

# Chapter G

## Appendix: “Where to Go to Buy Electronic Goodies?”

Good question! Here are some hints, from our experiences.

### I. Mail order and online

**Digi-Key Corp:** (Thief River Falls, MN: 1-800-DIGIKEY; [www.digikey.com](http://www.digikey.com)) We used to say “*Get their catalog!!*” – but, sadly, they’ve abandoned paper, replacing it with an impressive search capability. You can get everything here, even in small quantities, with fast delivery. They stock Adafruit and SparkFun products as well. It’s often worth designing with their webpage open in front of you. Online ordering and stock/price checking.

**Mouser Electronics:** (1-800-346-6873; [www.mouser.com](http://www.mouser.com)) Broad stocking distributor, with service comparable to Digi-Key’s, and willingness to ship small quantities. Good selection of precision passives and they used to print a comprehensive paper catalog but may no longer. We were able to find a [PDF download of the 2015 edition](#).

**Newark Electronics (US) / Farnell (worldwide):** (1-800-463-9275; [www.newark.com](http://www.newark.com) or [www.farnell.com](http://www.farnell.com)). Broadest stocking distributor, with service comparable to Digi-Key’s and good selection of tools. Paper catalog may not still be in print but we were able to find a [PDF download of the 2019 edition](#).

**Adafruit:** ([www.adafruit.com](http://www.adafruit.com)) A really good site founded by the serious and thoughtful electronics geek Limor “Ladyada” Fried who often integrates parts into helpful “breakout” boards that make the parts easy to wire. This aid is important because so many new parts are available in surface-mount packages only. The breakout boards permit breadboarding with such parts. Adafruit often provides code in addition to take advantage of programmable

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parts. The site initially leaned toward Arduino interfaces and code although more and more products now support Python. The site includes a tremendous number of blogs and tutorials for learning electronics and using Adafruit’s products.

**SparkFun:** ([www.sparkfun.com](http://www.sparkfun.com)) Similar to Adafruit, though perhaps more commercial. SparkFun, too, often provides helpful breakout boards, blogs and tutorials.

**Radio Shack:** ([www.radioshack.com](http://www.radioshack.com)) Yes. RadioShack lives (in the cloud at least). They carry a collection of electronic parts, kits and equipment. It might be worth looking at if you get enough for free shipping (over \$49).

**LCSC Electronics:** ([www.lcsc.com](http://www.lcsc.com)) We have not used them but LCSC Electronics is a stocking distributor in China that claims a large inventory and, if you are not in a hurry, reasonable shipping charges. Their prices appear to be comparable or a bit higher than Digi-Key and they allow small quantity orders.

**“Stocking Distributors:”** These are the standard distribution channel for quantity buying; names like Allied (now RS), Arrow, Avnet, FAI, Heilind, Insight, Pioneer, Wyle. Substantial minimum quantities – not generally useful for prototyping or small production.

**Manufacturers’ Direct:** Many semiconductor manufacturers ([Analog Devices](#), [TI \(Texas Instruments\)](#), Maxim (now part of Analog Devices), ...) will not only send free samples with the slightest provocation, they will also sell in small quantities via credit card; check out [Mini-Circuits](#) for RF components, and [Coilcraft](#) for inductors, transformers, and RF filters.

**Oddballs:** [Marlin P Jones](#), [Jameco](#), [B&D](#), [Herbach & Rademan](#), [Omnitron](#), [ABRA](#), [All Electronics](#), [seed studio](#), [Electronic Goldmine](#), [Antique Electronics Supply](#); ephemeral collection of “surplus” stuff, some real bargains.

**eBay:** ([www.ebay.com](http://www.ebay.com)) If you haven’t been here, you’ve probably just arrived from Mars. LOTS of stuff, literally millions of items, an online auction. Good for obsolete parts since you can set up a search to email you when something shows up. You can get plenty of electronic stuff, but CAVEAT BIGTIME EMPTOR. Feedback Forum helps. (That said one of us has had good luck finding rare and obsolete parts that were not available anywhere else.)

**Alibaba:** ([www.alibab.com](http://www.alibab.com)) Small Pacific-rim companies that have stocks of obsolete components are easily found on Alibaba. You can place a quote request for a part number, and you’ll get dozens of useful reasonably-priced suppliers.

