

Using the ASR-10 as a Digital Multitrack Recorder — (Part 1)

Clark Salisbury



Dozens of intriguing applications are made possible by the ASR-10's ability to sample and resample while sounds are being played live on the keyboard or by the sequencer. One of my favorite applications turns the ASR-10 into a digital multitrack recorder. The ASR-10's incredibly flexible sampling options makes it possible to build up some pretty cool backing tracks with nothing more than an ASR-10, a sound source such as a guitar or microphone, and a pair of headphones. In this article, I'd like to detail some of the steps involved in creating sequenced/sampled background tracks using the ASR-10 as the recorder. We'll take a look at a couple of examples: adding live guitar tracks to a sequence, and building up background vocals. We'll also touch on using the ASR-10's effects processing and mixing capabilities to achieve the best results. For these applications you'll need a microphone and an electric guitar (or some other instrument that you might want to record into the ASR-10).

We'll be using a combination of sequenced ASR-10 sounds along with "live" instrument and vocal parts recorded directly into the ASR-10. Let's start by developing the basic groove that we'll be working with.

Any short groove (two to four measures) will do. If you don't already have something that you'd like to work with, you might try using the tutorial sequence and some of the tutorial sounds from your OS disk. Load the sound JM DRUMS into Instrument 1, the sound DEMO PERCS into Instrument 2, and the sound MOOG POP 1 into Instrument 3. Now load the sequence TUTORIAL SEQ (not the song TUTORIAL SONG). This will provide you with a funky four-measure groove upon which to experiment (once everything is loaded as specified, press [Play] to hear what we'll be working with).

Plug your guitar into one of the two audio ins on the ASR-10. It doesn't really matter which one since electric guitar has a mono output, but for the purposes of this article, I'll assume you're using the B/Right input.

Press the Audio Track B button twice (once to select it, and the second time to enable source monitoring; both its yellow and red LEDs should be lit). Turn up the volume on your guitar and adjust the input level control on the back of the ASR-10 so that you are getting an appropriate level (the green Signal Input Level LED should light when you play something, with the red Peak LED flickering on just the loudest sounds).

When you listen to the guitar through the ASR-10, now, you'll note that you are hearing it primarily on the right side of your monitoring system (although the processing you have set up in the ASR-10 may affect the left/right balance to a greater or lesser extent). This is because Audio Track B is set up to route its output to the right side of

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whatever bus is being used, facilitating stereo sampling and processing. I generally prefer monitoring tracks that I'm recording in the center of the stereo field, and since the recorded track can be placed anywhere in the stereo field later on, I'll edit the Audio Track output routing so that the signal will appear centered. To change the routing, then, press Edit, then the Track button. The ASR-10 display should be showing "ATRK-B MIX=60 PAN=+99." Select (underline) the PAN parameter, and press the Up and Down arrow buttons simultaneously to set it to its center value of +00 (you can also adjust the monitoring volume for the track by changing the MIX parameter. This allows you to listen to the track at whatever volume you find comfortable without changing the input volume for the track).

At this point we could begin sampling a guitar track, but one of the things that makes the ASR-10 so powerful an audio tool is the on-board effects processing. There are several algorithms available that can work well with guitar. If we use one of them to process the guitar while sampling, the processing becomes part of the sample, and we won't need to re-process the guitar later. This will leave the ASR-10 effects available to do other things when it comes time to mix our tracks.

Let's start with the premise that the sound we want is a clean rhythm guitar sound. Several effects can be helpful in creating such a sound, particularly the guitar amp effects, speaker simulators, and the EQ-Compressor algorithm (remember, we can add effects such as reverb and chorusing during the mixing process). Simply scrolling through the effects (press the FX Select • FX Bypass button and use the Up/Down arrow buttons) while playing the guitar can present a number of processing possibilities — you may want to listen to a few of these.

For clean rhythm guitar sounds, I often like to use the effect GUITAR AMP 3 (ROM-30) as a starting point, but I'll usually make several edits to optimize the effect for the guitar I'm using and the sound I'm after. For example, with GUITAR AMP 3 selected as the current effect, press Edit, then Effects, and use the right arrow button to scroll through the parameter listing. Continue scrolling until the display shows "PRE-EQ FC=7089 G=-25." Increasing the value of the "G" (gain) parameter will thicken the sound up a bit. Or scroll a bit more, and increase the value of the "EXPANSION RATIO" parameter, to get a more squashed, compressed sound (you may also want to decrease the value of the next parameter, "THRESHOLD," especially if you increase the expansion ratio by much). Experiment with any of the parameters you find in any of the effect algorithms; after all, if you go too far afield you can easily get back to the original effect by pressing the FX Select • FX Bypass button, and scrolling up until you reach the ROM version of the effect you started with.

We're just about ready to begin recording our first guitar track. Press the Play button, though, and you'll find that your sequence is playing back through the processing you've set up for the guitar. This may or may not be a problem, depending on the processing you're using (this doesn't affect the sample in any way, it may just make the sequence you are using sound a bit weird during the recording and overdubbing process). For now, you may want to assign the sequenced tracks to play back through another effect bus — one that won't color the sound. If you're using the GUITAR

AMP 3 effect, you can assign the sequenced tracks (tracks 1, 2, and 3) to play through bus 3, which is dry: press Edit, then Track, then scroll to the display showing "OUT=WAVESAMPLE." Select the track you wish to change by pressing its associated Instruments • Sequence Tracks button, and use the up/down arrow buttons to set this to "OUT=BUS3 DRY."

Now we should be ready to lay down our first track. Press the Sample button. You'll find yourself at the Input Select page. Set the REC SRC to INPUT+FX RIGHT (or LEFT, if you're using the A/Left Audio Track for your guitar input). Press Enter • Yes, and you'll be instructed to PICK SAMPLE INSTRUMENT. Do so by pressing any of the unused Instruments • Sequence Tracks buttons; for now, let's use track 4.

The ASR-10 will display its VU meter; play a few notes on the guitar to ascertain that your volume is within acceptable limits. Note that if the sampling threshold (indicated by the asterisk in the display) is set to anything above 0, sampling will not begin until you play something on the guitar. For now, leave the sampling threshold set to something just below the level of the quietest sounds you think you'll be playing; this will make it easier to place the guitar track correctly into the sequence later on.

When you're ready, press the sequencer Play button; the 4 measure sequence will begin playing. Once you feel comfortable with the groove, press Enter • Yes, (to initiate sampling), and play a 4 measure guitar part. When you've finished, hit the Cancel • No button to stop sampling. The ASR-10 will prompt you to "PLAY ROOT KEY OR ENTER." Let's assign this sample to the lowest "C" on the ASR-10 keyboard by playing that note.

If you are using the sequence "TUTORIAL SEQ" as the basis for recording, you'll find when you play the sequence now that your newly recorded guitar part is playing back the track that was originally recorded in the tutorial sequence. This is probably not what you had in mind, but can be remedied easily enough by pressing Command, then Track, scrolling to "ERASE/UNDEFINE TRACK," hitting the Enter • Yes button once to be sure that you are editing track 4), then once more.

Now you'll want to create a sequence track that plays the new guitar part. Make sure that track 4 is still selected, and record a track which consists of the note "C1" (the note that the guitar part is triggered by) held for the duration of the sequence (or at least for as long as the guitar part plays). And that's it — you've created a "live" guitar track to play along with the rest of your sequence.

If you want to re-record the guitar part, simply repeat the sampling process: press the Sample button, select the record source (the correct source should still be selected, unless you've changed it for some reason), hit Enter • Yes, and select Instrument • Track 4 again as the sample instrument. This time, however, the ASR-10 will display something like "UNNAMED LYR=1 WS=NEW." Use the up/down arrow buttons to change the value for WS (wavesample) from (NEW) to (1). This will cause your new guitar part to be recorded into the wavesample memory originally allocated for your original guitar part. This will erase the original guitar part, and free up that memory for the new part.

Once you've created a guitar part you want to keep, save it to disk. You can continue to add parts to build up your track by sampling new parts either into new Instrument locations, or into new wavesamples (WS) or layers (LYR) of the Instrument you've already created. Since the ASR-10 makes it pretty easy to control volume, panning, and processing for individual samples and layers in an Instrument, there really isn't any good reason not to record

all of your guitar tracks, say, into the same Instrument.

We'll continue this discussion next time with some pointers on combining samples to free up memory as well as some tips on signal routing and processing for when the time comes to mix your masterpiece. Until then, keep on trackin'... ■

Front Panel

RND (🎵🎵)

Hacker News

The summer months are always extra quiet...

TRANSONIQ-NET HELP WITH QUESTIONS

All of the individuals listed below are *volunteers!* Please take that into consideration when calling. If you get a recording and leave a message, let 'em know if it's okay to call back collect (this will greatly increase your chances of getting a return call).

All Ensoniq Gear – Ensoniq Customer Service. 9:30 am to noon, 1:15 pm to 6:30 pm EST Monday to Friday. 215-647-3930.

All Ensoniq Gear – Electric Factory (Ensoniq's Australia distributor). Business hours – Victoria. (03) 4805988.

Sampling – The International Samplers Cooperative, 310-455-2653 or via MusoBBS, 818-884-6799.

SD-1 Questions – Philip Magnotta, 401-467-4357, 4 pm – 12:30 EST.

VFX Sound Programming Questions – Dara Jones, Compuserve: 71055,1113 or Midi-net and Fido-net. The local BBS is the Nightfly in Dallas: 214-342-2286.

SD-1 Questions – John Cox, 609-888-5519, (NJ) 6 – 8 pm EST.

SQ-80 Questions – Robert Romano, 607-533-7878. Any ol' time.

Hard Drives & Drive Systems, Studios, & Computers – Rob Feiner, Cinetunes. 914-963-5818. 11 am – 3 pm EST. Compuserve: 71024,1255.

EPS, EPS-16 PLUS, & ASR-10 Questions – Garth Hjelte. Rubber Chicken Software. Pacific Time (WA). Call anytime. If message, 24-hour callback. (206) 821-5054.

ESQ-1 AND SQ-80 Questions – Tom McCaffrey. ESQUA. 215-830-0241, before 11 pm Eastern Time.

EPS/MIRAGE/ESQ/SQ-80 M.U.G. 24-Hour Hotline – 212-465-3430. Leave name, number, address. 24-hr Callback.

Sampling & Moving Samples – Jack Loesch, (908) 264-3512. Eastern Time (N.J.). Call after 6:00 pm.

MIDI Users – Eric Baragar, Canadian MIDI Users Group, (613) 392-6296 during business hours, Eastern Time (Toronto, ONT) or call MIDILINE BBS at (613) 966-6823 24 hours.

Mirage Sampling – Mark Wyar, (216) 323-1205. Eastern time zone (OH). Calls between 6 pm and 11 pm.

SQ-1, KS-32, & SD-1 Questions – Pat Finnigan, 317-462-8446. 8:00 am to 10:00 pm EST.

ESQ-1, MIDI & Computers – Joe Slater, (404) 925-7929. Eastern time zone.

HYPERSOINIQ NEW PRODUCTS

Latter Sound Productions introduces "*Nineties Type One-Man-Band Sounds*," the fifth volume of sounds for the VFX, VFXsd, and SD-1. Velocity triggers rhythms and dramatic timbre change and these sounds rocket your VFX into the year 2000. Big band, new age, experimental, rock, pop, jazz, R & B, and orchestral themes run through this collection. 60 sounds, 20 presets, 3 demo sequences. (Disks, \$40.) Latter also introduces *Hardwire 1* for SQ-1 owners. 160 sounds created by Mark Clifton of *Hacker* fame and extensively edited by Walter Cooper to give you the best value available. Organs, pianos, drum kits, percussion, bass, brass, woodwind, synth, keyboard, string, sound effects and more. These sounds will work on the entire SQ-1 line. (Disks, \$65.) For more information: Latter Sound Productions, 1341 Westheaven Ct., Tallahassee, FL 32310, phone: (904) 575-5561.

Eye & I Productions, the makers of all Voice Crystal products, announces that they are furiously planning support for the new Ensoniq TS-10 synthesizer. First in this line is the *VCITS10* Voice Crystal diskette. The *VCITS10* disk has over 60 new patches for TS-10 owners, each including patch-select functions and thorough controller & effects routing. The *VCITS10* is available now at local dealers for \$39.95. More new volumes are on the way. For further information: Eye & I Productions, 930 Jungfrau Ct., Milpitas, CA 95035. Phone: (408) 945-0139.

