TOA

Infrared Wirelss Classroom System

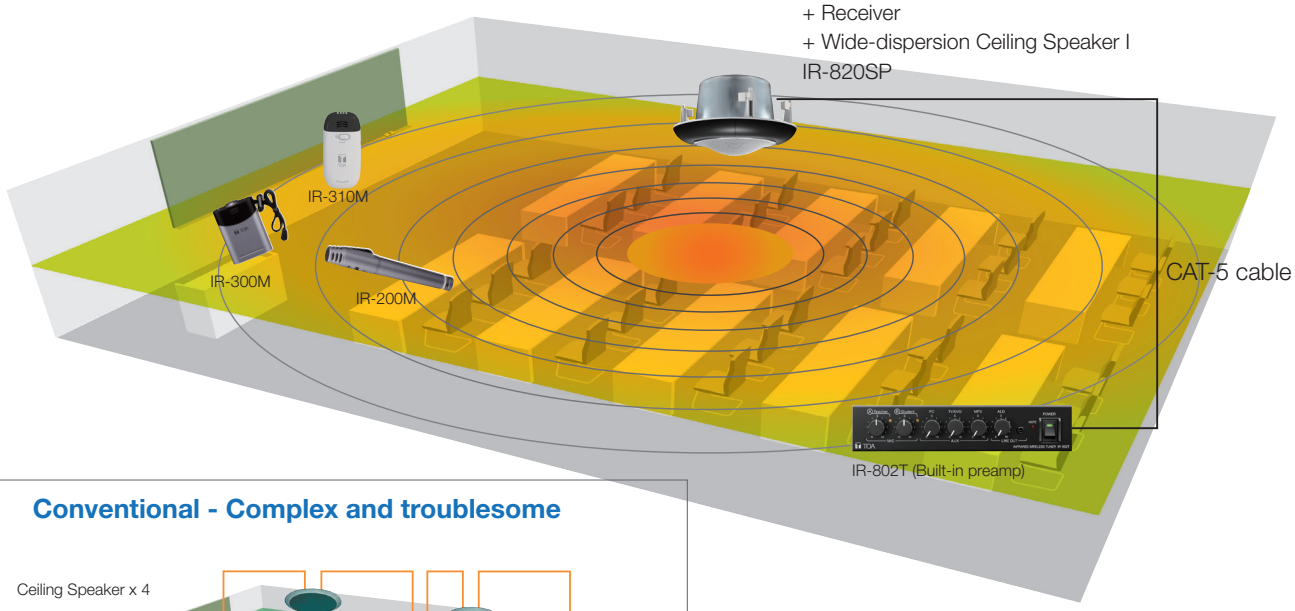
Enrich Your Students‘ Learning Experience with
Remarkably Clear, Easily Audible
Classroom Communication.

TOA's educational microphone interference-free infrared voi

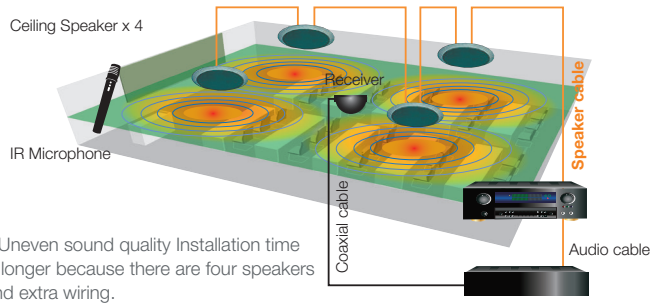
TOA innovative all-in-one solution - simple and easy

- Uniform classroom-wide sound quality with single wide-dispersion speaker
- Minimized system components (tuner, 2 microphones and integrated speaker)
- Quick, easy installation requiring just one CAT-5 cable.
- Selection of three TOA lightweight, low-fatigue IR wireless microphones
- System expandable with optional interface unit for external device control and paging operations

TOA IR Classroom System - Simple and easy



Conventional - Complex and troublesome



- Uneven sound quality Installation time is longer because there are four speakers and extra wiring.

- Uniform sound quality throughout the classroom through one speaker Quick and easy installation using one CAT-5 cable.

system offers wireless convenience and clear, ce transmission that brings classrooms to life.

Assembled specifically for classroom use, TOA's new Infrared Wireless Classroom System includes a ceiling-mounted wide-dispersion speaker (with integrated receiver and amplifier), an easily accessed desktop tuner and a pair of lightweight IR wireless microphones, one each for the teacher and students.

The system is tailored to classroom size, moreover, thus avoiding unnecessary equipment installation. The wide-dispersion speaker provides ample 30 ft x 30 ft coverage, transmitting teachers' and students' normal speaking voices to everyone in the room, from front to back, with equal clarity and TOA's renowned superior sound quality. The resulting easy interactive communication stimulates students and improves their understanding of the course content.

