

Car Alarm Project

→ System armed automatically after she turns off the ignition and exits the car and arm delay has passed.

① So system armed when

Case I }
→ ignition off
→ car door has opened (driver's)
→ car door closed
→ t-arm-delay has passed.

Case II }
in case of passengers -
The system arms when

→ both the doors are closed
→ t-arm-delay has passed.

Case III }
→ t-arm-delay is restarted if a door is opened and reclosed before the alarm has been armed.

① Once system is armed

Opening the driver's door, begins a countdown.

I { If the ignition is not turned on within the countdown interval - i.e. $t_{\text{driver-delay}}$ the siren sounds.

II { The siren is on for as long as the door is open and for extra time after the door is closed - ($t_{\text{alarm-on}}$). After this the system resets to armed but silent state. (siren off)

III { If ignition is turned on within the countdown, then system is disarmed.

③ It is polite to open passenger's door first.

when passenger's door is opened first a separate delay, presumably longer delay. ($t_{\text{passenger_delay}}$) is used as countdown interval.

This extra time is for the driver to walk around the car and get in driver seat.

④ LED on dashboard

Blinks with a 2 second period when system is armed state.

Remains illuminated
→ Countdown before getting armed
i.e. delay time.

→ Siren is on.

LED off when disarmed.

Extra from normal alarm

control of power to fuel pump

① Ignition off - ~~Control~~ power to fuel pump is off.

② Power is restored when
→ first ignition is turned on.

→ driver presses both a hidden switch and brake simultaneously.

③ Power is on until ignition is turned off.