

MASTERING ENGINEERS DISCUSS

Mixing For Better Masters

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What things can a musician do in the final mix that will get him the best master?

An analog desk and a half inch tape recorder will give you the best sound, to me. It is my favorite sound. Other than that, I'd be reluctant to send something on a DAT because many of the DATs these days are long in the tooth. A lot of people working with DAT machines are not professionals, not working with them every day, and, not keeping them clean. They might be using old tapes. We've had a lot of problems with DATs these days so I try to steer people away from that.

There is a wonderful box made by Alesis called the Masterlink. When someone wants to make a CD, Red Book audio disks, or have a hard drive to record to so they don't tie up their computer, this is a wonderful box to record onto. It's a stand-alone box that has a hard drive in it. There is a CPU in it and a CD writer. The beauty of it is you can record the sound files in resolutions up to 96KHz, 24-Bit work lengths. It sounds good and has very good A to D converters, and, D to A converters and it sells for about \$900 on the street. It's an amazing box. If you're giving me a CD I prefer to get AIFF files, 24-Bit if possible. If they have it at a higher sampling rate that would be fine too. We prefer 88.2KHz because it's an easier algorithm to get down to 44.1 than going from 96 KHz to 44.1 when we do sample rate conversion.

If someone had a Pro Tools type rig would it be better to bring you the data files?

We can handle Sound Designer files. I'm not sure if the Alesis Masterlink does. However, with Pro Tools, what I actually do is ask people to make a copy with AIFF, non-interleaved files if they can because there is a certain danger in having ev-



everything on a hard drive. The reason we ask for non-interleaved files is this way, if you're in the mastering realm and you need to just slice off a bit of a take on just one side of the audio, dual mono will let you do that as opposed to having an interleaved file that won't allow you access. An interleaved file is one stereo file that cannot be broken up into two mono files.

Conceptually, one of the problems that we have is dealing with volume. Having something re-

ally compressed is a very, very poor idea. Because, if we're going to do anything with it later on there is no headroom. Everything does not have to be at Digital 0. When you're mixing, give yourself 3 Db of headroom. You never know. There are average levels and there are peak levels and the meters on many midline DAWs are

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showing you peak levels.

Basically what happened was the radio stations wanted everything to play even so they built all these really proprietary compressors so that every CD, regardless of its level, would eventually sound the same on the radio. For some reason there are volume wars now. Everything has to be louder, if not as loud, as the previous thing. But you don't have to worry about loudness as the radio stations themselves are handling that at their level. All mastering engineers are freaking out about this problem. But we have to do it because this is what the clients want. If we don't do it they won't come back.

Is it a good idea to bring a mastering engineer multiple mixes?

It's really a good practice if you have the luxury to do that, especially in a home studio. I have techniques to be able to raise or lower a vocal, 1 1/2 - 2 Db. Sometimes, depending on how it's mixed there are compromises. Sometimes there aren't. But, if I have three mixes, say, it can be an absolute gold mine. The more I have the more I can work with. Vocals and sometimes brass ensembles are best suited for multiple mixes. Those are things people sometimes have trouble with in their monitoring environment.

If you're bringing material to be mastered in on a CD, what is the best blank CD you can use?

I recommend Taiyo Uden 74 minute blanks. They're not really that readily available but professional suppliers do have them. They're not your 30 Cent disk variety but they're not more than \$1.00 - \$1.50 each.

When you have finished mastering, what is the best format for your client to send to the duplication plant?

We try to dissuade clients from having us give them CD masters to send to a duplication facility. We try to get them to send a DDP which is on Exabyte, or, a 1630. Both are verified media. DDP is an acronym which means Data Description Protocol and it's the professional master for CD duplication. It's an exabyte tape which is error corrected so it's a reliable transfer format. It's your best guarantee that your master will be transferred with no problems. It is the standard, required format for Warner Brothers. That used to be the 1630 but they're getting a little long in the tooth. The CD is being avoided because of Bler errors.

It used to be a time when you'd send out a master to a plant and they'd listen to it, they might come back and say, "We have a few Bler errors, can you cut us a new master?" That was great but those days are long gone. CD plants are now so competitive that they're not rejecting anything.

They just want to get the job done. That's making me and a lot of other mastering engineers nervous because now, any errors on that CD will just be cloned.

What is a Bler Error?

Basically it's a pit read error. It's a blurring of the stereo image. It could be a distortion element, an edgy element; just poor quality. There's more technical information on it on my website: <http://www.bangzoomonline.com>.

What's the biggest mistake you've seen people make in bringing material to you?

The biggest mistake is they're bring one DAT, and, that will be the clone instead of the master. And, we'll find there's a drop out on the clone. That eats up a lot of time, and, depending on the drop out, if I can't find the audio anywhere else I won't be able to fix it. Obviously, if they have an alternate mix we can extrapolate the audio that way. So if they do bring a DAT they should bring both the backup and the master.

What other advice would you have for someone bringing in a DAT?

And, if you are bringing a DAT, make sure you print one minute of a -18 Dbs tone, a 1 KHz tone, on the tape. Make sure you never lose your absolute time. Always record after a minute of audio. That's why I ask people to put the tone on because usually there's glue that contacts the leader to the tape and that sometimes provides drop outs. Use new tape at all costs, and, clean the DAT heads regularly. If they do that then DAT is a pretty OK format. If you're getting a DAT machine I think the Sony and Panasonic DAT machines are very good. There's a Tascam machine that's actually a 24-Bit machine. It's a good sounding machine but it's almost \$2000. If I were thinking about getting that machine I'd go for the Alesis Masterlink instead.

Is there anything else you'd like to add?

There's so much hype in this business right now. You're seeing these plug ins with names like these beautiful analog processors, like an LA-2A for example. People are thinking that this is just like owning one of these machines. No. If you've ever used an LA-2A you'd know it's not the same at all. There's such hype that it's unbelievable. So, I'd recommend, don't buy in to all the hype. Some manufacturers are better than others but there are still a lot of people doing puffware.