



Hello from Jenny Toomey & Kristin Thomson and welcome to the 2000 digital version of the Mechanic's Guide. Between 1990 and 1998 we ran an indie record label called Simple Machines. Over those eight years we released about 75 records by our own bands and those of our friends. We closed the whole operation down in March, 1997.

Ironically, one of our label's most popular releases was not a record, but a 24-page "Introductory Mechanics Guide to Putting out Records". The first version of The Mechanic's Guide was created in 1991 for Positive Force DC and Dischord Records to be released as part of a larger booklet called "You Can Do It" that covered a variety of other activist topics like how to organize a group, how to put on a show. Two years later, when Simple Machines was more established, we expanded our section of the booklet and created a much more detailed booklet, the "Introductory Mechanic's Guide to Putting out Records". Our goal then was to explain the record manufacturing process in simple terms that could be used by the enthusiastic teenage girls who wrote to us by the thousands after *Sassy Magazine* published a little story about our label. Over the course of Simple Machines' eight year history we sent out about 10,000 copies, and still get requests to this day. In 1996 we passed the text along to Muji who put a digital version of the Guide up on his excellent site <http://www.indiecentre.com>, where it has continued to attract the attention of entrepreneurial musicians.

The version you see before you is updated as of November, 1999. It's a good place to start if you're interested in releasing vinyl records or CDs, but those methods are fast becoming outmoded due to technological advancements in MP3 & digital downloads. Like the rest of you we've heard a lot of stories about how the internet will level the playing field for indie musicians. We're just as curious, optimistic and suspicious as you are, which is why we will be actively researching indie options of digital downloads. We hope to compile this research sometime next year into a Guide to Putting Up Records. Watch here for details.

Looking back at the original version it's amazing how little of the key information we've needed to update. Steve Scruz's basic info on putting out vinyl and

John Henderson's CD tidbits were right on the money. In the fourth edition we added a bit of basic info on publishing, copyrighting, "going legal". For this one we've updated some of the general info and included some URLs for some of the companies that can help with CD or record production.

One thing to keep in mind. This booklet is just a basic blueprint, and even though we write about putting out records or CDs, a lot of this is common sense. We know people who have used this kind of information to do everything from putting out a 7" to starting an independent clothing label to opening recording studios, record stores, cafes, microbreweries, thrift stores, bookshops, and now thousands of start-up internet companies. Some friends have even used similar skills to organize political campaigns and rehabilitative vocational programs offering services to youth offenders in DC.

There is nothing that you can't do with a little time, creativity, enthusiasm and hard work. An independent business that is run with ingenuity, love and a sense of community can even be more important than the products and services it sells because an innovative business will, if successful, stretch established definitions and set a new standard. These businesses can serve the practical function of employing other like-minded people at cool jobs which offer flexibility (part-time commitment), sense of community and, sometimes, a paycheck. In a larger sense, independent businesses can offer alternative notions of success, fame and rewards – all traits that are sorely needed in a society as consumer-focused and capitalistic as ours.

And now...The Mechanic's Guide.

Let's say you're in a band.

Don't expect record label moguls to approach you with some 3-record, \$1,000,000 deal. In almost every case, if you want to make a record or CD of your musical project, you've got to do it yourself (for good up-to-date information on home recording subscribe to Tape Op magazine). Or, say you're not in a band yet, but there's a band or bands you love and you'd like to try putting out a record/CD of their stuff. It's probably best to start with a band you know personally, or one that genuinely wants to help with the process. That way, no one will be surprised or angry if there are problems like unexpected costs or delays.

We won't talk much about actual recording methods, except to say that the possibilities are endless. Real recording studios, equipped with the giant 8, 16 or 24 channel mixing boards that record onto reel-to-reel magnetic tape, DAT/ADAT machines or computer hard drives can make any old Joe sound like the Mormon Tabernacle Choir. Of course, buying all that equipment costs a lot, and the hourly rates reflect that. Studios charge between \$20 and \$50 an hour and sometimes A LOT more. But who needs all that snazzy stuff anyway? Some of



Jeff Mueller of June of 44/Rodan photo by Pat Graham

our favorite records were recorded on simple 4-track machines.

Digital recording technology continues to raise the quality and lower the costs for home recording, and computer programs like Pro Tools can help small studios do very sophisticated editing. You can even record online at virtual studios or download shareware to record on your own computer and burn your own CDs. Even with the revolutions in technology, the recording process can be quite expensive.

Because recording costs so much, who pays for it - whether it's the band themselves or the label - becomes the first big question. When we

first started Simple Machines we couldn't pay bands to record specifically for us. We'd tackle this two ways. First, bands often record extra songs for records or tapes that they already are planning to put out. If this is true in your ideal band's case, it's just a matter of convincing them to give you a song/songs to put out. This arrangement works especially well for compilation releases, where you're only asking for one song from a number of bands. Second, some bands go into the studio to record for their own interest but don't have any specific plans for releasing it. What you can offer these bands is to do the work of turning their recording into vinyl, CDs or cassettes, with the understanding that they will probably not get paid back in money, but instead given a small quantity of records which they can sell themselves to pay for their recording expenses. You can also offer to sell the band records at cost or a little above. The band can then sell the 7"s for \$3 and make a profit too. This is an especially nice arrangement if the band is touring because they can sell CDs or singles to make extra gas or food money while they are on the road. But they won't be selling to the same people that you will be trying to sell to ...no competition, no bad blood.

Once you have a "studio quality" tape of the material to be pressed, you need to choose a format for your release - 7", 12" record, cassette or CD. Some choices, of course, involve more money than others, but don't let that stop you.

A whizbang cassette dubbed in your own home, with a snazzy cover can be just as impressive as a CD. In the 90's we've seen the big record companies completely phasing out vinyl releases. Have you noticed that most chain record stores don't even have places to display records on sale anymore? If the role of vinyl continues in this direction, the most affordable method of putting out music by small, alternative bands will be on CD and cassette, where manufacturing prices have dropped dramatically in the past couple of years. Another manufacturing option is developing rapidly in digital music distribution technology. MP3s present themselves as another inexpensive method bands can use to sell their music and connect with new fans (we are researching these options thoroughly and will present our findings in the next installment of this guide which is slated for release in January 2000). Either way, don't fetishize format. It's all about getting your music out anyway.

