

# FUNCTIONAL DESCRIPTION

## 1.0 DESCRIPTION

The DXS-LRP is a one channel, fixed or semi portable emergency signaling transmitter operating as a low power communication device. The center frequency is crystal stabilized at 315.00 MHz. The data output is Linear DX Code formatted.

The DXS-LRP and the DX Code format are designed for use with Linear DX format 315 MHz receivers and consoles. Typical receivers that could be used with this transmitter are the DXR-701, DXS-702, DXSR-1504/8, DVS-1200/2400, Dual 824 and PERS-3600.

Each DXS-LRP is programmed with a DX format factory ID code. The DX format code gives over 1 million possible transmitter IDs.

One lithium coin cell batteries, type 2032 is included. The battery should last about 4 years under normal use.

If the transmit push button is pressed four times during a time of 4 seconds, the DXS-LRP will go into a supervisory mode. It will thereafter send status transmissions every 2.0 hours. This supervisory signal will continue until the transmitter's battery is exhausted.

## 2.0 FUNCTION

When the push button is depressed, U1-4 becomes low and activates U1's program. The program provides a latch signal to keep the microprocessor alive until a minimum of 8 words (800 milli second duration) are transmitted.

After the 8 words are transmitted and if the switch is now open, the processor turns off. If the button is held down for more than 30 seconds, the transmitter's output is disabled.

When U1 wakes up, it outputs signals to turn on the oscillator IC U3 and to provide DX coded data. The frequency of oscillator U3 is stabilized at 315 MHz by a divide by 32 crystal time base, Y1. Data output at U1-6 modulates U3 which transmits the pulse-modulated carrier via the antenna.

The battery voltage is supervised by voltage detector U2. If the nominal 3.0 Volt battery Voltage drops below 2.7 Volts the transmissions will include a low battery signal.

## 3.0 SPECIFICATIONS

Product Identification:	DXS-LRP transmitter (SST00122).
Encoding Format:	Linear DX Code.
Encoding Technique:	Transmitters are factory coded with a sequential transmitter ID number.

Number of Channels:	One
Timing:	Transmission stops after 30 seconds when button is held on. When momentarily activated the transmitter sends a minimum of 8 data words (800 milli seconds transmission).
RF Carrier Frequency:	315.00 MHz $\pm$ 20 KHz.
Power Requirements:	One 2032 3 volt battery.
Visual Indicator:	Dual color display, green / red LEDs Green Steady – Battery OK Red Steady – Low Battery  Green or red blinking (at end of a transmission – Tx is in supervisory mode .
Operating Temperature:	0° C to +70° C. Tested –30° C to 70° C.
Size:	1.2" x 2.0" x 0.3"
Current Consumption:	10 mA (average) transmitting. <5 uA Standby.

All specifications are nominal unless otherwise noted.