

**PRODUCT AND OPERATIONAL DESCRIPTION**  
**LONG RANGE SYSTEMS**  
**BUTLER II TRANSMITTER**

### 1.0 General Description

The Long Range Systems Butler II transmitter is a 7" x 1½" x 1" wall mounted paging transmitter used to send commands and data to Long Range Systems staff and guest paging products. The ButlerII is battery powered, requiring 3 AAA batteries. The transmitter is designed for indoor use only. It is configured via a mini-B USB interface and a PC application . Configuration settings include button data, system ID, periodic alarms and timed repaging intervals. There is a button on the side of the transmitter used to cancel a repaging operation.

### 2.0 Electronic Description

The Butler II is comprised of a microcontroller, a FM exciter and encoder chipset set, a low pass filter, matching network, and a power amplifier. Transmitter tuning is performed by an LRS technician with tuning capacitors, and therefore is not configurable or changeable by an end user. Amplifier gain is set during tuning procedure so that power output at the antenna port is around 55mW.

### 3.0 Wireless Description

The EUT transmits at a licensed frequency of 467.75 MHz, one channel , FSK modulation. Pager messages are limited to 64 characters in length. It has a transmit range of around 1/10 mile. A wall mounting plate is supplied in the installation kit. No other options are available. It is not designed nor recommended to be handheld. The Butler II antenna is a 22 awg solid wire soldered directly to the PCB and raised slightly above the PCB, completely enclosed inside the plastic housing.

### 4.0 Model Description

There are 2 different models of Butler II transmitters available. A single button model TX-1605-1 and a 5 button model TX-1605-5. PCB is identical in both models. Only front face plastic and button membrane is different between the models. Firmware is the same for both models also.