Since we started by putting out 7" records, we'll begin by describing the step-by-step process from that angle. Some of the steps are different for CD releases, but we'll deal with that later. For now, onto records.

How to make a record.

Manufacturing the actual record is a five part process:

- **Creating a "master" from the tape**
- **Processing the masters**
- **Printing the record labels**
- **Pressing the actual vinyl**
- **Packaging the records for sale**

As with nearly anything, there are many ways to accomplish these five steps; the smart label seeks the most affordable route to her/his ideal record, as (hopefully) he or she clearly realizes the distinct possibility of losing her/his shirt on this and doesn't wish to jeopardize future releases and current friendships with dumb business moves.

There are a good dozen pressing plants/services in the U.S. (not to mention foreign companies), and a majority offer package deals, where you provide the tapes, cover art, label information and cash, and they provide the you with sale-ready records. But you pay a price for this convenience. When you opt for a package deal, you are leaving the important choices about who is going to master your records and how the packaging will finally look in the hands of strangers. Unless you are willing to compromise the quality of the record and/or packaging, it is best to do it yourself and find the best companies to individually handle the five steps for you. This can delay your records significantly unless you become a pest, calling the slowpokes (whoever they are) every day until they come through for you, but some energetic people can find this fun.

Creating a master.

Mastering is creating an original record by cutting a wobbling groove into a smooth lacquer disk - a delicate process which can be easily screwed up. Although many record plants offer mastering service as part of a package deal, there are a good number of places or people which specialize in mastering. Leaving this step to the pros means that you won't have to worry about the engineers sitting around swilling beers and mastering your record in their garage on equipment they picked up at the Saturday swap meet. It also means that if they do screw up, they will remaster your record free of charge.

Vinyl mastering prices vary wildly depending on your source tape, the format and length of your record, and the mastering method you choose. Standard methods are analog lacquer mastering from a 1/4", half-track reel of magnetic tape (1/4" is the width of the tape), 1/2" or a DAT. The usual job from a 1/4" tape or a DAT source tape costs anywhere from \$45/side to \$75/side for 7" mastering. There are more expensive methods of mastering, but we think the prices far exceed the perceptible difference in fidelity. When you send off your master tape, enclose a simple letter for the engineer, including the band name, song titles in the correct order and length of each song. You should also describe any parts on the tape that deserve special mastering attention, but be aware that there's only so much a mastering engineer can correct or improve. They can deal with stuff like "add more high end or mid-range", but they can't "turn up the guitars". We highly recommend that you send a tape that has been equalized and mixed to your satisfaction, because only you and the band know what you want it to sound like, and a mastering engineer may not have the same idea as you about what "loud guitars" means.

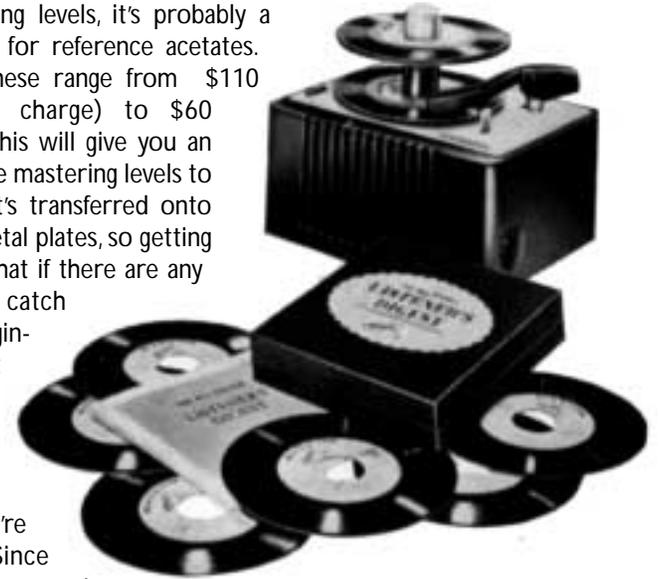
Now is also the time to pick a catalog or "matrix" number for your record, and let the mastering and pressing plants know what it is. Certain pressing plants require that the record side's matrix number be etched onto the inner groove of the record; this number consists of a combination of letters and numbers which identifies your record label, the release number, and the side of the record. For example, the 'B' side of Leopard Gecko Records' third release is LG003B. This information also needs to appear on the labels so the pressing plant people can correctly match the labels with their respective sides.

Did you ever wonder how those secret messages get on the inner groove of vinyl records? It's not actually a bored worker at the vinyl pressing plant sending secret messages out on freshly pressed records (although that would be nice...). Those etched messages are inscribed by the mastering person in the lacquers. If you want a special message etched on the hubs, you'll need to include that on your letter, too.

If the quality of your original tape is shaky, or you're putting out a compilation

record, where the different songs have been recorded at varying levels, it's probably a good idea to pay for reference acetates. The prices for these range from \$110 (KDisc used to charge) to \$60 (Masterworks). This will give you an exact replica of the mastering levels to listen to before it's transferred onto the permanent metal plates, so getting acetates assures that if there are any glitches you'll catch them at the beginning. But at around \$100, these can add a significant cost to the process, so don't feel like they're necessary.

Since they're not permanent vinyl, acetates can only be played about eight times before the quality begins to deteriorate, and you shouldn't pick the needle up before each side is completely finished. If in doubt, ask your mastering plant to send you instructions about listening to them. If you or your band are pretty sure about the sound quality of your master tape, more power to you...rock on in your youthful abandon.

