IR-820SP Y

INFRARED WIRELESS SPEAKER

The Infrared Wireless Microphone System using this IR-820SP is a PA system designed for use in the school classrooms assuming that their size is about 10 m. The IR-820SP is a ceiling-mounted powered speaker with the infrared receiver and offers a wide frequency range of high-quality sound output. It features a digital amplifer for the amplification section, and a full-range speaker for the speaker section. Use of the supplied mounting hardware and optional HY-TB1 Tile Bar Bridge permits it to be versatilely mounted to match a wide range of applications and installation locations. This speaker is combined with an infrared wireless microphone and the IR-802T Infrared Wireless Tuner to make up the infrared wireless microphone system. The infrared microphone system eliminates problems with interference or eavesdropping, allowing simultaneous use in adjacent school classrooms.

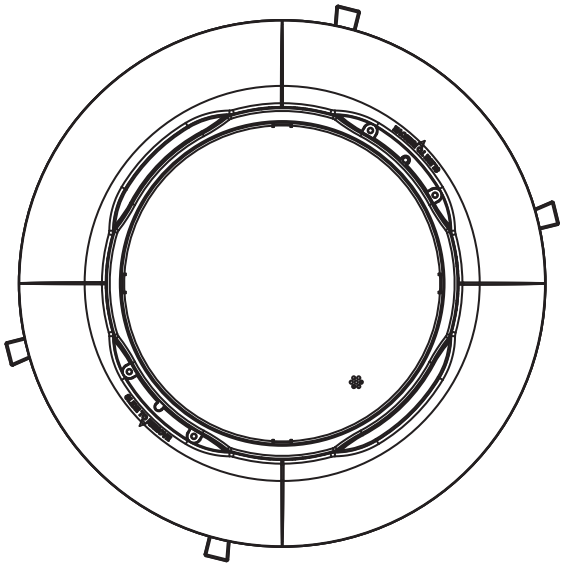
Key features

- Built-in infrared receiver and 20 W digital amplifier
- Unique wide-dispersion acoustic structure guarantees 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

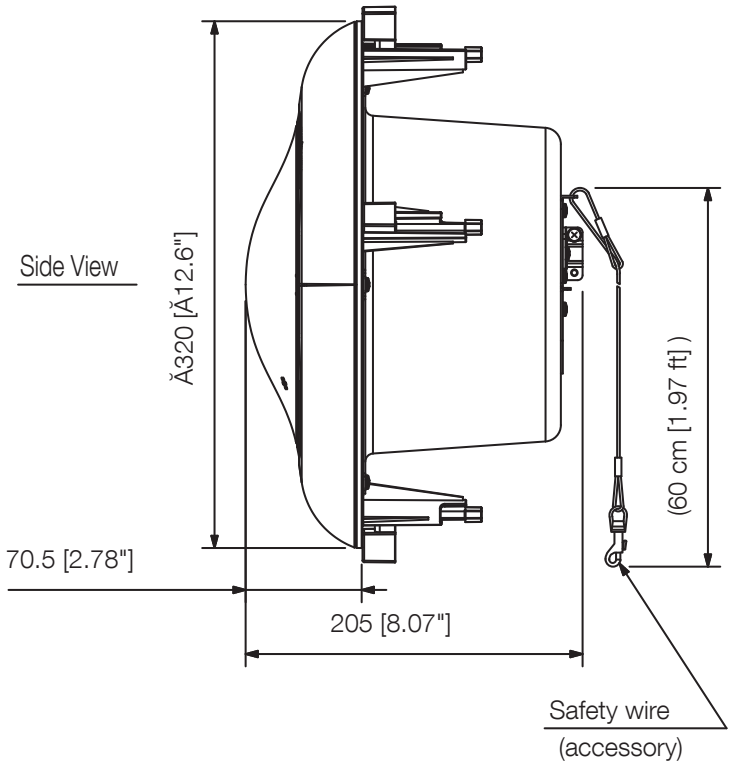
Specifications

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 (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
Connection Terminal	RJ-45
LED Indicator	Power (green) x 1
Compliance/Certifications	UL60065, UL2043
Mounting Hole	Ø300 mm (Ø11.81")
Cable Requirements	CAT-5 UTP
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 Baffle: Fire-resistant ABS resin (resin material grade: UL94V-0), white Punched net: Steel plate, white 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 …1, Ceiling reinforcement ring …1, Paper pattern …1
Optional Accessories	Tile bar bridge: HY-TB1

