BUILDING YOUR

OWN SAMPLE LIBRARY

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INSIDER TIPS FROM THREE INDUSTRY PROFESSIONALS WHO HAVE MADE A MARK IN THE SAMPLE LIBRARY MARKET

Your sound. The very sounds of your own instruments played by your own hands with your own strokes. The sound you create from your instruments is one of the most important things that define who you are musically. This is one of the aspects missing from electronic percussion. Even though a high-end kit comes with more than 1,000 fantastic sounds, they're not your sounds. But you can play your own sounds from your electronic kit by creating your own sample library.

By creating a library of sounds from your own instruments, you can easily reinforce your live sound without having to rely on microphones by triggering samples from your kit. You can use all the amazing tools now available in home-based studios, without having to build a drum booth. Once you've finished your library, you're sure to find dozens of other ways to creatively use these distinctive sounds.

If your library is really good, you might even decide to share your samples with others, either as freeware or shareware over the net or as a commercial product that would be used by other musicians around the world. In fact, this is the exact genesis of some well-known drum libraries. Take it from Andreas Sundgren of Toontrack, who explains that their product line "DFH was originally planned as a library for our own use in various productions. When we realized that it was a potential product we started selling it from our website, and soon after we got our first distribution through EastWest Communications."

It really can be done. We spoke with three folks who have produced high-quality sample libraries. In addition to Sundgren, Vincent Beijer, the manager of ProjectSam, which produces the True Strike 1 percussion library; and Larry Seyer, creator of the Larry Seyer Acoustic Drums library, share some ideas for creating your own sample library.

EARLY DECISIONS

At the very least, this is going to be a two-person project. After all, it's logistically tough to sample yourself while playing the roles of musical talent and recording studio engineer at once. Even if you've got good engineering chops, you may want to give some serious thought to hiring someone you can trust. Seyer suggests bringing in an experienced engineer. "It's not just about buying expensive microphones, pre-amps, and a great recording system," he says. "It's about knowing which microphone and microphone pre-amp sounds best for a particular instrument. A good engineer knows a thousand other little things, like where to place the microphones, and the fact that there can be phasing issues that detract from the sound of the instrument."

But it's not just who you know. It's also where you are. So to get the best quality, you should record in a professional studio. If finances are limited, you can record in any silent (or at least very quiet) environment where the pure sound of your instruments will be captured on the recording. The True Strike team went a different direction altogether. "We are all schooled engineers here and do most engineering ourselves," Beijer says. "We prefer to work with a small crew. We use the ancient trick of saving money for renting location space." Yet another option is to share the potential profits from the project. "We've been working with our own money from the start," Sundgren said, "and through royalty agreements with our musicians and producers."

RECORDING DECISIONS

You've gathered your project team and determined the recording space. You still have to make a few more important decisions. Depending on the available recording formats, you need to decide on a sampling rate and resolution. Higher rates and resolutions offer cleaner recordings, but require much more storage space and put pressure on the processors.

Seyer suggests that you record at a very high resolution. "I would recommend that people never record their samples at 16-bit. Always record them at least at 24-bit and preferably at 32-bit float. Choosing rates of 44.1k, 48k, 88.2k, or even 96k for sampling is not nearly as critical as making your bit depth greater than 16-bit."

Many professional sample libraries offer both mono and stereo versions of the exact same sounds. This makes sense for some end users when memory is at a premium, or when instruments are set on a virtual sound stage with stereo placement determined by a knob or slider. But it's a good idea to get it down in stereo in the recording session. You can always turn it into mono during the editing stage.

As musicians, we are always tempted to tweak our recorded sounds to perfection. But keep your hands away from those outboard processors. "As music producers we are altogether into unprocessed sounds since we want to be able to decide for ourselves what the final piece of music is going to sound like," Sundgren says. "A sample product like ours shouldn't limit a producer's or player's choice of what to do with his or her music. We work with both ambient and close mikes. We also work with both stereo and mono mikes."