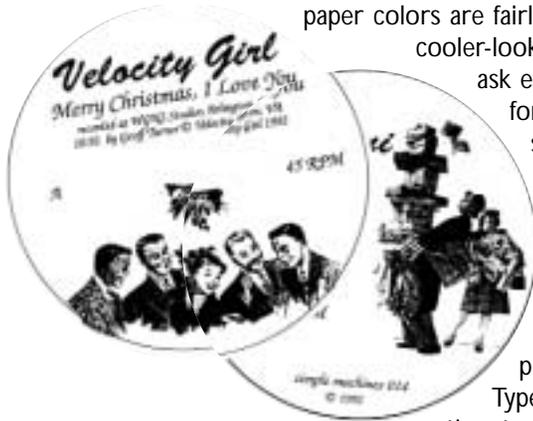


The processing process.

Once both sides of your record have been mastered, metal "stamper plates" must be formed from them. This is called "processing" or "plating". These stampers are reverse molds of the originals and are used to press your records. Generally, the pressing plant will send your master lacquers to a plating service once they receive them. It may be cheaper for you to work directly with the processing engineers, but it may also be more of a hassle. Two-step processing (versus one-step or full—who the hell knows what the differences are) costs about \$50/side for a 7" or \$70/side for a 12". We've always let the record pressing plant take care of this intermediate step and have never been unsatisfied.

Printing the record labels.

At roughly the same time you are sending your tapes off to be mastered, you should be sending off artwork for the labels. Most record pressing plants can have labels printed for you for a reasonable price, but your choices on inks and



paper colors are fairly limited. If you want to have cooler-looking labels, your best bet is to ask every label printer you can find for a price sheet and a booklet of sample label designs. We've had labels done through Hamlett, which is just down the street from United in Nashville, TN. It's only slightly cheaper, but he does have a larger selection of stock papers and ink colors. Typesetting, layout work, and negatives tend to be expensive at the printers,

so you're better off doing your own layouts. Most companies will accept a paper positive of the artwork, and if it involves two colors, you can do a paper or acetate overlay, but doing the layout on a computer and getting digital files output to film is preferable (more on these terms later). We'd suggest that you put the band's name, song titles, your record company's name and address, copyright information, RPM's and matrix number on at least one of the two labels, but it's your record. Once your label artwork is ready, send the artwork along with a description of the label design(s) and ink color(s) you wish, the name of your pressing plant, your record's matrix number, and your cash to the label printers. Most printing services will require 4-6 days to print your labels, after which they send them to the pressing plant to meet up with your records. One last consideration: if you EVER plan on repressing your record, it'll save you a load of money if you order extra labels at the start, since the cost of 2000 labels is only a couple of bucks more than 1000.

Pressing the vinyl.

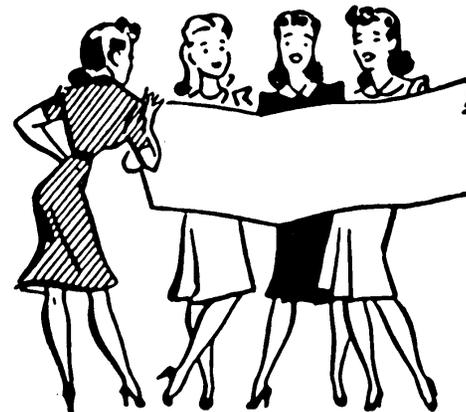
Now, the most important step: pressing the vinyl. As stated previously, there are about a dozen pressing plants in America, and even more overseas, although their numbers have been decreasing. Choose your plant based upon its location (shipping costs are killer, so the closer to you, the less in shipping costs), the amount of money you have to blow and what your looking for; if you've got the cash, you can find anything you want SOMEWHERE (picture discs, specially-shaped records, 5"s, 10"s, flexis, 78's, weirdo vinyl colors...). Most plants will press in quantities anywhere from 100 to 50,000, but quantities under 500 are noticeably more expensive. Here's a price breakdown based on an order of 1000 records:

7" on black vinyl	35¢-55¢ each	(cheapest is United in Nashville)
7" on color vinyl	48¢ -64¢ each	(United, Erika, Rainbo, Alberti and Bill Smith have good color selection)
12" on black vinyl	78¢ each	
12" on color vinyl	\$1.00 each	
10" on black vinyl	90¢ each	

Here's how to deal with them. First, figure out what you need them to do for you. Note that not all record plants offer the same options, so call them for a price list and order form before sending your order. Enclose a letter with your order to let them know every detail of your project including:

- who is making your masters (or stamper)
- who is printing the labels (if it's not the record plant itself)
- the matrix ID for this project (e.g. LG003)
- large (50's 45-style) or small (LP-style) center hole
- format (7", 12", 331/3 or 45 speed)
- color (if applicable)
- number of records you want.

You'll have to pay at least 50% of the total cost before the job is done, so be prepared to send a certified check/credit card info along with your letter. They'll send you 3 or so test pressings of your record so you can listen for mastering/processing defects before pressing the entire run. Test pressings are nice because they let you listen to what your music will sound like on their vinyl. But, if you find anything wrong you will probably have to pay to have your record re-mastered and re-plated if the fuck up is in the mastering or the plating stages and not just the pressing. If you're satisfied with the TP's, phone the plant and (in theory) 10 days later you'll receive your vinyl COD (have your payment ready!). The best advice we can give you is to be patient and but keep calling and checking on your order....you'll eventually get what you paid for.



Packaging for sale.

When you receive your records from the pressing plant, all that's left is to package them for sale. Obviously, there are a jillion different packaging schemes. (every one of the Teen Beat Sexual Milkshakes 7" came with 3D space asteroid glasses, and Steve from Meat Records had his mother sew 20 special edi-

tion covers out of the grossest blanket we've ever seen for the Slushpuppies double 7"). Don't be afraid to be creative, but pick a design which suits your budget; a carefully designed well xeroxed/printed sleeve is beautiful all on its own. In general, print 7" sleeves and inserts at local print shops, but always ask for estimates! Specialty printers like Barefoot Press do amazing work on 7" sleeves and inserts, as well as cassette covers and CD booklets, and they like to use recycled paper. If you're interested in full color sleeves or the kind that are like mini LP jackets with glued edges, you'll need to use a printer that's set up to do that work. Barefoot, Dorado, Erika and Ross Ellis can all get this done for you for prices from 35¢ up per 1000.

