

# Electronics

Room Steward: [Mark R Millsap](#)

Expert at large on radio equipment and instruments: [Allon Stern](#) ([Allon Stern](#))

- [Overview](#)
- [Rules](#)
- [Resources](#)
  - [Resources in the Electronics Lab Listing](#)
    - [In the gray drawers, nearest the wire spool rack](#)
      - [Far Right, Lower Cabinet:](#)
      - [Middle Column, Lower Cabinet:](#)
      - [Far Right, Upper Cabinet:](#)
      - [Middle Column, Upper Cabinet:](#)
      - [Far Left, Lower Cabinet:](#)
      - [Far Left, Upper Cabinet:](#)
    - [In the gray drawers, nearest the entrance door:](#)
      - [Far Right Column:](#)
      - [Middle Column:](#)
      - [Far Left Column:](#)
    - [In the Black Boxes with Yellow Tops](#)
    - [Drone \(quadcopter\) Hardware](#)
  - [Instruments, accessories and equipment](#)
    - [HP/ Agilent ESG Series User Manual](#)

## Overview

The Electronics Room provides a space where members can solder, use power supplies, oscilloscopes and small hand tools to build electronics projects, and find resources to help with their projects.

## Rules

1. If you don't know how to use a tool or piece of equipment, don't. Some equipment can be damaged through misuse. Refer to the pages here for guidelines for specific operation of these tools and owners of equipment that is on loan to the space.
2. Clean up when you are finished. Put all hand tools back on the pegboard where they came from, sweep any loose solder, wire pieces, and other detritus from the bench into the trash can.
3. Leave the equipment powered off. Never leave the soldering iron turned on - it is recommended to turn the large power strip off when you are leaving the space.
4. Mark any works in progress with your name and phone number. Do not leave works in progress in the lab for an extended period of time without approval. Unmarked projects may be scavenged or tossed.

## Resources

The electronics room contains a couple of benches with basic equipment, a bookshelf, and parts drawers galore. Not all parts are free for use!

The blue parts bins stacked on the wall contain donated parts. You are free to use these parts, but be a good steward of these resources. If you experiment with a part, unless you are SURE it is undamaged, do not return it back to the bins. Please ask before using large numbers of parts. The intent is that these be available for electronics use, NOT as decorations for art projects (that said, if you need decorations for art projects, there are some select parts that might be suitable for such).

The parts on top of the bookshelf belong to Allon Stern. Please let him know if you need to use any parts - if you need one or two random bits, it's okay but if you need more than that, please let him know and make arrangements to pay for the parts or replenish them.

The following is the text of a Google doc that was created listing some of the resources in the Electronics Lab and in particular, in the black and yellow bin boxes on the shelf above the benches:

(4/20/23 Rats. The pictures didn't come across, so we'll have to add them soon...)

## Resources in the Electronics Lab Listing

### In the gray drawers, nearest the wire spool rack

#### Far Right, Lower Cabinet:

RF - Filters



Attenuators

Short RF Cables

RF mixers, Doublers

Detectors, Bias Tees

Small Amps

Couplers, Dividers, Hybrids

50ohm Loads / Terminators

Noise & Power Measurement

Isolators / Circulators

### **Middle Column, Lower Cabinet:**

Proto Boards

RF Connectors (small)

### **Far Right, Upper Cabinet:**

Mosfets (2 drawers)

### **Middle Column, Upper Cabinet:**

Heat Shrink Tubing

Terminal Strips

LEDs (various colors and sizes)

LEDs On Leads

Header Strips (2 drawers)

Circuit Breakers / Fuse Holders

Small MOLEX Connectors

Audio Plugs & Connectors

Ring Terminals / Barrel Connectors / USB Connectors

### **Far Left, Lower Cabinet:**

????

????

LED Light Strips

8-segment Numeral Displays, Meter Displays, LED Strips

Empty

Empty

Capacitors

Capacitors

High Voltage Capacitors

Empty



**Far Left, Upper Cabinet:**

Panel Meters, Displays

Knobs

Trim Pots

Potentiometers

DIP Switches, 8 DIP Switches, Shaft Encoders

Toggle Switches

Buttons & Tactile Switches

Octal / BCD Thumbwheels

Power Relays & Sockets

**In the gray drawers, nearest the entrance door:****Far Right Column:**

Bumpers, Feet, Grommets

Rubber Feet & more Grommets

Component Heatsinks

Handles (small rectangular for project boxes)

Jumpers, Hook Up Wires

Cat-5 Patch Cables - 10' snagless

Voice / Data Connectors (Jacks)

**Middle Column:**

Standoffs, Spacers

Jackscrews

Nylon Standoffs, Spacers

Nylon Screws / Nylon Nuts

**Far Left Column:**

Panel Mounting Hardware

Nylon Washers

Metal Nuts, Washers, PC Screws

**In the Black Boxes with Yellow Tops**

RF Assemblies, Heat Sinks & Fans (for PC type enclosures)

Heat Sinks (Heavy Box!!!)

