Billfred's Guide To Small-Time Package Mailing

During the COVID-19 pandemic, many friends of mine with home shops or access to 3D printers have been working hard to make more personal protective equipment for the people who need it. As a longtime online seller, my joy in seeing their packages ready to ship was tempered by seeing them make rookie mistakes when it came time to buy shipping. With everyone on a budget, saving a few dollars in shipping could allow more good things to be made!

Then I kept getting in the orbit of people who ask "what can I do with all this _____"? Honestly, same answers. Anything around the size of a shoebox that's worth $20 to someone can traverse the country for less than that, and that'll get something reused rather than being recycled (or worse, dumped in a landfill).

This document is set so anyone can leave a comment or suggestion. I'm not saying I have *all* of the answers. If you find this info helpful, find a *FIRST* team or event near you once schools get back to in-person operations and give them some love with time or dollars or whatever you can do. Regional contacts can be found here.

If you need to get a hold of me, leave a comment on the document and I'll get a notification.

Disclosures

I've sold things as a third party on Amazon, eBay, and Bricklink, but don't sell any products listed. I don't own direct shares in anyone else mentioned here, nor does anyone in my immediate family work for them.

Everyone has different values and priorities, and Ted DiBiase told you long ago that everyone has a price. Nobody in this document is canceled, even if they maybe should be, for the benefit of those not in a position to vote with their dollars. If you don't like who Uline donates to or how Amazon treats warehouse staff, skip 'em.

This document was last majorly updated in August 2023. Rates may have changed a bit, but everything should still be in the ballpark. Leave a comment if you find a glaring error.

The Rules

Rule 1: Understand rates and speeds.

In many cases, the shipping transit time is a wash or maybe a day's difference. If your package is only going one or two states away, it's almost guaranteed to be a wash. Don't just buy Priority Mail (or especially Priority Mail Express) assuming it'll get it there faster--look at the chart or ask the person at the counter. Some of the most common US Postal Service shipping options are below.

1. **USPS Ground Advantage** is USPS' cheapest offering. It replaced both First Class Parcel (which was for packages under 1 pound) and Parcel Select (over). Unlike those two older services, pricing can be done either by weight *or* by dimensions (measured in tenths of a cubic foot). USPS advertises 2-5 days for delivery depending on distance, and also unlike those older services they throw in $100 of insurance. It's also the play for hazardous items that must travel via ground shipping.

a. Word of caution, once you get out of the 48 contiguous states this service gets awful slow. Like "up to 26 days" slow.

2. **Priority Mail Cubic** is for shipments under a half a cubic foot, no bigger than 18" on a side, and under 20 pounds. Usually, you have to be a high-volume shipper to have access to this rate as it's not available at the Post Office (but see Rule #2). If you can at all make your box qualify for Cubic, do it. Priority Mail Cubic, like all Priority Mail service, arrives in 1-3 business days but also includes insurance.
    a. The Cubic tiers are based on the dimensions, with breakpoints on the tenth of a cubic foot. Here's a tier calculator you can play with.
3. **Priority Mail** is the normal class that includes the flat rate boxes and anything else that isn't Cubic. Priority Mail can still be a solid value, but there are a few ways to ensure you get a better deal. Arrives in 1-3 business days.
    a. **USPS-provided Flat Rate boxes *can be* a trap.**
        i. *Not a trap:* The Small Flat Rate Box and all the various envelopes are great if things are above a pound--even *just* a pound. But if you can go slower, or get it a hair under 16 ounces, you can win. Some examples, going cross-country from ZIP 29201 to 90210:
            1. 1 pound Small Flat Rate Box: $8.10 and free box
            2. 1 pound 6x10 envelope, Priority Mail Cubic: $10.07
            3. 1 pound 6x10 envelope, Ground Advantage: $8.03 but slower.
            4. 1 pound 6x10 envelope, UPS Ground Saver: $6.35 but even slower (over a week).
            5. 15.9-ounce 6x10 envelope, Ground Advantage: $6.78
            6. 15.9-ounce 6x10 envelope, UPS Ground: $9.54
        ii. *Probably a trap:* Once you need the Medium or Large boxes, you will save money most of the time using your own box and sending it Priority Mail Cubic. (If you use a Flat Rate box, you must use the Flat Rate rate.) Give it a look when you're going cross-country with more than 5-10 pounds.
    b. **USPS-provided Regional Rate boxes *were almost always* a trap.** Which is why they got rid of them. If you find a box that hasn't been used, you can use it and it'll go regular or Cubic.
    c. Priority Mail pricing in your own box depends on weight *or* the dimensions of the box, whichever counts as larger on the price chart, as well as the distance.
4. **Priority Mail Express** is guaranteed overnight service to urban areas, and 2-day service to rural areas. You'll pay mightily for the privilege, although they do give you your money back if they miss the guarantee.
5. **Media Mail** is a phenomenal rate for shipping books, videos, or records if that's your thing. Nothing else is allowed in the box, including advertisements. USPS may open your box to ensure it qualifies for the rate, so don't try anything tricky. Media Mail gets there in 2-8 business days.