Seyer concurs, "We always record our samples dry. This is because we develop for GigaStudio, which comes with GigaPulse. GigaPulse is a convolution room modeler that gives the user the ability to artificially place instruments into modeled 'rooms.' Not only can you choose which rooms to put the instruments into, but you can choose the position in the rooms and the microphone colorization for that position in the room.

"I'm a firm believer and I feel very strongly about this. I do not do any additional processing on the samples once they are recorded – except for maybe normalizing them to zero level. We did absolutely no EQ, compression, or other manipulation on our samples. And this is one of the reasons that this library sounds as big as it does." Seyer's reason has more to do with technology than any specific purist attitude. "Every time you process a sound inside of a computer, you are introducing rounding errors that take away from the original recorded sound. These errors accumulate and are absolutely detrimental to the overall sound quality of the finished product."

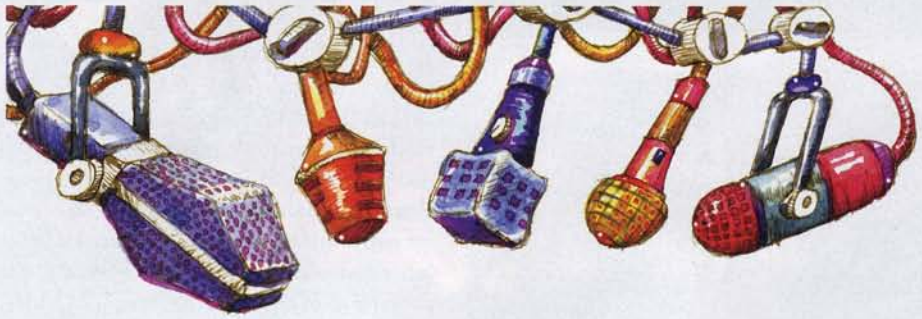
YOUR INSTRUMENTS

Since the entire library project is dedicated to recording your own instruments, you'll want to make sure that they are in tip-top condition. This sampling session might be a good excuse to go over your drums and stands to remove any rattles, and your pedals to remove squeaks. If your gear makes any extraneous sounds,

you'll hear them in the playback. This is also a good time to replace your heads and make sure that your drums are in tune. "You must have an instrument that is in top-notch condition," Seyer stresses. "If it is not, then don't even bother wasting your time. Everyone - including you - will start hearing the weaknesses of the instrument's condition very quickly."

Hey, as long as you're in the studio and all the mikes are set up, why not take advantage of the opportunity to go beyond your basic kit and sample other instruments that you may own. Pull out those shakers, cowbells, and djembes and start sampling. "When it comes to ideas for instruments, we have always worked from the vantage point of what we as music producers and creators feel is needed," Sundgren says. "Our whole product line and development stems from that basic rule."

Seyer also suggests that you arrange to have an instrument available for a significant period of time. "Many times an instrument needs to be re-sampled because of recording problems, noises, computer glitches, or other factors."



> "Failing computers and crashing hard drives are part of the project."
>
> *–Vincent Beijer*

THE SESSION

Once you put some ideas together, it's time to do your homework. You're paying for time, so don't waste it. Beijer recommends taking an organized approach. "Mostly we have a lot of sample activities compressed into way too short of a time schedule," he says. "This leaves us with a fixed program. We prepare scores and write down what the musician should play and in how many variations or alternatives. We categorize everything in postproduction, which is a lot of work. Preparing scores and using professional musicians really works if you are on a tight schedule."

While you might be more interested in collecting single notes for your own use in live performance, looping libraries are extremely popular for musicians preparing music for TV, film, or multimedia presentations. While you're in the studio and making recordings, go ahead and sample some grooves, fills, and patterns that can be used for loops. If you work with ReCycle, you can turn your loop recordings into REX files, which you can import into programs like Reason, Acid, Stylus RMX, or the growing number of sequencers that can import REX files. Then you can use special features and commands that those programs offer.

Vincent suggests recording loops and single shots: "First sample every piece of the kit separately and then do the loop thing for ultimate control. Clever loop slicing gives another distinctive sound." However, not all of our panelists agree. "Audio loops are fine if you don't care about the sonic degradation that occurs when you time stretch or compress the audio," Seyer says. "A much better way to create loops is to provide individual drum hits – one-shots – for everything. Then create custom MIDI loops so that the end user can drag and drop those MIDI loops into their sequencer for essentially the same thing."