More often than not you have to have cardboard 12" jackets made through a pressing plant or specialized LP jacket printer like Dorado, Stoughton or Ross Ellis. Some labels have been more inventive, like Guy Picciotto's snazzy label Peterbilt sliding their 12" LP's into manila envelopes and the CRASS folks wrapping records in enormous posters, but that's pretty unusual. Most pressing plants will offer to stuff your records into your jackets and shrink-wrap them. As rotten as it is to add to this world's plastic fetish, 12" records travel more safely when shrinkwrapped. But if you're doing a 7" record, save your money and put the records and inserts inside your sleeves yourself. It's also a good idea to enclose 7"s in plastic record protecting bags, which you can purchase for about \$27/1000 through Bags Unlimited.

Storing records. By the way, records need to be stored properly. Keep them in a fairly cool and dry environment standing upright (as opposed to stacked on top of each other). Shrinkwrap tends to stretch and tighten with temperature changes, which can seriously warp LPs. Be very careful!

CDs.

But now it's almost the Year 2000...distributors are ordering less and less vinyl (or in some cases none at all), most radio stations rely on CD players, and most chain stores are either cutting back or eliminating their vinyl stock altogether. Why not consider releasing a CD? For the most part, manufacturing 1000 CDs is less expensive than making 1000 12" albums.

Even if you never plan on putting out a CD, you might be surprised to know that a package deal for 1000 CDs costs between \$1700 and \$2000. When you break that down it comes to \$1.70 to \$2 per single CD (not including the big variable of recording costs). And this is just 1000 CDs. The manufacturing price dips much lower when you get to the major label level who make 50,000 CDs at a time (and in many cases also own their own CDs pressing plants). This may get you thinking...then why are major-label CDs usually about \$16 in the stores? That's a huge markup! It's not a short or easy answer and a lot of it has to do

with the extra money wasted by major labels on expensive recording, videos, promotion, salaries, you name it. It also has as much to do with your basic profit making forces (i.e. how much *will* the consumer pay for this?) and the cumulative effect of a music industry that's spent the past decade convincing the public that CDs are a \$12-\$18 necessity, cajoling them to re-purchase all their favorite albums in this new format so they can finally hear subtleties they had been missing on vinyl and thus sucking everyone into the CD realm for good. We don't deny that CDs sound great - it's the music industry that sucks. What's ironic about the development of the CD is that two of the main features they were trumpeted for - lasting forever and being able to hold eighty minutes of music - have not been realized. Most rock albums are still about 50 minutes and everyone knows a scratch on a CD can result in those annoying digital skips. When cool record labels like Dischord put out 2 albums and a single on one CD and sells it for \$10, or when Homestead squeezes 70 Sebadoh songs on one CD, then they're really worth the money.

Digital mastering.

The first thing you'll need is a finished tape. Unlike making an album, you could theoretically record a cheap cassette in your bathroom and turn it into a CD with hardly any loss of sound quality. This is because the first thing that's done with your tape is a conversion to a CDR, which contains the digital transcript of your music, plus subcodes used to show the number of songs, times, etc. Once your music has been "digitized" it can be transferred from DAT to DAT to CD and back without the slightest loss of fidelity.

The best format to master from is a DAT tape, which is already in a digital format, but a 15ips 1/4" stereo reel is good, too. Most places that manufacture CDs can do the conversion to the CDR and the actual mastering, but there are folks who specialize in this and it would be better if you handled this crucial step yourself. Current charges range from \$150 on up for CD mastering, depending on length of album and the engineer's expertise. CDRs have become more popular lately for a very good reason - you can listen to the CDR in your regular CD player after it's been mastered but before it goes off for duplication. Since CDs are an exact digital replica, what you hear on the CDR is what you're gonna get.

Glass mastering.

Glass mastering is similar to plating a record. Once a CDR or 1630 is received, the CD plant creates a glass master, and the glass master makes a family of metal stampers from which all the discs are printed. This is an amazing process where a piece of glass about 1" thick and about the size of a large pizza is stuck into a laser machine. Your CDR is placed inside the same laser machine and the digi-

tal information is basically shot onto the piece of glass that's been coated with a photo-sensitive substance. Then the piece of glass is taken out and left to cure, and the metal stampers are cast off this piece of glass. Once the stampers are done, the glass is scrubbed clean and re-used for another project. This whole process can take up to 18 hours!

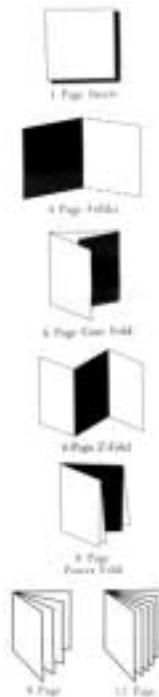
From DATs to discs.

In the short term, CDs have assumed the prominent position in the music world. While this may not be good news for those vinyl enthusiasts, the explosion of CDs has made duplication prices fall dramatically. We get our work done at Failsafe Media in Illinois but we've also used Skybow Records in Nashville, TN and KAO/American Helix in Lancaster, PA, and look in the back of the booklet for a more comprehensive listing of CD plants. They're pretty fast, very friendly, and relatively inexpensive. As with other formats, you need to send the plant your CDR, as well as info about the band, the catalog number and the quantity you need, as well as a 50% deposit. Most plants charge from 60¢ to 90¢ per raw CD based on a minimum order of 1000. You could do fewer, but it wouldn't necessarily cost you much less, although there are some CD brokers who now specialize in short runs of CDs at reasonable prices. Shop around!

One other small cost is for the printing on the CDs. In most cases a two-color printed label is free for orders over 1000, but some places charge about 5¢ per CD for this, or a flat set up charge of about \$35 for creating negatives of any artwork you send them. You could get fancy with lots of colors or weird patterns, but this will cost extra. CD label layout is very precise, so ask the CD plant to send you a template with the specific dimensions before making the films.

