

Cut-rate Motorbike Alarm

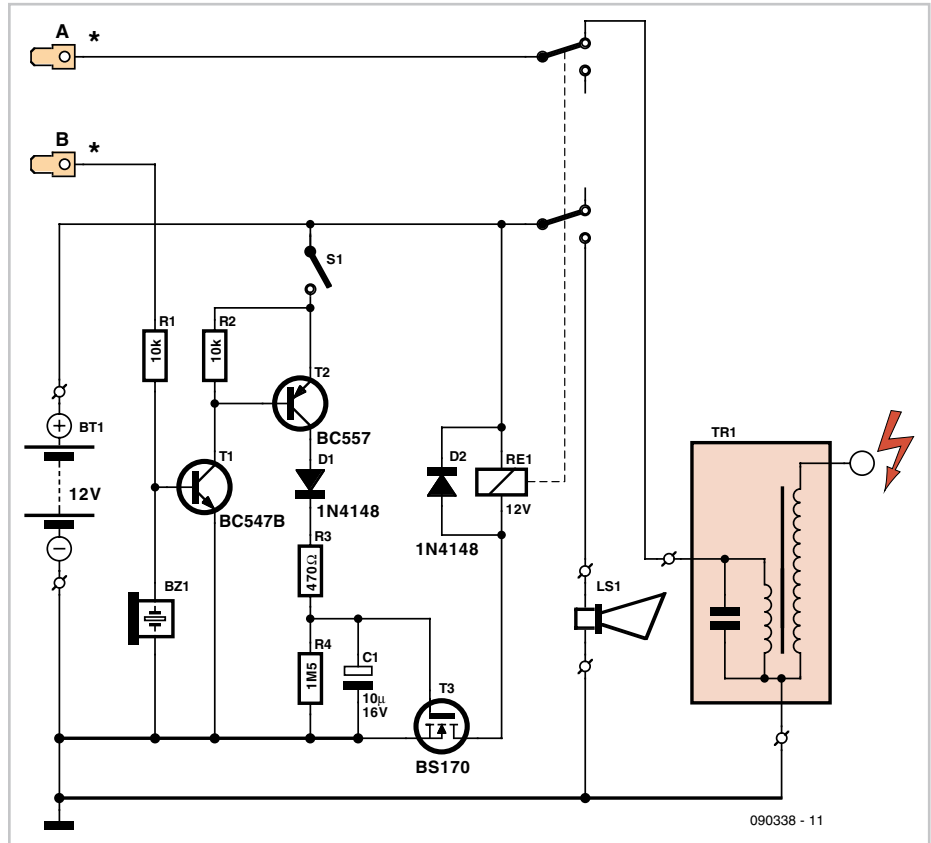


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Motorbikes are often a target for thieves. Here is an alarm that's loud, cheap and simple to build. Arming and disarming the alarm is done with a hidden switch, S1. This tiny circuit does not unduly load the battery, as it draws very little current in the standby condition. To activate the alarm, turn or press the hidden switch S1 to the 'on' position. If anyone attempts to start the motorbike, +12 volts from the ignition switch (connected to 'B') causes transistor T1 to conduct and switch on T2. The siren (LS1) then sounds for about 20 seconds, the period being determined by FET T3 wired as a monostable timer. The siren is a high-power ready-made piezo horn of the self-oscillating type.

Another piezoelectric component in the circuit has a different purpose — Bz1 detects attempts to tamper with the vehicle, or move it without starting the engine. The piezo transducer element should be mounted in such a way as to faithfully pick up vibration from the motorbike frame due to tampering.

One set of contacts on relay RE1 is used to effectively disconnect the ignition coil to prevent the bike from functioning when someone tries to steal it. Usually, there is a wire running from the alternator (point A) to the ignition coil (TR1), which has to be routed through the N/C (normally closed) contact of the relay. The hidden switch S1 is prefer-



ably a miniature type or its electrical equivalent. To deactivate the alarm, the hidden switch should be flipped to the 'off' position to disable the movement sensor and the siren

driver/timer circuit when the ignition key is turned... by the lawful owner!

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