P. TIMMERMANS of Belgium announces the *PART* Sound Set for the ESQ-1 & SQ-80. *PART* contains two banks of 40 sounds each covering a large spectrum of classic orchestra, original pop, and exotic instruments and makes extensive use of the "hidden" waveforms and alternative tuning scales. The set also includes extensive documentation that not only goes into great detail about the patches but includes a complete overview of just about every tip or trick ever published for these instruments. The double sound set is available for only \$21. Shipping overseas (including the U.S.) is an additional \$9. For further information: P. TIMMERMANS, Steyenhoflaan 33, B-3130, Betekom (Belgium). Phone: 016/561060.

The TS-10 — An In-Depth Look

Brad Kaufman

Imagine a synthesizer with a staggering variety of CD-quality sounds which are easy to layer and customize during live performance. Now add a sample-playback keyboard which reads the huge EPS/ASR-10 sample library and gives you *immediate* access to 10 (or 20 with upgrade) of these sampled sounds in addition to the 300 sound programs resident in ROM/RAM memory. Throw in the effects-processing power of the DP/4, itself having earned rave reviews for Ensoniq. Now add a user-friendly, 24-track sequencer which requires no previous computer or sequencing experience to operate.

Call it the sonic dream machine.

Or the deluxe model Swiss army knife synthesizer and sampler workstation.

Or the strongest contender for Best Keyboard of the Year award.

It's like having three or four different synths in one. And with 32 notes of polyphony and the ability to layer six sounds in a program, the TS-10 will generate some of the richest sounds ever heard coming from just one keyboard. That all of these features are packed in an easy-to-use portable unit for under \$2500 gives new meaning to the word "neat-o."

Having arrived with much less fanfare than it deserves, this next-generation synth from Ensoniq takes the very best features from the SD/SQ/VFX — great sounds and user-friendly sequencers — and goes far beyond. There are 254 tasty 16-bit waves running the entire spectrum of acoustic instruments, acoustic and electric keyboards, basic and unusual synthesizer waves, drum kits of every imaginable variety and excellent choir/vocal sounds. There are also new and improved Transwaves as well as the mind-boggling Hyperwave, a wave-sequencing technique which is really a new synthesis engine unto itself. The Hyperwave wave-lists make beautiful, sweeping, constantly evolving sounds, and some of the hippest drum-bass rhythm loops you'll ever hear.

Before getting to the specifics, I must mention how impressed I am with the design of the TS-10. This will appeal to a diverse group of musicians: the gigging pro who wants top-notch electric pianos, "retro" synths and a lightweight B-3, not to mention the killer grand piano sound; the advanced home hobbyist or studio entrepreneur looking for a new source of studio-quality sound material; sound programmers in search of sonic flexibility and cutting-edge technology; and *anyone* in the market for a portable, sophisticated but easy-to-use sequencer.

Is it tough getting around on the TS-10? Amazingly, the user-interface remains easy and intuitive. In under two hours, I was able to put together a 9-track song from scratch on the first try without even opening the manual! For non-programming dudes and the computer illiterate (that's me and some of y'all) much of the toughest work has already been done for us with ready-to-play sounds and presets in huge quantities (300 of each) as well as fully-developed Hyperwave programs.

The Sounds — Wave Quality/Selection/Programming

All the right choices were made here. Aside from the sheer variety and stark realism, the waves are *quiet* with virtually no audible looping or annoying split points on multisampled sounds. For example, the B-3 waves have built-in key click and percussion and that high-frequency crosstalk just like the Real Thing. Rhodes pianos have warm, fat distortion when you lay into the keys.

Ensoniq can be proud of the sound programming on this unit. Instead of shipping a new unit with half-baked, poorly programmed patches, the sounds are finely done. Soulful saxophones, vibes with stereo tremolo and panning, pads, new-age sounds and more. Much, much more.

The keyboard sounds deserve special mention. Pianos and organs on older synthesizers have left plenty of room for improvement. But not anymore: The TS-10's collection of grand pianos tops anything in its price range, in part thanks to superb reverb and EQ effects. B-3, Rhodes, DX-7 and Wurliitzer pianos are very well done and will work well live and in recordings. Church organs and classic analog synths round out the group.

The Sequencer

The basic workings of the sequencer look very much like the SD-1 as best as I can tell from comparing specs. This laughably easy-to-use system was pretty much crash-proof unless I tried to leave the sequencer mode while a sequence was playing. Editing and "punch-in" (overdub) were just as simple as making the original tracks. Step-entry and loop-sequencing are supported. The EVENT LIST allows editing of every note with surgical precision.

On-board Effects

It is astounding for a synthesizer in this price range to have such a vast choice of sophisticated, professional effects (73!)

with over 600 factory-supplied variations. The effects are easy to program as well. Many different reverbs are combined with parametric EQ, delay, flanging and roto-speaker. SD-1, SQ and VFX users will be thrilled to know that the voltage-control filter (VCF) effect includes Resonance ("Q") and adds a whole new dimension to emulations of analog synthesis. There are effects which simulate the old vacuum-tube guitar amplifiers and speaker enclosures with warm distortion. There are superb guitar distortion effects, phasers, Van Der Pol filters, chorus, pitch shifter, etc. etc.

Having listened to all the effects and read the manual, I can't say I understand what makes them work. But my ears tell me what I need to know — they're going to make *me* sound great. The effects section should be thought of as an extra synthesizer as it can radically change many sounds, not just sweeten them. And, like the EPSs and ASRs, the effects can be used in combinations, like roto-speaker + phaser-flanger + reverb with each voice able to be routed to one or more of the effects.

The Hyperwave or Wave List

Many programs with the word "GROOVE" or "-GRUV" as part of the program name use this incredible synthesis technique. A list of up to 16 waves is chosen. Each wave is like a completely programmable voice with its own filters, three envelopes, LFO etc. The wave-list lets you fade smoothly or abruptly from one sound to the next. Programming a wave list could make you lose your mind and/or age prematurely. Already, several talented and dedicated patch-programming gurus have given up their sanity so the TS-10 could be shipped with a dozen or more killer drum-loops and bass guitar or synth-bass loops which come alive by holding down *just one key*. A program can run up to four simultaneous wave lists to have a kick-drum and hi-hat beat running simultaneously with snares, a cymbal and rimshot layered over the bass-line, for example — all controlled by your little finger!

Another even more powerful use of the Hyperwave is to make constantly changing, swirling and alive pads and textures — a synth player's dream. Many such examples are shipped with the unit, but you'll miss them unless you give the sounds a good audition and hold the keys down for a bit.

Can the drum loops be slowed down or sped up to suit the tempo of your song? (Yes.) Can you change the filters and envelopes on each of the four possible wave lists in a program? (Yes.) Can you copy a voice from a standard program into one of the 16 locations on the wave list? (I have no idea.) Can you keep the tempo on track and not reset the drum loop or bass line by holding down one key while starting to hit a second key? (Yes.) It's hard to believe, but to understand the awesome Hyperwaves, we're on our own, dudes, because the *Musician's Manual*, so well-written in all other areas, is woefully inadequate in giving tutorial examples or performance tips on how to create a wave list from scratch or how to tweak the factory-

shipped ones. Even changing the tempo of a drum loop, which is so easy to do (press the TUNING button in the track parameter section 3 times and adjust the rate) is mentioned only in passing inside an inset box on page 28.

I am assured by the folks at Ensoniq that this lack of documentation is being worked on and there may be a separate manual devoted just to the hyperwaves. Meanwhile, make no mistake: Somebody knows how the hyperwaves work and has assembled a very useful and stunning set of patches showcasing this special feature. Remember, the hyperwave feature is a separate synthesizer unto itself.

It's worth mentioning that in spite of all the high-intensity computing going on, what with a 24-track sequencer, 6-voice sound programs and the hyperwaves, I have already done a sophisticated and classy "live" sequenced presentation without a hitch — no jamming or freezing of the sequencer, no start-up bugs. Several tracks, including a live track, used polyphonic-key pressure and the pitch bend and there were *no timing delays at all*.

Gripes

I already mentioned my disappointment about the still incomplete instructions on the Hyperwaves, but it is clear that they work and someone is expert at programming them.

For all you folks who program the VFX/SDs, all those great sounds you've collected won't work in the TS-10. You can't go home again. The good news is that I've tried porting over a few Dr. Brad patches to the TS-10 by hand, entering VFX parameters one screen at a time, one voice at a time. Since the TS-10 waves are different, substitutions must be made. I hate to say it, but the TS-10 version Dr. Brad patches sound better.

Bugs?

So far, so good. The unit will freeze if you try to edit a preset or sound while the sequencer is running. Also, in editing certain effects (for instance, effect #23 on the wonderful FULL BODY piano), underlining one parameter will change another parameter or sometimes make the unit freeze. I turned the unit off and resumed programming without further quirks or crashes. No RAM memory was lost or altered in either of these cases.

What Have I Left Out?

Several years of *Hacker* issues would probably be enough room to cover what the TS-10 can do. It has the playback power — and more — of the EPSs and can access 20 sounds to the EPS's 8! The disk storage and retrieval is FAST and is a system-exclusive recording medium. Presets are better than ever, allowing considerably more latitude in shaping the sound. Patch select buttons can be made to hold on to any of

the four options as a part of the program. And the two double pedal footswitches give an extra level of versatility to live performances and are totally programmable.

Most of all, the TS-10 excels at making sound come alive. You could buy it just for its grand piano or the Rhodes or FM sounds. Or the powerful synths. And a new glide feature, MINIMODE, makes all those fabulous portamento sounds you miss from the early analog days.

But you don't have to give up anything to have it all — a synth, a sampler, a wave-sequence unit, an effects unit which is a sort of synthesizer itself, and a sequencer which is ridiculously easy to learn. And sounds which encourages players to

be their best as musicians. Non-programmers will find that the programming work has already been done. And the advanced programmer will find that there are endless ways to expand the sound-producing capabilities of this unit.

My opinion of the TS-10: Ensoniq has produced another winner. In my crystal ball I see awards for innovation and excellence and kudos from the music industry for the TS-10. Meanwhile, take a good pair of headphones down to your local music store and enjoy Ensoniq's new star synth. ■

Bio: While not programming his VFX, Dr. Brad manages his solo cardiology practice in Fairlawn, NJ.

HACKER BASEMENT TAPES

Daniel Mandel

Tape: *Demo Tape.*

Artist: Paul Santa Maria.

Contact info: (305) 936-5954 — P.O. Box 2822, Miami, FL 33165.

Maelstroms from Miami

Equipment: EPS 4x/Tascam 244/DBX163x/Digitech 256xl/NAK cr-3A/Technics Cassette/JBL Lx44's/Gibson Les Paul/Shure 57/Boss Pedals, Prosonus 'RockNRoll' Horns, Ensoniq (Vol 8.) "Choice Drums" (16+).

This is a highly energetic demo that percolates with power! The musicality ranges from rock-fusion to peppy-pop. Paul says that his influences are the Beatles, Oingo Boingo, Chick Corea and Himself. Since he brought up all these famous names, I would say I can hear a definite Todd Rundgren thrown in there somewhere. Now I'm not sure how much you can influence yourself before you are doing something illegal, but I guess that's Paul's call. After all this is the '90s.

Paul played all instruments and sang on all vocal tracks. He sampled all the harmonies and then went back and punched them in.

Paul actually apologized for the amount of selections on the tape and the diversity of styles. Granted, he did break some standard rules for making a typical demo of no more than four songs and keeping in a consistent style or format. Yes, he's got a coupla instrumental *beautiful* pieces back to back with the pop tunes. However, one more rule of thumb for those of you brash individuals willing to put it out on the line goes like this: DON'T APOLOGIZE!

This is based on the other rule of thumb that constantly redefines rock and roll — If It Works — Do It! The hell with which convention you broke to get you there. I think Paul's got a good collection. The recording is way above average. Very good production values all the way around. Many of these songs are carefully crafted. These are all short takes, just enough to get a good taste of what Paul can deliver. He's

got a good voice that is expressive and clear. He may want to break it up into industry standard bits, and perhaps release several demos, pop, fusion, new age and jazz, but it's a good package all the same.

