

Alice Freeman's Home Recording Tips

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I have been saving opinions about recording equipment from several harp and hammered dulcimer Listservs since March 2007. This is a summary of the equipment and software people have recommended. I currently use a Sharp minidisc recorder with an external Sony microphone for personal recording of my harp, but the technology is out-dated and better recording devices are available.

STAND-ALONE RECORDING DEVICES

Up-to-date and comprehensive reviews and comparisons of portable digital recorders, including sound files, are at <http://digitalmedia.oreilly.com/audio/portable-recorder-comparison/>

For an article on a comparison of the Zoom H2 and Zoom H4 Digital Recorders see http://en.wikipedia.org/wiki/Zoom_H2_Handy_Recorder#Comparison_with_Zoom_H4_recorder

Edirol R-09HR

(http://www.edirol.com/index.php?option=com_content&task=view&id=332&Itemid=390)

A limitation with minidisc recorders is the minidisc that requires that you to "play" the music completely through. That's why I changed to the Edirol R-09. I use Polderbits and I can transfer instantly. Using the "Editor" I can move whole sessions, or break it up by viewing the waveform. (Sharon Skaryd - <http://www.dulcimers.com/skaryds.shtml>)

Roland Boss Micro BR Digital Recorder

(http://www.roland.com/products/en/MICRO_BR/index.html)

I've recently acquired a Roland Boss Micro BR 4-track digital recorder, and I've found it to be amazingly good for such a tiny gadget when used with good microphones. You have to be a little clever to find a cable that will connect two XLR microphone cables to the little recorder's mini-stereo input jack, but the results are rewarding. Being so small, the controls have to have multiple functions, so it's necessary to actually read the 150-page manual. The built-in chromatic tuner is at least as good as a Korg, so that's valuable as well. (Dave Tharp - <http://www.myspace.com/celticharper>)

Zoom H2 Digital Recorder (

I bought the Zoom H2 at the beginning of October 2007. What sold me on it compared to the Zoom H4 and the Edirol R09 was ease of use and price. The knock on the Zoom H4 was that the interface was somewhat non-intuitive and the display was small. I have been extremely happy with the H2, it's extremely easy to use and transfer the sound files (a wide choice of resolutions of .wav or mp3) to my Mac and the built in mics sound better than my old Minidisc set up. The other thing is that the H2 comes with lots of accessories, mic stand adapter, mini tripod stand, wind screen, lots of cables. I have been EXTREMELY happy with it. I've used this to record everything from rehearsals to concerts of both small and large ensembles. It even did a great job at my feet in the middle of the symphony while we played Beethoven. (Andra Bohnet, Professor of Flute - University of South Alabama, Mobile Symphony, Silverwood Quartet, Mithril Celtic Band - www.silverwoodquartet.com - www.mithril.us)

I recently bought a Zoom H-2 digital recorder for ethnomusicological fieldwork. I have been recording interviews and music. I cannot recommend it highly enough!! It took about half an hour of reading the manual, and I completely understood how to use it. You can record directly to various qualities of MP3 and also WAV file. It does 1, 2, or 4 channel sound. It also has no moving parts, so you get no unexpected noises. Really, really excellent!!! That's my 2 cents! (Deb Justice - http://www.indiana.edu/~folklore/Menu_Publications.html)

I have the Zoom H2 which works great, is easy to use and you can use it as a computer interface via the USB port. It has 4 mics in it, records to an easily available SD card, so no more mini discs to keep up with. You can record in various configurations and download into your computer. The H2 can use external mics also, it just can't multi track (but you can do that in Garage Band or Audacity.) You can use it with Garage Band with no problems. (Wes Chappell - <http://www.ernessay.com/>)

Zoom H4 Digital Recorder

(<http://www.samsontech.com/products/productpage.cfm?prodID=1901>)

Dual built in mics that pick up our whole group really well. Helpful for recording rehearsals to pinpoint areas that need work. This device is clear enough to hear each instrument so you can determine which one needs to be corrected. I put in a 2 GB SD card and it will record in MP3 for 34 hours. It takes 2 AA batteries. It will also do higher quality WAV files as well. I would recommend it to other harpers for practices at home and with other musicians. (Anita Hales - <http://www.myspace.com/paddysleatherbreeches>)

