Motorcycle Alarm System

Electronic Circuit Description

Product Introduction: This is an anti-theft system that has tracking feature composed of GSM communication function and GPS function.

Power Supply Voltage: DC12.6V

Frequency range: 824—895MHZ、1850-1910MHZ

Circuit description:

1. The switching power is composed of U4 and related components, on/off is controlled by MCU (U8). U15 is a regulator IC and provides a stable voltage of 3.8VDC power to the GSM module.
2. U14 is a regulator IC that provides a stable 5VDC power for constant current charging controlled by MCU (U8). The constant current circuit consists of Q4 and related components that provides the steady charging voltage for the back-up battery (BAT1 3.6V).
3. The DC-DC power supply circuit consists of U5 and related component, on/off is controlled by MCU (U8). When

normal power supply (12.6V) is disconnected, this DC-DC circuit will get power from the back-up battery and supply power to the MCU (U8) and the alarm power amplifier output circuit. The Q10 and Q11 will be the power switches when it's the transport mode.

4. Q6,Q7,Q9 and the periphery component is the power switch that for the back-up battery (BAT1 3.6V), controlled by MCU (U8).
5. U2 and the periphery component is the left/right light drive circuit, controlled by MCU (U8).
6. Q5 and the periphery component is the relay drive circuit, controlled by MCU (U8).
7. Q1 is the steering circuit that controls on/off of the GSM module (U7) and controlled by MCU (U8).
8. Q8 is the reset circuit , controlled by MCU (U8).
9. U11 is the SIM IC, parallel connection with the SIM card holder.
10. U12, U6 and U9 are voltage stabilizer, they provide the stable DC power for the GPS module (U1) and the GPS antenna.
11. U1 is the GPS module, it receives the GPS signal and send out the GPS data to the MCU..

12. U10 is a regulator IC, provides the steady working power 3.3V for the U8 (MCU).
13. U8（MCU）、U13（2.5V reset IC）、X1（32.768KHZ）、X2（16.000MHZ） and the periphery components composing a powerful manage-controlling circuit.
14. U13 is an external flash memory.
15. Q2 and T1 compose an alarm sound power amplifier. BZ1 is the Buzzer.
16. The pin 1 of the CON1 is an input pin for the VDD (12.6V) ; the pin 2 of the CON1 is an input pin for MCU (U8) wired control signal; the pin 3 of the CON1 is the GND.