Side one begins with *Lightspeed*, which absolutely boils up with strange energy. Once again Paul apologizes for the lag in the violin solo when he should relax and let us enjoy it. I think these apologies are Paul's perfectionism coming through [my psychoanalyzing fees are non-negotiable]. *Monsoon* is a Sitar wielding quick piece that is very well done. *Strange Things For Love* has an odd introduction that says abruptly, horns blasting, this-is-it!, forget any formalities, you're soaking in it! *Electrocuted* is electro-"cute." It is an advertisement for a new video game, which is now a movie, which was based on a sugar coated breakfast cereal. *Don't Hold Back The Night* is one step away from having a solid hook that you would walk away singing. The lyrics are typical swatches of phrases like the title, but nothing of substance gets through the production values. *Slick City* is just that, an extremely well done rock/jazz piece that has an exciting build for an introduction. This is Paul's best work. Lots of breaks where Paul's freedom and creativity take over. This should go in the "best of" when Paul puts together a collection to sell.

Side two begins with two pop songs. *She's Not Too Skinny* and *Damned If I Do, Damned If I Don't* are two standard pop/rock songs. These are followed by three instrumentals — *Pan Flute Theme*, *Marionette* and *3/4 Theme*. All three are quite short and interesting. *Love Goes* is the final piece, a more elaborate pop piece that uses Paul's skills well. ■



If you want your tape run through the Hacker, just mail it off to: Basement Tapes, *Transoniq Hacker*, 1402 SW Upland Dr., Portland OR 97221.

Bio: Daniel Mandel is a songwriter, sound designer, and has sold pro audio and keyboard equipment and produced demo tapes for local bands.

How Sounds Work

Part V: Wacky Woodwinds

Mark (the MIDI Avenger) Clifton

Okay, boys and girl, this month we'll be examining the microcosmos of near-genius known as "Vibrato Oboe" and "Alto Flute." Vibrato Oboe can be found in Volume II of my *Hardwire* sound collection, distributed by Latter Sounds. However, Alto Flute does not appear in any commercially available sound collection to date. I'm saving it for the, as of yet, unfinished Volume III, so it should get released eventually. You can take some degree of satisfaction in knowing that you're the first humans beside myself to actually lay eyes on it. I realize that I probably shouldn't recklessly be giving away my product like this, but I like to be generous and I know it makes you happy.

Flutes

Alto flutes are just like regular flutes only bigger and sounding a fifth lower. They're used widely in flute pieces and are known for their velvety and voluptuous tone. The flute is classified as a woodwind mainly because it used to be made out of wood and it uses a fingering pattern similar to that used by most other woodwind instruments. Nowadays, however, most flutes are made of an alloy of brass and nickel, though it is possible to find ones made of wood and even crystal. Different types and proportions of metals will yield different sounds and most players will try to find a mixture that suits their taste. To generate sound, air is blown into a metal mouthpiece on the side of one end of the instrument. It then travels through the hollow body of the instrument where it vibrates, finally exiting out the other end. A variety of effects such as double, triple and feather tonguing are possible as well as rather difficult and little used harmonics known as "whistle stops."

One of the major problems with creating an alto flute sound is that when the Wood Flute wave is transposed down to alto flute range, it has a tendency to sound too breathy, especially on the attack. The initial burst of air in a tongued flute attack is naturally a little breathy, but transposed this low it sounds like a sampled hurricane. To cut off a little bit of the extra air at the beginning of the sound, I increased the sample Start Index to 02.

The LFO is programmed to simulate the typical amount of vibrato that a normal (as opposed to abnormal) player would use. On a flute, vibrato is caused by stuttering the airflow by moving the lips up and down. This causes more of a change in volume and breathiness than in pitch, so this patch uses a lot of LFO to filter and output mod with only a slight amount of pitch modulation. The LFO itself is controlled by the mod wheel in case you want even more vibrato. It uses a typical

triangle wave (sine/triangle works too if you want a more mellow sound) and the Restart is on, letting the LFO begin freshly on each new note.

I've routed ENV 2 to control filters, shaped for a sloped attack and gradually mellowing out as the sound sustains, imitating the changing character and brightness of a natural flute tone. The ENV 2 Velocity Level is set to 33, making the sound mellower at low velocities and brighter at high ones. The AMP envelope is set to a similar shape to ENV 2. Together they change the brightness and volume simultaneously for a more realistic response. The attack velocity of both envelopes is set to yield a soft attack at low velocities and a harder one at high ones. A wind instrument sound should always have a somewhat rounded attack for a realistic tonguing effect, even at high velocities. The high velocity level on the AMP envelope ensures a volume range from a whisper to a shout without the volume slider ever needing to be touched.

Oboes

The oboe is a double reed instrument. That is, it generates sound as air is blown between two wooden reeds, making them vibrate. The body of the instrument is usually made of wood, but some inexpensive student models are made of plastic with plastic reeds. The thought of playing such an instrument, though, would probably move a professional or accomplished amateur player to a fit of severe whining, so I wouldn't necessarily bring it up if I were you.

"Vibrato Oboe" shares many common features with "Alto Flute," including LFO modulation of pitch, filters and volume, similar programming in the LFO section, ENV 2 modulation of filters (though to a lesser amount) and similar shaping of ENV 2 and the AMP envelope. The main difference between the two is that Vibrato Oboe contains a slight amount of ENV 1 to pitch modulation, with ENV 1 shaped to a sharp downward slope. This simulates the slight sharpening of pitch in the attack of a tongued woodwind note as the player adjusts his emboucher and airflow. Such a pitch blip will work on all wind instrument sounds as long as it's very subtle. The listener should not be able to detect any outright change in pitch. Instead, it should simply be perceived as part of a realistic tongued attack sound and nothing more. Such an effect is absent from Alto Flute simply because it was too conspicuous with that particular waveform transposed down that low. Once you start shifting the pitches of acoustic samples beyond their natural range, such as with that sound, programming details can get a bit touchy. Still, if you want to take a crack at programming your own pitch blip into

Prog: VIBRATO OBOE

By: Mark Clifton

WAVE	1	2	3
Select Voice	On	Off	Off
Wave Class	Waveform		
Wave	Woodwind		
Delay Time	000		
Wave Direction	-		
Start Index	-		
MODSCR	-		
MODAMT	-		
Restrk Decay	12		

PITCH	1	2	3
Octave	+1		
Semitone	00		
Fine	00		
ENV1	+01		
LFO	+02		
MODSCR	Off		
MODAMT	-		
KBD Ptch Track	On		
Glide	Off		
Glide Time	00		

ENV1	1	2	3
Initial	30		
Peak	00		
Break	00		
Sustain	00		
Attack	14		
Decay 1	00		
Decay 2	00		
Release	00		
Vel-Level	00		
Vel-Attack	00		
Vel Curve	-		
Mode	Normal		
KBD Track	+00		

LFO	1	2	3
LFO Speed	34		
Noise Rate	-		
Level	19		
Delay	72		
MODSRC	Wheel		
Wave	Sine/Tri		
Restart	On		

FILTER	1	2	3
Filter 1	3Lo		
Filter 2	1Hi		
FC1 Cutoff	051		
ENV 2	+25		
FC1 KBD	+25		
MODSCR	LFO		
MODAMT	+12		
FC2 Cutoff	059		
ENV2	+04		
FC2 KBD	+08		
FC1MOD-FC2	On		

ENV2	1	2	3
Initial	54		
Peak	99		
Break	92		
Sustain	90		
Attack	12		
Decay 1	59		
Decay 2	67		
Release	22		
Vel-Level	33		
Vel-Attack	00		
Vel Curve	Linear		
Mode	Normal		
KBD Track	+00		

AMP	1	2	3
Initial	82		
Peak	99		
Break	94		
Sustain	92		
Attack	09		
Decay 1	64		
Decay 2	60		
Release	19		
Vel-Level	40		
Vel-Attack	06		
Vel Curve	Linear		
Mode	Normal		
KBD Track	+00		

OUTPUT	1	2	3
VOL	99		
Boost	On		
MODSRC	LFO		
MODAMT	+10		
KBD Scale	+00		
Key Range	-		
Output Bus	FX1		
Priority	Med		
Pan	+00		
Vel window	>000		

EFFECTS — HALL REVERB			
FX-1	50	LF Decay	+10
FX-2	60	MOD (Dest)	FX1Mix
Decay Time	42	By (MODSRC)	Modped
Diffusion	40	MODAMT	+36
Detune Rate	40		
Detune Depth	12		
HF Damping	33		
HF Bandwidth	99		

Prog: ALTO FLUTE

By: Mark Clifton

WAVE	1	2	3
Select Voice	On	Off	Off
Wave Class	Breath		
Wave	WoodFlute		
Delay Time	000		
Wave Direction	Fwd		
Start Index	02		
MODSCR	Off		
MODAMT	-		
Restrk Decay	28		

PITCH	1	2	3
Octave	-1		
Semitone	+00		
Fine	+00		
ENV1	+00		
LFO	+02		
MODSCR	Off		
MODAMT	-		
KBD Ptch Track	On		
Glide	Off		
Glide Time	00		

ENV1	1	2	3
Initial			
Peak			
Break			
Sustain			
Attack			
Decay 1			
Decay 2			
Release			
Vel-Level			
Vel-Attack			
Vel Curve			
Mode			
KBD Track			

LFO	1	2	3
LFO Speed	32		
Noise Rate	00		
Level	26		
Delay	59		
MODSRC	Wheel		
Wave	Tri		
Restart	On		

FILTER	1	2	3
Filter 1	3Lo		
Filter 2	1Lo		
FC1 Cutoff	000		
ENV 2	+64		
FC1 KBD	+22		
MODSCR	LFO		
MODAMT	+19		
FC2 Cutoff	000		
ENV2	+99		
FC2 KBD	+26		
FC1MOD-FC2	On		

ENV2	1	2	3
Initial	77		
Peak	99		
Break	89		
Sustain	79		
Attack	08		
Decay 1	63		
Decay 2	55		
Release	49		
Vel-Level	33		
Vel-Attack	19		
Vel Curve	Quick		
Mode	Norm		
KBD Track	+00		

AMP	1	2	3
Initial	52		
Peak	99		
Break	94		
Sustain	88		
Attack	13		
Decay 1	20		
Decay 2	40		
Release	26		
Vel-Level	40		
Vel-Attack	06		
Vel Curve	Convex		
Mode	Norm		
KBD Track	+00		

OUTPUT	1	2	3
VOL	99		
Boost	On		
MODSRC	LFO		
MODAMT	+16		
KBD Scale	+00		
Key Range	-		
Output Bus	FX1		
Priority	Med		
Pan	+00		
Vel window	>000		

EFFECTS — HALL REVERB			
FX-1	50	LF Decay	+10
FX-2	60	MOD (Dest)	FX1Mix
Decay Time	42	By (MODSRC)	Modped
Diffusion	40	MODAMT	+36
Detune Rate	40		
Detune Depth	12		
HF Damping	33		
HF Bandwidth	86		

the patch, be my guest.

Both of these patches are polyphonic, allowing chords to be played. The problem with this is that every note you play will have a simulated tongue attack, while in real life many notes may be slurred or legato tongued. To simulate slurring, simply switch Pitch Glide to Retrigger. Don't touch the Glide Time parameter, though. Increasing this above 00 or 01 may create an undesirably queasy portamento effect. Using pitch glide will also eliminate overlapping notes in solo passages. When a polyphonic sound is used to play wind trills or legato passages, note attacks and releases may slightly overlap. While fine on a piano, this can destroy the credibility of a synthesized wind solo.

You'll notice that both sounds use basically the same Hall Reverb effects setting, with only slight variations to match the characteristics of that particular sound. This is my handy all-purpose concert hall reverb setting which I use on almost all of my orchestral sequences. FX2 amount is slightly higher than the FX1 amount. This is because instruments that are further back on the stage from the audience are acoustically reflected through the hall to a greater degree before the sound

reaches the audience's ears than instruments in the foreground, creating a livelier, wetter sound. By routing instruments that are usually in the rear of the stage such as brass, percussion, choir, harp and extra keyboard instruments to the wetter FX2 bus and routing those in the front such as strings, woodwinds and solo keyboards to the drier FX1 bus, you can create a more realistic three-dimensional effect. By adjusting the wetness of the effects busses, you can increase or decrease the "distance" between instruments.

As always, it's important to play instrument sounds within their natural ranges. The alto flute's (concert pitch) range is from G3 to G6 and the oboe's is from Bb4 to A7.

Well, kids, I'll be back right here in a month or two to confront a serious problem that plagues many Americans today: fake funk. So stay tuned, it may just save your life. ■

Bio: Mark Clifton is a player and composer of Jazz, New Age, Orchestral and Rap (yes, Rap!) music and an aspiring Cyberpunk writer who also wouldn't mind going into sound design or film scoring. His favorite color is the infinite, star-speckled blackness of space.