I would second Deb's recommendation (about Zoom Digital Recorders). The sound quality is very good. I believe that the SD card that is provided with the Zoom is not very adequate but this is a minor detail. I have the Zoom H-4. I just finished recording an old time fiddle tunes repertoire CD using the Zoom. I used it to record WAV files and then used Audacity to do very simple editing. I am not a techie and it was quite easy. (Ken Kolodner - <http://www.kenkolodner.com/>)

Another Comparison of Zoom H2 versus Zoom H4

Both Zoom H4 and H2 are good little systems. One review stated that the xy capsules of the H4 compare very favourably to those of the Rode NT4 stereo mic, which is a much more expensive microphone, and doesn't give you any of the recording capacity of the H4. Here are some things to keep in mind:

1. If you are intending to multi-track, ie. accompany your initial recording with vocals or another instrument, you'll want the H4 not the H2, because the H2 doesn't offer multi-tracking capacity.
2. The H4 will also let you plug in other sound sources, so if you wanted to lay a track from a vocal mic, or an electric guitar, you can plug straight in.
3. The H2 lets you record in XYZ configuration, which would give you all the data you'd need to produce surround sound 5:1 recording, which is rapidly becoming desirable for commercial production.

4. The H2 also lets you stick a single microphone right in the middle of a jam band and get a good audio picture of every instrument with minimal fuss. That is deeply cool. The H4 is a little trickier because it picks up sound best within 140 degrees or so, not 360.

5. If you are planning to produce a CD with your small recorder, don't record onto its internal memory. Use it as a recording interface and go straight into your computer instead. Why? Well, in field tests, both units have been found to have slight inconsistencies in their time-keeping. Time stretches or contracts by as much as a second over the course of a 1 minute recording. If you aren't multitracking this isn't such a big deal, but if you are it can potentially drive you utterly mad later on down the line. However, the H4 actually comes with a copy of Cubase, and either unit will work just fine as a plug and play interface with your computer for use with any one of the major software recording systems. (Timothy Habinski -

<http://www.timothyharps.ca/>)

RECORDING DIRECTLY TO A COMPUTER

Tascam US-122L USB 2.0 Audio/Midi Interface (<http://www.zzounds.com/item--TASUS122L>)

Used with Sony Creative Sound Forge software to prepare harp sound bites for Afghan Press Web page. (John Gill - <http://www.folkharp.com/>)

MICROPHONES

Samson C01U Studio Condenser USB Microphone (<http://www.zzounds.com/item--SAMC01U>)

Get a USB mic. Samson makes a nice one. You plug it into the USB port of your computer and bypass the usually lousy inputs on most laptops. Works fine with all software. In Sound Forge, you must select it in your .wav preferences as your input device. (Mike Nielsen - <http://www.weddingharper.com/>)

More information on this microphone.

(<http://www.samsontech.com/products/productpage.cfm?prodID=1810>)

Shure SM57 Microphone (<http://www.zzounds.com/item--SHUSM57LC>)

Good for both recording and live sound (amplification). (Stephen Vardy – husband of <http://www.alisonvaridy.com/>)

The problem with the SM57 is that you need to get up close for a good vocal sound. They are great for high sound levels and reject most background sound and are well suited to rock music. The problem with this mic for harp vocals is that when they are in a good placement for the vocal it is in the way for playing the harp. (Fred Gosbee - <http://www.castlebay.net/>)

The SM57 is still the standard of the industry for instrument sound, especially for live performance where its ruggedness and reliability are valued. (Dave Tharp - <http://profile.myspace.com/index.cfm?fuseaction=user.viewprofile&friendID=73981390>)

Shure SM81 Microphone (<http://www.zzounds.com/item--SHUSM81LC>)

Best overall performance is had from electret bias condenser mikes though, like the SM81. Condenser mikes require a power supply, either phantom power from the amplifier system, or a battery. (Dave Tharp - <http://www.myspace.com/celticharper>)

Shure SM94 Microphone

(http://www.shure.com/ProAudio/Products/WiredMicrophones/us_pro_SM94-LC_content)

