Wireless security system # A3758

A wireless/wired security system was developed using a ATmega16 processor. The copious amount of IO on the micro allows for a feature packed system with minimal external components. The system is highly customizable and integrates an off the shelf wireless Motion detector, powerful IR barrier (100-150 feet range) and reed switch window sensors. It also incorporates a wireless remote module using an AT90S2313 processor and linx wireless modules.

The key components of the system are

1. Home made infrared barriers – for external use – Range 100 feet.
2. Hacked Heath Zenith wireless motion detectors interfaced to the AVR controller
3. Magnetic Reed switches used for detecting open doors/windows
4. Wireless notification of alarms from the workshop to the caretaker's cabin – distance of 300 ft. using a Linx RF module

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The completed security system. The box to the left houses the ATmega16 and the motion detector receiver. To the right are some of the IR barrier sensors, reed switches for window open sensing and the wireless PIR motion sensors

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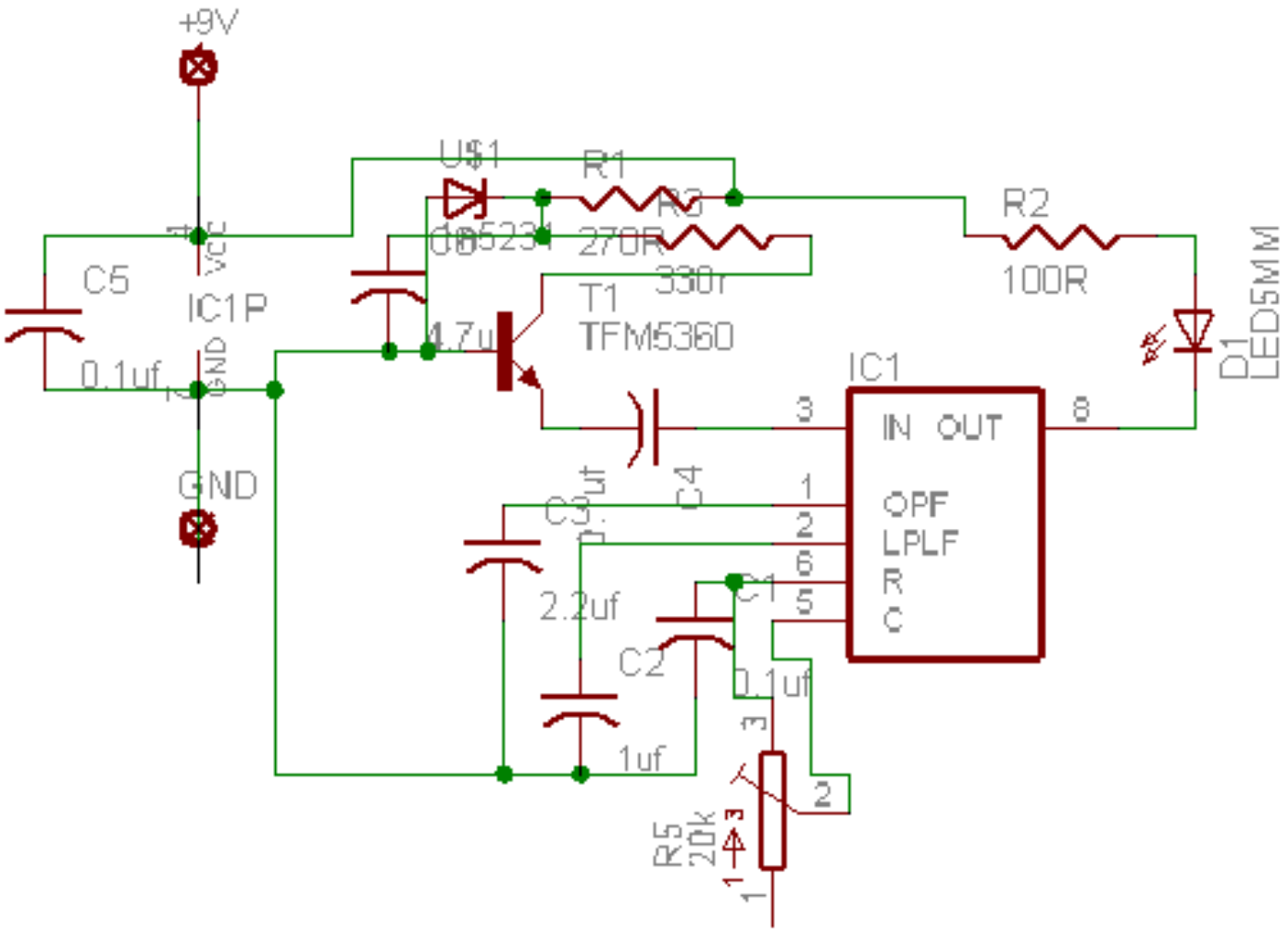