Understanding Envelopes in the SD and VFX Synths

Part 3 — Out of the Woods (Into the Fire)

Robby Berman

Hello again. In the last installment [Issue #96] of this not-so-mini-series (there must be a role in here somewhere for Jaclyn Smith), we talked about the mechanics of creating shapes with envelopes and, by way of demonstration, actually made one and applied it to the pitch of our program RAW WAVES. And, lo, in so doing we brought unto the earth a new program named UP+DOWN. And it was good. With UP+DOWN, when we held down middle C on the keyboard we could hear quite clearly how our envelope shaped the pitch we were playing, causing it to travel, yes, up and down (and up and down again). Now it's time to discuss what envelopes can do to filtering, volume, and stereo panning.

If you recall, in UP+DOWN we used Envelope 1 for our pitch contouring. This month, we'll use Envelope 2 for filtering and Envelope 3 for volume shaping. Both of these envelopes have their own button on the face of your VFX or SD, just like Envelope 1 did. Notice that the Env1 button is physically located above the Pitch Mod button, Env 2 above the Filters button and Env 3 above the Output button (which governs volume). Coincidence? I think not. Since Envelopes 1, 2 and 3 are generally used to shape pitch, filtering and volume, respectively, Ensoniq helpfully put each where it is as a visual aid. If

you momentarily forget which is for which, just look at the buttons. Helpful, no?

Do you have UP+DOWN handy? Good. We need it. You might also get out the last envelope article to refresh yourself on any points that've grown hazy over the last few weeks. Re-read it even.

Envelopes and Filters

Let's first make sure we're clear on what filters are and how they work, so that we can understand (and hear) what we're doing. It's not within the scope of this article to get too technical here, so we'll keep this simple. Lucky you. And me.

Think of the treble and bass controls on your home/car stereo, or on your keyboard amplifier. The treble knob can make the higher frequencies of whatever you're listening to get louder or softer; the bass knob does the same for the low end of the frequency spectrum. This is much like what synth filters do, except that instead of being able to turn the treble or bass frequencies up and down, filters only turn them down — they filter the highs and lows out of a sound.

The VFXs and SDs offer two filters simultaneously for every sound wave within a program/patch, and either can be one of two types: lowpass or highpass. A lowpass filter lets the low frequencies (the bass) pass through unaffected as it filters out the highs (the treble). A highpass lets the highs (the treble) pass through and cuts down the low (bass) frequencies.

Back to the matter at hand. We're going to use the same envelope on our filters that we used last time to mangle pitch in UP+DOWN.

Select program UP+DOWN and press Pitch Mod. Now turn MODAMT down to +00 so that Envelope 1 is no longer affecting the pitch — if too much is going on at once it may be hard to hear what effect our envelope will be having on the filters.

It's copyin' time. Press the Env 1 button (to establish the proper copying context), the Copy button, and the soft button underneath, MAKE COPY. We've just made a copy of our up-and-down Envelope 1 (why do gruntwork twice when you don't have to?). Now let's put it somewhere. Press the Env 2 button, Copy again and the button under RECALL. Press the middle top soft button so that the 2 in RECALL FROM COPY OF ENVELOPE 2 is underlined. Press the down arrow button once so that we're now recalling from a copy of Envelope 1; press YES. After COPY COMPLETED is displayed, press the Env 2 button and check out the Levels and Times. Look Familiar? Great.

Press the Filters button. If you properly programmed RAW WAVES (the basis for UP+DOWN) way back in the first installment of this series (Issue #94 — ah, the good old daze), what you'll see here is that the first available filter, Filter1, is set up as a lowpass filter, LO-PASS/2. If you press the Filter button again, you'll see that Filter 2 is set as a highpass (HI-PASS/2). Press the button again to get back to Filter 1 — that's where we'll start.

You'll note that in the top of the display it sez CUTOFF=127. The cutoff determines the point in the frequency spectrum where the filtering will begin. In the case of a lowpass filter like we have here, that means the point below which sound will be allowed to pass through to your earbones. Since 127 is the highest value allowed, the filter is wide open, letting all the frequencies of the sound wave pass through (by the way, the value range of 000 to 127 corresponds to MIDI values rather than Hertz, as frequencies are commonly described). If, for example, we were to set the cutoff to 64 (half of 127), all the frequencies above that point — the upper, treble, half of the frequencies contained in the sound wave — would be filtered out. Let's do that: Press the top middle soft button and change CUTOFF to 64. Play a note on the keyboard — see how much of the treble frequency range we've blocked from passing, and how dull it's gotten? What we're about to do is apply our ol' envelope shape to this cutoff setting we've just adjusted.

In the envelope we created last time, remember, the INITIAL setting was 00, so that when we played a key on the keyboard, no change to the manual setting was initially effected by the envelope. Over a duration corresponding to a time value of 70 (six and a half seconds, according to pg. 8-32 in the *Musician's Manual*), the envelope shape traveled to a level of 50, then back down to 00, then back up to 50, and then halfway back down, to 25, where it remained until we let go of the key or sustain pedal, after which it dropped back to 00. Well, last time the manual setting was the pitch we played on the keyboard; for this demonstration it'll be that cutoff setting of 64 we just dialed in. Therefore, the same up and down motion we applied to the pitch in UP+DOWN will be applied to the cutoff setting, as if we were moving the cutoff value up and back a few times with the data slider.

Press the lower right soft button and set ENV2 to +99. Now we're all set. No, wait! One last little touch: To make our last drop down to the manual setting a little easier to hear, press the Env 3 button twice and set RELEASE to 90 so that the volume of any notes you play will trail away a tad more slowly. Now save this as a new program called DULL+BRIGHT.

So what's gonna happen here? When we first play a note on the keyboard, the cutoff setting will remain at its manual level of 64 (due to our INITIAL level of 00), allowing only the lower half of the frequency range to be heard. After six and a half seconds the envelope will have pushed the cutoff value upward by a value of 50 (our PEAK level), letting more and more of the treble frequencies through, until, six and a half seconds later, the cutoff will sink back to its manual level of 64 in response to our BREAK 1 setting of 00. BREAK 2 will cause things to brighten up again until our SUSTAIN level of 25 takes hold and drops the cutoff (and the treble) halfway back down to 64 again. There it will remain, neither fish nor fowl, until we let go of the key or the pedal and the cutoff drops back down to its dull old manual setting.

Play middle C on the keyboard and hold it down until it goes from dull to bright to dull to bright to demi-dull — then let go. Comprehend? Feel free to play with different Level and Time values as you did with UP+DOWN.

Now let's use this same envelope on a highpass filter. First press the Filter button so you're on the Filter 1 page. Return the CUTOFF setting to 127 and ENV 2 to +00 so that we'll be able to hear what we're about to do with minimal obfuscation. If you play a key, you'll hear that all the freqs are once more being allowed through, and your sound is once again statically (since it's not being shaped by an envelope anymore) bright. Press Filter again to get us to the Filter 2 page. In our handy-dandy all-purpose envelope the top Level is 50 (instead of the maximum 99), so we're going to start this demo off with a little of the bottom already filtered out to make your listening experience more dramatic. Set the CUTOFF value to 30. Since this is set up as a highpass filter, where only the frequencies above the cutoff setting will be allowed to pass through, you

can see that we're already filtering out the bass freqs below 30. Now set ENV 2 on this page to +99. Save this, too, as a program — call this one FAT+THIN — and stop. Can you predict what you'll hear when you play and hold down a note on the keyboard?

Just like before, the envelope will be pushing the cutoff value up and down, but since this is a highpass filter, the effect will be different. Since the only freqs allowed to pass through are above the cutoff, the higher it's set, the more of the bottom of the sound is not allowed to pass, and the thinner the sound gets. Our envelope will start off allowing everything above 30 (our manual setting) to pass through. As it ups and downs, so will the cutoff setting, chopping off more or less of the bottom frequencies of the sound. Try it. Can you recognize our envelope's shape as being the same here as it was with the low-pass filter, and with last installment's pitch?

You might want to go back to the Filter 1 page and set the cutoff again to 64 and ENV 2 to +99. As you might imagine, now when you hold a key down, the sound gets simultaneously thinner and brighter as the envelope values increase, and duller and fatter when they go back down. Interesting, huh?

Envelopes and Volume

First of all, in the VFX and SD synths, there are primarily three variables that determine how loud a sound wave will be, starting with the VOL setting you'll find by pressing the Output button. Think of the VOL setting as your basic volume control. By pressing Output two more times you can access the PRE-GAIN setting. This is only for special circumstances, and is usually set to OFF (by switching it to ON, you can boost a wave's amplitude by an additional 12 db should the need arise — use sparingly).

The third factor is Envelope 3. As the shaper of wave volume, it's required to perform some unusual tasks, like making sure that every note eventually falls back to silence. Therefore, it operates slightly differently than other envelopes — it's subtractive. Huh? What I mean is that an envelope Level setting of +99 will not raise the manual VOL setting. Rather, 99 will give you exactly the volume VOL calls for, and any lower values will reduce the volume below that. Follow? We'll have to change our methodology here a tad to demonstrate this.

Go back to our original program, RAW WAVES. Just to keep life simple, let's make a new envelope shape that goes down and up instead of up and down. Press the Env 3 button. Since, as I just said, 99 will cause the wave to play at the volume we've programmed on the Output page, let's set the INITIAL Level to 99 so that when we press down the key on the keyboard we'll be able to get our bearings before things start to move. Now set PEAK to 50, (to push the manual volume setting halfway down to silence), BREAK 1 to 99 (back up), BREAK 2 to 50 (down again) and SUSTAIN to 75 (halfway back up). With Envelope 3, after you let go of the key or the

pedal, the envelope Level doesn't drop back to the manual setting (which, when ya think about it, would actually be upward to 99) — it drops down to 00, silence, a much more sensible direction to fall in since even the best notes have to end sometime. Now set all the envelope Times to 70 as before. Since Envelope 3 is automatically assigned to volume, we're done. Save this program as LOUD+SOFT.

Before you play middle C on the keyboard, press Env 3 once so you can watch your Level settings and try to picture what's going to happen to your volume next as you listen. Engage.

As ever, experiment with different Level and Time settings.

Envelopes and Stereo Panning

For the last of this month's demonstrations, get some headphones. Now select our program UP+DOWN, press Pitch Mod and set MODAMT to +00 to switch our pitch envelope off.

You may have noticed earlier in this article when I hedged a bit by saying that ENV 1 and 2 are "generally" used for pitch and filtering. That's because they can be used for other things as well. Here's an example. And we won't have to copy the envelope this time.

Press the Output button twice. The bottom of the screen is where you determine the placement of a sound wave in the stereo field. In this case, our manual setting is the PAN value on the lower left part of the screen. It's set to 50, which is the center stereo position. Press the lower middle soft button and scroll downward to set MODSRC to ENV 1. Then set MODAMT to +99. This way, we can use our envelope to push the manual setting up (which will move the sound to the right) and back (the stereo center) in that by-now-familiar up/down/up/down halfway way that we have. Except, of course, things are moving sideways now.

Save this program as GORIGHTWARD. Put on your headphones and try it. The motion of the sound in the stereo field should be sounding like an old friend by now.

By the way, if you'd like to make the sound move to the left, set the Output page 2 MODAMT to -99. -99? Ah now, this opens a whole new can o' worms — which we'll get to next time. 'Til then... ■



Bio: Robby Berman is a musician living in the mid-Hudson River Valley in New York, home of the mighty Junebug. Home of the goeey Junebug. Home of the mighty goeey Junebug. His latest album is "Rings and Rings."



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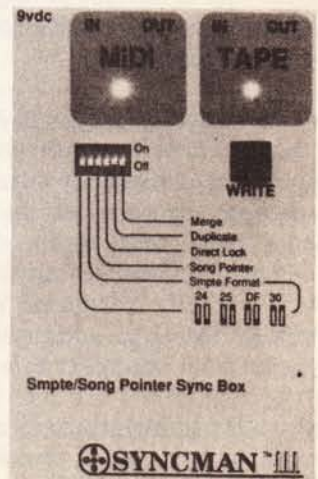
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Home Alone with the Chromelodeon

A Review of Nightwind's Harry Partch Samples

Sam S. Mims

Product: "Partch Timbres" sample set.

For: EPSs, ASR-10s, TS-10s.

Price: \$85 for 8-disk set.

From: Nightwind Sound, 170 Mar Monte Ave., La Selva, CA 95076.