SM94's are self-powered with an AA battery. I use an SM94 low in front on the right side of the harp, pointed at the soundboard, and another low on the left side rear pointed at the body/sound holes. I have home recordings on <http://www.myspace.com/celticharper>, Triplet Celtic II, Roland Boss Micro BR recorder, two Shure SM94's. Harps demand good condenser microphones. No dynamic will do them justice. (Dave Tharp -

<http://www.myspace.com/celticharper>)

Audio Technica ATM10a Artist Series Fixed-Charge Condenser Microphone

(<http://www.zzounds.com/item--AUTATM10A>)

Alternately look at this as a recording mic only but you will need a nice sounding room with lots of curtains and carpet. (Stephen Vardy – husband of <http://www.alisonvardy.com/>)

Find the sweet spot on the soundboard and the place the mic about 6 inches out in front of the soundboard into the room. Move farther out for more "room" sound; move farther in for more harp sound; move up the harp sound board for more treble; move down the harp sound board for more bass. (Stephen Vardy – husband of <http://www.alisonvardy.com/>)

More information on mics simplified:

<http://www.alisonvardy.com/harp-info/harp-amplification-microphones.htm>

SOFTWARE

Audacity (<http://audacity.sourceforge.net/>)

It's a free sound editing program available for both Mac and PC. After you do your editing, you can save the file as an MP3 or WAV file (with the proper plug-in for MP3). Then you can burn it to a CD with any burn software like Windows Media Player or iTunes. The only thing with Audacity is that its native file format is rather large. So I make sure my files are saved as MP3 and then delete the Audacity files to save room on the hard drive. Audacity makes a file folder with data files and a separate execute file. Both will need to be deleted to save space. If you ever want to re-edit, you can always load up your saved MP3. (Anita Hales - <http://www.myspace.com/paddysleatherbreeches>)

Garage Band (<http://www.apple.com/ilife/garageband/>)

The best way to record music on a Mac.

Sound Forge Audio Studio 9 (<http://www.sonycreativesoftware.com/audiostudio>)

Used with **Tascam US-122L USB 2.0 Audio/Midi Interface** (<http://www.zzounds.com/item--TASUS122L>) to prepare sound bites for Afghan Press Web page. (John Gill - <http://www.folkharp.com/>)

Polderbits Sound Recorder and Editor (<http://www.polderbits.com/>)

This is the software I use to transfer recordings from my mini disc recorder to my computer. I like it because it allows me to easily edit my recordings. (Alice Freeman)

Nero (<http://www.nero.com/enu/products.html>)

I convert MP3s to redbook audio CD format with Nero. (Stephen Vardy – husband of <http://www.alisonvardy.com/>)

COMMERCIAL CDS

DiscMakers (www.discmakers.com)

I have made six CDs so far. I have used Discmakers here in New Jersey. They are BY FAR the BEST company I know of. The reps are very intelligent and bend over backward for independent artists. They also handle very big name accounts. Their product is absolutely top notch. Good sound quality, reliable service, good prices, etc. I have re-run two of my albums several times and they have always given me great products. They also do CD booklet designs and their artwork is also top notch. I work with Jared Gallagher who is super-efficient, knowledgeable and professional. I highly recommend them. (Joanna Mell - <http://www.joannamell.com/>)

Unless things have changed in the last few years, I would characterize DiskMakers as less independent small scale artist friendly than Oasis. Also, at the time my first band chose Oasis, they were cheaper than DiskMakers. (Mike Nielsen - <http://www.weddingharper.com/>)

I've used DiscMakers for both of my CD's...I do believe I will try Oasis out for my 3rd one though. The first CD Disc Makers did, everything was fantastic and better than I had expected. On the 2nd CD I figured I would get the same treatment and actually have things go even easier than before since this time around I knew what I was doing. Not so. I had so many miscommunication errors and other issues that I threw up my hands in irritation. There wasn't any one big issue with them, just a whole load of small ones that added up. My product specialist was fabulous for my 1st CD, not so great for the 2nd...seemed unexperienced or something. A friend and her quartet had CD's released the same years as myself (also used DiscMakers) and had the exact same experience, first was great, 2nd borderline nightmare with the miscommunication and overlooked details. The quality of DiscMakers CDs are good though....I don't argue that! (Nina Lee's Music Studio – <http://www.ninasmusic.com>)

I've only had experience with Disc Makers in making my CD's, but I have only had good experiences with them. My sound engineer was used to working with them, so I started out with them and never had a reason to want to change. (Carol Wood - <http://www.carol.woodpage.com/>)

