

Chapter 5: Your Warehouse

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Your warehouse is an important part of your company. You cannot do without one (although you don't have to actually operate your own), but it doesn't produce profit (only designing games does that). Your warehouse is, however, a place that a lot of money can go out through a rat hole, up in a cloud of smoke, or down the drain ... if you don't do it right.

5A: GENERAL WAREHOUSE THOUGHTS

WHO

Who will run your warehouse for you? One choice is to run your own (i.e., your company has its own warehouse) while another is to use somebody else's.

Very small and new companies should try to get somebody else to do the warehouse thing for them (see Consolidators), even though it will cost you a fee. You might use a fulfillment company or consolidator, or you might get another, bigger, game publisher to handle your products out of their warehouse, again for a fee. While those fees will be more than a medium-sized company will spend running a warehouse, the high cost of starting up and running a warehouse could make it prohibitive for a start-up company with only one or two products.

Very small companies that have their own warehouse often just use a few square feet of their office space.

Running your own warehouse is important if you have a dozen or two products (particularly if they require assembly) and are selling \$100,000 per year. You can make it pay even if your company is much smaller. The trick is to avoid having more warehouse than you need. The rest of this chapter will assume you are going to run your own warehouse. If you aren't, you can skip it. Or you can read it so you'll know how to recognize the point at which your business has evolved to need its own warehouse.

WHAT

What are you going to be doing in your warehouse? It breaks down into these categories:

1. Storing products you haven't sold yet.
2. Assembling products that don't come from the printer in ready-to-sell form.
3. Shipping individual mail orders.
4. Shipping larger wholesale orders.
5. Storing assorted junk that has nothing to do with your business but which your spouse wants out of the house. Try to keep this to a minimum as it complicates a lot of things. When you are first starting your company, lots of relatives are going to want you to store stuff in your warehouse since you have plenty of room. Avoid this! You may have spare room when you start but you will need the room later and relatives who are getting free storage for their stuff won't be in any hurry to relocate it out of your way.

WHERE

In a perfect world, your warehouse will be in the same building as your office, separated only by a people-sized door.

Going to the warehouse to check on inventory or an order is no more trouble than getting up out of your recliner at home to go check the garage to see if you have the lumber for next weekend's home improvement product. The only drawback to this is that you have to get an office-warehouse combination (which may limit the number of facilities you can pick from when leasing) or you end up paying office-caliber rent for what should be cheaper warehouse operations. Even worse, you may be paying to heat and cool the warehouse, which can be a very expensive proposition. Most warehouses are not heated or cooled but rely on fans and heaters to make areas where humans must stay for extended periods slightly less unbearable.

If you cannot get the office and warehouse in the same place, or close enough that you can walk across the parking lot to reach the other building, you are going to have some business efficiency problems. Running over to the warehouse takes time, always needs to be done on the day you didn't keep your car with you (oil change, girlfriend borrowed it, whatever), and will always involve getting from one to the other without everything you needed to do the job you went there to do. Shipping a simple mail order can involve two or three trips between the two sites. But if you have to do it, you have to.

Now, one aspect of the location question comes later, when you are comfy in your office but you are running out of storage space in your warehouse. In this case, rather than move the entire operation, you might want to look for "off site storage" at some cheap facility where you can stock the surplus copies of your products. It would be better, of course, to not print surplus copies that you didn't sell in the first place. You're in business to sell games, not store them.

WHAT TO DO WHEN THE WAREHOUSE GETS FULL

1. Sell stuff fast enough that your warehouse doesn't get full in the first place. Do not overprint!
2. Use Print-It-Yourself so that you don't have lots of stuff in the inventory beyond color covers.
3. Get rid of the stuff you stored in the warehouse when you had plenty of room, things like the packing boxes that the computers and office equipment came in, that used furniture your brother-in-law asked you to store, the exercise equipment you were going to use and never did.
4. Throw out dead inventory or sell it to Titan Games or somebody else who buys dead inventory.
5. Look for empty space. If there is four feet or more above a row of pallets, buy shelving so you can use that space. If you have 16-foot ceilings, buy a Mezzanine to create a second floor.
6. In a temporary situation (and only then) rent an off-site storage locker.
7. As you watched your inventory grow, or always wanted to buy more equipment, or always knew you'd some day need more space, ask your landlord to let you know if anybody in your building complex is moving out, particularly your next door neighbors.

5B: SETTING UP A WAREHOUSE

ELEMENTS OF A WAREHOUSE

Your warehouse will be divided into various areas, each used for one or more functions. These areas include:

1. **A Cabinet** for storage of office supplies, catalogs, business records, warehouse supplies, and other such items. A good 2x8-foot shelf unit near the door between the office and warehouse will be adequate for this. Look for one on sale at Home Depot, preferably one that can be disassembled and rearranged when you need a different kind of shelving. It should be noted that the bulkiest "warehouse supply" will be empty corrugated cardboard cartons used to ship games. You will probably need a separate space closer to the packing area for these boxes due to the considerable volume of them.

2. **Pallet storage** of components for unassembled products and some complete products that arrive complete on pallets. This will often involve pallets (wooden platforms four-foot square and a few inches tall, convenient to be moved by a pallet jack or forklift). The pallets will be loaded with cartons of books, counter-sheets, card decks, and so forth. Depending on your product line, you might make do with a space as small as 5x20 feet (enough for four pallets) or as large as a thousand square feet including heavy 4x8-foot shelf units ten feet high. The pallet storage area can actually be two or more areas around the warehouse. You can park pallets under those big steel shelves (once you buy some). When you have used most of what's on a given pallet, you can unload the rest of the boxes onto the middle shelves of the heavy shelf units. Note, clever "print it yourself on demand" companies can avoid having a lot of pallet storage, but will still get pallets of color covers and other components they cannot make themselves.

3. **Bulk storage** of assembled products. Whenever you put a product together or get products which are already together, you need a place to put them. Miniatures which arrive in blister cards will probably be stored in this area. (Complete books will probably be in the pallet storage area due to the larger cubic volume of space they take up.) What works best for bulk storage are "grocery store shelves" which you can buy cheap at the auction of a grocery store that is going out of business. These come in four-foot units with four-five-or-six shelves on each side. Depending on your business, as few as two or as many as ten of these will handle things. One quick note. When you have cartons of finished products in this area, put a large clearly readable label on each box. It is preferable to laser print these in large black type on large white labels so you can readily see them in dim light and after they're covered with dust.

Another point here. Be sure that when you set up the bulk storage area you arrange for products to be stocked there in some logical order. All *stacking trays* of a given product should be together. If you have a series of expansions for a given game, consider putting them in one area, each one on a different shelf (expansion #1 on the top shelf, expansion #2 on the next shelf down, and so forth). The point is that if you pack six stacking trays of a given product and the place you have for that product only holds four and you put the other two in a different area, you'll waste time later when the inventory computer says you have another 80 copies but the warehouse crew says the storage area for that product is empty. So even if you have to push that product into the space of a neighboring product, keep it together and (as you sell them) shrink the stockpile back into its proper place.

