

# mtu301

## Ultra Wideband (UWB) Body-pack Transmitter

SpectraPulse® ultra wideband (uwb) wireless systems



### Features

- **Ultra Wideband (UWB) operation – immune to 700 MHz and spectrum-crowding issues**
- **3-position Mic Gain Switch**
- **Dual-color audio/mute status indicator**
- **Power LED and low-battery warning**
- **Charging port for separately available charger**
- **Rugged metal housing with transmitter mounting clip**
- **Operates on two standard Alkaline or NiMH rechargeable AA batteries**

### mtu301 Description

The SpectraPulse® mtu301 Body-pack Transmitter allows speakers the flexibility to clearly transmit audio as they move throughout the entire SpectraPulse coverage area. The mtu301 can be used with Audio-Technica Wireless Essentials® lavalier and headworn microphones. The unit provides bias voltage for electret condenser microphones. It offers a rugged metal housing, an on/off switch, a mute switch, and LEDs indicating power/mute and link status as well as low-battery warning. Each mtu301 operates using 2 AA batteries. Standard alkaline or NiMH rechargeable batteries can be used. With use of the separately available Audio-Technica chg001 Charger, NiMH rechargeable batteries recharge within the unit.

A SpectraPulse® system consists of up to 14 Microphone Transmitter Units (mtu101, mtu201 paired with gooseneck mics and/or mtu301 paired with Wireless Essentials® headworn or lavalier microphones), up to two Audio Control Interfaces (aci707), and up to four Digital Receiver Modules (drm141) with use of the rcu104 Receiver Coordinator Unit. An optional Charger (chg001) is available for the mtu301. An optional Charging Encryption Station (cei007) is available for the mtu101 and mtu201. The System Encryption Package (sep128) utilizing AES-128 bit encryption is available for additional security.

**Note:** Due to the highly directional nature of the SpectraPulse system, two or more drm141 Digital Receiver modules must be used in systems utilizing the mtu301 Body-pack Transmitter.

### Architect's and Engineer's Specifications

The body-pack transmitter shall be part of a wireless microphone system operating in the 6 GHz band using Ultra Wideband timed pulse technology with a pulse duration of 2 nanoseconds and a UWB rate of 8 mbps as part of a complete SpectraPulse® system. The device shall have a 4-pin microphone input and shall provide 11.5V DC for condenser microphones. The transmitter shall incorporate a simple address/channel selector switch for address assignment, without the need for frequency coordination, scanning, or preset frequency groupings. The transmitter's audio output shall be entirely digital with no compression or companders, and the overall system latency shall be less than 1.2 ms. The output signal from the transmitter shall be inherently secure with a very low probability of

transmission detection. For increased security, the transmitter can be encrypted with an AES level 3, 128 bit digital encryption key via a user-controlled software application. Current consumption shall be 260 mA at 3V DC. Average RF power shall be 40 nanowatts. It shall be capable of operating with standard AA alkaline or NiMH batteries. When using NiMH batteries, it shall be possible to operate the transmitter (continuous talk) for approximately 9 hours. Battery change-out shall not require any tools or special techniques. A charging port shall be provided on the transmitter allowing use of an optional charger. All components shall comply with RoHs standards.

The transmitter shall be an Audio-Technica mtu301 body-pack transmitter or equivalent.

### Specifications

Input connector	4-pin locking connector. Compatible with Audio-Technica Wireless Essentials® lavalier and headworn microphones
Bias voltage to mic feed	The mtu301 delivers 11.5V DC to pin 4 of the input connector
Battery type	Two 1.5 volt AA alkaline batteries are included. Rechargeable SANYO brand NiMH AA batteries are recommended; they are included with the available chg001 wall charger.
Battery life	Approximately 9 hours depending on battery type and use pattern
Current consumption	260 mA at 3V DC
Average RF power	40 nanowatts
Weight	227 grams (0.5 lb.) - less batteries
Dimensions	81.8 mm (3.22") wide, 27.5 mm (1.08") deep, 118 mm (4.65") height
Optional encryption	AES level 3, 128 bit

In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request. Specifications are subject to change without notice.



Audio-Technica U.S., Inc., 1221 Commerce Drive, Stow, Ohio 44224  
Audio-Technica Limited, Old Lane, Leeds LS11 8AG England  
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