IR-820SP
Infrared Wireless Speaker

- Built-in infrared receiver and 20W digital amplifier
- Unique wide-dispersion acoustic structure employing innovative TOA technology to achieve uniform output over a wide radius
- Bass-reflex speaker system achieving a wide frequency range and high power-handling capability
- Easy installation with quick, optimally positioned ceiling mounting

IR-802T
Infrared Wireless Tuner

- 3 AUX inputs for PC, TV/DVD player and MP3 audio player
- Output muting by 25 V line signal from telephone paging
- Equalizer control knobs for low-, mid- and high-frequency outputs
- Mixing output terminal for ALD (Assistive Listening Device)
- Frequency response optimized to reduce acoustic feedback in 30 ft x 30 ft classrooms

IR-310M Infrared Wireless Microphone (for Teacher/Student)

- Usable as hands-free or hand-held microphone
- Lightweight body with unobtrusive styling
- 8-hour operation with single AA battery
- Microphone sensitivity adjustable to suit application
- Sturdy clothing clip to prevent wobbling or rotation during hands-free use

IR-200M Infrared Wireless Microphone (for Student)

- Designed for stable voice transmission, with 2 infrared emitters positioned on the body to avoid accidental interference by a hand holding the microphone
- 2-level adjustable infrared light emission intensity
- Lightweight body keeps hands from tiring, even during long hours of use (0.37 lb with 2 alkaline batteries).
- Antibacterial treatment

IR-310BC
Battery Charger (for IR-310M)

- Dedicated battery charger for IR-310M
- Anti-overcharging design

IR-300M Infrared Wireless Microphone (for Teacher)

- Easy-to-wear, neck-suspension design permitting immediate use
- 2-level adjustable infrared light emission intensity
- Lightweight body can be worn for long periods of time without causing fatigue (0.29 lb with 2 alkaline batteries)
- Usable as transmitter for external microphone
- Antibacterial treatment

Optional External Microphones (for IR-310M/300M)

YP-M101
Tie-clip
Microphone

YP-M301
Headset
Microphone

IR-200BT-2 Ni-MH Batteries

Ni-MH AA rechargeable batteries for Infrared Wireless Microphones.

IR-200BC Battery Charger (for IR-200M/300M)

- Rapid-charging function permitting simultaneous charging of 2 infrared microphones within 3 hours (max.)

*0 dB = 1 V

	IR-820SP Infrared Wireless Speaker
Power Source	24 V DC (supplied from IR-802T)
Power Consumption	4.4 W (based on UL standard)
Rated Output	20 W
Frequency Response	100 Hz – 20 kHz (-10 dB) at installation in 1/2 free sound field (Measured by installing the unit in the center of a ceiling.)
Amplication System	Clase D
Distortion	5 % or less (rated output)
Speaker Component	12 cm (4.72") cone-type
Infrared Wireless Receiver	
Wavelength	870 nm
Carrier Frequency	Channel A (for teacher) : 3.100 MHz Channel B (for students) : 3.350 MHz
Reception Angle	360° (Horizontal)
Connection Terminal	RJ-45
LED Indicator	Power (green) x 1
UL Code	UL60065, UL2043
Mounting Hole	ø 300 mm (11,81")
Usage Cable	CAT-5 UTP
Operating Temperature	-10 °C to +50 ºC
Operating Humidity	90% RH or less (no condensation)
Finish	Enclosure : Steel plate, plating Baffle : Fire-resistant ABS resin (resin material grade: UL94 V-0), white Punched net : Steel plate, white Filter section : Polycarbonate, optical cut filter
Dimensiones	ø320 x 205 (D) mm
Weight	3.4 kg
Accessories	Safety wire x 1, Ceiling reinforcement ring x 1, Trim ring x 1, Paper pattern x 1
Option	Tile bar bridge: HY-TB1

