Dialog 20 USB

Architectural and Engineering Specification

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2 Channel Wireless Microphone System

Architect's and Engineer's Specification

Wireless Microphone System

The 2 Channel Wireless Microphone system shall consist of a Receiver and four different Transmitter microphones. The system shall use a globally accepted 2.4GHz RF frequency band. The RF frequency shall be 2.4GHz to 2.483GHz. The RF range shall be 30 meters line of sight and audio latency shall be less than 4 ms. The system shall operate on multiple frequencies using AFHSS technology. The system shall have 128-bit AES encryption for transmitting wireless audio from Transmitters to Receiver. The system shall have a frequency response of 20 Hz to 20 kHz, with audio sampling of 24-bit, 48 kHz and a SNR of 109 dB(A). The system shall use RF output power of 1 mW, 10 mW which are country specific. It shall have different types of Transmitters—Boundary or Tabletop, Gooseneck or Podium, Handheld and Beltpack. Each transmitter shall be synchronized with a receiver module to operate. The system shall have a separate docking station to charge the Transmitters with NiMH rechargeable field replaceable AA batteries. It shall have a software application for configuring, monitoring, and troubleshooting.

Wireless Receiver

The Wireless Receiver unit shall act as a base station to receive wireless audio from the transmitter microphones. It shall have 2 channels of receive modules with color LCD displays to display the channel related details. It can connect to any audio device via professional XLR and 1/4-inch TRS balanced analog outputs.

The Receiver shall have dipole antennas with a removable option to extend the distance by up to 25 feet from the Receiver using coaxial cables. The receiver shall have an option to mount the dipole antennas on the front of the receiver or using antenna mount rack ears.

The receiver shall have a ¼" TRS audio port for headphone/mixed audio output. It shall have a 2 in and 2 out GPIO port with a Gnd and 3 Vdc Euroblock connector. The receiver shall have a USB Type C port to support USB audio output and connectivity for remote control and firmware updates. The receiver shall be powered through either the USB port using 5 Vdc or the Plink PoE port using 48 Vdc. The receiver shall connect via Plink to a ClearOne CP2 DSP mixer for power, audio, and control. It shall consume less than 2 Watts power. The Receiver unit shall be mountable in a standard 19" Rack using a rack shelf.

There shall be an audio redundant mode where the audio from slot 2 shall be able to pass through slot 1 uninterrupted when two transmitters are used for one presenter. The receiver unit shall be able to load and store presets. The receiver unit shall have a dimmable color LCD display with options to stay bright or dim after the pairing process.

The receiver shall have a status LED for displaying the transmitter state (on/off/mute). The receiver shall have a tour mode feature where the same audio encryption key can be programmed into multiple receiver channels to allow one transmitter to communicate with multiple receivers. The receiver shall have an email alert system to notify a low battery state of a transmitter unit.

Wireless Transmitters

The system shall have different Transmitter types – Boundary or Tabletop, Gooseneck or Podium, Handheld and Beltpack.

Boundary or Tabletop Transmitter shall have Omni or Cardioid microphone SKUs to choose from. It shall use 2 AA NiMH rechargeable or Alkaline batteries. The batteries shall be field-replaceable. This transmitter shall fit into the Docking Station for recharging when the transmitter is installed with NiMH rechargeable batteries in its battery compartment. It shall have maximum 12 hours of talk time when it is fully charged. This transmitter shall have a programmable mute button (toggle/PTT–Push to Talk/PTM–Push to Mute), programmable slide switch (on/off/mute) and LED indicator. This transmitter shall have an option to power through a micro-USB port as an additional way of charging. This transmitter shall have a RF standby mode to improve battery life. This transmitter shall have an RF power of 1, 10 mW. The transmitter shall allow firmware to be field upgraded using Software.

Gooseneck or Podium Transmitter shall have a Cardioid microphone with modular length goosenecks 6”, 12” and 18” to choose from. It shall use 4 AA NiMH rechargeable or Alkaline batteries. The batteries shall be field-replaceable. This transmitter shall have a battery cassette to hold and recharge the batteries. The battery cassette shall fit into the Docking Station for recharging when it is installed with NiMH rechargeable batteries in its battery compartment. It shall have maximum 15 hours of talk time when it is fully charged. This transmitter shall have a programmable mute button (toggle/PTT/PTM), programmable slide switch (on/off/mute) and LED indicator. This transmitter shall have an option to power through micro-USB port as an additional way of charging. This transmitter shall have an RF power of 1, 10 mW. This transmitter shall allow firmware to be field upgraded using Software. This transmitter shall have key slots in the base to allow for permanent mounting in the table or podium.

Handheld Transmitter shall have interchangeable mic heads with an option to choose cardioid electret or super cardioids dynamic mic head SKUs. It shall use 2 AA NiMH rechargeable or Alkaline batteries. The batteries shall be field-replaceable. This transmitter shall fit into the Docking Station for recharging when the transmitter is installed with NiMH rechargeable batteries in its battery compartment. It shall have maximum 12 hours of talk time when it is fully charged. This transmitter shall have a programmable slide switch (on/off/mute) and an OLED display to show transmitter related information. This transmitter shall have an option to power through micro-USB port as an additional way of charging. This transmitter shall have an RF power of 1, 10mW. This transmitter shall allow firmware to be field upgraded using Software.

Beltpack Transmitter shall have a TA4 connector for use with lavalier, headset or lanyard microphones. It shall use 2 AA NiMH rechargeable or Alkaline batteries. The batteries shall be field-replaceable. This transmitter shall fit into the Docking Station for recharging when the transmitter is installed with NiMH rechargeable batteries in its battery compartment. It shall have maximum 12 hours of talk time when it is fully charged. This transmitter shall have a programmable slide switch (on/off/mute) and an OLED display to show transmitter related information. This transmitter shall have an option to power through micro-USB port as an additional way of charging. This transmitter shall have an RF power of 1, 10 mW. It shall have an external whip antenna. It shall have a reversible belt clip. This transmitter shall allow firmware to be field upgraded using Software.

Docking Station

The system shall have a Docking Station to hold and charge all types of Transmitters that have NiMH rechargeable batteries installed. Typical charging time to fully charge the batteries shall be 8 hours for 2AA Transmitters and 16hours for 4AA Transmitters. Up to 8 transmitters of any type shall be charged at the same time.

Remote Extension Antennas

The system shall have a remote antenna option to extend the antennas a maximum of 25 feet from the receiver base. The remote antennas shall be wall, ceiling or mic stand mountable. The antennas shall be ½ wavelength dipole with TNC connectors.

Wireless Software

Software shall provide for configuring and adjusting system parameters within each hardware unit and with a daisy-chained system. Software shall operate on a PC computer with USB port, running Windows 7 and up. The software shall provide configuration options for setting transmitter audio preamp gain, RF standby mode, transmit power, and button programming. The software shall have an option for an RF scan feature when connected with a Receiver. The software shall have an option to configure the wireless mics system alerts when connected with a Receiver. The software shall allow configuration of multiple receivers when connected via Plink. The software shall perform firmware updates to the Receiver and Transmitters.

Compliance

The 2 Channel Wireless Microphones system shall be compliant with FCC, IC and CE.

The Receiver shall be UL2043 Plenum rated.

Warranty

Warranty for the system shall be 3 years.

Conclusion

The 2 Channel Wireless Microphone system shall be Dialog 20 USB Microphone system.

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