4. **Shelf storage of ready use products**, the first place

you will reach into when filling an order. This area should be adjacent to the *Packing Area*, and include about a week's worth (or more) of what you expect to actually sell. The back side of the Grocery Store shelves from the *Bulk Storage* area works nicely. When you pack an order, you will probably pull it from this area. Note, however, that larger wholesaler orders for relatively new products will probably be pulled from the *Bulk Storage* area to avoid overwhelming the *Shelf Storage* area.

5. **Assembly Line**. There is a larger discussion of game assembly issues below. For now, simply note that the Assembly Line consists of a long row of tables on which you can create the assembly line to assemble products. If you are really pressed for space, you can set this up in part of the pallet-wide aisle between the freight dock and pallet storage, and then take the tables down when you need to move pallets around. The Assembly Line also becomes a handy spot to line up orders on days when you are releasing a new product and hence are shipping a whole lot of stuff. Pick the part of the Assembly Line with the best lighting and you have a work space for things like assembling boxes of miniatures (which are usually best done by somebody sitting down, taking one out of each tray and putting it in the correct part of the box). Another consideration, you should set up the conference room of your office (inside the heated-and-air-conditioned area) for emergency use as a compact assembly line on very cold or very hot days.

6. **Shrinkwrap Machine**. This beast is noisy, hot, smelly, and dirty. It needs its own spot, with a table (or space for a cart) to hold things ready to be shrinkwrapped on one end and a table for things you have just shrinkwrapped on the other end. Total area is about 15-20 feet long and three or four feet deep. You should put this close to the Packing Area (or Assembly Area) so you have extra space to put products which are waiting for or have just been shrinkwrapped. See the separate section below on Shrinkwrap machines. This location may well be dictated by where you have 220-volt electric power, as most of these machines require it. When considering a warehouse space for lease, find out if it has 220-volt power or how much it is going to cost to put it in. The fire extinguisher (and you should have one) goes next to the shrinkwrap machine, which is the thing most likely to catch fire. If you have two fire extinguishers, put the other one in an easily accessible area, probably next to the door to the office.

7. **Packing Area**. This is where already-finished products are put into boxes and sent to customers. You need good lighting, a desk for records and forms, two scales (a small accurate one for Post Office orders, a larger but still accurate one for UPS orders), parking space for hand carts, and a fairly big and incredibly strong table able to hold five or six of the 40-pound boxes which comprise most wholesale shipments. If you can find one, the old "high school lab tables" which have 4-inch thick posts for legs and one-inch-thick slate for a table top are the best. Flimsy card tables won't do, but folding "cafeteria tables" will do if you cannot find anything better (but they don't hold much weight). The total area here could be about eight feet wide and 15-20 feet long, which includes the aisle on one side between Packing and the Ready-Use shelf-storage, and the aisle on the other side between the Packing Area and the Shrinkwrap machine. Provide the packing area with a trash can, access to where you store the cartons used for outgoing shipments, a fan, and a heater. Cut up a cardboard carton to provide a place on the table to keep tape, pens, tape guns, marking pens, etc., and use other cut-down cartons to hold packing material (peanuts and newspapers) and scraps of

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corrugated cardboard useful as fillers in packing orders.

8. **Freight Dock.** In a perfect world, this needs to be a “truck high dock” so that freight trucks can back right up and wheel stuff off easily. Otherwise you have to have the freight lines deliver in lift-gate trucks able to lower the pallets to the ground. Sometimes they charge extra for this, sometimes not, depending on the truck line and the area.

But with or without such a truck-high-dock, what you will absolutely need is a garage door that is at least eight feet wide that opens into an area which is about the size of the average one-car garage (10x20 feet). This area needs to be kept clear of anything other than freight which is leaving today or which arrived in the last ten minutes. (If a truck arrives with a shipment and you have nowhere to unload it, the truck company might charge you extra, leave your freight on the parking lot, or move it around inside the truck and deliver it hours or days later. This area needs to be adjacent to, or have a five-foot-wide *Aisle* to, the *Pallet Storage* area.

9. **Junk Pile:** Establish a place on one of the shelves where you can put “slightly defective” games and parts. This could be the rulebook on top of the box that got cut by your box knife, the countersheet that had a few counters missing, the set of miniatures of which one was obviously defective, etc. As you pack games you will find some that are not up to your quality standards and set them aside; put them here in the junk pile. The products in the junk pile can then be used if you need to give a printer a sample, send a dinged copy as a store demo, or when a good playtester stops by on his drive across the country you can give him a pile of free products. If you are making a deal with someone and they need reference copies of your products, you can get “free” ones out of the junkpile. The junk pile will get bigger every week and sooner or later you have to throw half of it away. Sometimes you can offer customers a “mystery box” of ten pounds of old books for \$10 plus shipping.

10. The **Aisleway:** This is a “driveway” through your warehouse, connecting the Freight Dock, the Packing Area, and the Pallet Storage area. Often, the assembly line runs along one side of the Aisleway (or is temporarily set up when needed *in* the Aisleway).

11. The **Trash cans** are important in keeping trash out of the way. You need one by the packing area, one by the shrinkwrap machine (which also needs a huge cardboard box setting under it to collect the wasted few inches of shrinkwrap), and one by the door to the office. You need an area (perhaps with a large carton or box) where you can toss larger items (such as damaged cardboard boxes) to accumulate until there is time to carry them to the dumpster (or review them for conversion into *Stacking Trays*). Avoid letting trash pile up, and use big trashbags to keep the insides of the trash barrels clean (so they don’t stink). You may also want a place to put aluminum soft drink cans for recycling.

12. **Your relatives’ junk** that they conned you into storing for them. Do not let this happen.

Warehouse layout

This is going to be dictated by features you cannot change. The *Freight Dock* cannot be anywhere except where that big door is located. The *Shrinkwrap* machine has to be by the 220-volt power box (and in some cases it might be worth \$200 to have an electrician move this). The *Packing Area* needs to be well lit and out of the weather. One way to arrange your warehouse (when you’ve never done it before and need to get up and running without a *feng shui* expert) is to find the

220-volt box and put the *Shrinkwrap* machine against that wall. Then put the *Packing Area* adjacent to it, and the *Ready-Use Storage Shelves* next to that. Since bulk *Finished Product* shelf storage uses the other side of the *Ready-Use* shelves, you now have fully half of your warehouse areas defined and can fit the *storage cabinet*, *Assembly Line* and *pallet storage* into what is left. Remember that you can (if you check with the landlord) change some things, adding lighting to that dark area that would otherwise make a perfect assembly line, or a 220-volt box to the back corner where you want the shrinkwrap machine. When adding lighting, you can do this cheaply by buying one of those “outdoor festival lighting” rigs which is basically a fifty-foot extension cord with five large 150-watt light bulb sockets arranged on it at intervals.