	IR-802T Infrared Wireless Tuner (CE-GB version)
Power Source	120 V CA, 50/60 Hz (se debe usar el adaptador de CA suministrado)
Power Consumption	8 W (based on UL standards) Max. 40.8 W (rated output of IR-820SP)
Receiving Frequency	Teacher (Channel A): 3.100 MHz Student (Channel B): 3.350 MHz
Receiver Frequency	50 dB or more, Signal-to-noise ratio (40 dBμV input, 1 kHz modulation, ±4.8 kHz deviation)
S/N Ratio	Tuner: 60 dB or more (60 dBμV input, 1 kHz modulation, ±4.8 kHz deviation, A-weighted, Equalization: Centered) AUX: 75 dB or more (A-weighted, Equalization: Centered)
Tone Squelch Frequency	32.768 kHz
Input AUX PC:	line, -10 dB*, 10 kΩ, unbalanced, stereo mini jack (internal mixing)
AUX DVD/TV:	line, -10 dB*, 10 kΩ, unbalanced, 2P RCA jack (internal mixing)
AUX MP3:	line, -10 dB*, 10 kΩ, unbalanced, stereo mini jack (internal mixing)
Mute:	25 V line signals of telephone paging from a school intercom system)
Output	ALD (Assistive Listening Device): line, -10 dB*, 10 kΩ, unbalanced, monaural mini jack Speaker: RJ45 (dedicated terminal for IR-820SP connection)
Frequency Response	Tuner: 100 Hz - 12k Hz, AUX: 100 Hz - 20k Hz
Equalization	High: ±10 dB at 10 kHz/Mid: ±10 dB at 1.3 kHz/Low: ±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 ºC
Operating Humidity	90% RH or less (no condensation)
Finish	Panel: Aluminum, black/Case: Steel plate, black
Dimensions	210 (W) x 46 (H) x 312 (D) mm
Weight	1.80 kg
Accessories	AC adapter(DC cord length: 1.8 m) x 1, AC power cord (2 m) x 1 Volume control cover x 6, Removable terminal plug (2 pins) x 1
Option	Half-width blank panel: MB-15B-BK

	IR-310M Infrared Wireless Microphone	IR-300M Infrared Wireless Microphone	IR-200M Infrared Wireless Microphone
Batteries	One piece of IR-200BT-2 rechargeable battery for the infrared wireless microphone (option)	IR-200BT-2 rechargeable batteries for the infrared wireless microphone (option) or AA alkaline dry cell batteries (2 pieces)	
Current Consumption	typ.215 mA (1.2 V)	typ.250 mA (2.4 V, Power selector switch: N)/typ.340 mA (2.4 V, Power selector switch: H)	
Infrared Emitter			
Wavelength	870 nm (AM: Brightness modulation)		
Modulation Method	Frequency modulation		
Carrier Frequency	Channel A: 3.100 MHz/Channel B: 3.350 MHz		
Transmission Distance	Approx. 15 m (in an unobstructed space)	Approx. 20 m (Power selector switch: H; in an unobstructed space) Approx. 15 m (Power selector switch: N; in an unobstructed space)	
Maximum Input Sound Pressure	120 dB SPL		
Input Sensitivity Adjustment	Adjustment range: 2 levels (High, Low)	Adjustment range: -9 dB to 0 dB (factory-preset: 0 dB)	-
Microphone Unit	Unidirectional electret condenser microphone		
Frequency Response	100 Hz – 12 kHz		
Preemphasis	300 μs		
Input	External microphone input (ø3.5 monaural mini jack, phantom powered)		-
Battery Operation Time	Approx. 8 hours (one piece of IR-200BT-2)	Approx. 8 hours (IR-200BT-2, Power selector switch: N) Approx. 6 hours (Alkaline batteries, Power selector switch: N)	
Operating Temperature	0 ºC to + 40 ºC		
Operating Humidity	90 % RH or less (no condensation)	30 % to 85 %RH	
Finish	Control Section: ABS resin, white/Filter Section: Polycarbonate, optical cut filter	Control Section: ABS resin, metallic gray, paint, 50% gloss Filter Section: Polycarbonate, optical cut filter	
Dimensions	54.2 (W) x 109 (H) x 27 (D) mm	64 (W) x 91.3 (H) x 27.3 (D) mm	ø 37 x 241.8 (H) mm
Weight	95 g (with battery and strap)	130 g (with battery and strap)	170 g (with battery)
Accessories	Neck strap x 1	Screw driver (for setting) x 1, Color label (6 colors) x 1	

	IR-310BC Battery Charger	IR-200BC Battery Charger
Power Source	AC mains 50/60 Hz (supplied from the incfluded AC adapter)	
Power Consumption	Max.: 2 A	
Charging Time	Max.: 3 h	
Number of Wireless Microphones to be Charged Simultaneously	1 piece	2 pieces*
Operating Temperature	0 °C to +40 ºC	
Operating Humidity	90 % RH or less (no condensation)	30 % to 85 % RH (no condensation)
Finish	Control section: PPE resin, White	Case: ABS resin, metallic gray, paint, 50% gloss Microphone receptacle section : PPE resin, black
Dimensiones (W) x (H) x (D)	76 x 75.5 x 60 mm	238 x 109.5 x 98 mm
Weight	105 g	635 g (unit only, including mounting adapter(accessory))
Accessories	AC adapter x 1, Power cord x 1	AC adapter (DC cord length: 1.8 m) x 1, Power cord (2 m) x 1, Mounting adapter (preinstalled on the unit) x 2
Option	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

TOA Corporation
www.toa.jp

Specifications are subject to change without notice. (202008) 833-61-789-5C