[Ed. — While it's certainly a little strange to be having a vendor of sounds (Sam) review another vendor's sounds, we couldn't find anyone else in our bevy of writers who really felt they knew enough about Partch. So here it is. We figured as long as everyone was aware of the situation, they could "read it with their eyes open." Besides, we trust Sam.]

The late Harry Partch was, by most music listeners' standards, a rather eccentric guy. He didn't particularly care for traditional Western tunings, so he made up his own. And since there were no instruments to play in these tunings, he once again made up his own, usually out of odds and ends. His compositions are certainly a part of music history — but don't expect to hear them at the disco. To most listeners' ears, they are bizarre, to say the least.

The concept of sampling Partch's instruments, most of which are in residence in a San Diego museum, is an excellent idea. Samplers can serve an excellent purpose in archiving such unique and historic sounds and in making them available to the masses. Give the listeners some new and unique sounds! We don't have to have that M1 pan flute in every tune, do we?

With that in mind, I was excited to get my hands on Nightwind's "Partch Timbres" set (I was sent four of the eight disks to review). I was disappointed to find out, though, that these are not, in fact, samples of the instruments themselves. They are instead snippets taken from the recording "The Music of Harry Partch" (which is indeed why the set was named "Partch Timbres").

I don't mean to be a prude, but I don't think that this is strictly legal. Nightwind's view is that they sampled the sound of the instruments, and not performances, so all is well. I disagree; many of the samples are many notes in length, which I would certainly call part of a performance. Even so, I think a recent court decision found it illegal to sample anything from a copyrighted recording. I'm not the sample police, but I feel obligated as a reviewer to mention that the use of these sounds might constitute an infringement of copyright.

Well, enough of that. Let's dig in, shall we?

Disk HP3

Surrogate Kithara (696 blocks) — This stringed instrument sounds somewhat like a koto, and we're given what sounds like a looped measure of four beats. The tuning is definitely...interesting. The sample only plays on the lower half of the keyboard — the top half is silent — and the mod wheel adjusts the point in the loop where the sample begins. The CV pedal adds a key-up hit that, curiously, does play over the entire keyboard. The patch selects do right, left, and stereo versions of a short enveloped sound, normally playing just the first string pluck. What is downright clever is this: The mod wheel, controlling the sample start point, essentially chooses which note (or bizarre chord) in the loop gets played. So the ability to play the sample as an instrument, rather than as a song snippet, is somewhat possible.

Spoils of War (677 blocks) — This unique creation resembles a percussionist's stand filled with toys, but where the cowbells, agogos, triangles, and bongos should be, we encounter instead an odd assortment of large shell casings, glass bowls, and other items ready for striking. Nightwind has done four Spoils samples across the keyboard. The lower two octaves give a mallet-struck metallic sound with lots of inharmonic overtones. If I were scoring the "Cantina" scene in *Star Wars*, I would have used this sound. Next up is a cymbal/percussion snippet that fades out after 8 notes or so, followed by a wooden-sounding hit in the next key range. If this hit were isolated, it could be quite useful; as it is, subsequent notes are heard during the envelope's fade-out. On the top-most key range is another metallic sound similar to that on the bottom range. The patch selects call up some metallic layered hits that sound almost like a splash cymbal; each of these covers the entire keyboard.

Chromelodeon II (163 blocks) — This is a reed organ that Partch modified for his tunings. The sample is a two-note chord (a minor tenth), so its usefulness is limited. The patch selects are variations on the same sample (octaves and such).

Disk HP5

Castor & Pollux (1498 blocks) — This one, also called the Harmonic Canon II, looks like a cross between an autoharp and an Aztec weaving machine. The five samples are mostly single-note rhythmic strums, and I found these quite fun to use as a bed while I played soundtrack-type stuff over them. The patch selects combine the different samples in some quite interesting ways. I had fun with this one.

Mazda Marimba (80 blocks) — This is not made out of old RX-7s and Miatas; Mazda is a manufacturer of light bulbs, and the glass globes make a great sound when struck with a soft mallet. The sample is, fortunately, just a single hit, and it's very playable — a marimba sound crossbred with the plunk of a water drop. At the very low end of the key range, you can hear that the sample is not quite trimmed up enough; it starts just a hair after the note is struck. The patch selects and CV pedal add some nice variations. This is a very unique, very usable, and very cheap (block-wise) sample.

Disk HP6

DDGGC+P (710 blocks) — For those who overlook the obvious, I'll go ahead and point out that DDGGC+P stands for Drone Devils, Gubagubi, and Castor & Pollux. This one is a song snippet, a looped segment of a performance, and boy is it weird! It sounds like the Jew's harp player from a *Dukes of Hazard* session met up with a zither orchestra conducted by John Cage, and they decided to jam. I tried to dance to it, but I kept falling over trying to find the downbeat. It only plays on the top octave-and-a-half; I dunno why. The patch selects save us once again with the clever short-envelope/mod wheel trick; you can "dial in" and play single notes of the loop, over the entire key range.

Castor & Pollux (417 blocks) — Same instrument as on HP5, different sample. But the same file name, and that could cause trouble. Instead of strumming as before, this sample is a rhythmic loop with percussion, which limits its usefulness. And again, we only get the top octave-and-a-half, until the patch selects come to the rescue with single-note isolations over the whole keyboard range.

Blow-Boy (393 blocks) — Here's a great opportunity to make some crude joke about the name, but I'll spare you. This instrument is some type of bellows hooked up to a few whistles tuned very strangely. It sounds like a calliope that is running out of steam. There's a lot of blowing noise, and coupled with the strange tuning, it seems almost unpitched. This sample is an ideal candidate for looping, but this wasn't done. The patch selects turn this into a tuned percussion sound that is pretty interesting.

Disk HP7

Crychord (1296 blocks) — This one is some type of stringed instrument with adjustable tension, giving a rather boingy rubber-band type of sound. There are three samples spread across the keyboard; the top sample plays a partial run down the scale, the other two strum essentially on a single note. The patch selects add some variations, such as a note sliding upward. There are no looped strums like the first Castor & Pollux samples, and coupled with the boinginess of the sound — the notes typically stretch way sharp when first plucked — these samples are not nearly as usable.

Cloud-Chamber Bowls (267 blocks) — This is a collection of large pyrex jars that are struck with mallets or rubbed for a more sustained tone. They are surprisingly inharmonic — I expected more of a crystal bell tone. Once again, I'm curious as to why part of the keyboard range (the lower 1-1/2 octaves in this case) was left silent. The 00 patch select is mallet-struck with lots of slapback echo (the mod wheel removes the echo effect), the 0* patch is a rubbed and looped version, *0 is a shorter mallet-struck patch (and the most useful), and ** is the "struck, rubbed, slapped, and looped version" — kind of like the Scattered, Smothered, Covered, Chunked and Diced hash browns at Waffle House.

Nightwind's "*Partch Timbres*" set is a mixed bag of strange, oddly-tuned samples, some really clever programming, lots of silent keys, some wonderfully unique sounds, and some samples that I can't imagine ever using. There is not a single instrument here that is sampled in the normal fashion; instead, this is a "smash and grab" collection taken from performances, somewhat like trying to do violin samples from a Tschaikovsky recording. On the other hand, do you know any other place to get a Mazda Marimba sample?

Jim Newton, the programmer, has some good tricks up his sleeve, and despite the sampling method, there are some very usable sounds here, and always an enormous range of variations on each sample. But I was frustrated by the fact that the majority of the keys didn't play anything on some instruments, and that the really usable variation of a patch might be the *0 patch select with the mod wheel rolled slightly forward.

If you could get individual disks, HP5 would be a definite winner with the Mazda Marimba. As a set, you'll get some usable sounds and some that you don't quite know what to do with, unless you're doing the score for *Eraserhead II*. But you can rest assured that all of the sounds will be unique. ■

Bio: Sam Mims is a professional keyboardist and programmer, and the owner of Syntaur Productions in Houston. He currently works with Malaysian pop star Zainal Abidin, and tours throughout the world.

BACK ISSUES

Back issues are \$2.00 each. (Overseas: \$3 each.) Issues 1-38, 61, 67-72, and 82-84 are no longer available. Subscriptions will be extended an equal number of issues for any issues paid for that are not available at the time we receive your order. ESQ-1 coverage started with Issue #13. SQ-80 coverage started with #29, (although most ESQ-1 coverage also applies to the SQ-80). EPS coverage got going with #35 (and also applies to the ASR-10). VFX coverage (which also applies to the SDs) got started in #48. The SQs got going in #63. (SQ articles also apply to the KS-32.) DP/4 coverage started in #88 (much of which also applies to the ASR-10). TS-10 owners should check out sample reviews (EPS/ASR) and SD & VFX programming tips. Permission has been given to photocopy issues that we no longer have available — check the classifieds for people offering them. A free back issue index is available which contains the tables of content for all issues since Number 43.

Suggestions, Hints and Tricks on Using the DP/4 Part Two

Vance Galloway

Last issue I requested of Ensoniq that they create some way to switch between a "regular" preset and a "configuration" preset without having to touch the front panel. Well, there always was a way via MIDI. All you have to do is send program change information on the MIDI channel that is assigned to control the type of preset you want to recall. For instance, suppose you have the Configuration presets set to respond to MIDI channel 5 and the One Source config presets set to respond to MIDI channel 1. If you are currently on One Source preset #33 and want to get to Config preset #21, simply send program change #21 on MIDI channel 5. When you want to change back, send #33 on channel 1. Easy as that. Be sure to avoid the mistake I made and check to see that you are sending on the right MIDI channel. Also see section 6-3 and 6-4 of the manual for some more information on how the DP/4 uses MIDI channels.

Last time I talked some about general ways in which to get more out of the DP/4. This time I'm gonna explain a couple of tricks I've figured out to help me with realtime control of DP/4 algorithm parameters.

You probably know that you can assign two of many MIDI or analog controllers to alter (or modulate, as Ensoniq puts it) any algorithm parameters. (If you are not familiar with this, see Part One of this article and Section 4-4 of the manual.) Sometimes, however, you might run into limitations with the DP/4's parameter Modulation scheme. What if you need to control more than two parameters per unit? Or what if you only have one source for continuous controller information (like the DP/4's Analog CV pedal, or a synth's mod wheel) but want to send different information at different times to two, three or four (or more) parameters. What if you want the same continuous controller source (again, like the DP/4's Analog CV pedal, or a synth's mod wheel) to have different minimum and maximum values at different points in a song?

In these cases you can assign one Modulation Source to alter which parameter the other Modulation Source controls. This means that you can assign, for example, your footswitch to control which parameter your footpedal is assigned to. Since this is not covered anywhere else that I've seen, I'll give an example.

What you will be doing is assigning the Mod 1 Destination (found on the EDIT page) to the parameter number that corresponds to Mod 2 Destination. (In this example I am assuming that you are using both the DP/4's Footswitch 1 and its Analog CV In as controllers. If not, either do so by following the directions in Section 6-8 of the manual or use ANY con-

troller that works with your setup to achieve the same goal I am about to describe. No matter which controller you choose, the concept remains the same.)

Choose the Large Plate algorithm to be in Unit D by pressing EDIT then pressing the Unit D Unit Button. Then turn the Data Entry Knob until Large Plate appears. Next press the Left or Right arrow buttons until Mod1 Src appears (parameter 15). Using the Data Entry Knob choose Mod1 Src to equal Ftsw1 toggle. Right arrow scroll over to parameter 16 (Mod1 Destination) and set it to equal parameter 20 (Mod 2 Destination). You have just set Mod 1 to control the destination of Mod 2. Now set parameters 17 and 18 (Mod 1 Range Min and Max) to 3% and 9% respectively. Set parameter 19 (Mod 2 Src) to DP/4 Analog CV In. Don't worry about parameter 20 (Mod 2 Destination) since Mod 1 is controlling it. Set parameters 21 and 22 (Mod 2 Range) to 0% and 99%. Now scroll back to parameter 20 and press the DP/4's Footswitch 1. You will see that the Mod 2 Destination changes from parameter 1 (which is Mix) to parameter 3 (which is Decay Time). Now whenever you move the Analog CV In pedal you will be altering the mix or the decay time, depending on the status of the DP/4 Footswitch 1.

Also note that this same concept can be applied to multiple Units at the same time. So, in one part of a song, the Analog CV pedal could control distortion level and reverb balance and then, once you press the DP/4 footswitch 1, the same Analog CV pedal could be controlling distortion tone and reverb time.

