

**Issue #291**  
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### **PROJECT FILES**

All of the project files for this issue are available at:  
[ftp://ftp.circuitcellar.com/pub/Circuit\\_Cellar/2014/291/](ftp://ftp.circuitcellar.com/pub/Circuit_Cellar/2014/291/)

### **ARTICLE MATERIALS**

**Author:** Max Rothstein & Richard Speranza  
**Article:** "BlasterWorks: A Real-Time Laser Tag System"

#### **REFERENCE**

[1] Lee, Y. H., "Design a Wireless Lab for ECE4760," Cornell University, <http://bit.ly/USmWTb>.

#### **RESOURCES**

Henriksson, D. and Cervin, A., "TinyRealTime—An EDF Kernel for the Atmel ATmega8L AVR," ISRN LUTFD2/TFRT7608SE, Department of Automatic Control, Lund Institute of Technology, 2004.

Nordic Semiconductor, "nRF24L01+: Single Chip 2.4 GHz Transceiver," Product Specification v1.0, 2008.

#### **SOURCES**

ATmega644A Microcontroller  
Atmel Corp. | [www.atmel.com](http://www.atmel.com)

VLM-650-03-LPA Laser and LTR-301 Phototransistors  
Digi-Key Corp. (distributor) | [www.digikey.com](http://www.digikey.com)

Transceiver nRF24L01+ Module with Chip Antenna  
Nordic Semiconductor | [www.nordicsemi.com](http://www.nordicsemi.com)

**Author:** Ken Merk  
**Article:** "Land Mobile Radio Wireless Control"

#### **SOURCES**

Flashlite 186 SBC  
JK Microsystems | [www.jkmicro.com](http://www.jkmicro.com)

NX-210 Portable radio and NX-700 mobile radio  
Kenwood USA Copr. | [www.kenwoodusa.com](http://www.kenwoodusa.com)

F-PC Forth 3.6  
Tom Zimmer, Forth Interest Group | [www.forth.org](http://www.forth.org)

**Author:** Larry Cicchinelli

**Article:** "AC Monitor"

#### **SOURCES**

DipTrace Schematic and PCB software

[www.DipTrace.com](http://www.DipTrace.com)

National Instruments (now Texas Instruments) LM3914

Texas Instruments | [www.ti.com/product/lm3914#relprod](http://www.ti.com/product/lm3914#relprod)

**Author:** Bob Japenga

**Article:** "Linux System Configuration (Part 3): Build Your Linux System"

#### **RESOURCES**

Ångström, [www.angstrom-distribution.org](http://www.angstrom-distribution.org)

BeagleBone, <http://beagleboard.org/bone>

BeagleBoard, <http://beagleboard.org>

Fedora, <https://fedoraproject.org>

Linux from Scratch, [www.linuxfromscratch.org](http://www.linuxfromscratch.org)

Open Embedded, [www.openembedded.org](http://www.openembedded.org)

Raspberry Pi, [www.raspberrypi.org](http://www.raspberrypi.org)

Ubuntu, [www.ubuntu.com](http://www.ubuntu.com)

Wind River Linux, [www.windriver.com/products/linux.html](http://www.windriver.com/products/linux.html)

Yocto, [www.yoctoproject.org](http://www.yoctoproject.org)

**Author:** George Novacek

**Article:** "The Not So Humble Capacitor"

#### **RESOURCES**

Cardwell Condenser, <http://cardwellcondenser.com/>.

N. Gruending, "Varactor Diodes, Weird Component #6," Circuit Cellar 287, 2014.

G. Novacek, "Impedance Matching," Circuit Cellar 281, 2013.

**Author:** Robert Lacoste

**Article:** "RF Connectors"

#### RESOURCES

Amphenol RF, "Precision Connector Series,"

[www.amphenolrf.com/products/precision.asp?N=0&sid=4A4D4A002301E17F&](http://www.amphenolrf.com/products/precision.asp?N=0&sid=4A4D4A002301E17F&).

Hirose Electric Co., "Ultra Small Surface Mount Coaxial Connectors—1.9 mm or 2.4 mm Mated Height," [www.hirose.co.jp/cataloge\\_hp/e32119372.pdf](http://www.hirose.co.jp/cataloge_hp/e32119372.pdf).

Microwaves101.com, "Connector Care,"

[www.microwaves101.com/encyclopedia/connectorcare.cfm](http://www.microwaves101.com/encyclopedia/connectorcare.cfm)

———, "Microwave Connectors," [www.microwaves101.com/encyclopedia/connectors.cfm](http://www.microwaves101.com/encyclopedia/connectors.cfm)

Pasternack, "Connector Identifier,"

[www.pasternack.com/images/pdf/7%20Connector%20Identifier.pdf](http://www.pasternack.com/images/pdf/7%20Connector%20Identifier.pdf).

#### SOURCES

HP8510C Network analyzer (now obsolete)

Hewlett-Packard | [www.hp.com](http://www.hp.com)

**Author:** Jeff Bachiochi

**Article:** "Embedded Voice Recognition (Part 1): Recognition as a Peripheral"

#### SOURCES

EasyVR Module and EasyVR development kit

TIGAL KG | [www.veear.eu](http://www.veear.eu)

Liberty Basic

Shoptalk Systems | [www.libertybasic.com](http://www.libertybasic.com)

RSC-4x Speech recognition and synthesis microcontrollers

Sensory, Inc. | [www.sensory.com](http://www.sensory.com)