WS4955 Functional Description and Block Diagram

WS4955 is a device, which is mounted on a doorframe. A magnet will be mounted on the door. A reed switch, which is in the device, will be closed if the magnet is in close proximity to the reed switch. When the door is opened the reed switch will open and the transmitter will send the "Open" condition. When the door is closed the reed switch will close and the transmitter will send the "Closed" condition. If the device is removed from the door, there will be a tamper transmission sent to the receiver. This is detected through a switch connected to Zone 2, which is closed when the device is mounted to the doorframe. When in the door contact configuration the ASIC will be in a sample mode. This means that the RC oscillator is running but is only incrementing a timer chain. This timer chain will wakeup the state machine once the pre-programmed number of ticks is realized. The state machine will turn on the pull up resistors and sample the inputs. If the zone has changed state and remained stable for the debounce period the state machine will power up the transmitter section, wait the VCO lock time and stabilization period and send the transmission. After the single round has been sent the state machine will load the inter-round timer and shut down. During the subsequent wake ups the state machine will check the inter-round timer and send the next round when the timer has expired. This sequence will continue until all the pre-programmed rounds have been sent. The state machine will also keep track of the supervisory timer. Under the same wake-up sequence the state machine check the supervisory timer and send the supervisory signals when required.