Something that will help you is to “name” each area of the warehouse (and put these names on a printed map). You might name the *Pallet Storage* area Chicago and the *Bulk Storage* area Milwaukee, or you might name the *Aisle way* Broadway and the *Ready Use* area the Dog Pound. If you have big steel shelves, then you can number, or letter, or name them. You might name each row of shelves after a mountain range or each walkway between shelves after a river. The point is that when the warehouse manager is home sick he can tell someone on the phone “Oh, yeah, I put the spare box of dice on the third shelf of the Kansas Rack, right next to the Missouri River.”

More importantly than your map, however, is to label most of the *Stacking Trays* and pallets. If you have a row of grocery-type shelves loaded with cartons of finished games, you don’t want to have to peer into each carton to find out what it is. Simply write on the carton, or print out a label. (Printing labels is harder, but big black type on stark white labels is easier to read in a dimly-lit part of the warehouse.) Use both product names and stock numbers on such labels. Just remember that when you empty a stacking tray and put it back into the stack by the shrinkwrap machine to mark out the label. Those big white labels that UPS provides are great for this if cut into four smaller labels, although you’re really not supposed to use their labels for this purpose. (That’s why they started, in late 2005, printing “for UPS use only” on them, the dirty spoil sports.)

5C: THINGS IN YOUR WAREHOUSE

WAREHOUSE FIXTURES AND EQUIPMENT

You are going to need a whole bunch of stuff!

Big Shelving: This is heavy-gauge steel, usually in units that are eight feet wide, four feet deep, and up to ten feet high. This stuff is expensive; each unit will cost \$300-\$500 new and a typical 2,000-foot warehouse for a medium game company will need eight units. Fortunately, a start up company won't have much stuff to store and you can buy this shelving later only when you need it. Even better, you can pick this stuff up for 10% of retail cost at an auction when a big store (say, a K-Mart or a Builder's Square) goes out of business. This shelving is part of the *Pallet Storage* area for two reasons, one is that is designed so you can park pallets under it, and the other is that you will be storing unassembled components on both pallets and heavy shelving. If your product line does not require assembly, you will still stock the bulk of your inventory on pallets and heavy shelving.

Medium Shelving: The best here is "grocery store shelving" which disassembles into a pile of metal parts, can have the shelf height adjusted easily, and can be bought cheap at an auction. Do without it until you can find an auction as it costs a bunch. A typical four-foot unit with six shelves on each side will cost \$20 at auction and \$200+ bought new. Wait for the auction. You can sub-divide these shelves vertically in the Ready Use area by using cheap plastic "stacking trays" (each of which would hold six-ten copies of a rulebook) available at office supply warehouses for about \$2 per tray.

Light Shelving: This is the cheap shelving everybody has in his garage which comes disassembled and reminds you of the Erector Set you had as a kid. It can be used to store stuff that isn't particularly heavy (e.g., miniatures, boxes games, office supplies) but not entire boxes of rulebooks fresh from the printer. Ask around and you may find a relatively who had some of these and isn't using it any more and will donate it to your new company. Otherwise, this stuff is cheap enough you can afford to buy it new.

Special Shelving: When you have the need and the money, you might look through warehouse supply catalogs and find a shelf unit which is perfect for your product line. A "literature cabinet" could be used to stock 30 or 60 rulebooks in the Ready Use area. If your product line includes a lot of products that have to be assembled, this could be used to stock spare parts (but only after you list the spare parts on your shopping cart site and find out you are going to be selling ten or twenty such spare parts per week, in which case having six copies of each spare part in that rack saves you a bunch of time). Another kind of special shelving is a "parts bin" which can be a typical light metal shelf unit with a bunch of cardboard or plastic bins. Each bin could hold a dozen blistercards of a given type of miniature, and the shelf unit could hold your entire line of miniatures.

Tables: Typical "cafeteria folding tables" work fine here, but you can also build your own cheaply out of 2x4s and plywood. Actually, unless you really love spare time carpentry, you're better off to buy the tables. Look for used ones, and check the office supply stores for damaged ones that are still usable but available at half price. These are available in lengths of four, five, six, and eight feet. If you hunt for bargains, you'll end up with a variety of sizes, but placed end-to-end, they are just one big table anyway. These form the assembly line, a temporary packing table until you can afford a heavy one, can be used as emergency desks, and win points with

grandma when she borrows them for Christmas Dinner. Buy a couple for now and look for bargains to continually expand your assembly line as your company grows. If you specialize in products that do not have to be assembled, you can get by with one or two tables for utility functions.

Pallets: These are wooden platforms used to ship boxes of books and other things. The standard size is about 40 inches square, but they come in many sizes (and some new ones are plastic). Unless you're going to be shipping a thousand books to one wholesaler, you won't use pallets or freight lines for outgoing shipments, but stuff will arrive on pallets and you'll use them for convenient storage since the stacks of stuff can be easily moved around. One factor is that a typical game company actually accumulates pallets over time and they get in the way. You can often give them to a freight line or one of the local printers, or donate them to the local college bonfire. Some printers will send you stuff on pallets that are marked "property of US Postal Service." Ooops. When you get these, just quietly take them to the Post Office and say that you found them under a rock.

Pallet Jack: This is a hand-powered mini-forklift, used to pick up pallets (well, about an inch off the floor) and move them around. New ones go for \$400 and used ones for \$100. You are going to have to have one, or even better two. Learning to drive one of these things is about like learning to drive a car. Find a friendly printer who has one and get his warehouse guy to give you some lessons.

Dock Plate: Assuming you have a truck high dock, you need a dock plate. This is a piece of steel planking about 3x4 feet in size and a quarter-inch thick, with assorted handles and cleats on it. This is used to bridge the gap between the warehouse floor and the truck bed, allowing the pallet lifter to carry a pallet of newly-printed books into your Shipping Dock area.

Cleaning Supplies: You'll need a mop, broom, vacuum cleaner (get a discarded one from a relative who bought a new one), a bucket (several of them if the roof leaks), and assorted cleaning supplies. A few rolls of paper towels should be in handy places to mop up spills.

Tools: You will accumulate, over time, such things as a hammer, a saw, a box of odd nails and bolts, and a big crowbar which can be handy in moving or repairing pallets, shelves, and such things. If you get metal shelving, you may need a rubber mallet to bang it together. A few extension cords will come in handy in ways you cannot predict. A caulking gun and a couple of tubes of waterproof caulking can quickly repair minor leaks before they damage things. A can of foot powder can be used to prevent mold from developing where water has leaked through the roof and down the walls. Pick up some cheap plastic "painting tarps" and keep them in a handy area where you can get to them in the event of a roof leak. A few extra 2x4 boards can provide you with blocking when you have to move pallets around.

Carts: You need several of these. A two-wheel hand truck can be used to move the odd box or two (and if you get the kind that folds up, you can take it to conventions to wheel your boxes into the exhibition room). Shop carts (plastic things that have four wheels, one shelf about ankle height and a second shelf about waist height) are great for stacking games ready to be shrinkwrapped, cartons ready to be shipped, or anything that needs to be moved. They become, in a sense, portable tables. Make a parking spot for them in the *Packing Area* and exercise strict discipline to avoid letting people pile junk on them. (Said junk, which accumulates on any flat spot around

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human beings, has to be moved before you can use the cart.) A low-boy cart (a platform about six inches off the floor, supported by heavy wheels, with a handle that reaches up to waist height) can be used to move a number of heavy boxes at once. This cart can also be highly useful at trade shows if you get one of the kinds that folds down into a relatively small package.

