5 monaural mini jack)  |
| Battery Life                       | Approx. 8 h (when the IR-200BT rechargeable battery for the infrared wireless microphone is used, Power selector switch: N)<br>Approx. 6 h (when the alkaline battery is used, Power selector switch: N) |
| Operating Temperature              | 0 °C to +40 °C (32 °F to 104 °F)   |
| Operating Humidity                 | 30 % to 85 %RH (no condensation)   |
| Finish                             | Control section: ABS resin, metallic gray, paint, 50% gloss<br>Filter section: Polycarbonate, optical cut filter   |
| Dimensions                         | 64 (W) x 91.3 (H) x 27.3 (D) mm (2.52" x 3.59" x 1.07")  |
| Weight                             | 130 g (0.29 lb) (with battery and strap)   |
| Included Accessories               | Screw driver (for setting) x 1, Color label (6 colors) x 1   |
| Optional Accessories               | Battery charger: IR-200BC<br>Ni-MH battery: IR-210BT-2 (containing 2 pieces)   |

Do not use battery together with rechargeable or dry batteries of different product numbers.  
Failure to follow this instruction may result in battery leakage or excessive heat generation.

## INFRARED WIRELESS SPEAKER

|                            |   |
|----------------------------|---|
| Power Source               | 24 V DC (supplied from IR-802T)   |
| Power Consumption          | 4.4 W (based on UL standards)   |
| Rated Output               | 20 W  |
| Frequency Response         | 100 Hz - 20 kHz (-10 dB) at installation in 1/2 free sound field<br>(Measured by installing the unit in the center of a ceiling.) |
| Amplification System       | Class D   |
| Distortion                 | 5 % or less (rated output)  |
| Speaker Component          | 12 cm (4.72") cone-type   |
| Infrared Wireless Receiver |   |
| Carrier Frequency          | Channel A: 3.100 MHz Channel B: 3.350 MHz   |
| Compliance/Certifications  | UL60065, UL2043   |
| Mounting Hole              | Ø300 mm (Ø11.81")   |

|                       |  |
|-----------------------|--|
| Cable Requirements    | CAT-5 UTP  |
| Connection Terminal   | RJ-45  |
| LED Indicator         | Power (green) x 1  |
| Operating Temperature | -10 °C to +50 °C (14 °F to 122 °F)   |
| Operating Humidity    | 90 %RH or less (no condensation)   |
| Finish                | Enclosure: Steel plate, plating<br>Baffle: Fire-resistant ABS resin (resin material grade: UL94V-0), white<br>Punched net: Steel plate, white<br>Filter section: Polycarbonate, optical cut filter |
| Dimensions            | Ø320 x 205 (D) mm (Ø12.6" x 8.07")   |
| Weight                | 3.4 kg (7.5 lb)  |
| Included Accessories  | Safety wire x 1, Ceiling reinforcement ring x 1, Trim ring x 1, Paper pattern x 1  |
| Optional Accessories  | Tile bar bridge: HY-TB1  |

|  |  |
|--|--|
| Power Source                                 | AC mains, 50/60 Hz (supplied from the included AC adapter)   |
| Current Consumption                          | Max. 2 A   |
| Charging Time                                | Max. 3 h   |
| Number of Units to be Charged Simultaneously | 2 pieces*  |
| Operating Temperature                        | 0 °C to +40 °C (32 °F to 104 °F)   |
| Operating Humidity                           | 30 % to 85 %RH (no condensation)   |
| Finish                                       | Case: ABS resin, metallic gray, paint, 50 % gloss<br>Microphone receptacle section: PPE resin, black   |
| Dimensions                                   | 238 (W) x 109.5 (H) x 98 (D) mm (9.37" x 4.31" x 3.86")  |
| Weight                                       | 635 g (1.4 lb) (unit only, including mounting adapter (accessory))   |
| Included Accessories                         | Mounting adapter (preinstalled on the unit) ...2, AC adapter (DC cord length: 1.8 m (5.91 ft)(*1) ... 1, Power cord (2 m (6.56 ft)(*1) ... 1 |
| Optional Accessories                         | Ni-MH battery: IR-200BT-2 (containing 2 pieces)  |

\*Using the mounting adapter allows one each of the IR-200M and IR-300M to be charged in combination.  
Note that nickel metal hydride (Ni-MH) batteries other than the dedicated battery IR-200BT cannot be charged.

|                       |   |
|-----------------------|---|
| Nominal Voltage       | 1.2 V DC  |
| Capacity              | Min. 2400 mAh   |
| Operating Temperature | 0 °C to +40 °C (32 °F to 104 °F)                        |
| Operating Humidity    | 30 % to 85 % RH (no condensation)                       |
| Dimensions            | Ø14.5 x 50.5 mm (Ø0.57 x 1.99")                         |
| Weight                | 30 g (1.06 oz) (per piece)                              |
| Compatible Model      | Infrared wireless microphone: IR-200M, IR-300M, IR-310M |
| Finish                | Steel plate, plating                                    |
| Weight                | 500 g (for set of 2 bars)                               |

|            |   |
|------------|---|
| Finish     | 18 Gauge (0.048") cold rolled steel with black powder coat finish |
| Dimensions | 212 (W) x 329 (H) x 158 (D) mm (8.35" x 12.95" x 6.22")           |
| Weight     | 1.5kg (3.2 lb)  |