

# LoRaWAN Voice Transceiver

## LAP-E01 Features and Specs

LAP-E01 is a push-to-talk (PTT) Voice Transceiver utilizing LoRa™ modulation for long range transmission. It supports group communication and voice encryption. In addition, it embedded a rechargeable 1800mAH battery that can be charged by Micro-USB. As it is with algorithm of low power consumption.



### Features

- ◆ LOS Range Up to 1km (\*depends condition)
- ◆ LCD Display 0.96", 80x160 (RGB)
- ◆ Frequency bands: 915/868MHz
- ◆ Bandwidth (BW) = 125 kHz.
- ◆ Transmit Power
  - RF output: 2~ 20 dBm +12.5dBm (For Japan)
- ◆ Micro USB for power charging
- ◆ GPS, GLONASS, GALIEO, BEIDOU (Optional)
- ◆ Internal Antenna -0.4dBi
- ◆ TELEC Certification
- ◆ Working Power Consumption
  - TX(Speak) < 0.5W
  - RX(Listen) < 0.9W
  - Standby < 0.3W

### I/O description






|  | Home Menu             | Function Menu  |
|--|-----------------------|--|
|  | Enter Menu            | 1.Enter/Select<br>2.Power-on<br>3.Press 8 seconds for shutdown |
|  | Push to talk          | Exist/Back   |
|  | Increase voice volume | Next option  |
|  | Decrease voice volume | Previous Option  |

| Power LED | Function           |
|-----------|--------------------|
| Green     | Charge Full        |
| Red       | Charging           |
| Orange    | Receiving Voice    |
| Blue      | Transmitting Voice |

Prevention of Hearing Loss  
To prevent possible hearing damage, do not too close and listen at high volume levels for long periods.

## Quick Start

To start use LAP-E01, two LAP-E01s are required at least. Following is step of quick start using LAP-E01:

1. Press **Power Button**  to turn on devices.
2. After main screen been displayed, press power button to enter menu.
3. Set TX and RX frequency under TRANSMISSION → FREQ. SETTING to same frequency.
4. Set GROUP ID under TRANSMISSION → GROUP ID SETTING to same ID.
5. Set PWD under TRANSMISSION → ENCRYPT SETTING to same PWD.
6. Press **Talk Button**  to return to main screen.
7. Press **Talk Button**  on one device and start to talk.

## Specifications

|                       |   |
|-----------------------|---|
| Operating Voltage     | 1,800mHA Battery<br>DC 5 V via Micro-USB for charging |
| Frequency             | 920.6 ~ 928MHz  |
| Transmit Power        | +13dBm  |
| Certification         | TELEC   |
| Sample Rate           | 8KHz  |
| Sample Bit            | 16bits  |
| Channel               | Mono  |
| Codec                 | Speex   |
| Operating Temperature | -20°C ~ 60°C  |
| Storage Temperature   | -20°C ~ 70°C  |
| Dimension             | 111 x 69 x 12mm                                       |
| Weight                | 105g  |

## Mechanical Drawing