The Warehouse Cat: Bring in an expert in hunting mice and small bugs. A visit by a cat belonging to one of the partners every week or two should keep things under control. Otherwise, mouse traps and bug spray would be required, and these won't be nearly as much fun.

Shipping Supplies: Here you will need one or more tape guns (the kind that hold two-inch cellophane tape), a box knife or two, a large marker, and a few odd pens so that if you find yourself without the one you left on your desk you can just grab one of the cheap ones.

The Office Gun: Forget it. If you have to keep a gun in your desk drawer, either your office is in a high crime district or you are doing games about things better left unpublished. Seriously, lots of people legally own guns and there is nothing wrong with that, but you don't need one around the office and you certainly don't need one where any bozo can get to it.

Bubble wrap: This is used to protect games inside boxes. The reason it is a separate entry is that it comes in huge rolls (five feet in diameter) and you have to find places to put it (tops of big shelves as there is no weight to speak of). Get a piece of two-inch PVC pipe, tie it to the top of the Ready Use Shelf with foot or two sticking out, and you can put one roll of bubblewrap on it where you can easily unroll and tear off what you need while packing.

Ladders: These are needed to get to things on shelves. You need one fairly big one for the high shelves and two strong and stable shorter ladders (or mobile steps) so that two people can work together to bring down big heavy things from medium shelves.

Radios: Get a couple of cheap FRS radios when you see them on sale and they'll come in handy for things like taking inventory, two people working in different areas who need to talk to get their job done, etc. You can also take these to conventions to stay in touch.

Forklift: You probably don't need one, and probably can't afford one, and probably don't know how to operate and maintain the thing anyway. But you can, for about a thousand dollars, buy an unpowered hand-cranked forklift able to lift 350 pounds up ten feet in the air. This is handy for moving boxes of products that aren't selling to higher shelves where they will be out of the way and you won't be reminded of your mistakes in selecting products to print and in deciding how many to print.

CORRUGATED CARTONS

You are going to become very familiar with corrugated boxes (the proper term is "cartons" since a "box" is the full-color thing that your product goes in), and will have plenty of them. Many will come in for free with printed games and parts packed in them; some will have to be bought if you need specific sizes. Try to avoid using custom-made cartons just the right size for your games as these will probably cost a lot more. Shop around with Viking, U-Line, and other local and national suppliers to get the best deals. (See Chapter 9 Annexes for a list of suppliers.) Figure out several standard carton sizes you have to buy in order to ship your products out; individual mail orders often require 12x9x3 cartons or flat cardboard mailers.

Most cartons from the printers will be around 17x11x10 or

18x12x12 or 17x11x6 or sometimes 12x9x9, which are convenient sizes for shipping games. Some will be in other sizes. A given printer may use one size for years and then suddenly switch to another size if he finds a bargain on a trainload lot of boxes. While old Henry Ford was able to force his suppliers to send auto parts in wooden boxes that were the perfect size to become the floorboards of the Model T car, you will get laughed at if you demand that your printers use a particular size of boxes. Take what they give you and use them as you can and be grateful. When you accumulate a bunch of empty cartons (which happens every time you pack games from bulk components) you should deal with them promptly so they don't become a fire hazard. Check each carton. Those which are damaged can be cut up to become *Stacking Trays* while those which are in good shape can be used to ship out orders. (You may also find that at least one of your relatives is always looking for boxes to pack away winter clothes or pack junior off to college or move apartments or whatever.) Surplus cartons can have their tape cut and be stacked flat somewhere, perhaps in the *Pallet storage area*. If you accumulate more cartons than you can use, you can donate them to a local charity, ask your neighbors in the warehouse district if they need them, or find other uses. Some printers have custom-printed cartons with company logos and (if you are accumulating more cartons of that size than you can use) you might ask them if they want the empties back the next time that their truck drops by.

A *Stacking Tray* is simply a cardboard carton of a useful size with the top flaps cut off. It's used to hold finished games in the *Bulk Storage area*. A stack of these will be by the *Shrinkwrap machine*, and the *Quality Control Man* will use them to hold games coming out of the machine. When you are packing a new product, you may need a dozen or two of these, but only for the two or three days it takes to pack the initial wholesaler shipments.

TRASH SERVICE

Your warehouse will generate most of the trash and the warehouse crew will be the ones who empty the trash. Trash service may come as part of your building lease, or you may have to arrange your own. Ask neighbors and friends in your home town, talk to the trash hauling companies, and get quotes.

One thing that happens in some areas is that the trash company will raise your bill every year (sometimes more often). It won't be much (a few dollars) and it will be explained by something like "Increased fuel costs" so you probably won't even ask. After a few years, your trash bill could be double or triple what it started at.

Try calling your trash company and asking them for a quote as a new customer. You might or might not get a much lower quote. If you do, demand that your current bill be reduced to this amount. Alternatively, call another trash service and if they're cheaper, switch to them.

5D: THINGS DONE IN YOUR WAREHOUSE

GAME ASSEMBLY

Before we get into game assembly, ask yourself if you could be happy with a product line that either doesn't require assembly at all (just books and magazines that come as complete units from the printer) or which arrive from the factory fully assembled (e.g., boxes of painted miniatures). If you can, then you can save yourself a lot of time and grief.

But assuming for the moment that you do at least some products which arrive as various parts from numerous sources and have to assemble them, you have to account for this in your business and warehouse plans.

Let's look at the various kinds of "products you have to pack" as there are some differences.

Blistercards: Most miniatures and a lot of other small products are sold in stores on blistercards. You have to obtain the special cards with a special coating on them (only a few printers do these), and the special plastic blisters, and then have a blistercard machine that fuses them together (after a human being put the requisite parts into the blister). For the most part, small companies simply have these done for them by the casting houses, and treat these as "finished goods" which don't require assembly. An alternative you can consider if you want to pack your own blisters but don't want to buy the special machine (which is as cantankerous as the Shrinkwrap machine) is a thing called a plastic clamshell. This is a plastic box (you have seen them in stores holding lots of small products) which folds in half and snaps together, forming a pocket that is about the size of a blister card. These are available in many sizes from several manufacturers (Aikpak, Placcon, etc.). The advantages are that you can buy them in small quantities (about 500, whereas you have to buy about 30,000 blisters and 30,000 cards to get into the blister card business), don't need a machine to pack them, and can quickly and easily adapt them to limited run special products. (Say you come upon a box of neat dice in the warehouse of a defunct game company. Trying to sort them into sets and ship them across the country to have someone blister card them won't work, but you can sit down in front of the television at home and mindlessly snap them into clamshells.)

