

**MACS (/CATEGORY/MACS)**

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# Recycle your old tech gear



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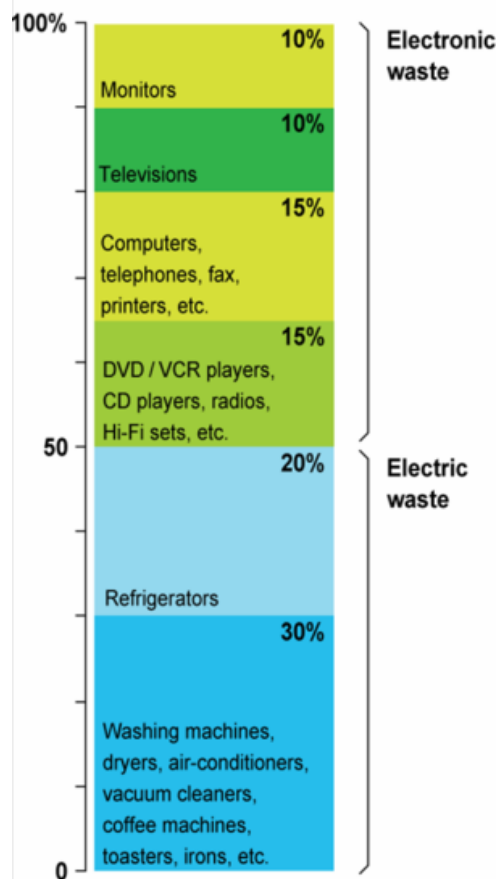
In springtime, people's fancies may turn to love, but their to-do list turns to cleaning. Make this the year that you finally recycle all the ancient MP3 players, toner cartridges, ethernet cables, and bulky monitors out of the closets, garages, and spare rooms where they've been lurking. Your home will feel more modern, and you'll be doing your part to boost the 27 percent electronics recycling rate in the U.S.—just in time for another spring constant, Earth Day.

## Why recycle at all?

Sure, it would be easier just to dump all your old, unwanted electronic stuff in the trash. However, old computers and their related peripherals contain a lot of heavy metals—lead, cadmium, mercury—that are bad for people's health when they get into the soil and water

<http://images.techhive.com/images/article/waste-100033841-orig.png>

## What is e-waste?



Additional categories: lighting equipment (fluorescent tubes); toys, sports and recreational equipment; electric and electronic tools (drills, sewing machines, lawn mowers, etc); surveillance and control equipment; medical instruments; automatic ticket machines.

Source : EMPA Swiss Federal Laboratories for Materials Testing and Research (definition according to the European Union WEEE Directive).

Half of all electronic waste is linked to consumer electronics.

(<http://www.techhive.com/article/2023547/the-dirty-and-dangerous-side-of-tech.html>). In addition, when old electronics hit the trash heap, they're out of a recycling stream that can cut the energy costs for production of future electronics.

But if the environmental concerns don't grab you, consider the business benefits to recycling electronics: According to the [Institute for Local Self-Reliance](http://www.ilsr.org/recycling-means-business/) (<http://www.ilsr.org/recycling-means-business/>), compared to disposal, computer reuse created 296 jobs per every 10,000 tons of material disposed of each year.

The [Electronics TakeBack Coalition](http://www.electronicstakeback.com/home/) (<http://www.electronicstakeback.com/home/>) estimates that the U.S. generates approximately 1.7 million tons of electronic waste annually—so imagine the job potential that's still there. And if those arguments don't sway you, maybe the long arm of the law can: It's [illegal in 25 U.S. states to simply trash your old electronics](http://www.electronicstakeback.com/home/)

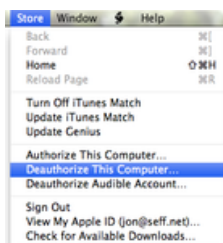
(<http://www.electronicstakeback.com/home/>).

Now, don't you want to avoid breaking the law? Don't you also want to employ people and keep the planet clean by recycling your old stuff? Of course you do, so let's get started.

## Before you get rid of any of your electronics

The first step on your recycling journey: Make sure that none of your personal data will be leaving the house along with your soon-to-be-discarded electronics. As a bare minimum, make sure you do the following:

If you're using Apple's iTunes to manage your digital music and video, be sure you deauthorize any device you're recycling



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Don't forget the little things like deauthorizing iTunes-running computers, for example.

[http://www.macworld.com/article/1167523/deauthorizing\\_the\\_itunes\\_account\\_on\\_an\\_old\\_computer.html](http://www.macworld.com/article/1167523/deauthorizing_the_itunes_account_on_an_old_computer.html)).

“But that computer is dead” is no excuse: Apple expects you to simply deauthorize all your devices via the iTunes app, then reauthorize the ones that are still alive (and hanging around after the purge). Note that the “deauthorize all” option works only once a year, so use it wisely.