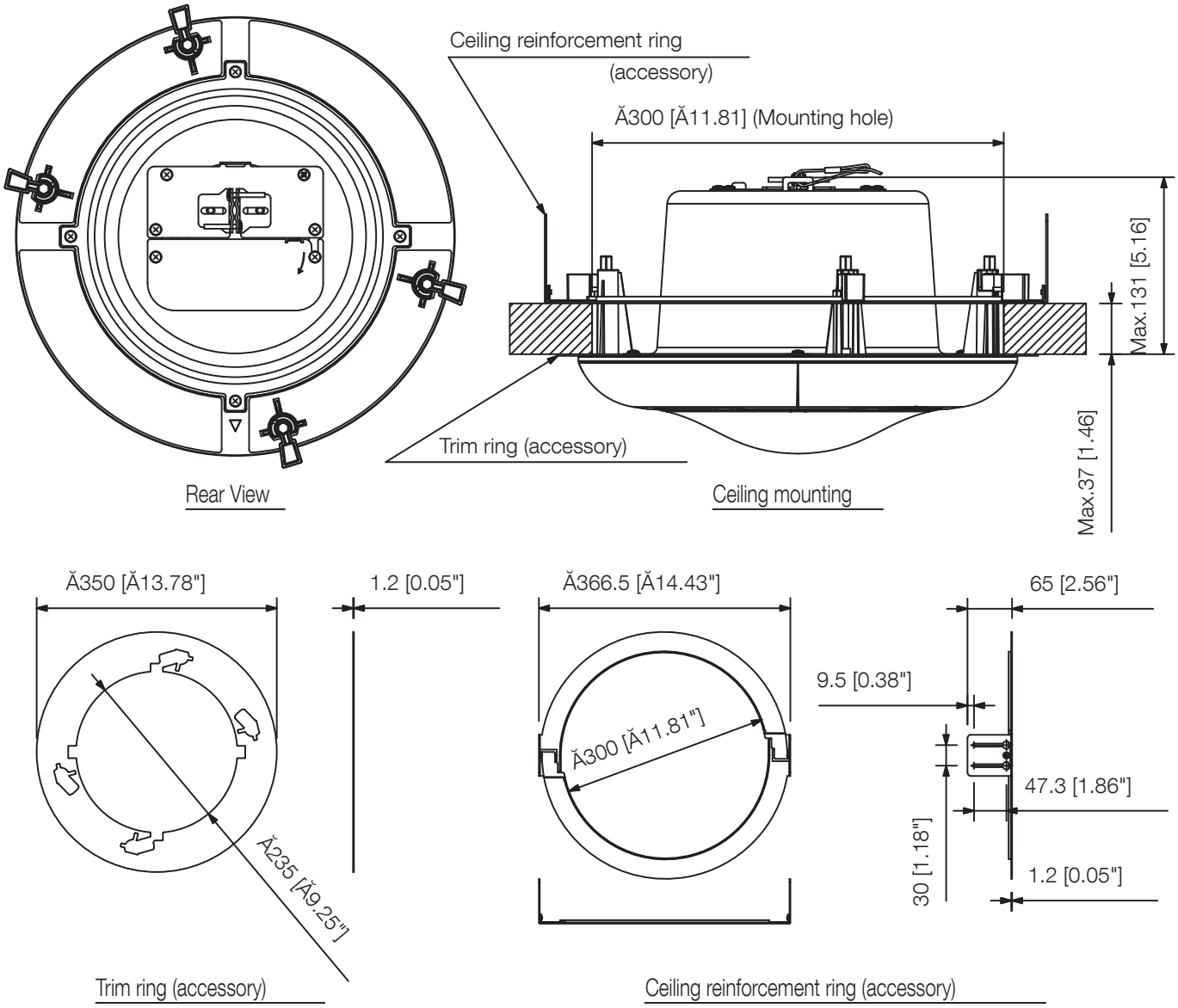
Dimensions



Front View



Dimensions



UNIT:mm SCALE:1/5 Note: The dimensions related to the antennas apply only to EA version of the Wireless sets.

A&E specifications

The IR-802 wireless system shall also consist of an integrated Powered Speaker & IR Sensor. The speaker shall be an in-ceiling type consisting of a 5” low-frequency driver & 1” coaxially mounted high-frequency driver housed in a UL plenum-rated metal back-can with a perforated metal grille. The speaker shall generate sound with a dispersion angle of 170° within the vocal range and provide high intelligibility for typical 30’ x 30’ classroom environments. The unit’s housing shall measure 12.6” in diameter and 8.1” in depth and shall weigh 7.5 lbs. The speaker shall be powered by an internal Class D amplifier, producing a maximum output of 20W with less than 5% distortion. The unit shall also incorporate an integrated IR sensor array configured around the front speaker grill and will be fitted with a matte-finished, dark-tinted plexi-glass cover. The IR sensor will provide 360° angle of coverage and transmit signals received on both IR channels. The rear-can connection shall be an RJ-45 type mounted in a recessed well behind a hinged cover plate. The unit will connect to the IR-802T via standard CAT5 cable, which will transmit the IR sensor signals to the tuner/mixer, as well as the input audio and DC power signal to the speaker. The unit shall be supplied with a standard reinforcement trim ring and detachable steel safety cable. An optional tile bridge kit (HY-TB1) will also be available. The unit shall be called the TOA IR-820SP.