You could also set up a footswitch to control the Range of the Analog CV pedal by assigning the footswitch to the parameter which controls the Analog CV pedal's Range. (In our example you would be assigning Mod 1 Destination to equal parameter 21 or 22 which are Mod 2's Min and Max respectively.)

Unfortunately, there does not seem to be a way to assign Mod 1 to control Mod 2's Source. This would be nice because then you could have, for example, reverb time controlled by Analog CV in during the verse of a song, then once you press a Footswitch 1 reverb time could be controlled by MIDI note number. If this is attempted the DP/4 simply ignores it.

The limitation of using a footswitch is that it can send only two values (on and off or Min and Max). Therefore (in our example) we are stuck with switching between only two parameters that will be controllable by the analog CV pedal. We could, however, assign Mod 1 Src to equal a MIDI continuous controller number. Each time we alter the value of that con-

troller, the destination of MOD 2 (which, as you remember, is being controlled by MOD 1) would change. This would have the effect of making Mod 2 control any parameter we want, but only one at a time. But remember that "one at a time" on the DP/4 really means "one at a time per unit." During the verse MOD 2 could be controlling one particular parameter per unit. During the chorus you could send a new MIDI continuous controller value from your sequencer (or whatever MIDI device you are using) to Mod 1. By doing this you will have changed the parameters MOD 2 is controlling. During the second verse you could send yet a third continuous controller value, thereby switching the destination of MOD 2 to a third set of parameters. This can be very tricky to set up however. Since each algorithm has a different number of parameters, it is difficult (and in fact sometimes impossible) to assign one single controller value to select the exact parameters you want to modulate on all four units simultaneously. I have found that this particular trick is best suited for selecting many different parameters of one or maybe two algorithms at a time. It all depends on your particular application and which algorithms you are attempting to use.

Note too that this trick could also be used to select between various MOD MIN or MAX values instead of selecting MOD destinations. To do this simply assign MOD 1 destination to equal MOD 2's MIN or MAX parameter. In the example above, this would mean assigning MOD 1 destination to parameter 21 or 22.

I hope that these little tricks and bits of advice on how to get more out of your DP/4 will be useful to you. They are really meant to serve as jumping-off points for your own experiments. Your own needs and applications are likely to be quite different from mine. Nonetheless the inner workings of the DP/4 remain the same no matter who uses it or what setup it is being used in. With a tool like the DP/4 it is particularly important to really understand how the device is set up. By doing so you are much more likely to get it to do exactly what you want it to do. Then again, the DP/4 is such a flexible device that there are probably things it can do that you (and I) have yet to realize. Therefore I also suggest that you experiment freely with it: Change effect routings, alter mix levels, change every single value of every parameter in your favorite preset, use a variety of input sources, set parameters to random values, substitute one algorithm for another... Play, have fun, and remember to remember exactly what you did to create that new effect that you like. ■

Bio: Vance Galloway is a Composer/Musician and Sound Engineer who does Mac based digital editing during the day. At night he collaborates with other musicians as well as with choreographers and multimedia artists. His own music, it has been said, has "little or no current commercial potential within the Music Industry as it now exists" which is just fine by him.

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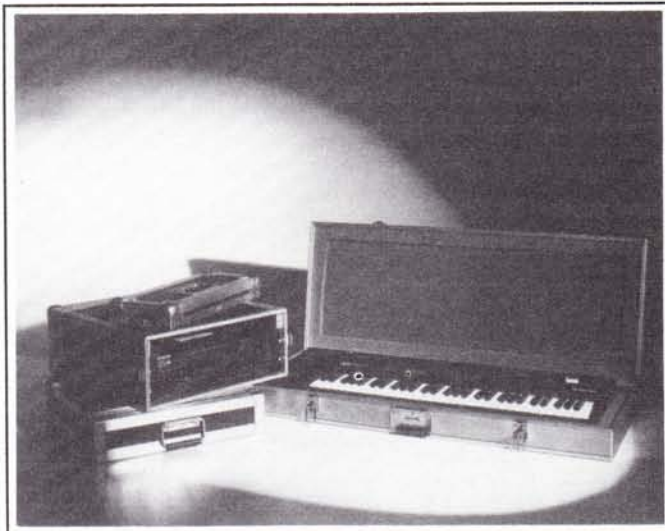
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Making BigBux Doing What You Do Best

Part 3 — Preparing Your Successful Demo

Jeffrey P. Fisher

"The good composer is slowly discovered, the bad composer is slowly found out."

— Sir Ernest Newman (1868-1959), British musicologist.

Why You Need A Demo

Before you can start selling your music to clients, you must show that you can do the job. And that means a demo tape.

Your demo showcase your originality and composition skills, demonstrate your versatility at covering chosen styles, and do all this in less than ten minutes. I have my personal preferences when it comes to music, but the purpose of your demo is to show clients that *you can compose the music they need*. Even if you don't have exactly what they are looking for on your tape, your skill must convince them that you can give them what they want.

I've tried many approaches over the years. Here are three methods that have worked for me:

- Five complete tracks
- Montage of several tracks
- Free sample tape

Demo Five — The demo with five complete cuts on one tape seems to work well. I recommend you include a rocker, a jazzy track, an orchestral piece (yes, synth orchestra is okay), something unusual, and an ambient, new age piece. In other words, the five most popular (and most requested) music styles of the day.

Always lead with your best track and style! — The slow track that takes two minutes to get to your ripping sax solo has no place on your demo reel. While not every track needs to be commercial, it helps if they have impact and make a good, strong impression. If you specialize in one particular style, you can limit your tape to just your specialty. But you also limit your clients. Most are looking for versatility. Show them you can cover a variety of popular styles and you'll be more successful.

Demo montage — One other method that works in certain circumstances is a montage of short snippets from several songs on one tape. For one of my demos I wove twelve songs into an eight-minute montage. What was especially good about this approach was that only the best parts of each track were on the tape.

But there is a drawback. Many music buyers want to hear

longer pieces to see how well you maintain interest with your music. To accommodate this need, put a few longer pieces on the other side of the tape for those who request it.

Sample Music Tape — The last kind of demo is not a demo at all. One of my successful promotions offered a free cassette with five music tracks that could be used by anyone who requested the tape. In other words, I gave away a music sample, just like the cookie store lets you taste their latest choco-orgasmic delight. They hope (as I did) that you'll come back for more.

A demo just screams, "Here's what I did." (Who cares?) while a sample says, "Here's something for you to use to make your work better. And if you want more of this, just call." (Thanks, just what I need!)

The demo gets listened to and then sits on the shelf. Your sample gets used, stays on the prospect's mind, and gets you the scoring gigs.

People just aren't interested in your music (gulp!). They're only interested in what your music can do for them — how your music can make their project better. You must position yourself to help them. Show how your music solves their problems. This is how you get the work.

Get it? Sell the sizzle (better video, more effective message), NOT the steak (music).

More Money Making Advice

Giving away samples is an ideal marketing strategy for any business. For those of you who create and sell patches and/or sequences, providing samples is the best way to increase your business. You should send prospects some of your best work along with your standard promotional literature.

If I were selling SD-1 patches, I'd send two banks (twelve patches) to prospects; if I sold sequences, I'd send five of my best songs in different styles. You're out the cost of the disk, slightly higher postage, and mechanical rights (if you send sequences), but the goodwill you build may be worth the extra effort and cost. If your prospects like what you have to offer, chances are they'll want more. Of course, there will always be a few freebie seekers who will waste your time and money, but the majority of those requesting your sample will go on to buy your offering. Are you willing to risk missing them?

To promote a patch/sequence business, you could take out ads, use direct mail, send press releases, or write articles. Try sharing your information through articles published in the *Hacker* and elsewhere. What should you write about? Patch designers could offer a sample patch (through *Hacker-Patches*) or write a short article about how the patch was put together. Several of the *Hacker's* most prolific writers, for instance, have contributed several such articles that I've always found interesting.

Sequence sellers can do the same thing. Explain how you dissect a popular song and turn it into an SD-1 sequence. Many *Hacker* readers would love to know the creative process behind creating quality sequences. Or you could write an article about the business side of sequence selling — clearing rights, packaging, promotion, etc. Write to the *Hacker* for writer's guidelines before embarking on your article.

Packaging Your Demo

Now that you have picked and recorded the right music, it's time to duplicate and package your puppy.

Don't spend too much money duplicating your tape. Put your dollars into making it sound great! I do all my duplicating in-house using two cassette decks. My demo was mixed to DAT, so I just spend a full day making about 50 tapes. When I run out, I duplicate more. This way your inventory doesn't get unmanageable. And you're not out a lot of money up front.

Once you get it on tape, package it nicely with printed labels, J-card, and quality tape. If you go to a duplicator, they can usually handle all this for you. I recommend using a local duplicator so if you have any trouble, you can complain easily. You can find duplicators in the Yellow Pages under Audio/Video Duplication.

If you have a computer, use it to print your labels and J-cards. I buy blank labels, card stock, chrome tape, boxes, and all my duplication supplies from POLYLINE. Ask for their free catalog by calling them at 708-390-7744 in Chicago or 818-969-8555 in Los Angeles.

My typical demo is a C-20 chrome tape with label and hinged molded plastic box called a soap dish (I really hate breakable norelco boxes). I pay about \$0.50 for the tape and about \$25 for 1200 blank labels. You can get offset sheets, laser compatible sheets, and fan fold labels. The soap dish case adds about a penny to the cost. I throw my business card in with the tape, so I don't always use a J-card. Instead I include my marketing kit with every tape I send. All the information about the music is in the kit, not on the J-card. Here's an example of my J-card that I use with my sample music demo.

On your label make sure you print your name and telephone

number and the appropriate copyright information. Make sure you keep some blank labels around for special projects, too. Something like this is fine:

JEFFREY P. FISHER MUSIC
SCORES — 708-971-1641
(c) Jeffrey P. Fisher, 199x

Use chrome tape and Dolby B noise reduction for your demo. But tell your clients to play the tape back on "normal," not chrome. Print this on your label, too. By recording on chrome and playing back on normal there is an increase in presence to the cassette. People are accustomed to hearing CD quality — you need to make your tape shine — so use this little trick. And make sure you duplicate in real-time and not high speed which sounds absolutely terrible.

Special Note


I use a boom box with auxiliary inputs so I can actually mix to it using its speakers for reference. If you can get your demo to sound great on a boom box, it'll sound great anywhere. But always double-check any and everywhere you can — in your car, on a Walkman, a home system, your boom box, and your studio monitors, of course. Most clients will listen to your music under less than ideal circumstances like in their car or on a Walkman. Make a good mix that works on a variety of systems and give that version to clients.

Get a good quality boom box to take to client meetings. Don't rely on their having a cassette deck or even a remotely decent system. You want your music heard at its best, don't you? Take fresh batteries, too. It can be embarrassing searching for an AC outlet.

I have a special "enhanced" demo mix that absolutely kicks on my boom box. I use it for presentations only. Even if the client has a decent system, I still insist on playing my boom box version when I can. It makes a powerful impression and showcases my music at its best.

For the best results, play this tape on normal with Dolby turned off

Here's your
sample music tape
courtesy of
**Jeffrey P. Fisher
Music**



Jeffrey P. Fisher Music
924 S. Lake Ct., Suite 209
Westmont, IL 60559
708-971-1641
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Side A
Music you can use

Channel News
Stand Pat
Closer Look
Upbeat 101
Hip 'N' Hop

Side B
Music others have used

Street Smarts Soundtrack
Cry Open
Cry Asleep
Twin Jam One
Scary Gang

However, I give a cassette with a good overall mix to clients to keep and listen to again at their leisure. I keep my special boom box version myself because it really only sounds good on my particular system. You might want to try the same strategy.

Don't save money on your music. If you must cut corners, cut out other things like fancy packaging, full-color J-cards, and their like. Though packaging is important to sell music in retail stores, it is less a factor in the commercial soundtrack scoring world. Keep it simple, neat, and clean.

Always record your music in the best possible light. Always. It's your lifeblood. And you never get a second chance. So, make sure your music knocks their socks off!

Bio: Jeffrey P. Fisher scores jingles and sound designs for documentary, drama, and business TV. His latest work can be heard on the PBS special Street Smarts: Straight Talk For Kids, Teens, and Parents and on dozens of corporate, cable, and commercial productions. He is also the author of the book, How to Make Big Money Scoring Soundtracks — Your Complete Guide to Writing and Selling Original Music.