**Aliexpress:** ([aliexpress.com](http://aliexpress.com)) The retail arm of Alibaba, direct sales from China at ridiculously low prices from small vendors like the “No Problem Store”. You take your chances but won’t be out for that much if it all goes badly.

## II. Indexes and Locators

**Octopart, FindChips, NetComponents:** ([octopart.com](http://octopart.com), [findchips.com](http://findchips.com), [netcomponents.com](http://netcomponents.com)) Give them a part number and they search dozens of distributors, returning (sometimes unreliable) information on availability and pricing.

**Google:** ([www.google.com](http://www.google.com)) Our standard “portal,” reads your mind and vectors you to the goodstuff (sometimes too much good stuff; pages and pages of good stuff). Helpful, sometimes, in finding parts and equipment manufacturers and vendors.

**ChatGPT, Bard, or whatever the *AI du jour* is:** ([chat.openai.com](http://chat.openai.com), [bard.google.com](http://bard.google.com)) The future is here – when asked where to get a 74LS469 counter, ChatGPT noted that “[t]he 74LS469 counter is an older integrated circuit that may be difficult to find as it is no longer in production. However, you may be able to find it at specialty electronics stores or online retailers that specialize in obsolete electronic components. ” It then suggested a number of possible sources including several we were not previously aware of (so we added them to the “Oddballs” list above). Sadly, google’s Bard just listed a bunch of normal distributors that would be unlikely to have an obsolete part like the ’469. Neither bothered to actually find the part for us. (Sheesh - if you can’t get your AI out of bed to do the work for you what use is it?)

## III. Local

Sometimes it’s nice to shop in person; here are the sorts of places to go.

**Microcenter:** ([www.microcenter.com](http://www.microcenter.com)) If you are lucky enough to be near one of their 25 US locations (we are), Microcenter has grown from just a computer store to include a nice selection of DIY components and kits from Adafruit, SparkFun and others. It also has simple tools and equipment like soldering irons and hand tools. Its fun to browse and you can get a new SSD hard drive for your laptop while you are there.

**“You-do-it” Electronics Center** ([www.youdoitelectronics.com](http://www.youdoitelectronics.com)) You-do-it in Needham, MA, has been around for decades (since 1949). We haven’t visited for a while but the last time we did it had two huge floors with the first floor mostly consumer electronics and the second devoted to components, kits and tools.

**Electronics Flea Markets:** Also known as “swap meets,” perhaps somewhat in decline; two legendary meets are on opposite coasts: [De Anza College \(Cupertino, every second Saturday, March–October\)](#), and [MIT \(Cambridge, every third Sunday, April–October\)](#). What meets are three cultures (electronics, computers, hams); haggling is mandatory; caveat very emptor.

**Electronics Surplus Supply Stores:** These are incredibly cool if you can find one! Murphy’s Surplus Warehouse (<http://www.murphyjunk.net/>) still lives in El Cajon, CA, and also in Ogden, IA. Sadly, it appears that Halted ([www.halted.com](http://www.halted.com)) has been sold to [Excess Solutions](#) who may only have an eBay presence (they do list an address in San Jose, CA).

## IV. Miscellaneous

**Obsolete ICs.** Your best place to start is Rochester Electronics ([www.rocelec.com](http://www.rocelec.com)), a wonderful place that apparently buys up inventories of ICs being discontinued. [Jameco](#) has a lot of obsolete parts. We don’t have personal experience with them but [Freelance Electronics \(www.freelance.com\)](#) appears to have good availability on obsolete parts, although they have a \$10 minimum per part number. Also try [Interfet \(www.interfet.com\)](#), a manufacturer of small-signal FETs, including ones that the big guys have abandoned.

**PC Board Manufacture.** We like a place called Advanced Circuits ([www.4pcb.com](http://www.4pcb.com)); you can get online quotes, and they do a good job and deliver pronto. We do not have personal experience but [JLCPCB \(jlcpcb.com\)](#), a Chinese company, promises not only low cost with fast turnaround but claims a large stock of parts and can do both PCB manufacture and assembly (they also offer 3D printing).