Printed booklets and traycards.

At this point you've got 1000 CDs and nothing to put them in. Here's where you can do a lot of different things. The traditional CD jewel box packaging requires a booklet and a tray card, as well as the actual jewel box. A lot of CD pressing plants will take care of this step for you as long as you send filmwork and color proofs along with your CDR. In cases where you're interested in special papers, weird folds or diecuts you may save money by having the booklets & tray cards made by a specialty printer (see list in back) and having them ship the booklets to the CD plant for assembly. Most of the CD plants have very low printing



prices on standard booklets and trays since they are set up to do it. A set of 1000 4-panel (that's one piece of paper folded over) booklets and cards cost a little over \$300, and it doesn't cost much more to print in full color. As with the record jackets, if you pay a little extra you can get a lot more covers or booklets. A paltry \$100 with the original order will get you a full 1000 extra booklets/tray cards. But here's the catch - you must send them final film negatives ready for printing. Preparing filmwork for printing is a huge topic on its own so refer to the section done by Barefoot Press in a few pages for the basics. Always refer to the art specifications from the place you've chosen to do your printing because everyone is slightly different and it's very important to get it right and avoid extra charges.

Packaging.

Now that you've decided about booklets and CDs all you need to do is put it together. The most common way is by using jewel cases. While most of them are clear plastic with black trays, you can also find colored trays or tinted plastic in a variety of colors. While you have the option of buying empty jewel cases and having all the parts shipped to you separately for you to assemble yourself, probably won't want to. John Henderson said he spent over a week putting together copies of the Beat Happening 1983-85 CD by hand to save \$150, and wrestling with tray cards and jewel case parts just wasn't worth it. Most CD plants have giant machines that will assemble the CD, booklet and jewel box for you for no additional cost, unless you have some extra-big booklets or alternate packaging that needs to be hand-assembled. For about 5¢ extra they'll shrinkwrap them, and for another 10¢ or so they'll apply barcode stickers or those topspine barcodes that have the band name, album title and barcode on a removable strip on the top of the CD, which make them more visible in record store racks, thus easier to find and buy.

There are at least two other common methods of packaging - the digipack and Eco-Paks - and more creative stuff appearing every day. Digipacks are like the old-fashioned double album sleeves shrunk down to the size of a CD package. They have a wide spine and look like little books. When you open up the package, there's a plastic tray glued onto the inner right-hand side that keeps the CD in place. These are very cool, but they're at least 80¢ each and there's usually a minimum order of 2500. The official manufacturer of digipacks is AGI (708/344-9100) but most of the big CDs plants can order these for you. An Eco-Pack is almost identical, but they avoid the plastic part in the center all together by sliding the CD into a small slit. We use a company called C-Case, but as we understand, there is no "industry standard" for eco-paks, so every CD plant may offer something along these lines but with a different name. Both are ecologically a lot groovier than jewel boxes, and it's an all-in-one deal (booklet/ tray/jewel box/assembly), so it's not as expensive as it seems when you add it all up. We

don't see why you can't silkscreen a little box, include a xeroxed booklet with your CD, or even put it in a little envelope with a nifty sticker. We've found some neat white cardboard CD jackets through Bags Unlimited for about 20¢ each that could be silkscreened or printed on. Not only would it cost a lot less, but CDs are a lot harder to mangle than albums, so you wouldn't have to worry as much about damage in shipping and storage. There's also the gorgeous letter-pressed folders that Independent Projects Press and others have created, all of which have that special handcrafted look. It's going to take a concerted effort to break the jewel box habit, so let's not be afraid to try different packaging schemes.

Low Quantity & Low Cost Duplication

In 1993 we stated that cassettes were the wave of the future...well, for independent music at least. Cassette releases offer three great bonuses. First, they're not that expensive to dub in quantities, and as long as the cassettes are good quality, they can sound almost as good as a record. Second, if you run out, you can usually find a friend with two tape decks where you can make more copies yourself. You can buy cassettes in bulk in a variety of lengths. Third, it's much easier to make your own cassette covers at the local Kinko's or print shop, thereby saving a lot of money. The down side is that stores and distributors are unlikely to buy them from you to sell, so you've gotta hustle them yourself at shows or through mailorder.

We buy our blank cassettes at Diskmakers in Philadelphia. They have blank cassettes in three grades running from 5 mins to 95 mins, for about a penny a minute (so a 60-min tape costs 62¢). Diskmakers also offers blank cassette labels on tractor feed or laser printer type sticker paper, as well as those clear shell boxes. We know there are companies like World Class Tapes that offer colored labels and shells for a bit more money.

For those of you who are short of time or don't want to invest in extra cassette decks, you can also send away master tapes and have them dubbed by a large company. Check your Yellow Pages for a place in your area that will dub tapes for a reasonable price. When calling, make sure they're using good quality cassettes (high bias chrome tapes) and that they dub in "real time". That means that they play the master tapes at the actual listening speed, not at twice or three times the speed like high speed dubbing decks do which results in a larger loss of sound quality.

Welcome to the new future, where CD burners are supplanting cassettes as affordable means to keep a small release in print without making thousands of them. CD burners used to be an extravagant piece of musical equipment found only in recording and digital media studios, but now that the price has dropped

to around \$400 many people have them in their own homes. With a CD burner you can replicate your own CDs from your CDR for a very short run of CDs, or you can go from CD to cassette. If you make your own CDs you have plenty of packaging options - from paper or cardboard sleeves to buying a handful of jewel cases and making booklets and trays. If you are thinking of investing in a burner, make sure the model you're considering includes the software you need to run it - Toast is a common program - since the software by itself can be expensive.