Trilingual Sample and Hold

Kirk Slinkard

Just because your Ensoniq synthesizer doesn't have anything labeled "Sample and Hold" doesn't mean that you can't get those rhythmic random-sounding effects on it. This is just another one of those many capabilities that is hidden somewhere in there — maybe somewhere you might not think to look for it. So here are a couple of ideas I have found helpful on simulating this effect.

Okay, this is my first attempt at a trilingual synthesizer article. I suppose that technically, we have here two languages,

one of which has two dialects. I like to think of the current (beginning of 1993) Ensoniq synthesizers as coming in two basic kinds of voice architectures, which I've divided into three groups:

1. The ESQs and SQ-80
(3 oscillators per voice, 1 voice per patch)
- 2a. The VFXs and SDs
(1 oscillator per voice, up to 6 voices per patch)

ESQ-1/SQ-80 PROG: L.F.O.										By: Kirk Slinkard	
	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH			
OSC 1	0	0	0	SQUARE	LFO1	+63	LFO1	+63			
OSC 2	-	-	-	-	-	-	-	-			
OSC 3	-	-	-	-	-	-	-	-			
	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH					
DCA 1	63	ON	WHEEL	-63	OFF	-					
DCA 2	-	OFF	-	-	-	-					
DCA 3	-	OFF	-	-	-	-					
	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH				
FILTER	127	0	0	OFF	-	OFF	-				
	FINAL VOL	PAN	PAN MOD	DEPTH							
DCA 4	63	8	OFF	-							
	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD			
LFO 1	1	OFF	OFF	NO1	63	0	0	LFO2			
LFO 2	0	ON	OFF	SQR	63	0	0	OFF			
LFO 3	-	-	-	-	-	-	-	-			
	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK	
ENV 1	-	-	-	-	-	-	-	-	-	-	
ENV 2	-	-	-	-	-	-	-	-	-	-	
ENV 3	-	-	-	-	-	-	-	-	-	-	
ENV 4	+63	+63	+63	0	0	0	0	0	0	0	
	SYNC	AM	MONO	GLIDE	VC	ENV	OSC	CYC			
MODES	OFF	OFF	OFF	0	OFF	OFF	OFF	OFF			
	SPLIT/LAYER	S/L PRG	LAYER	L PRG	SPLIT	S PRG	SPLIT KEY				
	OFF	-	ON	VELCTY	OFF	-	-				

ESQ-1/SQ-80 PROG: VELCTY										By: Kirk Slinkard	
	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH			
OSC 1	-1	0	0	SAW	OFF	-	OFF	-			
OSC 2	-	-	-	-	-	-	-	-			
OSC 3	-	-	-	-	-	-	-	-			
	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH					
DCA 1	0	ON	WHEEL	+63	OFF	-					
DCA 2	-	OFF	-	-	-	-					
DCA 3	-	OFF	-	-	-	-					
	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH				
FILTER	042	31	0	VEL	+24	OFF	-				
	FINAL VOL	PAN	PAN MOD	DEPTH							
DCA 4	63	8	OFF	-							
	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD			
LFO 1	-	-	-	-	-	-	-	-			
LFO 2	-	-	-	-	-	-	-	-			
LFO 3	-	-	-	-	-	-	-	-			
	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK	
ENV 1	-	-	-	-	-	-	-	-	-	-	
ENV 2	-	-	-	-	-	-	-	-	-	-	
ENV 3	-	-	-	-	-	-	-	-	-	-	
ENV 4	+63	+63	+63	0	0	0	0	0	0	0	
	SYNC	AM	MONO	GLIDE	VC	ENV	OSC	CYC			
MODES	OFF	OFF	OFF	0	OFF	OFF	OFF	OFF			
	SPLIT/LAYER	S/L PRG	LAYER	L PRG	SPLIT	S PRG	SPLIT KEY				
	OFF	-	ON	L.F.O.	OFF	-	-				

2b. The newer SQs (not the SQ-80) and KS
(1 oscillator per voice, up to 3 voices per patch)

I have included work patches here in three different formats which (I hope) will be usable on all Ensoniq synthesizers. I made up these patches simultaneously on my SQ-80 and VFX-sd, so that I was able to make sure that they have the same sound, modulation ranges, etc. I've included a separate patch for the 2b group because, even though it has the same

basic voice architecture as the 2a group, there are enough differences to make patch translating from one to the other difficult for a lot of us. I've been loading 2b group Hackerpatch patches into my VFX-sd for a while, so I thought that I would try the reverse process here.

So much for the trilingual part. Now if you are familiar with the sample and hold effect, you might as well go on to the next paragraph. If you are not, it is a synthesizer device (electronic circuit or software subprogram) that is typically used to derive a control voltage from an audio signal or to modify a control signal. It has a signal input, a trigger input and a modified signal output. Whenever the S&H unit would receive a trigger, it would take a sample of its input signal at that instant in time, and hold its output level at whatever voltage the input signal was, and the output would (ideally) remain at that level until a new trigger signal was received. Some units had more refinements and enhancements, but this is how a typical basic S&H would work. Perhaps the most popular application is to put a random noise signal at the S&H signal input and a LFO to the trigger input. This would produce an output that changes to different random levels at the LFO rate. Then the output would be typically be used to control either an audio oscillator's pitch or a resonant filter's cutoff frequency.

This is the sound effect that ushered in the computer age. Keep in mind that these patches are not finished sounds, but only work patches that demonstrate the basic techniques (that's why no effects are listed on the 2a or 2b patches).

Pitch Modulation

For the two ESQ/SQ-80 patches, they are both layered to each other, so you can pick either one to play — it doesn't matter which. All three patch types are set up with an LFO modulating the pitch of an audio oscillator in a manner that sounds somewhat like it is being modulated by a sample and hold unit with a random input and a steady LFO triggering it, except that in our case, the noise waveform eventually repeats. Due to digital resolution limitations on all types of current Ensoniq synths, these low-frequency noises are noticeably quantized when the audio oscillator is set for high amounts of modulation, thus making them perfect for this type of effect.

An interesting thing here is that the low-frequency noise on the 2a and 2b types is set near the high limit of its frequency range, and the ESQ/SQ-80 LFO is set near its low limit. Apparently each synth type is optimized for a different use. Another difference is the basic shape of the noise waveform. The one in

SD & VFX Prog: LFO/VELCTY

By: Kirk Slinkard

WAVES	1	2
Wave	Square	Resonant3
Wave Class	Waveform	Transwave
Delay	0	0
Start	-	0
MODSRC	-	Veloc
MODAMT	-	+99

MOD MIXER	1	2
SRC-1	-	-
SRC-2	-	-
SRC-2 Scale	-	-
SRC-2 Shape	-	-

PITCH	1	2
Octave	0	0
Semitone	0	0
Fine	0	0
Pitch Table	System	System

PITCH MODS	1	2
MODSRC	Noise	Off
MODAMT	+66	-
Glide	None	None
ENV1	0	0
LFO1	0	0

FILTER 1	1	2
Mode	LoPass/2	LoPass/2
Cutoff	127	127
KBD	0	0
MODSRC	Off	Off
MODAMT	-	-
ENV2	0	0

FILTER 2	1	2
Mode	LoPass/2	LoPass/2
Cutoff	127	127
KBD	0	0
MODSRC	Off	Off
MODAMT	-	-
ENV2	0	0

OUTPUT	1	2
VOL	99	99
MODSRC	Wheel	Wheel
MODAMT	-99	+99
KBD Scale	0	0
LO/HI Key	-	-
Dest Bus	Dry	Dry
Pan	50	50
MODSRC	Off	Off
MODAMT	-	-
Pre-Gain	Off	Off
Voice Prior	Med	Med
Vel Thresh	0	0

LFO	1	2
Rate	-	-
MODSRC	-	-
MODAMT	-	-
Level	-	-
MODSRC	-	-
Delay	-	-
Waveshape	-	-
Restart	-	-
Noise SRC RT	94	-

SELECT VOICE	1	2
00	1	2
0*	1	2
*0	1	2
**	1	2

ENV3	1	2
Initial	99	99
Peak	99	99
Break 1	99	99
Break 2	99	99
Sustain	99	99
Attack	0	0
Decay 1	0	0
Decay 2	0	0
Decay 3	0	0
Release	0	0
KBD Track	0	0
Vel Curve	-	-
Mode	Norm	Norm
Vel-Level	0	0
Vel-Attack	0	0

PGM CONTROL	1	2
Pitch Table	Off	Off
Bend Range	**	**
Delay	X1	X1
Restrike	0	0
Glide Time	0	0

SQs/KS-32 Prog: LFO/VELCTY

By: Kirk Slinkard

WAVE	1	2	3
Select Voice	On	On	Off
Wave Class	Waveform	Transwave	
Wave	Square	Resonant3	
Delay Time	0	0	
Wave Direction	-	-	
Start Index	-	0	
MODSCR	-	Velocity	
MODAMT	-	+99	
Restrk Decay	0	0	

PITCH	1	2	3
Octave	0	0	
Semitone	0	0	
Fine	0	0	
ENV1	0	0	
LFO	0	0	
MODSCR	Noise	Off	
MODAMT	+66	-	
KBD Ptch Track	On	On	
Glide	Off	Off	
Glide Time	0	0	

LFO	1	2	3
LFO Speed	-		
Noise Rate	94		
Level	-		
Delay	-		
MODSRC	-		
Wave	-		
Restart	-		

FILTER	1	2	3
Filter 1	2LP	2LP	
Filter 2	2LP	2LP	
FC1 Cutoff	127	127	
ENV 2	0	0	
FC1 KBD	0	0	
MODSCR	Off	Off	
MODAMT	-	-	
FC2 Cutoff	127	127	
ENV2	0	0	
FC2 KBD	0	0	
FC1MOD-FC2	Off	Off	

AMP	1	2	3
Initial	99	99	
Peak	99	99	
Break	99	99	
Sustain	99	99	
Attack	0	0	
Decay 1	0	0	
Decay 2	0	0	
Release	0	0	
Vel-Level	0	0	
Vel-Attack	0	0	
Vel Curve	-	-	
Mode	Normal	Normal	
KBD Track	0	0	

OUTPUT	1	2	3
VOL	99	99	
Boost	Off	Off	
MODSRC	Wheel	Wheel	
MODAMT	-99	+99	
KBD Scale	0	0	
Key Range	-	-	
Output Bus	Dry	Dry	
Priority	Medium	Medium	
Pan	0	0	
Vel window	0	0	

EFFECTS — None

the 2a and 2b types does more random jumping up and down between higher and lower levels during one cycle, while a cycle of the noise waveform on the ESQ/SQ-80 LFOs more roughly approximates a sine wave in its general shape, with less intense jumping up and down between each discrete step. You might try switching the mod source of the audio oscillator to a really slow-moving LFO triangle wave turned on full. You can hear a "stairstep" effect in the movement of the pitch because all the LFO waves have this same quantized nature.

Filter Modulation

The second part of the patches is activated by moving the modwheel all the way forward. This applies modulation to the filter in the ESQ/SQ-80 patch, and to a resonant transwave in the other types to simulate a resonant filter. In this particular case though, the patch is set up to use velocity as a modulator. To get an idea how to use this, try playing sixteenth notes on one key alternating between hands each note. Try to play in the middle of the velocity range. The natural error factor involved will cause each note to have a different velocity value, therefore a different filter or transwave value. By modulating the filter or transwave instead of an oscillator's pitch, you can still get the random effect while retaining the normal pitch of the audio oscillators.

More Stuff

Here are a few other ideas you might consider. On the 2a type, you can send any of the waves of the LFO (or whatever else you might want to use) through the mod mixer set to

quantize, and get some nifty S&H-sounding variations. On the ESQ/SQ-80 type, you can modulate one LFO's amplitude with another LFO to get lots of tasty and unusual control voltages. As long as their frequencies are low enough and modulation amounts are high enough, you can get the quantized effect on any of these synthesizers. Try this with two or three LFOs at the same frequency and with resets on, or with each one at a different frequency for another random effect. Combined LFO square waves are particularly good for S&H-type sounds. Don't forget, on both the 2a and 2b types, you can use any envelope as a LFO. So for example, you could set up envelope 1 as a repeating square wave modulating the LFO's amplitude. I'm starting to get the impression that almost any function on one of the synths can be duplicated on any of the others.