Clamshells and small boxes: In some cases with these you will want to buy foam rubber pads to pack inside them; smaller clamshells holding a single figure don't need them. Basically, you set yourself up at a table with shallow open boxes or trays of parts in front of you and a stack of clamshells to your left. You pick up a clamshell, insert the parts (possibly including cover cards, foam rubber pads, painting guides, etc.), snap it shut, and place it in a bin to your right. If there are a lot of parts, you might divide up the work between two or even three people, with each one adding his own parts and passing the clamshell along. Be sure to have a table surface that won't scratch the plastic clamshells. You can go to a fabric store and buy a yard or two of marine vinyl to cover the table if you want. If there are not many parts involved, you could even do this at home watching television. If you are having this job done by part time workers, you may want to create a photograph or computer graphic showing all of the parts and where they go in the box. The assembly supervisor needs to be sure that the parts to be used are all in separate open-topped shallows trays or boxes (defective game boxes are good for this, as are cheap plastic shoeboxes available at chain stores) and that the workers call him for help when they run out of a part rather than just looking around the warehouse for something more or

less like the wanted part and using it.

Bags: Retailers don't want odd little bits in plastic bags, but sometimes you sell things by mail order this way if you don't have enough of them to be worth the bother of clamshells. These can be treated as small clamshells. You pick up a small ziplock bag, put a mailing label on it so the shipping crew knows what it is, put the parts into the bag, seal the bag, and put it into a bin.

Folio Games: A folio game includes a loose 11x17 cover (usually full color cardstock with "scoring" to mark where it folds), one or two books, possibly a sheet of die-cut counters, possibly some charts, and perhaps other items. The big trick here is that you have to (before even getting to the *Assembly Line*) hand fold the covers along the scoring lines (since you cannot do this with all of the components present). This can be done at home in front of the television, or you can have warehouse people do it. In some cases, you are putting a sticker on each cover (perhaps to change a price, to mark it as a special edition, or to change the name of the publishing company if you bought another company's inventory) and if that is the case you must do this when (or before) the covers are folded rather than trying to add them later to packed games. Folios, like most boxes, don't like being slid down the table as people sitting in comfy chairs add their share of the parts and pass it along. The cover needs to be put down on the table and then have parts piled on it and then be picked up and put into a stack (preferably in a special box known as a clip) for the shrinkwrap machine. A typical 30" cafeteria table will hold three rows of games (if you were wise enough to leave the tables four inches or so from the wall so that the back row can hang over). For this kind of game, the assembly supervisor should bring all of the parts to a table near the *Assembly Line*. Knowing in advance how many games will be packed and how many the assembly line can hold at a time, he ensures that the right number of parts are on hand. (Note, in the design of the product, ensure that both the front and back of each piece have clear identification as to what product it is part of and which part of that product it is. Avoid having parts with very similar covers as warehouse crews can get them confused. Include a large typeface name and perhaps a graphic symbol on each.) The Assembly Supervisor has worked out ahead of time what order the parts go into the box or folio, and has on file a printed one-page document for each product listing in large and bold type the parts included and the order they go into the product. These are hung above the assembly line using tape, magnets, or pins as may be appropriate. Folio games can be assembled by one or two people; three can do it but with four or more they start getting in each other's way. (If you have a lot to do and plenty of help, consider dividing the assembly line into two sections, each with its own crew.) Each person picks up a stack of parts (the first person taking the first part on the list and so forth) and walks down the assembly line placing the required number of that part in each stack. If all of the people are knowledgeable, then the second worker can check to be sure that the first worker put the right part in the right position, while the next one checks him. If the workers are not knowledgeable, then the Assembly Supervisor has to check all of them in real time as they go along. Games can be effectively packed by one knowledgeable individual and one non-gaming worker who couldn't tell the rulebooks for any two products apart as the knowledgeable one is constantly checking the other (but of course, no one is checking him). Folio games need to be stiff on the shelf, and you probably cannot count on the cover and rulebook to do this. If there is

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not a full 8.5x11 sheet of something stiff (e.g., die-cut counters) in there, you might want to include a piece of chipboard (cardboard) which can be custom-cut to the size you need by your printer. (It will take him a day or two, so don't expect to get these while the gang lays out the covers.) You might print one of the charts on stiff cardstock to provide stiffness to the product without adding another part.

Boxed Games: These are handled much as Folio Games as handled, but you have the box lids to deal with. The simplest way to do it is to use the *Assembly Line* but stack the box lids on part of it, laying the bottoms around the stack. Do eight boxes per set, with the eight lids stacked (turn each one 90°) in the center of the "U". Here's a tip. When having the boxes printed, have a special mark put on the part of the wrapper for the bottom that folds inside the box. This mark indicates which end of the box is "up" (as far as the back cover art) so that when you put the top on the full box bottom you have the top and bottom in the same direction without having to pick the box up and look under it.

General comments: Every single part in a game is going to require a human being to "walk the assembly line" and another one to be sure he put the parts in correctly. Think during your design process about ways to reduce the number of parts. Perhaps the printer could collate the cardstock chart? Another possibility is to combine several charts into a book of charts. If your game includes two dozen plastic markers of some sort, have the source for those markers deliver them already in small sealed bags.

THE FLOW OF PRODUCT

A new product arrives on the *Freight Dock* from the printer. If it is a product you have to assemble, then you probably got several components, each from a different source, and they may well have arrived over a period of several days. Each pallet of components goes into the *Pallet Storage* area, but at the front, nearest the *Aisleway*, so that you can get to them easily.

When all components are there, you proceed to *assemble* the games on the *Assembly Line*. You know your expected sales (both immediately and for the first few months). You might choose to pack enough for the first 90 days, or to just pack enough for the initial orders and then, after those orders are shipped, pack more. In any case, once you have the initial shipments out the door, any packed games you have left go into the *Bulk Storage* area with a few copies (from 10-300 depending on the product and your set up) into the *Ready Use* area. The remainder of the components (you should have used half of them anyway) can be restacked onto a smaller number of pallets and are kept in the *Pallet Storage* area. If you felt the need to pack more of this product than your *Bulk Storage* and *Ready Use* areas can hold, you can stack boxes of complete games on top of the pallets of components of those games. As time goes by, you continually restock the *Ready Use* bin from the *Bulk Storage* area.

Sometime later, your computerized inventory system tells you that you need to pack more of a particular game, so you shuffle pallets to get at the ones containing this product and do a few production runs. The packed games go into *Bulk Storage* and the components go back into *Pallet Storage*. This continues at intervals for some time; perhaps eventually all of the components fit on a single pallet. It's important to keep older inventory in the smallest number of "pallet footprints" so you have room for new material. Eventually, you may have less than a pallet's worth of components for this product and

can transfer them to the *Heavy Shelving* area of the warehouse. And at some future time, you will have so few components left that when you do a packing run you will be out of the parts for the product and its entire supply will be assembled and in the *Bulk Storage* area. If you have a quiet afternoon and are packing the next-to-last run of this product, you might go ahead and "pack it out" which means to pack all of it you can until you run out of one of the parts.

