

HX11T

HX11T is an ultrasonic transmitter; it transmits ultrasonic identification periodically. The transmission-triggering rate is selected through the bottom hole on the face of the unit. Holding the button down using toothpick or something similar lets the user select the triggering rate. An LED is visible through the upper hole indicating the rate of transmission. The bottom button is held down until the LED on the unit flashes, as the user continues to hold the button down the LED flashes at increasing rates, the ultrasonic identity is transmitted every time the LED flashes. It is possible to hear the transmission clicks from the ultrasonic transmitter on the device. To turn the unit off, just continue to hold the button down until the LED stops flashing, then release the button. The rate is as follows



| Step | Transm. interval | Step | Transm. interval |
|------|------------------|------|------------------|
| 1 | 8000ms | 10 | 8000ms + |
| 2 | 4000ms | 11 | 4000ms + |
| 3 | 2000ms | 12 | 2000ms + |
| 4 | 1000ms | 13 | 1000ms + |
| 5 | 500ms | 14 | 500ms + |
| 6 | 250ms | 15 | 250ms + |
| 7 | 150ms | 16 | 150ms + |
| 8 | 75mS | 17 | 75mS + |
| 9 | OFF | 18 | OFF |



Steps 10 through 17 add an extra interval into the transmission cycle at random. This is done to increase probability of detection in case of multiple transmitters competing for the same sensor space.

Size box 50 x 35 x 15 mm, Height measured with sensor 19.3mm, sensor 16mm (dia.)

Size 1.97" x 1.38" x 0.59", Height measured with sensor 0.76", sensor 0.63" (dia.)

BATTERY INSTALLATION

Batteries are installed through the back of the device as shown below. The back of the device is removed using normal Philips screwdriver. Batteries used are CR2330, CR2320, CR2325, BR2330, BR2325 and etc. The device operates in the range from 1.8V to 6.0Vdc. Once the lid has been taken off, slide the coin type battery into the holster as shown. Push it as far as it will go. Until the sensor contacts are exposed as shown in the last illustration below.

While the device is shut off the batteries will last for years. When the device transmits ultrasonic signature it consumes about 10mA for the duration of 20mS. Roughly calculated this mounts to about 400000 ultrasonic signal transmissions per battery load. And again roughly calculated a 200mAH coin battery should run the HX11T for more than 100hrs at a rate of 1 transmission per second.



| Specification | |
|---------------------------|------------------|
| Supply Voltage (battery) | 2.7 to |
| Range | 8m * |
| Rotational Angle α | +/- 50 degrees * |
| Shear Angle β | +/- 40 degrees * |
| Sound Pressure Level | 113 db |
| Output Power | 1 Watt |