Art lesson 101. courtesy of the folks at Barefoot Press

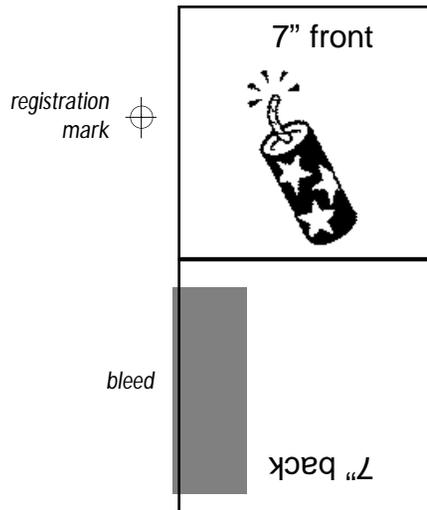
While all the mastering, recording and stamping is in the works, the artwork should be prepared for printing. The following info should help you understand the process. The best thing to do though, is to find a reputable printer to take care of you, especially if you've never done this before.

For starters, let's assume that your artwork is going to be one color. With thousands of inks and hundreds of papers available, a lot can be done with one color at a low cost. We'll also assume that you are not laying out your artwork using a computer. As we mentioned before, computers have made graphic design a lot easier, but not everyone has access to them and it's very important to know these printing fundamentals whether you're using a pair of scissors or Photoshop.

Camera-ready art is exactly that - it's artwork that's ready to be photographed. Printers shoot negatives from your artwork. These negatives are used to make the metal plates that do the actual printing. Printers can shoot just about anything; photographs, drawings, charcoal sketches, cut-and-paste collages, etc, but for best results, all camera-ready art that involves line art or type needs to be high contrast (black on white). When anything has a tone or a shade the printer makes a **halftone** of it. A halftone breaks the image down into tiny dots or lines. Look very closely at a black and white photo that's been printed in the newspaper. It's not a photo - it's actually a bunch of dots! The dots allow the same range of tones to be reproduced using one color of ink.

The best halftones are from original black & white photographs that are between 50% and 200% of the finished size. Keep in mind how your choice of ink and paper will affect the image. The image's darkest area will be as dark as the ink you've chosen, and the lightest areas will be the color of the paper. A light color ink on dark appear will provide a muted, low contrast reproduction. That's not bad as long as it's what you want.

Color. It's important to remember that each color you pick requires a separate negative. Let's say your 7" sleeve has a line drawing of an firecracker - it's



red with yellow stars. If it was totally camera-ready you would have two separate pieces: the red plate and the yellow plate. Registration marks (see diagram) are used to line up each plate so they need to be in the exact same position on each plate. When you lay the plates on top of one another, the stars should line up with the firecracker.

Another option is to create a **mechanical** by mounting your art onto a stiff backing board. Then attach a sheet of tracing paper along the top. The top sheet represents the yellow plate, so shade the stars

on the tissue paper. Your actual firecracker drawing represents the red plate. The printer cuts masks based on your mechanical and shoots negatives from those. You'll pay more to have the printer do it, but it may be easier.

All printers refer to ink colors by using the **Pantone Matching System** (PMS). This system was set up to ensure that the red you pick out for the firecracker - say, PMS #186 - is the same one the printer will use. Any printer, and most art stores, will have a Pantone matching book you can look at.

There are two ways to print multi-color images: **spot color** and **process/full color**. The 7" described above would be printed as a spot color piece. In spot color printing the paper goes through the press once for each color and the press' ink reservoirs are loaded with the specific Pantone colors that you picked out of the book. If you've picked more than three spot colors, you should consider doing process printing.

Every color you can imagine can be created with a combination of cyan, magenta, yellow and black ink (except metallics like silver or gold). In process printing, each ink is applied to the paper in the right amounts in the right areas to "build" the right colors. Next time you open a box of cereal take a look at the edges - you can usually see where the 4 colors overlap. As we said before, each color needs a separate negative: cyan, magenta, yellow & black. Keep in mind that the cost of generating these CMYK negatives from original art, which may include scanning, color correction, film output and a color match, can become very expensive. If you have a scanner and a computer at your disposal you can do a lot of this stuff yourself, but we'll get to the computer version of this in a minute.

Bleeds. Let's say that you want a picture on your CD booklet to touch the edge of the paper. That means you need to build a bleed for the printer. In order to do that, the image you've chosen has to actually extend beyond the edge of the finished product. The printer then trims away the extra. Most printers need a minimum of 1/8" bleed. If you don't set it up that way you run the risk of having a white border on the edge of your photo (see diagram).

Computers and layout. If you have access to a computer with the right software and someone who knows how to use it, you can make the design and layout of your music a lot easier. Applications like Photoshop™, Freehand™, QuarkXPress™, Pagemaker™ and Illustrator™ were created to circumvent many of the traditional printing setup and layout tasks. With these you can manipulate color and placement at the touch of a key.

We're not going to talk about how to layout things on computer, but what to do once you're done. Particularly if you're working in full color, computers make it much easier to create CMYK films by using machines that output your files directly to film. A lot of printers can now accept artwork on a computer disk and output the films, or you can send it to a **service bureau** that will output the negatives that you would then send to the printer.

You can usually save money by taking care of the film output instead of leaving it up to the printer. Before you send your computer files for output, you need to ask your printer these things:

- what line screen they use
- preferred dots per inch (DPI)
- whether they want the films as negative or positive
- films right-reading or left-reading
- films emulsion up or emulsion down

While this probably sounds like Martianspeak, the service bureaus and printers know what these things mean. As long as you can tell the service bureau what the printer's specifications are, you don't have to worry about the actual definitions.

Proofing. Regardless of how the job is prepared the printer will send you a blueline or a color proof to approve. A blue line is a proof made on photosensitive paper from your negatives. Although the image will look blue, it shows placement and size. This is the last chance to catch any problems, so double check both the printer's and your own work. Look for correct size of images, type, cuts, folds and the finished piece; position of images, type, cuts; color separations as marked on the blueline; spelling, and typefaces. Also look for scratches, stray marks and missing artwork or type. Be aware that once the blueline is approved, any mistakes in the finished product that are on the blueline are your responsibility.

If you're doing full color printing, the service bureau that creates your negatives can create a **color matchprint** for you. They may cost a lot (like \$100 each) but it's nothing compared to the cost of reprinting a job because something is wrong. In fact, most printers require a color proof to be sent along with the films to ensure everything matches.