Oasis Disc Manufacturing (www.oasiscd.com)

We have found Oasis to be an exceptional CD reproduction company. They provide all sorts of extras (including promo material, CD racks, a UPC symbol, etc.) and give excellent customer service...even BEFORE you send them a deposit. (Denise Grupp-Verbon - <http://www.queenofharps.com/viewpoint.htm>)

I'm currently working on a third recording and I wouldn't consider using anyone else for duplication packaging and promotion tools. (Susan Sherlock - <http://www.susansherlock.com/susansherlock.com/Home.html>)

I found the people at OASIS just so much more pleasant to deal with, the price was better and the delivery so far a head of schedule that I hadn't made room for the many boxes. (Ellen Tepper - <http://www.ellenteppe.com/>)

I've worked with Oasis, and they're great. We did our own art, and despite their disclaimers that the colors on the disk might be a little off because of the process they were using, they were perfect. Whenever I called or emailed, they called me back or emailed within an hour or so. They were very helpful and friendly all the way. An added bonus is that when you have them press your disk, you get a free coupon to sign the CD up on CD Baby. I know that when you're paying a load of dough for the production, \$35 doesn't seem like a lot, but I think that it's just another way that shows that they want you to succeed. I recommend them highly. (Christopher A. LaFond - <http://www.celticharper.net/>)

I've worked with Oasis as well and think they are utterly fabulous. (They used to use an over-the-top quote in their marketing materials from me when I rhapsodized about how they should all run for president or some such silliness.) Really competent, really bright, many of them (including founder Micah) are musicians themselves. They saved my patootie w/a release party and production scheduling glitch, and got CD's sooner to me than they'd originally promised. No hassles, no fretting, everyone working extra hard to make sure that it all came together and charming the entire time. (Leigh: "Panic! Augh! Gargle!" Oasis Customer Service Rep: "No problem! We can make this work!") Their sampler CD got my first recording into the top 40 folk charts many moons ago. As Christopher mentioned with the CD Baby coupon, they make all sorts of extra efforts to help you get your music out there. To my knowledge, they were also the first independent artist duping company to think about environmentally friendly packaging, if that matters to you. They rock! (Leigh Melander - <http://www.imaginalinstitute.com/aboutus.htm>)

I simply have to add my 2 cents to this thread -- I used DiscMakers for five of my CDs and will *NEVER* use them again. (Rather detailed rant follows...)

My experience was much like others have described already: the first project I sent them was splendid, done right, on time, and at a much better price than my first CD (for which I used an out-of-state independent manufacturer and local printer, which were both recommended by the sound engineer for that project).

After that, my relationship with DiscMakers was like any other abuse cycle: #2 with them was a disaster (including a batch of `_completely_blank_discs_`, which I unknowingly shipped to customers and media contacts across the US and Europe); nearly 15% of the shipment was broken in transit from incompetent packing at the factory; and the accompanying poster, which was part of the job and intended for the album release and promotion, finally arrived nearly five months late.

#3 went quite well, as DiscMakers was trying very hard to make up for the previous project.

#4 was also reasonable, though DiscMakers' graphics department never did seem to be able to follow my very specific spec sheet, and the project was delayed for nearly two weeks because I declined to go to print with their errors (wrong fonts, wrong sizes, misspellings, etc).

#5 was again a disaster, and that was the last straw for me. I'd given them another shot because they had opened an office here in town (Seattle), and I thought many of our communication and design snafus could be avoided by face-to-face meetings (rather than by phone and email). The short version is, I was quite wrong. DiscMakers' graphics department again paid remarkably little attention to detail... if, for one example, you could call it a detail that on the first set of proofs they'd rotated the cover painting 90 degrees (I guess it didn't occur to them that the deer in the picture should be hooves-down).

For my next three CDs, I worked with a local independent company which was really a brokerage office (they outsourced manufacturing for the discs, as well as outsourcing most of the graphic design, prepress, and print work). I was reasonably satisfied with the first project with them, and increasingly disappointed with the second and the third... I was unable to talk directly with the designer working on my projects, each round of proofs had new typos in the text, each project was further behind schedule than the one before, and the packaging was increasingly inconsistent.