IR barrier receiver schematic

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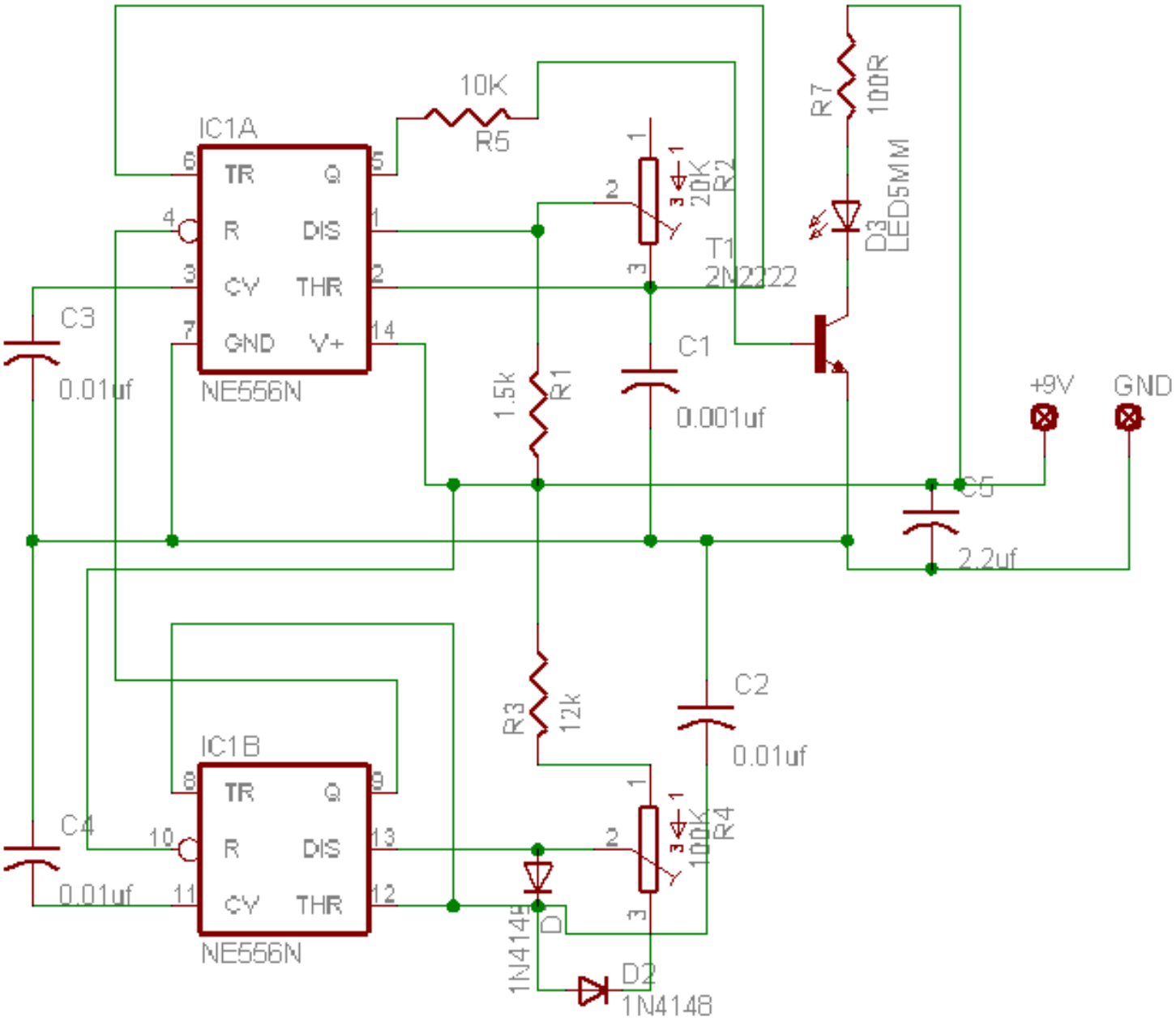

