

# **THEORY OF OPERATION**

## **TSSM FOB Transmitter**

### **Overview**

The TSSM FOB transmitter is used in conjunction with a vehicle mounted receiver to provide remote arming and disarming of a vehicle alarm system. The TSSM system is installed on various platforms of Harley Davidson motorcycles.

### **Circuit Theory**

The transmitter provides a rolling code type of secure RF link based on a Delphi proprietary algorithm. The TSSM transmitter uses the Microchip PIC12C509A microcontroller to decode keypad inputs, generate the appropriate function code and encryption data, and provide a complete digital message stream to the RF output stage.

The RF output stage is a single stage transistor SAW based colpits oscillator operating at 315Mhz +/- 100Khz. The antenna is a circuit board trace.

# Transmitter Block Diagram