For my 2007 CD release I shopped around quite a lot, and decided to go with Oasis. I was quite simply astonished at their level of responsiveness, customer service, and very high quality: not only was everything on time and on budget, but everything was very nearly exactly what I wanted. I'm about to send Oasis my new CD project this week (April 2008) ("Provenance" -- all original music for the 36-string lever harp), and am fully expecting to have an equally positive experience as last year. Caveat emptor. (Harper Tasche - www.HarpCrossing.com)

I had my CD done by Oasis and I also found them to be wonderful in terms of service and responsiveness. However, I had a similar experience to Harper's when I started hearing back from people who had bought the CD that their copies skipped. The ones I had opened originally had all been fine but then I started sampling a larger number and found that about a third of those I opened had a flaw in the same spot on each of the "bad discs". I had to retrieve a number of CDs as a result but others which had gone out were fine (or the buyers just didn't return them, which still plagues me when I think about it).

That being said, Oasis couldn't have been nicer about all of this. They were terribly upset, as they told me they had only had one other experience like this and they couldn't do enough to make up for the problem. They asked me to send back the remainder of the shipment and any flawed ones that had been returned or retrieved from stores etc. By that point I had opened and tested about three hundred and fifty copies as I was just getting ready to be featured on public radio and play at the folk festival here etc. and I wanted to be sure I had enough good copies to sell. I had set aside good ones till I had enough and then had taken them to someone locally to be resealed. Oasis ran a whole new set of 1000 CDs, put those new ones in all the original digipak covers I had returned to them, and resealed them. Then they sent the remainder of the second set (several hundred) back to me in paper sleeves. So I not only had the remaining complete CDs in perfect condition to replace the flawed ones but also had several hundred copies in paper sleeves to use for demos. I suppose that sounds pretty confusing but the bottom line is that they went to considerable expense and rushed the order to make up for the original problem.

For first time CDs they also have a number of supportive services, such as taking care of getting a skew number for you and setting you up with CDBaby etc. They also put one of your

cuts on a multi-artist CD which they release to radio stations around the country. I was really impressed with the finished product (eventually) and the fact that they have a number of options that are more environmentally friendly than the old jewel case route. (Nancy Davis - <http://home.comcast.net/~NancyDavis-harpist/>)

QCA (<http://www.go-qca.com/>)

We done about five CDs through QCA and another 5 that we produced and I did the artwork on. They have guide to CD manufacturing at <http://www.go-qca.com/step/stepbystep.swf>. Templates for artwork (jewel case booklet, CD printing and tray card, etc.) are also on their website. Preferred software (perhaps required) are the standard graphics tools: Adobe Photoshop and Adobe Illustrator. There is a price break if you do your own graphic design. There is also a cut rate CD plan where you forgo proofs and submit final art as TIF files.

We do the mastering at Group Effort Sound Studios <http://www.groupeffort.com/>. They have done a great many acoustic music projects and have software that I can't afford, including the ability to tweak pitch and timing if a few notes turn out to be just a hair off on your otherwise best take. We also record there. They have better microphones and soundproofing than I could hope to have in my house without major renovation. (Maynard Johnson - Kitchen Musician Website <http://www.kitchenmusician.net/> and Jink and Diddle School of Scottish Fiddling <http://www.kitchenmusician.net/jink/jink.html>)

Northwest Discs (<http://www.nwdiscs.com/>)

Don't know about Oasis. I was with DiskMakers a long time ago and desired more personalized service and better prices. For many years, I've been with Northwest Discs and have been thrilled with the service. I've ordered many thousands of CDs with them...Check them out before making your decision! Run by Andrew Ratshin, who also is a well known performer and recording artist himself, as well as owner of Yellowtail Records, he is also a sensational graphics artist who works fast, cheerfully and you can't beat his prices. (David Michael - <http://www.davidmichaelharp.com/>)

HOME-MADE CDS

Epson Stylus® Photo Series Ink Jet Printers (<http://tinyurl.com/4axogr>)

I use CDs that can be printed on. I think Epson is the only company that produces home printers that will do it. (Chuck Boody (<http://dpnews.com/issues/Summer08/Summer08.html>))

CD DISTRIBUTION

CD Baby (<http://cdbaby.net/>)

Sales and distribution for music.