TOA Electronics, Inc.

Architects & Engineering Specifications for IR-700 Wireless System

IR-702T IR Wireless Tuner

The IR wireless system shall consist of an IR (Infra-Red) tuner in a 1U, ½ rack housing measuring 8.3" (W) x 1.7" (H) x 8.3" (D) and weighing 1.4 lbs. The unit is capable of being rack-mounted via an optional rack kit (MB-WT3). The tuner shall operate on two independent channels, each selectable to one of two available IR frequencies in the 3 mHz range (3.10 & 3.35 mHz). Each channel shall have an independent front panel output level control and corresponding ¼" output connector, one of which can function as a mix of both channels. The rear panel shall also have two BNC-type connectors for remote IR receivers, each supplying 24VDC for receiver operation. The unit shall power from a supplied external 24VDC power adapter and shall consume a max of 15W.
The unit shall be called the TOA IR-702T.

IR Wireless Transmitters

There shall be two available IR microphone transmitters. Each will be capable of operating on one of two selectable IR frequencies in the 3 mHz range (3.10 & 3.35 mHz) and two of either model (or one of each) can operate simultaneously with a single IR-702T Tuner in a given (optically isolated) location. Each transmitter will also be capable of operation on either two AA alkaline batteries or two rechargeable AA NiMH batteries for continuous operation of up to 10hrs. Both transmitter units shall have gold-plated charging contacts on the bottom portion of the casing and may be charged by direct insertion into an optional battery charging station.

IR-200M Handheld IR Wireless Microphone

The hand-held-style transmitter model shall be housed in a cylindrical ABS plastic case measuring 1.3" (W) x 5.8"(H) x 0.4" (D) & weighing .4 lbs (incl. batteries). It shall include an integrated uni-directional condenser microphone for maximum gain-before-feedback. There shall be an array of multiple IR LEDs at the front of the housing and one LED at the rear to facilitate clear transmission regardless of vertical orientation. There shall be an accessible on/off switch on the barrel of the transmitter. The lower portion of the case shall slide open to allow access to the battery compartment and controls for frequency select. There shall also be a switch to select Hi or Low transmission output for compensating for operating distance or battery life. The unit shall have a frequency response of 100Hz to 12kHz and can accept a maximum Sound Pressure Level of 120dB. The unit shall be treated with an anti-bacterial coating to help reduce the likelihood of transmitting common bacterial agents from user to user.

The unit shall be called the TOA **IR-200M**.

IR-300M Pendant IR Wireless Microphone

The pendent-style transmitter model shall be housed in an ABS plastic case measuring 2.5" (W) x 3.6" (H) x 1.1" (D) & weighing .3lbs (incl. batteries & strap). It shall include an integrated omni-directional microphone and also an input for use with an external lapel or headset mic via a 3.5mm mini-jack. There shall be an array of multiple IR LEDs at the front of the housing to facilitate clear transmission. There shall be an internal switch for selecting sensitivity for use with different external microphones. The unit shall have a frequency response of 100Hz to 12kHz and can accept a maximum Sound Pressure Level of 120dB. The unit shall be treated with an anti-bacterial coating to help reduce the likelihood of transmitting common bacterial agents from user to user.

An integrated nylon lanyard allows the pendent to be comfortably worn around the user's neck.

The unit shall be called the TOA **IR-300M**.

IR Receivers
There shall be three available IR Wireless receivers (or "sensors"). All shall include a BNC-type jack for connection via coaxial cable to the IR-702T or IR-700D distributor. They shall operate from 24VDC power received from the IR-702T Tuner.

IR-500R IR Wireless Receiver
The wall-mount receiver shall be housed on a metal back plate and fitted with a dark tinted plexiglass cover with overall dimensions of 3.0" (W) x 4.7" (H) x 2.8" (D) and weighing .5 lbs. The unit shall have a BNC-type jack for connection to the IR-702T Tuner from which it will also receive 24VDC power. The receiver shall be capable of being installed in a single-gang electrical circuit box and is equipped with power indicator LED. The receiver shall have a reception area of up to approximately 49' line of sight and shall have an internally adjustable infrared light reception angle of between 50° & 80° both horizontally & vertically. The receiver shall also include a wall-mounting bracket.
The unit shall be called the TOA **IR-500R.**

IR-510R IR Wireless Receiver
The ceiling-mount receiver shall be housed on a circular metal back plate and fitted with a dark tinted plexiglass dome cover with overall dimensions of 4 .7 " (W) x 2.8" (H) x 0.5" (D) and weighing .5 lbs. The unit shall have a BNC-type jack for connection to the IR-702T Tuner from which it will also receive 24VDC power and shall be equipped with power indicator LED. The receiver shall have a reception radius of up to approximately 26' line of sight and a coverage angle of 360°.
The unit shall be called the TOA **IR-510R.**

IR-520R IR Wireless Receiver
The stand-mount receiver shall be housed on a rectangular metal back plate and fitted with a dark tinted plexi-glass dome cover with overall dimensions of 33 .3" (W) 2.5" (H) x 1.3" (D) and weighing .2 lbs. The unit shall have a BNC-type jack for connection to the IR-702T Tuner from which it will also receive 24VDC power and shall be equipped with power indicator LED. The receiver shall have a reception area of up to approximately 49' line of sight.
The unit shall be called the TOA **IR-520R.**

IR-700D IR Distributor
There shall be an available active IR receiver distributor for allowing expansion of the number of IR receivers in larger spaces. The unit shall be housed in a 1U ½ rack case, with dimensions of 8.3" (W) x 1.7" (H) x 7.9" (D) and weighing 1.4 lbs and shall be capable of being rack mounted with an optional kit (MB-WT3/MB-WT4). The unit shall be equipped with (4) 75 Ohm BNC-type receiver mixing inputs and (2) 75 Ohm BNC-type distribution outputs. The unit shall allow for use of up to 16 IR receivers in any combination when used in conjunction with the IR-702T and up to four passive distributor adaptors (models YW-1022/1024). The unit shall be powered by a supplied 24VDC external power adapter and shall consume a max of 25W.
The unit shall be called the TOA **IR-700D.**

IR-200BC IR Microphone Charging Station
There shall be an available "table-top" charging station housed in an ABS plastic case which shall have dimensions of 9.4" (W) x 4.3" (H) x 3.9" (D) and weigh 1.4 lbs. The unit shall have two top-oriented charging bays to accommodate either the IR-200M or IR-300M (with a supplied adapter). The unit shall be powered via a 24VDC power adapter and shall consume a max of 2A.
The unit shall be called the TOA **IR-200BC.**

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