If you're recycling a smartphone, do a complete reset of your phone to wipe out its data and restore it to its factory settings. Before you do this, however, make sure that you've got your data backed up someplace else, and that you've double-checked the manufacturer's instructions on how to reset your phone.

If you're recycling a computer or a hard drive, don't just assume that deleting files will wipe the data off your system, because it won't. All it does is reformat the space on the drive, and the data can be snagged using tools designed for disaster recovery.

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In 2003, graduate students at MIT were able to pull more than 5000 credit card numbers, personal and corporate financial records, and medical records from so-called “wiped” drives

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You need to get a disk-wiping program, preferably one that meets the [U.S. Department of Defense's Media Sanitation Guidelines](http://www.doncio.navy.mil/ContentView.aspx?id=4138) (<http://www.doncio.navy.mil/ContentView.aspx?id=4138>), and you need to set aside a few hours. What a good disk-wiping program will do is write all sorts of data on your hard disk multiple times, effectively obscuring your original data with newer, nonpersonal stuff. This takes some time, so don't procrastinate and leave it to the morning of your planned recycling run.

Mac users looking for disk-wiping programs can use Apple's built-in Disk Utility, or they can cough up \$25 for Mireth Technology's [ShredIt X](http://www.mireth.com/pub/sxme.html) (<http://www.mireth.com/pub/sxme.html>). Windows users on a budget can erase their drives using the free [Eraser 6.0.10](http://www.pcworld.com/article/2024250/review-eraser-removes-files-safely-and-permanently.html) (<http://www.pcworld.com/article/2024250/review-eraser-removes-files-safely-and-permanently.html>).

If you're tempted to skip this step, consider this: In 2003, [graduate students at MIT](http://web.mit.edu/newsoffice/2003/diskdrives-0129.html) (<http://web.mit.edu/newsoffice/2003/diskdrives-0129.html>) bought 158 used hard drives—approximately 60 percent of them reformatted and 45 percent with no files on them at all—and they were able to pull more 5000 credit card numbers, personal and corporate financial records, and medical records from these “wiped” drives. While the odds of a graduate student at an elite technical university pulling your personal data off that old MacBook and using it for evildoing are low, why not make them even lower? (Some people recommend physically drilling holes in hard-drive platters, but even that may not be enough.)

If you're recycling a digital camera and its attendant memory card, you'll need to wipe the card too. The best way to do this is to stick any memory card back in the camera and use the camera's built-in “format card” option to wipe the memory card clean of all data.

If you're getting rid of memory sticks, USB flash drives, and other small storage drives, reformat the drive, preferably with a disk-writing program. Remember, throwing out files doesn't delete the data.

If you're getting rid of old printers, scanners, or fax machines, you'll need to purge the appliance's memory. The good news is, most consumer-grade printers, scanners, and fax machines don't have internal hard drives. (Most of the time, the document you're printing or scanning is stored in RAM in the appliance's hardware.) All you have to do is disconnect your appliance from any computer, and then turn it on and go through the settings until you find the option to reset everything to factory settings. That should flush out any residual data or personal information like your fax number.

## Now, on to recycling

Broadly speaking, you have three recycling options: You can drop off your unwanted stuff in person somewhere; you can ship it away; or you can donate it to a willing organization.

**Drop it off in person.** The advantage to dropping off your gear is that you don't need to really plan ahead and print out prepaid labels (as you would if you were shipping things away); you just toss your stuff in the car and go. Several national retail chains have set up recycling options for everything from batteries to toner cartridges to mobile phones. Below, some of the most ubiquitous:

You can bring your old iPod to any Apple Retail Store and get 10 percent off a new one. (Note: this does not apply to iPod shuffles).

<http://images.techhive.com/images/article/2013/04/ewaste-greenpeace-100033839-orig.jpg>



If you thought computers from the late 1990s were ugly on the desktop, wait til you see several thousand of them in a landfill.

Dell has set up a printer recycling program in conjunction with the office supply chain Staples, where you can drop off Dell-branded used ink and toner cartridges at participating locations (<http://www.dell.com/Learn/us/en/uscorp1/corp-comm/recycling-inktoner-us?c=us&l=en&s=corp&cs=uscorp1&delphi:gr=true>). The program is free. (Staples takes any brand of empty ink and toner cartridge through its own recycling program (<http://www.staples.com/sbd/cre/marketing/easy-on-the-planet/recycling-and-eco-services.html>)—and you'll even get back \$2 in Staples rewards for each cartridge you recycle.)

Hewlett-Packard has also partnered with Staples as a drop-off point for its old computing equipment and printer cartridges (<http://www8.hp.com/us/en/hp-information/environment/computer-hardware-recycling.html>). Again, you can drop off your old equipment for free.

