

# MISCELLANEOUS BEAM CIRCUITS

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This section contains odd and interesting circuits I've run across along the way.

- **Charge pumps** -- a charge pump uses arrays of capacitors to increase voltage in a circuit. In this way, you can drive higher voltage loads from logic voltages of 3 - 5 volts.
- **Battery chargers** -- handy for non-solar BEAMbots (particularly ones that use rechargeable batteries in "non-standard" shapes and sizes)
- **Sound generators** -- if your BEAMbot makes sounds, it's a multi-sensory experience!
- **Remote control** -- a more-direct way to make your BEAMbot do what you want
- **Radio frequency transmit / receive** -- another way to communicate with your BEAMbot (or enable groups of them to talk together)
- **Solar cell simulators** -- mighty useful in testing and designing your 'bots
- **Op-amp based Nv nets** -- a more complex, but more flexible way of implementing bicores and quadcores and such.

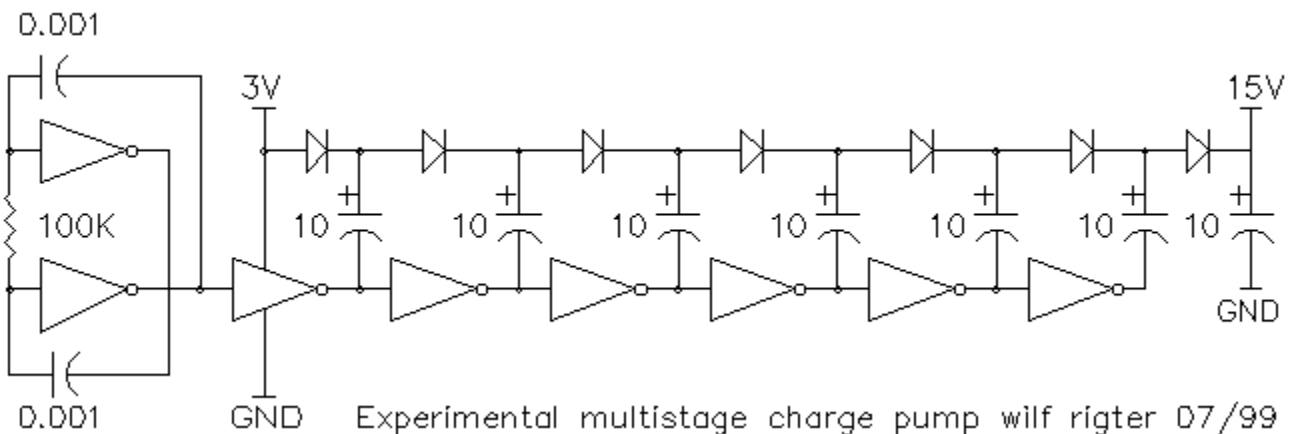
## Charge pump circuits

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A charge pump uses arrays of capacitors to increase voltage in a circuit. In this way, you can drive higher voltage loads from logic voltages of 3 - 5 volts.

Wilf has posted a number of interesting charge pump designs on the (formerly eGroups, now ) Yahoo BEAM group list:

This is a simple, multi-stage design -- all you need is a bicore, 3 volts, and a bunch of 10 uF capacitors...



Source: <http://www.solarbotics.net/library/circuits/misc.html>