Now that most of the methods I'd use to buy shipping support UPS as well, might as well break those options down too.

1. **UPS Ground** is UPS' bread and butter. $100 shipping included, 1-5 business days, takes shipments up to 150 pounds with max 108" length and 165" length+girth.
2. **UPS Ground Saver** is a cheaper plan for residential deliveries. Still $100 insurance, but 2-7 business days. Max length 60", 130" length+girth, and only a 70-pound max. But it does offer an honest savings.

3. **UPS Standard** is generally the play if you're shipping from the 48 states to Canada and Mexico. Otherwise, it's basically UPS Ground.
4. There are other UPS rates that are basically what they say on the tin, no need to go into them. They're usually faster and more expensive. Once you get into 2nd Day Air territory, UPS starts providing boxes. Unlike USPS, these free-box rates are *steep*.
    a. Going from ZIP 29201 to 90210 (South Carolina to California):
        i. 5-pound UPS Express Box Small (13x11x2) from 29201 to 90210, UPS 2nd Day Air: **$43.28**
        ii. 5-pound Priority Mail Medium Flat Rate Box (14x12x3.5), Priority Mail: **$14.00** and actually managed to get there a day earlier. And as you read above, I don't even *like* the Medium Flat Rate Box!
        iii. 5-pound USPS Box 1092 (12.125 x 2.75 x 13.375), Priority Mail: **$18.45**
        iv. 5-pound 13x11x2 plain box, USPS Ground Advantage: **$9.29**
        v. 5-pound 13x11x2 plain box, UPS Ground Saver: **$9.18**
    b. Going from ZIP 29201 to 46901 (from South Carolina to Indiana):
        i. 5-pound UPS Express Box Small (13x11x2) from 29201 to 90210, UPS 2nd Day Air: **$29.62**
        ii. 5-pound Priority Mail Medium Flat Rate Box (14x12x3.5), Priority Mail: **$14.00** and still got a day on 2nd Day Air.
        iii. 5-Pound USPS Box 1092 (12.125 x 2.75 x 13.375), Priority Mail: **$7.09**
        iv. 5-pound 13x11x2 plain box, USPS Ground Advantage: **$6.85**
        v. 5-pound 13x11x2 plain box, UPS Ground Saver: **$6.73**

Rule 2: Skip the Post Office (or office supply store) when buying shipping.

If you're sending anything that's bigger than a normal letter envelope, use PirateShip.com. The pirate theme is a little silly (and it was even sillier when I started using them), but the service is 500% legit. Pirate Ship has access to USPS and UPS commercial rates, which are usually double-digit percentage savings over what you'd pay at the Post Office or anywhere selling UPS shipping. It also hooks in with a few e-commerce platforms to automatically import stuff and accepts spreadsheets of addresses too, which is nice if you're sending identical shipments to many places.