Mostly DB-? Connectors (DB-9, DB-25, and others) & some random stuff (with Picture)



Nuts, Bolts, Screws, Standoffs, Spacers

Lots of loose parts in small bottles

ICs in tubes. 100s of them.

RF Parts & Assemblies, LCD Panels, More ICs in tubes.

RF Power Supplies, Power Converters, Selectors, Transformers (heavy box)

Project Boxes (some used), misc. metal bits

BNC Connectors (100s of them), DB-9 connectors, DB-25 connectors, RF connectors, RCA Audio cables (heavy box)

Whole Box of Resistors (1000s of them. Yes, lots and lots of them!)

2nd Sort - Allon, Connectors (?)

Wire on Spools (Various gauge wire on spools)

Project Boxes, Thinflex Cable, Lamp Cord, Screws & Misc. Stuff

Project Boxes

Inductors, Capacitors, Limiters, 70's era MOLEX Connectors

## Drone (quadcopter) Hardware

### Box #1:

Flight controller

Four (4) carbon fabric blades on motors

Drone frame

Battery Charger

A few small batteries

Power Supply / Battery Charger?


### Box #2:

Drone Frames

Audio Cables

A bunch of other stuff

## Instruments, accessories and equipment

Item	Instructions	Responsible	Picture
<b>Kungber DC Power Supply</b> (SPS series)  (New to Makersmiths 08/23)	<b>Manual:</b> <a href="#">User Manual (captured text from photos)</a>  <b>Photos:</b> <a href="#">Photos of Manual Pages</a>	Room Stewards	Coming Soon
MPJA 9333-PS Dual 3A 0-30V /5V@3A Fixed Power Supply	Manual: <a href="#">9333ps.pdf</a>	Allon Stern	



<p>BlackJack SolderWerks BK 8000 Dual Port / Dual Pump Repairing System</p>	<p>Manual: <a href="#">Bk8000.pdf</a></p>	<p>Minh Vu</p>	 <p>A photograph of the BlackJack SolderWerks BK 8000 Dual Port / Dual Pump Repairing System. The device is a black, rectangular unit with various ports and controls. It features a large, vertical, cylindrical component on the left side, which is part of the dual pump system. The unit is connected to a power source and has several cables plugged into it. A small, round, metallic object is placed on the blue surface in front of the device.</p>
<p>HP ESG- 4000A Signal Generator</p>	<p><a href="#">Specifications</a>  <a href="#">HP/ Agilent ESG Series User Manual</a></p>		 <p>A photograph of the HP ESG- 4000A Signal Generator. The device is a large, rectangular, silver-colored unit with a prominent front panel. It features a large, green, rectangular display screen in the center, which shows some text and numbers. To the right of the screen is a large, circular, silver-colored knob. The front panel is densely packed with various buttons, switches, and ports.</p>
<p>8648c signal generator</p>	<p><a href="#">Specifications</a>  <a href="#">Data Sheet</a></p>		 <p>A photograph of the 8648c signal generator. The device is a rectangular, silver-colored unit with a front panel that includes a small, green, rectangular display screen. Below the screen is a large, circular, silver-colored knob. The front panel is covered with numerous buttons and controls, typical of a signal generator.</p>
<p>Agilent/ HP 8596E Portable Spectrum Analyzer, 9 kHz to 12.8 GHz</p>	<p><a href="#">manual</a>  <a href="#">Data sheet</a></p>		 <p>A photograph of the Agilent/ HP 8596E Portable Spectrum Analyzer. The device is a rectangular, silver-colored unit with a front panel that features a large, black, rectangular display screen. The screen shows a spectrum plot with several peaks. To the right of the screen is a large, circular, silver-colored knob. The front panel is equipped with many buttons and controls, including a numeric keypad and various function buttons.</p>



Stanford Research Srs Ds335 3.1 mhz Precision Function Generator	<a href="#">manual</a>		

If you need to edit the page and formatting there are some instructions you could follow [here](#)