

509923 Transmitter --- Technical Description

The 509923 transmitter is a hand-held keyfob designed for use with the Volvo S80 vehicle family. It transmits an ASK (amplitude-shift-keyed) modulated RF signal at 315.0MHz whenever a switch is pressed. There are five switches in total: lock, unlock, boot unlock, approach light and panic.

The transmitter consists of the following building blocks:

Encoder	This section will consist of a PIC HCS412 chip that generates the encoded data that modulates the RF signal. A secure code hopping encryption algorithm is employed.
RF Section	This consists of a 315.0MHz SAW resonator together with an oscillator and antenna. The resonator determines the operating frequency. The antenna is a printed loop on the PCB.
Battery	This is a single 3V primary lithium cell. The housing is designed to allow the battery to be replaced by the customer when necessary.

Approved by: *Pat Lynn*
Date: 13/04/00