

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:

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| 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: 
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