IR barrier transmitter

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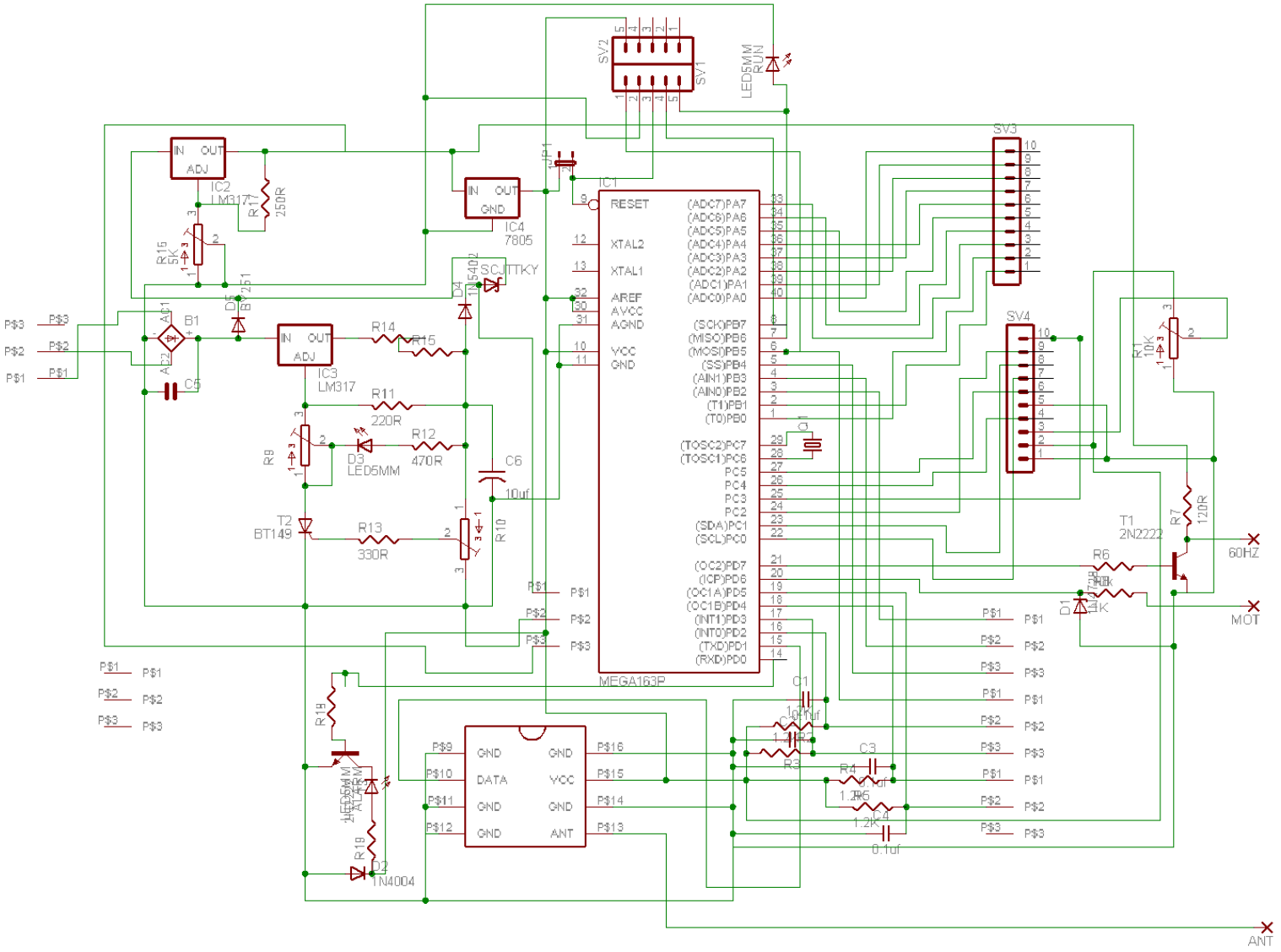