Since I originally wrote this guide in 2020, PayPal ditched their custom (bad) shipping system for one powered by ShipStation. It seems to match Pirate Ship on rates, and it would also be a worthy option. I think Pirate Ship is a little easier to use, and they have their Simple Export Rate that makes international shipping cheap and very simple. But I'm glad to have a second one out there.

Neither site does monthly fees or minimums, so you can buy one label when you need one label. Until you're doing such volume that you get to negotiate rates with FedEx or UPS, this is the best thing going.

Rule 3: Skip the Post Office when buying stamps.

If you're willing to shell out for a book (20) or coil (100) at a time, you can knock a good 20% or more off the current 66 cents per Forever stamp on eBay. You may save even more if you're willing to piece together odd old denominations--remember when people used to buy two-cent stamps when the price went up?--but you've probably got better things to do with your time. Best I can tell, you can't use stamps on the box to offset shipping prices unless you're paying retail rates at the Post Office; unless you're getting stamps for an absolute song, it's probably a wash and you can save time buying postage online.

Rule 4: Box or bag?

Sometimes, you really need a box to protect the item--but bubble mailers are fantastic. They are usually cheaper per piece than small shipping boxes, usually lighter, and USPS measures bags by their empty dimensions rather than measuring height. If you're shipping something that can fit snugly into a mailer rather than a comparable box, you're almost guaranteed not to come out worse and could well come out better.

Rule 5: Get a scale and a ruler.

You don't want to pay unnecessary shipping because you guessed too heavy, you don't want to get stuff returned (or getting a fat bill later) because you guessed too light. Some rates will be influenced by sizing too, and not all packaging prints the dimensions on the outside. My scale is about $30 at Sam's Club, and tape measures are two bucks at Harbor Freight if you don't have a coupon.

Rule 6: Shipping a lot USPS? Print a SCAN form and schedule a pickup.

Pirate Ship will help you schedule a free pickup for the next day (useful if your letter carrier doesn't come to the door normally) and generate the SCAN form which lets the USPS staff only scan one barcode to accept all your packages that day. According to USPS, you need a SCAN form even if you're only shipping one package with printed postage. In practice, most Post Office staff don't balk at a couple packages being dropped off without one.

If you ship FedEx or UPS, they'll also let you schedule a pickup but will charge you for it--usually between $10 and 15--until you're shipping at such a scale you're doing negotiated rates. If you're shipping hundreds of pounds of product, of course it's worth it. If it's small things, check their website and find a place to drop it off. For UPS specifically, The UPS Store (which is a franchised chain) gets a dollar or so for each UPS shipment they receive. If you like supporting small businesses, that's an incredibly easy way to do so.

Sources for materials

Boxes

- **Recycled Amazonium** is obviously free if you have the appropriate size and the item doesn't depend on living in a perfectly pristine box. Remember to cover old labels and barcodes, or black them out with a marker. With Amazon doing more deliveries themselves, more pristine packaging is out there.