Computers and graphics tools have opened the doors of graphic design to more people than ever before. It also creates new problems: corrupted files, inaccurate colors on monitors, and so on. In the long run computers can make things easier but an understanding of the basics of printing and mechanical layout is the only way to use these tools effectively. We scratch the surface here, but you can get a book, take a class or talk to a printer to get more information.

Designing and having your artwork printed can be fascinating. And it's important - a lot of people may "see" your music before they ever hear it. Take the time to make the outside as unique and interesting as the music inside.

So you've done it. What now?

See? Not so hard. All it takes is a little money, a dose of ingenuity, and a lot of perseverance, and you have yourself a bunch of records, cassettes or CDs. Now that you have your jewels, what are you going to do with them? We have learned, often the hard way, that **selling them (and actually getting your money back) is the most difficult part**. We're serious about this. With so many independent records and CDs coming out every week, distributors and stores have a lot of releases to consider. On top of that, indie stores have been feeling the squeeze of the chain stores that buy CDs in such volume that they get special discounts, or those like Best Buy that sell CDs at a loss just to entice customers into the store where they'll hopefully buy some even more expensive housewares. With limited budgets, store buyers stick with what they know they can sell, leaving only so much money to spend experimenting on releases from new bands or labels. While this may sound discouraging, please take this as a simple warning. It is relatively easy to get through the steps we've listed here and create a record, but much more difficult to sell enough to make your money back. Usually this has very little to do with the quality of the band or record, but more with the sheer market forces of the independent music community. Even with this warning, there's plenty of room for the band or label with some extra energy and ingenuity.

Distributors act as middle agents between labels and stores all over the country. Many of the existing American independent record distributors are trustworthy folks who do the thankless and invisible job of keeping up with the massive, and for the most part disorganized, indie music community, buying CDs and records from the multitude of small labels, and selling them to the indie stores around the country. Some, however, are corrupt or exceptionally poorly oper-

ated and make a lot of their money by stepping on tiny labels, or go out of business and take your money with them (like Rough Trade who went under owing money to almost every little label). We sell our 7" records to distributors for \$1.75-\$2.00, and 12" for \$4.50-\$5.25, and CDs for \$6.40-\$7.00, but the prices may be higher or lower depending on your costs in manufacturing. Most distributors will buy 10 to 100 records from you at this reduced cost, and then (should) pay you back within 60 or 90 days.

Local indie record stores will probably take local releases. Although they may buy conservative amounts, it's much easier to talk local stores into cash on delivery deals, so at least you'll have some cash in your hand.

Sell them at shows. We know - you want to be dancing up in the front row, but shows are one of the best opportunities to sell records, zines or anything. Especially effective if the band you put out is playing and they announce from stage that you have records for sale.

Internet/Mailorder. Ordering records online or through the mail can be fun! In fact there are a bunch of healthy mailorder distributors in the US, including K, Revolver, Parasol and Initial. They're not as big as distributors, but they may be interested in carrying your stuff on their catalog. We'll be researching this in great detail in throughout 1999-2000 and will give a report in the next edition on new tools available to small bands. You should also consider offering your records through the mail yourself, because that's the most direct and surefire way to sell your records. Set up a website. Place an ad in a couple of fanzines and accept mail orders. Choose wisely, though, because ads are expensive - sometimes \$75 to \$200 for a 1/4 page! Think about who will be reading that zine, and the likelihood of them buying your records before signing that check. For inexpensive publicity, you can also send promo copies of your record to major fanzines, which will probably review it. Make sure they print your address (snail or email) and the mailorder price correctly, so that review readers can contact you about purchasing your record. If you advertise in a few fanzines and put catalogs in the records that you sell to stores and get a few reviews, you're sure to get some mail. Make sure your prices absorb the costs of postage and packaging incurred by you. We've cut down on packaging costs by re-using boxes and packages that have been sent to us or our friends, and we spend a lot of time cutting 7" squares out of cardboard boxes otherwise destined for the trash. You can also get mailing materials from local/college radio stations or record stores, which usually get a ton of promo records every week, all neatly packaged in new padded mailers. The radio stations end up throwing envelopes out, so they're usually more than happy to give them away.



The internet. The web has become a completely new way to spread information and, potentially, sell stuff. Many bands or labels have websites that give the casual browser immediate access to information about a band's releases, their history, and soundclips so you can preview before buying. There are plenty of websites that act like retail stores out there, from the biggest down to the indie versions. You could set up a website with info and links to people who have your records in stock, or offer them for sale yourself via credit card sales. The internet allows even the smallest band to have an equal address to, theoretically, a limitless audience.



For rocket scientists: Publishing and copywriting.

Since we first created this booklet, we've had a lot of calls or letters with questions about publishing and copyrights. What does the © on records mean? There's the high tech and low tech approach and we've always done the low tech, so we can only give you a few starting points.

A copyright is a way of saying you created something, therefore you own it. You acquire a copyright automatically when your work is "created" - the moment that you turn off the tape recorder the song is deemed created and the copyright begins. But don't confuse this with registering your copyright. There's

two ways to do that. The simple one is a layman's copyright, where you just have to mail a tape or CD with the songs on it to yourself. The postmark serves as proof that the band, songs, or recording exists as of that date. Pretty useful, but if you ever got in a serious legal battle with someone about ownership, it might not hold up as well as a formal copyright. A formal copyright means you register your songs with the copyright office in Washington, DC. We've never done this, but we know there's a fee of \$20 and some paperwork involved. If you need more info, give them a call at 202/707-3000. Fortunately, we've never had a problem with anyone "stealing" our stuff, so we've always just used the layman's route.