INVENTORY MANAGEMENT

A good question is: how many of each assembled product to keep on hand (i.e., how low do you let the inventory get before you pack some more)? The same question applies to those products (e.g., blistered miniatures) which you buy complete from another company.

The point, of course, is that to give good service to your customers you want to have enough already-packed merchandise on hand that you can ship any order on the same day or the next day, something not practical if you have to stop and pack and shrinkwrap more of them before you have enough to fill the order. On the other hand, you don't want to spend a lot of time and effort and money to pack games you won't need for months. If the product in question uses some part that is used in several products, you don't want to have to unpack products to scavenge that part sometime in the future.

The answer is simple. What is the largest number of a given item you might have to deliver in a period of two weeks? Basically, whenever your stock of an item falls below this number, you need to seriously think about packing some more of them at the first opportunity. When you pack them, you pack whatever is a convenient number (say, the number that fit on your assembly line, or if that number is less than you could expect to sell in two weeks, enough for two weeks of sales, or maybe two months). That way, you always have plenty and if you get into a jam on time (somebody is out of the office, you're all busy finishing your next product) you can let it slide a few days. Given that it's not really convenient to shrinkwrap less than about 300 games, you might want to use a system of regular assembly.

To do that, pick a day each week that isn't a historically busy day. Every week on that day, have the accountant give you the inventory stock levels of the ten products you assemble which are at the lowest levels (or, if the software can handle it, the ten products in which the inventory level divided by the rate of sale yields the shortest remaining time). Then assemble one or two assembly-line runs of the lowest product, then the next and the next, until you have a good day of shrinkwrapping, and then shrinkwrap them. Say you do this for a few weeks, and you notice that you are selling stuff faster than you are assembling it. The answer is to pack more of it on "assembly day" or have two assembly days. If you find yourself in a situation that you have enough inventory for all of your items for a month, then assembly day can be skipped for a week or two. Be careful. You don't want to waste a lot of time assembling games you will sell next year, but you may find yourself in a situation where you are so busy that you don't want to have to assemble games for several months.

If you rely on an employee, outside contractor, or out-of-work relative to do your game assembly, you might be happier to have a six-month supply of inventory just in case your warehouse "crew" quits or moves away or otherwise becomes unavailable. [Note: Check carefully with your accountant and insurance agent before assuming you can just hire some high school student or playtester as a part-time game assembly

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technician. You may find that having such an employee keeps you from having a company-funded retirement plan, or that your insurance premium will go up considerably because you are hiring such people.]

THE SHRINKWRAP MACHINE

This monster has been given its own section as it will become the most important, not to mention the most cranky and cantankerous, piece of equipment in your warehouse. The shrinkwrap machine puts that plastic around your products so they look bright and shiny (and stay that way) on the retailer's shelf. Because there are so many ways it can go wrong, game companies affectionately name their shrinkwrap machines things like "the beast" and "old smokey" or "hellmouth" and "Spawn of Satan".

There are basically two kinds of these. One is a small design costing a couple of hundred dollars which involves plastic bags, a hot-wire cutter to trim and seal them, and a hair dryer to cause the plastic to shrink. These are used by retailers to reseal packages which they opened or which arrived with damaged shrinkwrap. They won't work for you unless the only thing you do with a shrinkwrap machine is to bundle unitary rulebooks into dozens for shipment to wholesalers. And you can do that just as easily by putting six copies into an oversized ziplock bag.

The real shrinkwrap machine you need to wrap a few hundred products per day for shipment to wholesalers is much larger (about 2x5x5 feet), includes a conveyor belt to carry the games through a box (the "shrink tunnel") that is heated to 400°F, and will cost about \$5000 new. Try to find a used one for \$1000 or so. Ask around. Try the printers (who use them a lot) and get them to tell you who supplies shrinkwrap and other needs in town, then ask the supplier if they know anyone who is going out of business or who is replacing an old shrinkwrap machine with a new one. Another alternative is to find someone who already owns one and either rent it by the hour (if his insurance company will allow non-employees to operate it) or pay his employees to do your shrinkwrapping on a per-piece basis.

Shrinkwrap machines are noisy, smelly, hot, expensive, and the most ornery thing invented since the camel. By all means, if you buy a used one, insist that the seller give you the manuals (buy the manual from the manufacturer if you have to). Get someone (perhaps hire someone from your printer who uses one all day) to show you how to operate it. (Trust me, no printed manual is going to be adequate so, other than a few tricks and traps, I won't even try.) Even more important, call everybody you know with a shrinkwrap machine and get the name of their repairman. (This is often a retired employee of one of the printers.)

You would think that a shrinkwrap machine is like any other machine: you plug it in, push the buttons, and it works. In fact, there are a dozen things that can go wrong. You can expect two people packing a typical game with four pieces (cover, rulebook, playing pieces, etc.) to pack and shrinkwrap about 300 products in a four-hour period. (Shrinkwrapping alone runs about 75 products in 30 minutes.) The trick is how many of these products have to have the shrinkwrap torn off and redone because it didn't work right the first (or second, or fourth) time. Let's review the procedure. If your error rate is less than 10% then you have the perfect material, system, and frame of mind. If your error rate is over 50%, you need to get some serious help because you are doing something very wrong. [Let me reinforce the point. The world would not be

using shrinkwrap machines that don't work right, so if yours doesn't work right, it is not the nature of the beast, it is something you do not know. Get someone to tell you what you are doing wrong.]

To work a shrinkwrap machine takes two or preferably three people. One, the *Operator* (or gunner, or batsman) picks up each game, slips it into the plastic film on the loading tray, moves it over to the cutting platform (unrolling shrinkfilm as he does so), operates the cutting bar to trim and seal the plastic, and slides it onto the conveyor belt headed for the heat box. The *Quality Control Man* (*QC Man*) then catches each game as it slides out of the heat box, inspects it, tosses it back into the heat box if it needs more heat, and when satisfied stacks the wrapped game in a *Stacking Tray*. If a game is badly wrapped and must be done over, the QC man tears off the wrap and places the game in a spare *Clip* which is at his work area (the table at the end of the shrinkwrap machine). The QC man also spots any repeating problems and advises the Operator so he can make adjustments. The third man is known as the *Handler* (also known as the *Baggage Masher*). He brings clips of unwrapped games to the machine and takes away full stacking trays of wrapped games. His job is not full time so he is often packing more games on the *Assembly Line* while waiting to hear the Operator call for another clip or the QC man call to have a stacking tray taken away. He also covers for the first two when they take a break.

The need for this full crew is driven by the way the machine works. Products coming out of the machine need to be inspected, tossed back in, and/or kept clear of the exit ramp otherwise the shrinkwrap will be damaged and the game will have to be done over. If these products cool off before this is done, it will be very hard to get them to reshrink properly. If the machine is working well and games are flowing through it nicely (about three games per minute) then the last thing you want to do is stop and shuffle boxes; the machine has to "settle down" after any stop longer than one minute. That "settling down" period will mean five or six games that have to be done over.