- While I did caution you about Flat Rate boxes earlier, **USPS** does offer free Priority Mail boxes that aren't Flat Rate boxes. If you are fine locking yourself into Priority Mail rates, they're a great look. Post Offices don't usually have them (they'd rather sell the ReadyPost stuff), so order online. *Hat tip: Jimmy Mish who says his favorites are Box 4, Box 7, and 1096L*
    - Cubic-friendly boxes include (all dimensions are inside and in inches):
        - Tier 0.1: ODVDS (7.56 x 5.44 x 0.63), 1096L (9.25 x 6.25 x 2)
        - Tier 0.2: Box 4 (7 x 7 x 6)
        - Tier 0.3: 1097 (11.333 x 2.333 x 13.111), 1092 (12.125 x 2.75 x 13.375)
        - Tier 0.4: OSHOEBOX (7.5 x 5.125 x 14.375), 1095 (12.375 x 3 x 15.25)
    - Non-Cubic, non-Flat Rate boxes: 1098S (25.438 x 5.875 x 5.125), 1098 (37.875 x 6.125 x 4.125), Box 7 (12 x 12 x 8)
- **Local box manufacturers.** If you're operating at scale, buying thousands of a few set sizes, this will start to make the most sense. Probably worth calling even when you're starting out; one local supplier also sells misprint and overrun boxes at a 25-40% discount but doesn't have proper e-commerce going so it's kind of "25-40% off of what?". You won't know until you ask.
- **U-Haul dealers** have the most absurdly cheap prices on shipping stuff, especially if you buy the bundles of 20-25 boxes. They're cheapest if you pick them up from a U-Haul store, but you can also order online and have them shipped for a still-very-reasonable price. They'll do returns on anything unused as long as you keep the receipt. Combined with their other supplies, if I'm making one stop to get supplies I'm going to U-Haul.
    - *Not every place that rents U-Haul trucks sells U-Haul boxes, and self-storage places selling non-U-Haul boxes charge extortionate prices. Check the U-Haul website for pickup options.*
    - *If a place you like rents U-Haul trucks but doesn't sell any boxes, it might be worth asking them what it'd take for them to order some. I truly don't know the requirements, but I'm down for giving places I like extra business. If you do this, leave a comment with how it went and I'll update this part.*
    - *I don't think I've ever been worse than third in line at a U-Haul store, so if you're trying to minimize crowds it's a very good look.*
- **Walmart** has astonishingly good prices on lightly-branded light-duty shipping boxes smaller than U-Haul's small moving box. And you know that making boxes as small as they can be is how to do it. Once you get to moving boxes, U-Haul is cheaper and they make a better box...but Walmart's are still good enough if it saves you time.
- **Lowe's and Home Depot** moving boxes are fine if it saves you an additional stop and you only need a couple. Home Depot boxes are a little beefier, but Lowe's boxes are good enough to ship books in. Both undercut U-Haul on single-box prices by a few pennies. Both are significantly more expensive than U-Haul once you hit bundle prices.
- **Office stores like Staples or Office Depot** are often ridiculously expensive. Once in a blue moon a bundle of some specific size will be cheapest there, but definitely not for singles.
- **Uline** is the McMaster-Carr or Grainger of shipping supplies if you know those companies. They have that very specific box size you need, they can probably get it to you tomorrow, and you'll pay for the privilege. I've never had a need to order from them, but I'm including them as a baseline for "am I paying too much for this?".

- **Bubblefast** is a mom-and-pop seller of boxes and many other shipping supplies. They won't beat U-Haul on those boxes, so no illusions there. Other materials are very much in the ballpark, and they sell good variety packs of things like mailers. I've been very happy with ordering from them, and if you want to get off of the megastores it's well worth a look.
- **Amazon** has occasionally come through with a short run of specific boxes. Try it if you need something specific like mailer boxes that have the extra flaps or the Prime shipping is beneficial for your deadlines.

Bubble mailers

I first fell in love with some Duck brand ones from Sam's Club, but they don't carry them anymore. My current supply is from ValueMailers, which also sells on Amazon. If you need mailers *today*, go to Walmart. If you can have them shipped to you, cross-check Bubblefast, Amazon, and/or Uline.

I don't love the challenges of recycling them, but you'll be pleasantly surprised by what will fit in a #0 mailer and they are light and compact. Pick your poison, I suppose.

Poly mailers

This is slightly advanced game. Maybe the thing you're shipping is durable enough to ship as-is (say, a product in a sturdy retail box), but you don't want it directly exposed to the world. Poly mailers are the trick here, simply a thin layer of plastic as a barrier. Try Staples, Amazon, or Bubblefast. (Bubblefast sells nice sampler packs of different sizes too.)

Tape

Virtually all tape sold in retail stores is 2" nominal. Once you hit a certain volume (and probably before you trade up in box suppliers), you will learn that 3" nominal tape and a matching commercial tape gun lets you get one strip on fast and be done with sealing that box where the cheap stuff may require a second pass or more bracing. I got both my tape and gun off of Amazon and have no strong loyalties. (3" tape guns will take 2" tape, by the way.)