Acer works with Best Buy's in-store recycling program. Check Acer's website (<http://us.acer.com/ac/en/US/content/recycling-pc>) to see what programs the computer manufacturer offers in your state.

Some large chains have recycling programs as well. OfficeMax (<http://www.officemax.com/storelocator/storeLocatorHome.jsp>), for example, will take your old printer/toner cartridges, as will Walgreens (<http://www.walgreens.com/storelocator/find.jsp?tab=store%20locator&requestType=locator>).

Finally, who among us doesn't have a ratking ([http://en.wikipedia.org/wiki/Rat\\_king\\_%28folklore%29](http://en.wikipedia.org/wiki/Rat_king_%28folklore%29)) of cables that you've been holding on to since the Clinton administration? Happily, most electronics recycling places will take any and all cables you have, as well, because the cables have copper that can be stripped out. If you really want to brighten the day of whoever is stuck dealing with your cables, take the time to untangle them, sort them by size, and use twist ties to make compact little bundles of each cable.



You've also got the option of dropping off your unwanted stuff at a local recycling center. [LG \(http://www.lgrecyclingprogram.com/\)](http://www.lgrecyclingprogram.com/), [Sony \(http://store.sony.com/webapp/wcs/stores/servlet/CategoryDisplay?catalogId=10551&storeId=10151&langId=-1&identifier=SeCycle\\_Locator\)](http://store.sony.com/webapp/wcs/stores/servlet/CategoryDisplay?catalogId=10551&storeId=10151&langId=-1&identifier=SeCycle_Locator), and [Toshiba \(http://us.toshiba.com/green/reuse-and-recycling\)](http://us.toshiba.com/green/reuse-and-recycling) all provide location-based lookups for electronics recycling centers that take their wares. You can also find one through [eStewards \(http://e-stewards.org/find-a-recycler/\)](http://e-stewards.org/find-a-recycler/), or [Greener Gadgets \(http://greenergadgets.org/\)](http://greenergadgets.org/). When you do find a center, call ahead and ask the following questions:

- Do you accept electronic devices from individuals, or do you work only with businesses?
- What are your policies on destroying personal data that may still be on used computers or cell phones?
- Do you destroy storage media?
- Can I get a record of the methods used on my old electronics?
- What environmental management guidelines do you follow?
- What percentage of the materials you collect are recycled and what percentage is disposed?
- What fees will you charge for disposing of computer monitors? Televisions? Or do you charge a flat fee for a carload of items? (The first time I used a recycling center, 11 years ago, I paid \$35 to get rid of two laptops. That experience made me appreciate the free programs set up by manufacturers.)

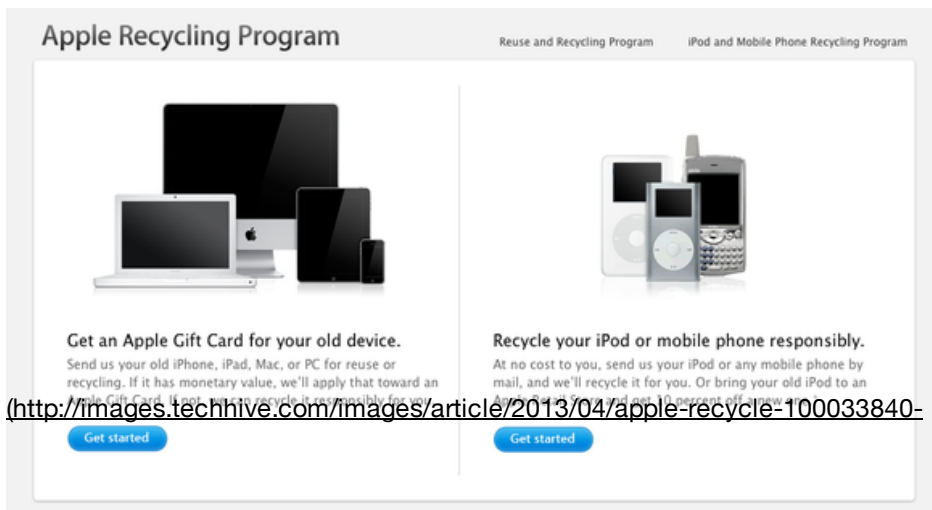
A third option that's cropping up across the U.S. is the electronics recycling fundraiser. You'll often see schools or civic groups doing these, where a coordinating group, such as a middle-school orchestra's booster club, charges a nominal fee of \$25 or so for all the electronics you care to drop off. The advantage here is that you don't have to go chasing all over the place to drop off your stuff. The disadvantage is that Lincoln Middle School's first clarinet chair may do a great job hustling your old printer cartridges out of your car trunk, but she probably can't tell you whether there's a decent data-management policy in place at the recycling endpoint.



