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The OmniRemote *Plus* Springboard Module was designed and manufactured by:

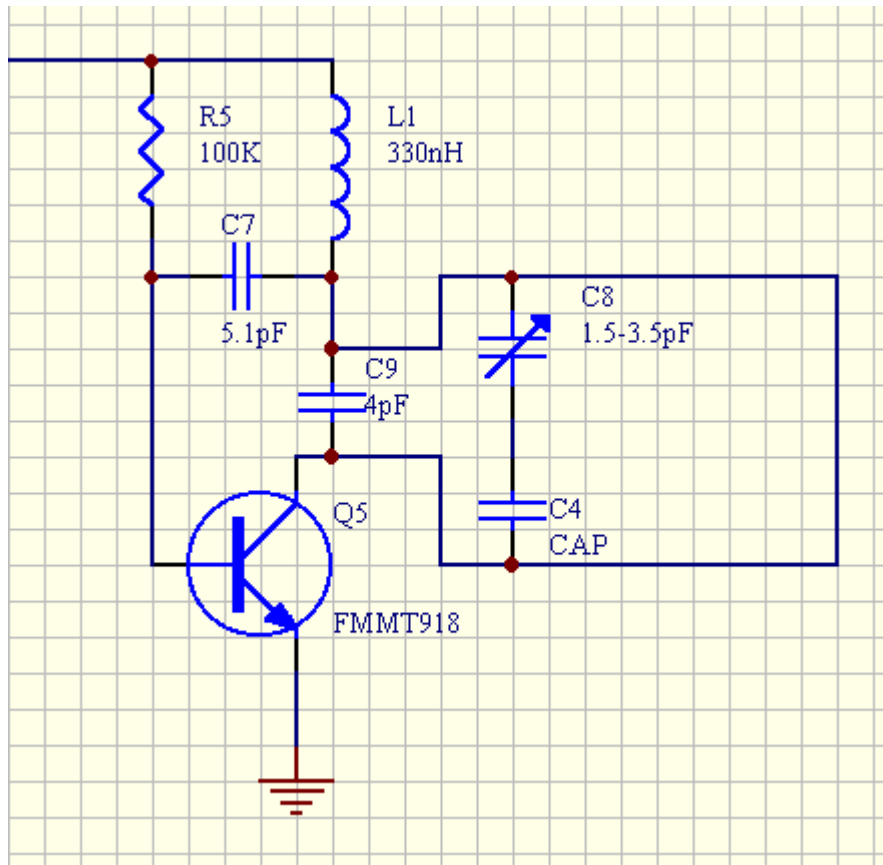
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The OmniRemote *Plus* Springboard Module contains a 310MHz RF transmitter which is designed to send data to standard “off the shelf” X-10 compatible RF receivers (produced by various other manufacturers). The purpose of this is to allow the user to control lights and appliances (through an X-10 home control system) from their Handspring Visor handheld organizer.

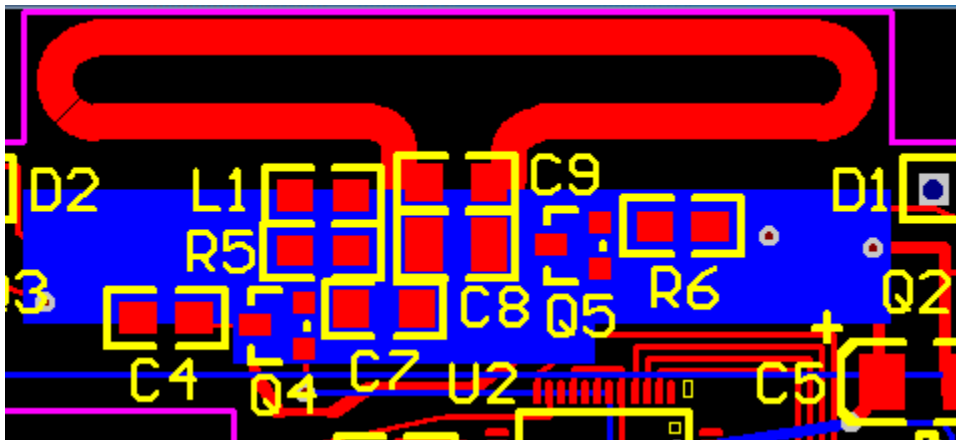
A Springboard Module is an expansion card which slides into a Handspring Visor handheld organizer giving it additional software and capabilities (in this case including the RF transmitter).

The transmitter is a simple 310MHz sine wave oscillator (L-C oscillator) which is turned on and off under the control of software running on the Visor Handheld producing a pulsed CW signal. The timing of these pulses of 310MHz RF describe the binary data which is being sent to the X-10 receiver.

The L-C oscillator can be turned on and off under software control because its source of power is one of the logic outputs of one of the I/O chips in the module. A logic 1 being output from this general purpose I/O pin will supply 3.2 volts which is enough to power the oscillator. The transmitter circuit uses very little current, so no amplification is needed. The antenna is internal and consists of a track on the PCB which forms an elongated loop.



Schematic of RF transmitter portion of design



Board layout of RF transmitter portion of design

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