THE EDITING PROCESS

Editing is a two-stage process. You'll need to edit the samples themselves, and then map them to your audio engine. This is the time to learn as much as you can about getting new samples into your machine so that the process

gives you a kit with a high playability factor.

Good editing software is a must. And the art of editing is a skill that gets better with practice. "We do all editing ourselves and work with a lot of programs," Beijer explains. "We mostly batch normalize every sample up to -1 db and then correct excessive volume settings in the programming. Sometimes we normalize a whole articulation file, though." Seyer explains that his editing is "done totally in 32-bit floating point using Samplitude. All microphones for a particular zone, velocity, and strike are grouped together and normalized to zero."

Even if you use only one type of audio engine, you may think about porting your samples and your programs over to another machine. For example, if you work in Kontakt, you may want to consider duplicating your library for Mach 5 or Gigastudio. "Since we are now working out of software, we are more concerned with getting that to work with the key formats of the major sequencers, AU, VST, and RTAS," Sundgren says. "The original DFH was a multi-format product. But in the future we will likely put our efforts – when it comes to products that are purely sound libraries – into Refills for Reason and the Garageband format."

We wondered why the Larry Seyer Acoustic Drums library is only available for the GigaStudio. Seyer explains, "There are valid reasons for developing for Kontakt, Halion, EXS-24, Vsampler, and Mach 5. But because we chose to go in the direction of letting the individual choose their rooms, position, and microphones, there is really only one platform that offers that encapsulated into the instrument."

COMMERCIAL ADVICE

If you do plan to "go commercial," be prepared to take your time and create the very best product you can. Beijer took about six months to complete his library, since he works with a small crew, barring third parties such as DVD pressing plants and graphic designers. "This project took five years to complete," Seyer says of his product. "Granted, a couple of years we were waiting for the technology to catch up with our vision. But, there are several solid years of development for this library. And, realize that stuff is going to go wrong from time to time."

Like any complicated process, most sample library producers have their fair share of horror stories. Beijer told us of "having your expensive players set up, mikes prepared, and everything ready to go and then receiving radio sig-

nals on your preamps – somehow all of a sudden. Those kind of things are really annoying. Of course, traffic, other people in the building, and failing computers and crashing hard drives are part of the project as well."

Pricing your product can make the difference between success and failure. "There is an existing good standard way of making up a retail price that is well established for products in different categories," Sundgren says. "Our virtual instrument DFH-Superior is priced at $299 and is at the lower end of the virtual instrument segment considering the size and scope of the product. We learned from Doug Rogers at EastWest, the importance of packaging your product right. Advice that has, as we move forward, become increasingly valuable. What your product looks like in the store is of major importance and something that we didn't get until we repackaged the first DFH-library."

Beijer believes that "pricing is always difficult. As ProjectSAM has matured, costs for making libraries have gone up considerably. We demand much more from our products to call it a 'SAM' product. We want to offer products at very affordable pricing. Most of the time it's plain estimation of costs versus income."

Seyer adds, "Retail price is determined by how much the market will pay for it. Some people have told me that I am not charging enough for my products because they are aimed at the high-end user, and those folks can afford to pay more. Others have said that my library is simply too much money and they would like to see it in the sub-$200 range. We came up with our current price after looking at what the competition was charging for their products, then settled on our current price as a compromise."

FINAL THOUGHTS

Beijer offers some great advice for the budding sample library producer. "If you plan to record your library, do not think it's too difficult," he suggests. "Don't see the problems, but the opportunities. You can get convincing results by just going out there and start sampling. Of course, a lot of things help, like decent microphones, decent preamps, high bit-rate audio cards, good players, and great instruments. But if you have a friend who has an instrument that you would like to sample, throw in a bottle of good wine and invite him over to your place. Set up a few mikes and get going. Building your own sample library is great fun and it's always cool having sounds others don't have."