Let's review the whole system looking for problems.

Assembled games are stacked on a table or cart at one end of the Shrinkwrap machine. What can go wrong? The stacks can fall over! To avoid this, put each stack of just-assembled products into a "*clip*" made by taking a box just big enough to hold one stack and cutting out the top (and cutting a deep U-shaped slot into one side so you can easily pull out each product). Hint: When picking up complete games on the Assembly Line, put them face down in the clip with the spine away from the deep U-shaped hole. You'll see why in a minute. If you are just bundling complete books or boxes that arrived from the manufacturer, you can just leave them in the carton that they arrived in and pull each group of six (or whatever) out as you need it.

The shrinkwrap film is a large roll that sits on rollers at one end of the machine. *What can go wrong?* You need to store the shrinkwrap itself in the heated-and-air-conditioned office so that it stays at the same temperature. Leaving it in the warehouse causes it to heat up and cool down and can ruin it or make it hard to work with. Another problem is that there are several kinds of shrinkwrap, and not all of them work well with every shrinkwrap machine (or with the particular style of individual people who operate the machine). Try a couple of types (beg a 5-foot sample from two or three people who own and use shrinkwrap machines). You want a tight crystal-clear finish. Some types of shrinkwrap are soft and stretchy and are

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used by printers to hastily bundle together things they have printed, and don't look good on store shelves. The shrinkwrap (which is folded in half lengthwise so it can cover both sides of the product) is separated as it unrolls by a splitter bar and then flows over and under the loading tray. There are adjustments here to position the wrap in just the right place so that it naturally and comfortably places the fold just where the center of the product's spine will be in the loading tray. [Personal experience, our "re-shrink rate" went from 20% to less than 1% when we stumbled into the right kind of shrinkwrap.]

The Operator picks up each game and places it on the loading tray, under the top layer of shrinkwrap. You need it to be face down (since the machine burns a small hole in the top layer of plastic so air can escape and you want this hole on the back) with the spine toward the folded edge of the shrinkwrap. (On any one game, three sides will be heat-cut-sealed and the fourth will be the original folded side. This side looks best and is the one that the retailer wants to display facing out, so put it on the best edge of your product.) This is much easier if, when the assembled games are taken from the *assembly line* and placed into the *clip*, they are placed in exactly the position that the *Operator* wants to pick them up in, so he does not have to turn every game over or around before feeding it into the loading tray.

The *Operator* now slides the game from the loading tray onto the cutting tray, unrolling the shrinkwrap as he does so. The cutting tray usually has a height adjustment so that the seams of the plastic wrapper can be positioned in the least objectionable place. The Operator then brings down an L-shaped guillotine device which trims and seals the shrinkwrap by using a hot wire. You have to learn from experience just how much slack to leave in the unheated bag so that it will shrink to fit just perfectly. Too much slack and you have to heat it over and over with a risk of tearing the plastic every time. Too tight and the shrinkwrap will burst when it goes into the hotbox, forcing you to do it over (after the game cools off some). Another problem is that the hot cutter wires are being pressed into plastic three times a minute and will tend to collect a coating of ash and scum that keeps them from sealing properly in a few spots. When this problem becomes evident to the *QC Man*, the *Operator* will have to clean the hot wires with a putty knife. Another problem is that the hot wire is pressing onto a strip of Teflon tape which eventually burns through and won't seal; the Operator must then replace the tape. The wire can also break, and eventually it will. (Note, threading the new wire through the machine is a painful and tedious task. You can put this off by simply "splicing" the wire with another piece of wire, but only if this splice is not going to land on the seam of the product. If the wire breaks at one end, you can often get away with a splice.) The hot wire is pushed down by a long ceramic strip which can eventually get burned spots in it and won't work; replacing it is an hour-long chore. If none of that happens, the Operator then lifts the cutter and slides the game onto the conveyor belt. (Note, because some of the things that can go wrong can take an hour to fix, or may require you to air-express a spare part, avoid leaving the shrinkwrapping to the morning of the day you are making a major shipment.)

The game then goes into the Shrink Tunnel and the wrap is shrunk by the heat. You need to check the instructions (both the machine's manual and any with the shrinkwrap) on the proper temperature. Too hot and it will burst; too cool and it won't shrink. You can adjust both the speed of the belt and the temperature of the box. A safety issue here is that before you turn the machine on, you need to look inside the box with a

flashlight to be sure that no trash has gotten in there, as it will catch fire and cause problems. While you are at it, make sure that the Warehouse Cat is not sleeping in there, or that he didn't leave anything (e.g., a dead mouse) in there. That will also burn and smell up the place. It is a good idea to have a tarp which covers the shrinkwrap machine so that anything falling off of a nearby shelf doesn't get into the machine. By all means, do this if the landlord is working on the roof of the building as the roofers will often cause things to fall down from the ceiling.

The game then comes out the far end of the shrinkwrap machine, where it slides or falls from the conveyor belt onto the table you put there. The QC man then inspects, re-shrinks, rejects, and/or stacks the game. You have about 20 seconds between each game, so the QC man has to be on his toes. The QC man will have to check for shrinkwrap that burst or ripped, for seams that are not completely sealed, for bags that are too loose and floppy, etc. Here's another tip. Have the QC man stack the finished games in the stacking tray in fives (or sixes), reversing each group of five to show the white edges of the book instead of the colored edge of the spine (or just having the spine upside down, or whatever makes it easy to tell one group of five from another). That makes it easier to count how many you actually did (something that the inventory clerk in the accounting department will want to know) and easier to check your inventory figures weeks later when you look into that stacking tray.

Safety is key and you need to safely shut down the machine when you are done with it. Read the owner's manual and ask somebody who knows! In most cases, you will need to turn off the heating elements but leave the conveyor belt running since if it sits still in the still-hot box it can be ruined by the heat. Set a kitchen timer to remind you 15 minutes later to check the temperature of the box and if it's cold you can turn off the conveyor. Turning off the machine is just a start; go find the master circuit breaker box and kill the "master switch" to the machine.

SHIPPING GAMES

Games don't do you any good in the warehouse; you need to ship them to customers. Basically, you take a game, put it (along with a copy of the invoice and some packing material) into a box, put a label on it, and hand it to someone from the shipping company (UPS, the Post Office, DHL, or FedEx Ground), and you're done. It's a bit more complicated than that. Let's discuss wholesaler orders and individual customer orders as separate cases.

Mail Orders to individuals are complex but profitable. Because of the discount system, you will get 2.5 times as much money and five-or-six times as much profit from a game sent mail order as one sent to a wholesaler. And you'll earn the extra money with harder work. Mail orders are complex as you have to go through the same steps of accounting, packing, and shipping to send one game to Joe Smith in Idaho as you must to send 288 games to Alliance in Indiana. Anyway, here's the low-down on it.