Secondly – publishing. Initially, the concept of publishing was established to make sure that the lyricist, composer and performer were all paid for their individual contributions to a finished song. These days you're likely to be all three and publishing is a way for you as songwriter/band to collect royalties if anyone chooses to air your song, buy your records or cover your songs. Royalties are broken into two parts - mechanical and performance. Mechanical royalties are based on the number of records manufactured and sold, and are usually paid to

the band by the record label. Performance royalties are based on the number of times the song gets played on the radio, TV, as a video, or each time it's performed by another artists, aka a "cover". There are two main organizations that act as collection agencies for performance royalties, BMI and ASCAP. You can register with one or the other as a songwriter for free, or you can choose to pay a five-year fee of \$100 to set up a small publishing company. This makes it easier to collect royalties worldwide and many bands can publish under the same name. Eggs' publishing company is called "Brettfromsuede". It serves as an umbrella under which all the Eggs songs are registered, but it doesn't have to be exclusively Eggs. They could share their name with any friend or band who needed a publishing company. Ideally, BMI and ASCAP keep track of the number of times any song listed as part of your publishing company is played on commercial radio or TV or as a video, then pays the artist. The payment rates vary wildly depending on the time of day, place, and potential audience size, but an average radio play on prime time is worth a whopping 6¢. BMI and ASCAP only track commercial radio and mainstream TV - almost no college radio. So your record may be numero uno for thirty weeks on WPRB-Princeton, but you wouldn't receive any performance royalties for that. Why no college tracking? Because each station has to pay a fee to BMI or ASCAP every year, and most college stations refuse to participate/cannot afford it. As an indie band you may wonder why publish at all. Who knows? Maybe it's not worth it, but you may have a huge hit and suddenly find every commercial station in the country playing your song for a week. You could be chalking up \$\$\$\$ in performance royalties right there. If you're not published, BMI and ASCAP are collecting those royalties anyway and you're not getting your percentage. It's a strange world. For more info you can call either organization to request an info package. BMI is 212/586-2000. ASCAP is 212/621-6000. You can download registration forms from BMI at www.bmi.com, or from ASCAP at www.ascap.com.

The bottom line on this stuff is, it can't hurt to put the © on your records, and mail yourself a copy. It establishes its existence and ownership. As far as the copyright office goes, it's probably overkill, but it's up to you. Publishing is more of a personal or band choice. You can a) choose not to do it at all, or b) register with BMI or ASCAP either as a songwriter for free or pick a name and set up a basic publishing company or c) the more dangerous route - sell your publishing rights to an established publishing agency for a large cash advance. They will then hypothetically act as an aggressive promoter and collector. This is a weird and shady world, and if you get offered a publishing deal, we suggest you talk to someone who knows more than we do before sell your soul or your songs. If you have more questions about these two things, call the experts at BMI/ASCAP or copyright office and ask them to send you their info packets.



Going legal.

We get a lot of questions about registering as a legal business. We won't presume to tell you what to do but we can tell you what we did. When we began Simple Machines we planned to put out 6 compilation 7" releases. We considered the label a hobby, and since we weren't planning on becoming a legitimate business, so we didn't register as one. We did keep track of all our costs, however and we kept copies of all of our receipts. This way we could prove how little money we made if the tax collectors came around. Two years into the project we got the chance to put out the Lungfish record. At this point we were pretty sure that we wanted to try our luck as a "real business". It's really pretty easy. Look in the blue pages of the phonebook for the business license office or treasurer of your city/county. Either stop by their office or have them mail you a business license application. There's usually a small fee and some paperwork to do, but it's pretty straightforward. You'll also need to check on the zoning for your county. Many places allow mailorder or small businesses to be run out of private homes, but there are specific rules about setting up a retail business. We're considered a wholesale/mailorder company, which was fine in Arlington, but it varies from town to town. In the worst case scenario you can apply for exemptions. You will also have to decide what kind of business to create. There are basically four options for registering your business. In a nutshell they are 1) sole proprietorship, where one person takes sole financial responsibility for the profits and losses; 2) a partnership (that's what we are) which means that we equally share the financial responsibility for Simple Machines or; 3) a corporation. This takes more legal work and will be more expensive to set up, but if you are going to be a big business it may be preferable because it protects you as a person from any liabilities you may incur as a business. You can also apply to be registered as a non-profit or a not-for-profit. These options are complicated and are based on the assumption that you have goals other than making money.

At the same time you'll need to clue in the US government that you exist by registering with the Internal Revenue Service and applying for a tax ID number. Most libraries have copies of the form, and there's IRS offices everywhere. Of course, once you register you are tax liable, but if you make under a certain amount per year or if you can show a loss, then you won't owe anything. Once you begin to make money, you might want to enlist the services of a professional accountant to do your taxes. It may seem pricey (like \$500) but it is a genuine expense that you can write off, and they can really help you organize your returns, find all the loopholes and protect you in the case of an audit.

So why do we do this anyway?

Whatever you do with this information, have fun with it. Remember that the people you are dealing with are people. If you want your business associates to pay special attention to your project, then don't send them instructions without sending them a letter. We've received a lot of mail that did not contain any real correspondence, so we end up just sending off a packet and that reduces our interaction to business when it could have been friendlier. Not to criticize those who didn't write anything special, but it's only natural that we will remember and respond more quickly to those who went out of their way to communicate and have caught our attention. This is a lesson to learn for life: if you make yourself into a real person in the minds of people who would usually deal with you as a post office box it's much more likely that they will feel more obliged to treat you like a person. We've gone so far as to send boxes of homemade cookies to KDisc as an added incentive to master our 7"s well, and Kristin will always be remembered as the one who mailed John Atkins of Leopard Gecko Records a peanut butter and jelly sandwich - the ultimate token of admiration and friendship. Write letters when you send out records, or take a minute to drop a note to a band or label that does something that you think is cool, and tell them so.

Music is great, and has created its own community of people who love it and support it in a variety of ways. Whether you put out records or cassettes, play in a band, silk screen shirts, organize shows, put out a zine, take photos, or just go to shows and listen to the music, the whole idea is that we all have the power to create, and we should do what we can to foster that creativity in ourselves and our friends. By the way, we're very interested in the whole world of cottage industries, so if you have any friends who have set up small, creative businesses of any kind, please drop us a line and let us know how we can get in touch with them. Good luck!