Cushioning/void fill

First, minimize void fill. A box that requires less void fill is always going to be cheaper to ship, either because it's lighter or because it's smaller (or both). I've cut down many boxes to shorten them; slit the corners, then fold again. A box resizer will give you a nice uniform scoring all the way around for that second fold, and it will help you avoid going too far on that slitting.
Much like with boxes, I keep a box of the stuff that comes in so I can send it back out. Could be air pillows (they require special machinery to make), could be paper, could be weird foam bits that were made for packing other things I bought. If it's good for one more trip, it's great to make it fulfill its purpose.

For bubble cushion (BubbleWrap is a brand name), Walmart has the best in-store-anywhere price. U-Haul is a couple bucks more per (big) roll, but still in the ballpark and comes boxed which helps contain the chaos. Satisfying as it is to pop and as effective as it may be, it's also a pain to recycle so don't overdo it.

Wrapping paper (in the form of blank newsprint sheets) is a little heavier, but useful for heavier or pointier things that would murder air-filled stuff, and it is ridiculously easy to recycle. I get mine from U-Haul when I need to buy new; the $15 box lasts an astonishingly long time and it's available locally. I've heard of some people buying roll ends off their local newspaper, but have not attempted this myself. I'm sure they wouldn't mind the cash. (Think long and hard before using printed newspapers; that ink loves to rub off and make a mess.)

I've also used leftover letter-sized flyers. Nice for a bubble mailer that needs juuuuuuuust a little more stuffed in, but not a full sheet of wrapping paper. If you have a connection in a print shop, might as well ask.

Packing peanuts? Ugh, no thank you.

Printing labels

Pirate Ship supports PDFs of shipping labels in a few flavors. In order of increasing elegance:

- Print on your usual laser printer two to a page, cut in half, attach with tape.
    - Laser printers are cheap and durable. If you're buying a printer for this, the Brother HL-L2350DW is Wirecutter's budget pick at $150. I own a fancier Brother and it's a beast even after sitting idle for close to two years. Any inkjet printer would've died from that.
- Half-sheet labels save a ton of time and are a cheap upgrade. I like HouseLabels on Amazon (or better, on their own site). Don't pay office supply store prices for the Avery ones; they're nicer, but not THAT much nicer.
- Thermal printers are more expensive but the standard once you hit a certain size since they're more efficient for workers to slap a label on and they don't need toner or ink. Pirate Ship supports the newer 2"x7" labels (DYMO 99019 or the HouseLabels compatible) which fit in the smaller/cheaper DYMO 450 printer. If you're only using USPS, it's worth a look.
    - To my knowledge, other carriers like UPS and FedEx still require 4x6 labels and 4x6 labels on a DYMO thermal printer means using the 4XL. Many (me included) find the 4XL to be pretty fragile and super expensive; consider a Rollo or used Zebra instead.

PPE-Specific Shipping Anecdotes (comment with yours!)

A friend in North Carolina shared the following tactics for mailing the NIH-style ear savers:

- 6 go in a standard envelope. Ear savers + sheet of paper + envelope is 0.96 oz
- 100: USPS Small Flat Rate Box
    - Note that I haven't taken a scale to this, but extrapolating out the weight of six you're *just* on the edge of 1 pound. Here's the difference in Pirate Ship for a package sent from ZIP 29212 to 90210 (a cross-country mailing), with a 6x10 envelope used instead of a Flat Rate Box:
        - 16 ounces, Small Flat Rate Box: $7.65
        - 15.9 ounces, First Class Package: $5.70 (plus your own packaging)
        - 16 ounces, Priority Mail Cubic: $8.42 (or $8.12 for slow Parcel Select Ground)
- 200-350: USPS Padded Flat Rate Envelope
- 350+: Amazon box or whatever I have in the house