It starts with ways to take an order. You can do so by: phone, Fax, internet shopping cart, Email, or in a letter through the mail. All of these are discussed in a separate chapter, but they all result in an invoice or shipping order being handed from the accountant to the shipping clerk. The clerk then goes to the *Packing Area*, pulls the products from the *Ready Use* bins, has somebody else check to be sure it's all there, selects an appropriate box, puts the products into the box with suitable

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packing material, seals the box, and then writes the name of the customer and the invoice number on the box. The box is weighed and the weight is written on the file copy of the invoice, which is handed to the employee who handles the UPS software. That employee then enters the address and weight and prints out a UPS tag which is taken back to the warehouse and (after matching up the tag with the correct box) the tag is glued to the box and the box is placed on a cart which is rolled to the *Freight Dock*. (Note: You can also use FedEx Ground in pretty much the same way. Since UPS and Fed Ex Ground charge for pickups even if you don't ship anything, you will probably have only one of these two fine companies working for you.)

If the box is going to be sent by Post Office (to foreign addresses or to customers who don't like UPS), then the box is placed in a separate area to wait for the employee who handles mail shipments to produce the mailing label, insurance tags, confirmation tags, customs forms, or whatever else is needed. Depending on your office system, you may have to pull, inspect, pack, and weigh (but not seal) the box first so that the accounting clerk can charge the correct postage costs based on the actual weight, in which case all of the relevant labels and tags may come back out to the warehouse at the same time. (This back-and-forth stuff is why it's best to have your office and warehouse in the same building.) Packing materials are designed to keep a product from rattling round inside the box and to cushion it from shocks or damage to the outside of the box. Wadded up newspapers work, as does bubble pack and styrofoam peanuts. Newspapers are cheaper. If you are sending someone a small part in a box of plastic peanuts, put it in a bag and tape it to a piece of cardboard so it doesn't get lost.

Wholesaler orders are easier and harder to pack. They will usually be larger orders, for multiple copies of a given product. You want to inspect the products you are shipping as you pull these orders. If you find a product with torn shrinkwrap, then put it aside and send it out in a mail order to a consumer (who will only tear off the shrinkwrap anyway) or put it in the re-shrink box by the Shrinkwrap machine. The problem is that these heavier boxes tend to be more susceptible to damage. Take care to pack games so they won't get crushed, bent, or damaged in shipment. Some companies put a custom-cut one-inch-thick block of styrofoam on the top and bottom of every box. Some companies use double-boxing, where the games are in one box, which is then placed inside a box an inch or so larger with the intervening space filled with bubble pack or other materials. Make sure products cannot rub against each other as this will scratch the covers; products which are not shrinkwrapped individually should be shrinkwrapped in bundles or bagged in small quantities. You will need to include a packing list (an invoice without prices) for the distributor's warehouse crew to use; your accounting crew or software will give you that. Foreign distributors all have a cargo forwarding agent inside the US; you ship to him and he sends it the rest of the way. Foreign shipments will need various documents (security and customs forms) and a copy of the invoice placed into a plastic bag (thoughtfully provided by UPS) and glued to the outside of the box.

General: Study your shipments and decide what size boxes you want to stock, then find a good source for them and watch for bargains. If a box company is having a sale on a size you use, then buy a couple of hundred and stick them in an out-of-the-way spot.

Most boxes these days are sealed with two-inch-wide

plastic tape. Some companies still use the old three-inch paper tape which has to be moistened to stick. This is better but more expensive and messier, and the machine to cut and moisten the tape can cost a few hundred dollars. Wholesaler orders should be banded two or three times with fiberglass tape to keep them in one piece.

About UPS: Be nice to the UPS (or FedEx-Ground) driver! Make his life simpler. Have the boxes ready for him at the most convenient door for him to park at. Stock his favorite soft drink in the office refrigerator. Ask his advice on anything to do with dealing with his company and take that advice. Have a metal sign made that says "UPS YES" on the green side, and "UPS Not Today" on the red side and hang it out by mid-afternoon so he knows if he doesn't have to bother backing up and stopping. Not only is it good karma to be nice, but it will pay dividends. Like when you are rushing to get a shipment out and it's *almost* ready when he gets there, and you can ask him to wait five minutes and drink a soda. Like when you know (from the tracking software) that the key shipment of parts from a vendor is due tomorrow and you ask him if there is any way he can get it to you earlier in his route.

5E: FINAL WAREHOUSE THOUGHTS

WAREHOUSE SECURITY

Be sure that any doors and windows to your warehouse have adequate locks to keep out burglars and other unwanted guests. Avoid leaving the big garage doors open for hours at a time while everybody works in the office. Not only might criminals walk in and help themselves, but fun-loving children (or pets) from nearby neighborhoods might consider your warehouse their personal playground, creating safety issues as well as causing damage to products and leaving a mess. One good accident can ruin your insurance rates forever.

Your office will have a lot of computers and other portable things in it, and so you probably want a burglar alarm for it. If it's part of the warehouse, you may want to have the alarm sensors cover that as well. If your warehouse is separate, get the alarm company to give you a package deal (demand a discount) which covers both facilities. (The best way to minimize the whole problem of theft is to rent a warehouse in a low-crime part of town.)

Be sure a sign on the outside of the building gives the phone number of the company executive who is to be called in the event of an emergency or crime, and preferably list two unrelated executives in case one is on vacation or at a trade show.

Your warehouse does not need armed guards, although printers who produce collectable card games often have these and even "pat down" the minimum wage workforce to make sure it doesn't carry off the best cards after their shift.

WAREHOUSE SAFETY

Safety starts by keeping the warehouse clean and the equipment in good repair. Sweep the floor once a week and after any activity that creates a mess, and don't let piles of boxes, debris, or trash accumulate. These constitute a fire hazard as well as a hazard to people trying to walk by. If you drop a die, or a bolt, or a nail, then pick it up so that you don't step on it later. It's really great to recycle but if your recycling company won't show up to pick up the surplus cardboard at a reasonable interval, just dumpster it as the fire hazard is not worth the minor help for the environment.

Have a first aid kit near the bathroom and a fire extinguisher near the shrinkwrap machine. Just for fun, pay the \$20 to have somebody attend the local Red Cross First Aid class, perhaps a different person every year.

Have a fire escape plan. Make sure that everyone who works (or frequently visits) knows where the various doors are, and if you have one of those concrete box warehouses which doesn't have a back door, make sure people know that the only escape is through the various doors at the front of the building. Establish a place outside of the building where everybody will meet up should a fire occur; that way you will know who is missing.

Get your insurance agent to walk through your warehouse and point out anything that could be done in a safer manner. Your state may have its own safety agency that could conduct an inspection for you (on a no-penalty basis) and give you some ideas. Relatives and friends who run warehouses in unrelated industries may also have some insights, and if you ever get a chance to visit another game publisher then certainly ask to be shown around their warehouse and keep a notebook handy for safety (and other) tips.

Please do not post this document on a web site or pass it around. Anybody who wants a copy can ask or download a free PDF or link to my site. That's not because I want to be a control freak but because I do update individual chapters whenever I think of something to add and would just as soon there be one place for the most recent copy.