

Architect and Engineer Specifications

Bogen UHF8011BP and UHF8011HH Wireless Microphone Systems

The wireless microphone system shall be of professional quality and offer 1,440 user-selectable phase-locked loop (PLL) frequencies in the UHF 470-960 MHz band. The system shall consist of a half-rack wide UHF receiver coupled with either a body-pack transmitter with lavalier microphone (UHF8011BP) or a wireless handheld microphone (UHF8011HH). Available system options shall include an Antenna Distribution System (UHFADS), remote powered Antenna Signal Amplifier (UHFASA), passive Unidirectional Antenna (UHFUDA), Dual Microphone Charging Dock (UHFDCD), Headset Microphone (UHFHSMB), and Single/Dual Receiver Unit Rack Mount Kit (RPK900). The system shall be FCC and UL/CE listed with a minimum one-year manufacturer's warranty.

Wireless UHF Receiver

The Wireless UHF Receiver shall be a Bogen UDR8011 and shall offer 1,440 user-selectable frequencies in the UHF 470-960 MHz band, provide a minimum 105 dB(A weighted) Signal/Noise Ratio and be capable of operating up to 500 ft. line-of-sight. The receiver shall also meet the following minimum operational specifications: 36MHz Bandwidth, <0.6% @ 1KHz Total Harmonic Distortion (Thd), -95 dBm (S/N > 80 dB) Receiving Sensitivity, >80 dB Rejection Ratio, and 50Hz ~ 16 KHz \pm 2dB Frequency Response.

The receiver shall support antenna diversity for maximum range and dropout protection. The receiver's front panel shall provide a toggle on/off power button along with an easy-to-read LCD screen to display the system information. Up/down/set buttons shall be provided to change system settings, parameters, and volume. A lock button shall be provided to lock the front panel control buttons. A sync button with corresponding sync indicator shall allow users to pair the transmitter after modifying any system parameter and display the current pairing status. The receiver shall utilize an ultrasonic sync transmission element that transmits digital pairing data at an ultra-sonic frequency with an effective direct line-of-sight range of at least 30° on both sides off-axis with the maximum distance of 12".

The receiver shall provide the following rear panel connections: one (1) BNC connection for a $1/2 \lambda$ antenna; one (1) 1/4" TS unbalanced audio output jack; one (1) 3-pin male XLR balanced audio output jack; one 12-15V DC / 300mA power supply socket; and one (1) strain relief securement for the DC power cable. The wireless receiver shall be powered from the AC mains using a supplied AC-DC adapter with power consumption of 300 mA (12VDC). Unit construction shall be steel, painted dark gray, with dimensions being 8.35" (W) x 1.5" (H) x 5.6" (L) and with a weight of 1 lb. (antennas detached). Up to two units shall be rack-mountable in one standard 19" rack 1U height using an available optional rack mount kit.

Wireless UHF Handheld Microphone

The handheld (HH) wireless UHF microphone shall be a Bogen UHT8011 and possess a sleek housing measuring 10-1/2" long x 2" diameter and weighing no more than 10 oz. (without batteries) with an internal antenna for optimum aesthetics and durability. The HH microphone shall incorporate a unidirectional dynamic cartridge for optimum sound, maximum feedback rejection, and minimal handling noise. The HH microphone shall possess an audio mute switch that allows convenient audio muting while leaving the transmitter "ON". The HH microphone shall also provide a power indication LED and LCD status information display. The microphone shall be designed to provide convenient, economical operation using two (2) AA alkaline or NiMH batteries (not included).

The HH microphone shall provide mute, auto off, sensitivity adjustment, group, channel, and frequency functions via power, mute, set up/down, and button lock controls. The HH microphone shall also meet the following minimum operational specifications: Phase-locked loop (PLL) Frequency Mode; 470-960 MHz frequency range; 10mW / 50mW RF Power Output; $< \pm 10$ KHz @ Fc Frequency Stability; ± 48 KHz Modulation Frequency; and < -50 dBc Harmonic Radiation.

Wireless UHF Body-Pack Transmitter with Lavalier Microphone

The UHF body pack transmitter shall be the Bogen UBP8011 coupled with the Bogen BCLM1 lapel style lavalier (LL) microphone. The UHF body pack transmitter shall measure 2-1/4" W x 4" H x 1" D and weigh no more than 2.8 oz. (without batteries). The LL microphone shall incorporate a 4-pin, mini-XLR connection for connecting to the LL microphone's mini-XLR cable. The LL microphone shall provide an audio mute switch that allows convenient audio muting while leaving the transmitter "ON". The LL microphone shall also provide a power indication LED and LCD status information display. The microphone shall be designed to provide convenient, economical operation using two (2) AA alkaline or NiMH batteries (not included).

Antenna Distribution System

The Antenna Distribution System shall be a Bogen UHFADS full-range UHF antenna splitter that routes antenna signals from a pair of antennae to several wireless receivers within a multi-channel system. The unit shall have two (2) A/B antenna inputs on the rear panel with BNC-type connectors and 50-ohm impedance. The unit shall have eight rear panel antenna outputs, four from each rear-panel antenna input, BNC-type connector and 50-ohm impedance. Four (4) rear panel DC outputs, 12 VDC, shall be available for powering four (4) Bogen UDR8011 wireless receivers. The front panel shall include Power On/Off and Power LED. The antenna distributor shall be powered from an included 12 V DC/5A power supply. Unit construction shall be painted steel with dimensions of 19" x 1.7" x 9.8" and weight of 2.2 lbs. (1.0 kg). The unit shall be rack-mountable using built-in rack mount ears and occupy one standard rack height. Included accessories shall be one (1) DC power supply, ten (10) BNC patch cables, two (2) BNCF/F panel adapters, and four (4) DC patch cables.

Remote Powered Antenna Signal Amplifier

The remote powered Antenna Signal Amplifier shall be the Bogen UHFASA and shall be suitable for use in the UHF frequency range of 470 - 960 MHz. The antenna's minimum booster gain shall be 14 dB (+/- 2dB) with a coverage angle of 360 degrees. The output impedance shall be 50-ohms with an operating distance of 65.62 ft. (20 m) maximum using RG-58 cable. For longer operational distances the antenna shall be capable of be cascaded using a second UHFASA. The antenna's input power requirement shall be 12 VDC/500mA supplied from the wireless receiver, antenna distributor, or AC/DC power adapter (+12VDC/0.5A). The antenna's RF Output to the wireless receiver or antenna distributor shall be +8V - +12V at 100 mA. The unit shall have dimensions of 2.92" x 0.72" x 3.0" (75mm x 18.2mm x 77mm) with weight of 0.31 lbs. (140g) – antenna and wall mount kit excluded. Included accessories shall be one (1) DC power supply and one (1) wall mount bracket kit.