

Digital Belt Pack Transmitter



The DBa transmitter is a second generation design with specially developed, high efficiency digital circuitry for extended operating time on two AA batteries. The transmitter can tune in coarse or fine steps across the UHF television band from 470.100 to 691.175 MHz, with an output power of 50 mW. The pure digital architecture enables AES 256-CTR encryption for high level security applications.

Studio quality audio performance is assured by high quality components in the preamp, wide range input gain adjustment and DSP-controlled limiting. Input connections and settings are included for any lavalier microphone, dynamic microphones and line level inputs. Input gain is adjustable over a 44 dB range in 1 dB steps to allow an exact match to the input signal level, maximizing the dynamic range and signal to noise ratio.

- Tunes across entire UHF frequency range
- 256-bit encryption - AES 256-CTR
- 50 mW output power for extended range
- USB port for firmware updates
- Wide range input gain adjustment
- DSP-controlled input limiter
- Two AA battery power
- Solid machined aluminum housing

The top panel contains the antenna jack, audio input level LEDs, the programmable function switch and the audio input jack. The LEDs provide red/green indications of the audio level from -20 dB to the onset of limiting to enable accurate input gain adjustment. The programmable switch can be configured as a mute switch, a power on/off switch, or be bypassed.



The housing is constructed of solid machined aluminum for lasting ruggedness. The exterior is finished with an ultra hard, black electroless nickel finish called **ebENI**.

The transmitter is supplied with a stainless, spring wire belt clip that is secure, but easily detached and re-attached without tools. A spring-loaded belt clip is available as an option. The battery door is machined aluminum, hinged to the housing to prevent it being lost. The battery door latches securely to prevent being opened inadvertently, and will not pop open even if the unit is dropped.



Firmware updates are made via the USB port on the side panel of the housing. The procedure is very simple using a menu item on the transmitter and a standard micro USB cable.



Specifications

Operating Frequencies:	470.100 - 691.175
Frequency Selection Steps:	25 kHz
RF Power output:	50 mW
Frequency Stability:	± 0.002%
Digital Modulation:	8 PSK
Spurious radiation:	>90 dB below carrier
Equivalent input noise:	-128 dBV
Input level:	Nominal 2 mV to 300 mV, before limiting Greater than 1V maximum, with limiting.
Input impedance:	<ul style="list-style-type: none"> • Mic: 300 Ohm • Line: 2k Ohm
Input limiter:	Dual envelope type; 30 dB range
Gain control range:	44 dB in 1 dB steps; digital control
Modulation indicators:	<ul style="list-style-type: none"> • Dual bicolor LEDs indicate modulation of -20, -10, 0 and +10 dB referenced to full modulation • LCD bar graph
Controls:	<ul style="list-style-type: none"> • Top panel toggle switch; programmable as power, mute or none (off) function • Side panel membrane switches with LCD interface for power on/off and all setup and configuration controls
Audio Input Jack:	Switchcraft 5-pin locking (TA5F)
Antenna:	Galvanized steel, flexible wire
Battery:	Two AA Duracell Quantum recommended
Battery Life:	5 hours; Duracell Quantum alkaline
Weight:	6.24 ounces (177 grams), including two AA batteries and wire belt clip
Dimensions:	3.2 x 2.5 x .74 in. (86 x 62 x 19 mm)
Emission Designator:	200KG1E

Setup and adjustment is enabled through a backlit LCD, membrane switches and an intuitive menu structure. Input gain is adjustable over a wide range in 1 dB steps to optimize modulation and limiting for maximum signal to noise ratio and minimum distortion.

