

**GENERAL DESCRIPTION**

The TS300 is portable, water-resistant, ultrasonic transmitter, compatible with the RS900 receiver, and all the Securalert™ Generation II series. The TS300 is lightweight. Upon activation of the alarm switch, it generated an ultrasonic, modulated signal AND a two-ways radio signal. The radio signal is compatible with the M900 central system. It is provided standard with a key ring and a clip. It can be wear easily at the belt, or attach on any cloths.

**USE**

Contrary to radio waves, ultrasonic signals are stopped by walls, floors, ceilings, and bounce off them. Therefore a transmitter will only activate the one receiver located in the same room, no matter the size of the room.

The use of ultrasounds is most recommended when an emergency happens, and one quickly needs to find the exact location of the person in distress within a building that has many different closed rooms.

**HOW IT WORKS:**

**NORMAL :**The TS300 has a multicolor LED , that provide provide instant information on battery status, as well as general status of the transmitter : (color green,yellow or red = battery good, average, low) (light ON of flash = system OK or in trouble). A test button give the user an instant report of the transmitter state.

**ALARM: An alarm notification is initiate when the main alarm switch is depressed for a programmable period of time.**

If activate, the internal vibrator, and the LED will indicate to the user that the alarm has been trigger.

The transmitter will start sending both ultrasonic and radio signal, until a positive acknowledge is received form the central M900.

**SUPERVISION**

A microprocessors constantly monitor the proper operation of critical part and battery status. A check-in signal is send automatically and periodically to the M900 central. Any problem is report immediatelly. Also, the user can force a system verification at any time by pressing and holding the test switch. If localisation beacon are in use, the M900 will note position of the transmitter at every transmission, so a lost unit can be found.

**ADDITIONNAL FEATURES:**

Other options can be activate or add to the basic operations:

1-Forbidden Zone Beacon option, work with X900 beacon in order to create radio zone where the TS300 should not be (to avoid staff eaving the facility with the unit) and make the transmitter vibrate to alert the staff.

2-Tracking option enable the TS300 to be locate from the M900 system ( to find a lost or steal unit).

3-The TS300 has a built-in mobility sensor. The unit can detect if the unit is not moving at all for a period of time and can, either go in battery saving mode, or report to the central an suspect situation ( main down or steal unit)

**APPLICATIONS:**

The TS200 is commonly used for personnel localization (through the use of the panic button) in hospitals' psychiatric wards or emergency, young center detention, court house, penn. or laboratories.

**BI-DIRECTIONNAL, MULTI-CHANNEL RADIO COMMUNICATION.**

The TS300 communicate with the M900 central thru a standard IEEE 802.15.4 protocol. Over the basic protocol features, Nordicom has increased the fonctionnality by addind a additionnal communication layer, managing the frequency and power of the radio signal in order to detect and correct radio interferences. Frequency sweeping and changing are features unique to Nordicom's Securalert™ Generation II series. Nordicom use the maximum radio power permit ( 60mW), compare to 1mW, used by other compagnies) . The results are a full proof and complete 100% communication in a radius of 30 meters (100 feets), in any conditions. This system will worked perfectly in today environnement as well has futurs radio saturaded environnement. With the di-directionnal communication, no message is lost. Acknowledge are always send back to confirm reception of signal ( in addition to the built-in acknowledge inherent of IEEE 802.15.4 protocol), thus avoidind old system approach of sending multiple messages and then saturated the radio channel.

**BATTERY OPERATE:**

The TS200 transmitter is powered by a miniature lithium-polymer rechargeable battery. Life time for 1 charge vary, depending of the options activated. It can be more than a month. Recharging the unit take between 2h or less.

**CASE:**

The case is very ergonomic and provide a safe and solid grip in case of panic. The reaction time require to trigger a alarm is adjustable to avoid false alarm. Also, a unique feature of the TS300 is his tacticle feedback. When a alarm is trigger, the TS300 vibrate, giving a and clear positive feedback to the user, keeping the use quiet and discret. The waterproof case enabled to be clean and desinfect easilly.

**TECHNICALS SPECIFICATIONS**

- Ultrasonic Operational frequency : 40.6KHz +/- 100Hz Modulated
- Omnidirectional ultrasonic range : Adjustable (at the receiver) from 1m<sup>2</sup> to 50m<sup>2</sup> minimum.
- Decoder : RISC Microprocessor controlled.
- Visual indicator : Multicolor LED ( Green, yellow and red)
- Tactile indicator : Vibrator
- Switch : 2 ( alarm and test)
- Time required to trigger alarm: Programmable between .2 and 25 seconds (by increment of .1 seconds)
- Supervision cycle: Programmable between 1 and 255 minutes.
- Economy battery mode: After 4 minutes without any mouvement.

**RADIO**

- Operational frequency : BANDE ISM 2400 to 2483.5 MHz  
12 channels, auto-scan
- Type of modulation: FM, spread spectrum
- Maximum Power: 60mW. (+20dBm)
- Minimum garanty range: 30 meters ( 100 feet)
- Radio baud rate: 250Kbps.
- Radio protocol: IEEE 802.15.4
- Homologation: FCC part 15 & ETS 300-32
- Globale free licence : International (USA,EUROPE,ASIE)

**SPECIFICATIONS ÉLECTRIQUES ET PHYSIQUES**

- Battery: Rechargeable Lithium/polymer , 3.7 Volts DC , 210mA
- Operating temperature : 0°C to 65°C
- Recharge temperature : 0°C to 40°C
- Water resistance: Splash and immersion (the TS300 alone float).
  
- Material / color : ABS plastic, 3 colors available (Black, Grey or Almond)
- Weight (with battery): 1.5 oz ( 43 g )
- Dimensions :
  - width 2" (48mm)
  - length 3.5"(87mm)
  - height 5,2" (132mm)