Burglar alarm schematic

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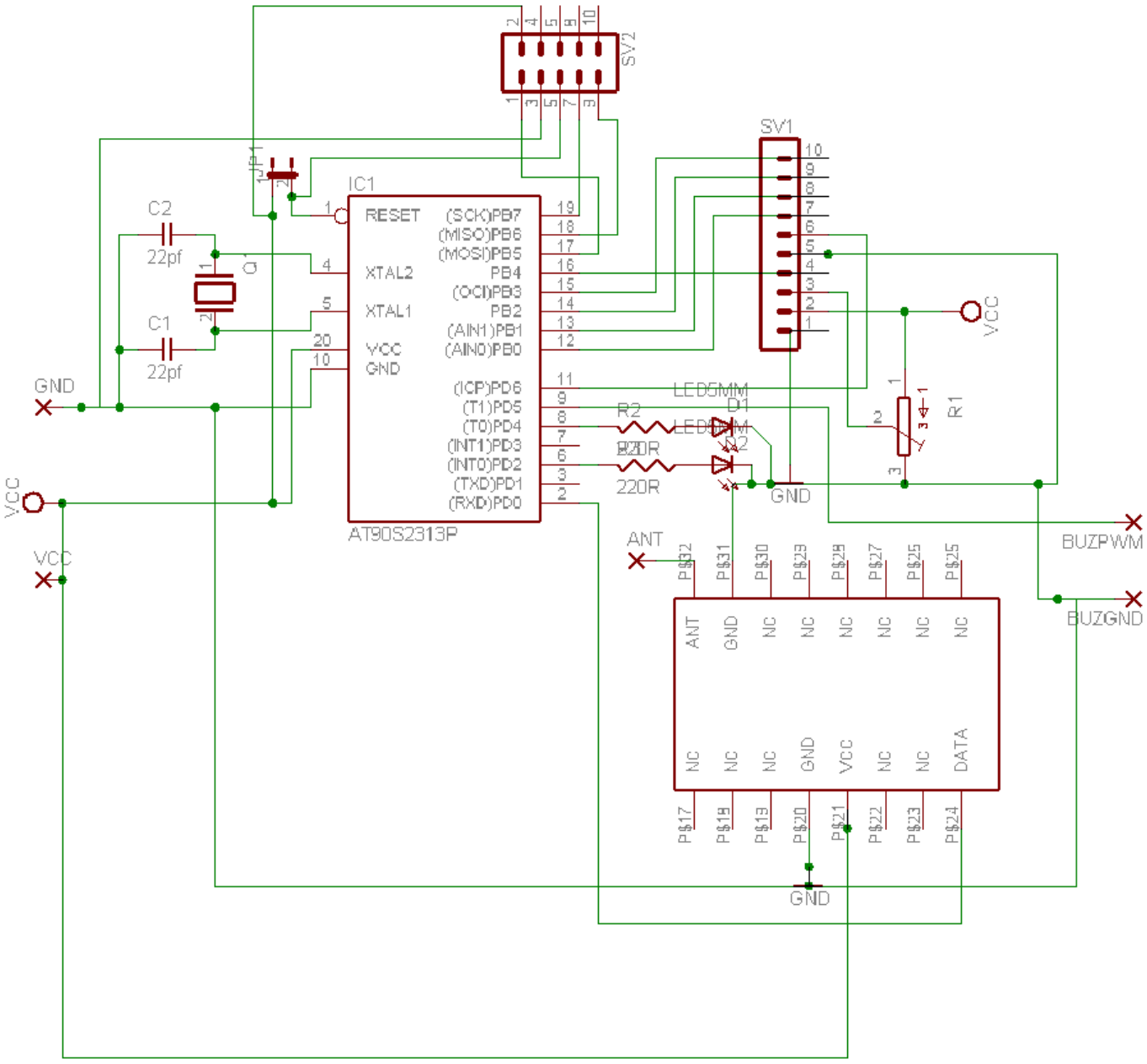

Remote alarm schematic