<http://images.techhive.com/images/article/recycling-fundraiser-flyer-100033838-orig.jpg>

A local recycler-as-fundraiser program typically takes the kinds of small electronics found around the house, but won't take televisions or other appliances.

**Ship it away.** The Web is chockablock with sites that promise to pay you cash money for your old junk. Some manufacturers and retailers have gotten in on the game too. Apple, for example—working in conjunction with [PowerOn Services \(http://poweron.com\)](http://poweron.com)—promises a [gift card with whatever cash value your old computers, iPhones, or iPads had \(http://www.apple.com/recycling/gift-card/\)](http://www.apple.com/recycling/gift-card/). (And if your gear doesn't qualify, it'll recycle them for you at no charge.)



(http://images.techhive.com/images/article/2013/04/apple-recycle-100033840-orig.png)

Apple will take all sorts of your old gear.

Other tech vendors provide free shipping and hassle-free recycling: Dell's mailback program provides a prepaid mailing label and a pickup by FedEx to whisk away your old PCs (<http://www.dell.com/Learn/us/en/uscorp1/corp-comm/GetFreeAt-HomePickup>). Motorola will foot the bill if you want to send it any brand of mobile phone, tablet, or accessory

(<http://responsibility.motorola.com/index.php/environment/products/recycling/htrmp/USrecycling/>)

and it'll recycle its branded cordless phones, modems, and routers for free.

Other major brands that will provide prepaid mailing labels to recycle their old products include BlackBerry (<http://us.blackberry.com/recycle.html>), Hewlett-Packard (<http://www8.hp.com/us/en/hp-information/environment/computer-hardware-recycling.html>), Lenovo (<http://portal.aerccr.com/TRCS/RequestMailback.aspx?f=104632>), and Verizon Wireless (<https://www.trade-in.vzw.com/home.aspx>).

If you just want to toss everything in one giant box and never think of it again, check out the services GreenDisk (<http://www.greendisk.com/>) offers. It'll recycle almost anything (<http://www.greendisk.com/gdsite/accept.aspx>) (but draws the line at electric toothbrushes). Note that this convenience does not come free—getting rid of your Jurassic monitor starts at \$35.

**Donate it.** If your older gear is still in working order, you may want to think about giving it away instead of sending it on its way to its next life. But before you make plans to gift your local preschool with a Performa 6115 ([http://www.everymac.com/systems/apple/mac\\_performa/specs/mac\\_performa\\_6115cd.html](http://www.everymac.com/systems/apple/mac_performa/specs/mac_performa_6115cd.html)),

stop and consider whether your donation is going to be useful to any given organization. Phones, computers, and printers that don't work aren't going to magically fire up once they've been tossed in the Goodwill bin; if you can recycle them on your own, do it and save the folks at the nonprofits the effort.

If you have relatively modern, working electronics and you want to get them into the hands of people who can use them, start with the Cristina Foundation (<http://www.cristina.org/>), which matches donors of used computers and other electronic hardware to select a local charity or school in their area of the country.

Another organization to consider is the World Computer Exchange (<http://www.worldcomputerexchange.org/gear-we-can-use>), which sells low-cost refurbished desktop computers and peripherals available to developing countries.

There's also a crop of charities seeking to pass along mobile phones to people who desperately need them — groups such as the National Coalition Against Domestic Violence (<http://www.ncadv.org/takeaction/DonateaPhone.php#labelsandsupplies>), HopeLine ([http://aboutus.verizonwireless.com/commitment/community\\_programs/hopeline/](http://aboutus.verizonwireless.com/commitment/community_programs/hopeline/)), Cellphones for Soldiers (<http://www.cellphonesforsoldiers.com/>), Operation Gratitude (<http://www.operationgratitude.com/>), Hope Phones (<http://hopephones.org/about/>), Secure the Call (<http://www.securethecall.org/>), and the 911 Cell Phone Bank (<http://911cellphonebank.org/>).

And keep in mind that if you're giving to a registered nonprofit organization, you may get some tax benefits from your donation (you'll need a receipt with the company's Tax ID on it).

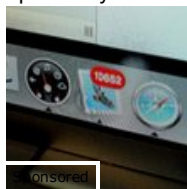
## WE RECOMMEND



Fact or fiction:  
Nine iPhone and  
iPad battery-  
saving techniques  
tested



Watch and rip  
Blu-ray movies on  
your Mac



7 out of 10 people

(<http://www.macworld.com/article/2046209/fact-or-fiction-nine-iphone-and-ipad-battery-saving-techniques-tested.html>)  
(<http://www.macworld.com/article/2042431/watch-and-rip-blu-ray-movies-on-your-mac.html>)

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