Maybe by considering the similarities rather than the differences between the various Ensoniq synthesizers, we can usher in a new day of brotherhood and love between computerized musical devices. Mod you later. ■

Bio: Kirk Slinkard hangs out near Denver and plays synth. His favorite color is ultraviolet. Author's picture:

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ESQ-1 PROG: JANGLE

BY: Ted Ulle, Brighton, MA

	OCT	SEMI	FINE	WAVE	MOD#1	DEPTH	MOD#2	DEPTH
OSC 1	+0	00	00	SAW	LFO1	+02	LFO2	+01
OSC 2	+0	00	00	NOISE2	KBD2	+27	OFF	-
OSC 3	-1	00	00	REED	ENV2	+63	OFF	-

	LEVEL	OUTPUT	MOD#1	DEPTH	MOD#2	DEPTH
DCA 1	41	ON	VEL	+25	OFF	-
DCA 2	39	ON	VEL	+40	OFF	-
DCA 3	63	ON	VEL	-56	KBD	+63

	FREQ	Q	KEYBD	MOD#1	DEPTH	MOD#2	DEPTH
FILTER	22	03	48	ENV3	+34	WHEEL	-15

	FINAL VOL	PAN	PAN MOD	DEPTH
DCA 4	63	08	KBD2	+32

	FREQ	RESET	HUMAN	WAV	L1	DELAY	L2	MOD
LFO 1	00	OFF	OFF	NOI	19	00	00	OFF
LFO 2	30	OFF	ON	TRI	06	02	30	WHEEL
LFO 3	00	OFF	OFF	-	-	-	-	-

	L1	L2	L3	LV	T1V	T1	T2	T3	T4	TK
ENV 1	-	-	-	-	-	-	-	-	-	-
ENV 2	+63	+00	+00	63	00	00	02	00	32	00
ENV 3	+63	+36	+27	38	00	00	20	28	26	17
ENV 4	+63	+60	-63	09	20	08	25	46	30	16

	SYNC	AM	MONO	GLIDE	VC	ENV	OSC	CYC
MODES	ON	OFF	OFF	00	OFF	OFF	OFF	OFF

	SPLIT/LAYER	S/L PRG	LAYER	L PRG	SPLIT	S PRG	SPLIT KEY
	OFF	-	ON	JANGLE	OFF	-	-

ESQ Patch: JANGLE

by Ted Ulle, Brighton, MA

The object here was to create a lot of subtle variation on different key hits and avoid the "electronic monotony" that patches often have. The random effect LFO1 creates does not work immediately after the patch is written to memory; LFO1 must begin to cycle first (set FREQ to 02 for a note or two, then back to 00). If polyphony allows, layering this patch to itself creates a more interesting sound.

The Hack

This is an interesting synced-oscillator patch, using the NOISE2 waveform to create a pitched sound. The velocity response is very nice, with OSC3 prominent when played softly, and OSC1 and 2 really kicking in with higher velocities. I changed the envelope times just a bit, increasing the release time of ENV4 to 35, and setting L3 to 00. I also played around with some different waveforms. For OSC2, try using SYNTH2 as the WAVE. And for OSC3, I liked

OCT+5, SQR2, EL PNO, and my favorite, BELL.



Bio: Sam Mims is a studio session player and programmer in Houston. He owns Syntaur Productions, a company that produces music for film and TV and markets sounds for Ensoniq keyboards.

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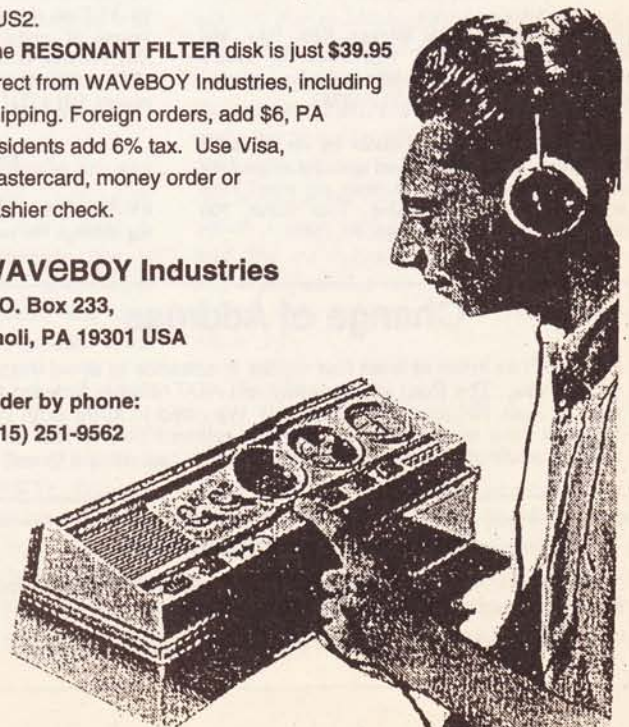
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The Interface

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U.S. Mail - The Interface, Transoniq Hacker, 1402 SW Upland Dr., Portland, OR 97221

Electronic mail - GEnie Network: TRANSONIQ, CompuServe: 73260,3353, Internet (via CS): 73260.3353@compuserve.com.

This is probably one of the most open forums in the music industry. Letter writers are asked to please keep the vitriol to a minimum. Readers are reminded to take everything with a grain of salt. Resident answer-man is Clark Salisbury (CS). Letter publication is subject to space considerations.

Subj: ASR10

It would be nice to have a faster time/compression algorithm than the one in the ASR-10. It's presently too slow for me ...and probably anyone else.

D'noski

Genie: D.Dean4

Sender: w.dean4@genie.geis.com

[CS - It doesn't really bother me that much - but I'll see if I can't have a more detailed response together for you within the next few months...]

[Ensoniq - The compression algorithm is being executed by the main processor in the ASR-10 (a 16-MHz 68000), which is doing it as fast as it can. The setting of the QUALITY control has a lot to do with the overall processing speed. You should not use it over about 60% unless you have a lot of time to spare, or really need the utmost quality for a production. We think that you'll find the lower settings very satisfying. Start at about 20% and work your way up.]

To: Transoniq Hacker

Subj: Ensoniq MIDI Spec

A lot of PC-based users use SampleVision by Turtle Beach to edit their samples. After recently purchasing an ASR-10 I contacted Turtle Beach for a new SampleVision driver for the ASR-10 and they claim that they are not getting a response from Ensoniq with the information that they need to create a drive for Sample Vision and the ASR-10.

What's the problem? A LOT of users out here use SampleVision on a regular basis.

If this information is available will someone from Ensoniq contact Mr. David Zimmerman from Turtle Beach at 717-843-6916.

Thanks in advance,
Dave Nosek
SYSOP, MIDILink

[Ensoniq - We are very familiar with SampleVision and have been supporting Turtle Beach for many years now. Due to

some communications mishaps they had not received the newer documentation, but we have spoken to them and gotten them up to speed. We are looking forward to their upcoming support of the ASR-10.]

To: Transoniq Hacker

Subj: Ensoniq MIDI Spec

Please accept this message as my "ditto" to the above letter from Dave Nosek...

Joe Santacrocce
MIDILink

[Ensoniq - Ditto.]

Dear Hacker,

I took a course in electronic music and learned to use the program Turbosynth on a MAC IICI and an EPS-16 plus. I like the program Turbosynth because it allows one to mix any desired frequencies. Encouraged by my early works I purchased a MAC ICI. They work fine together and I have made a lot of crazy patches that I like. Finally I accumulated enough money to buy an EPS-16 but found that it was no longer available and purchased an ASR-10 instead. The ASR-10 sounds great but it won't accept the patches from Turbosynth program. It will use the patches that I made on the EPS-16 plus and saved on disk since the disks from the EPS and ASR-10 are compatible.

For sequencing I use Master Tracks Pro and that works fine. I called the Turbosynth people and they said they don't have a driver for the ASR-10. I thought that it might be due to system 7 so I borrowed a system 6.5 disk from a friend and that doesn't allow the transfer of patches from the MAC to the ASR-10.

I suppose that one solution would be to save the Turbosynth patches on the MAC disk and find someone with an EPS-16. Transfer the patch to the EPS-16 and save it to an EPS 3.5 inch disk and then bring that back to my ASR-10. What a pain. The transfer to the ASR-10 from the MAC almost works - the instrument button lights up and one gets

an organ-like sound that is nothing like the sound I created on the MAC using Turbo-synth. Does anyone have any suggestions?

Warner L. Peticolas

[CS - Normally, what I might suggest is that you use a program such as Alchemy (from Passport Designs) to read in the Turbosynth files, and transfer them to the ASR-10. Unfortunately, Alchemy is no longer available. Seems that Passport never sold enough copies of the program to justify continued support. (Are all you people out there who are using unregistered copies of Alchemy and other copyrighted software paying attention?) Perhaps one of Digidesign's other programs (Sound Designer, perhaps?) would allow you to transfer your samples - although I realize that shelling out a bunch of dough for a program you use only for importing and exporting wavedata may not be the most appealing solution.

Don't give up hope yet, though. My understanding is that the powers that be are looking into putting together a fix for this situation. Stay tuned.]

[Ensoniq - We don't have an easy answer to your problem. As the manufacturer of a sampler we can provide the information needed for third-party software companies to support our products, but we certainly can't force them to update their products (or, in the case of Alchemy) even continue to make the product. TurboSynth is a great creative tool, but it is an old program that hasn't been updated in a while. Even more disturbing is the recent discontinuation of Alchemy, which is just about the industry-standard tool. We are in touch with Passport and are still trying to sort out this situation. If there is any news we will let the Hacker know about it.]

TH:

I use a VFX as a controller keyboard for an EPS-16+ rackmount. Using the SW-5 dual pedal switch, I am able to configure the VFX to respond to left pedal pressure (sostenuto) in a manner that duplicates the sostenuto action of a grand piano - sustaining only those

keys that are depressed when the pedal is applied). I find this function very useful.

My problem is that the EPS-16+ *does not* implement this function. Also the sequencer does not transmit the sostenuto control back to the VFX in a "create new instrument" configuration.

This is a curious omission in light of the many fine piano samples in the EPS-16+ library. I hope this lack can and will be overcome in a future operating system update. Other than this, I find my Ensoniq equipment entirely satisfactory.

In closing, I wish to say that my subscription to TH is one of the more useful and informative investments that I have made. I eagerly await every issue.

Thanks,
Ed Bourg
New Orleans, LA

[CS - As best I can determine, the EPS-16 Plus does not support sostenuto pedal messages. Sorry. Perhaps Ensoniq can offer

some other insight...]

[Ensoniq - It is true that the EPS-16 Plus does not support the sostenuto function. The two products have different voice architectures and were developed at different times - the EPS-16 Plus was based on the EPS and needed compatibility with it, and the VFX was a new design. We cannot promise that there will be an update to correct this issue, but thanks for bringing it to our attention.]

To the Interface,

I recently purchased a new ASR-10 rack. Upon removing it from the carton I noticed a rattle. I planned on adding SIMMS for more RAM so decided to see what the noise was. To my surprise five of the screws holding the main board in, had come loose in the case. I had read in the May issue that someone in Italy had had the same problem. I love the sounds and features of my board but am a little worried about my unit.

When I called Ensoniq they didn't seem to be alarmed at the news of loose screws rolling around inside.

Booting my unit the other day it had a loud ground hum. I hit the side of the rack box and it quit. Could this have been caused by the lone screw I never found? For \$2600 this never should have happened. I would like to know how these units could leave the factory like this. And if I have to send my unit back who pays the freight?

I was also under the impression that the memory upgrade was user okay, yet the manual states otherwise. I was told that Ensoniq wasn't too concerned about user upgrades.

Another point of concern is the heat build up. When asked about this, the factory rep said they all run warm, not to worry. Wouldn't a small screen vent around the memory board help? How much heat is normal and should I be concerned?

I went with Ensoniq after looking at an Akai. I hope I didn't make a mistake. Also, is there a company out there that makes sample editing software for the ASR-10? I've called all over the country without any luck. I own an Atari Mega 4 STE.

I hope you don't get the impression that I

don't like my ASR-10, it's just that I'm a little concerned as this is the first unit I've purchased with a screw missing and this much heat without a fan or vent.

Keep up the good work, Hacker. Maybe if enough of us complain about these problems, they'll fix them.

Please don't use my name as I'm concerned that Ensoniq will not be happy about the bad PR and void my warranty.

Thank you,
R W
Oroville, CA

[CS - I can understand a bit of trepidation when purchasing a high-end product like the ASR-10 from a company whose products you've never owned before - especially if the product arrives with several screws loose. While I cannot speak for Ensoniq, I can add a couple of pennies worth of thoughts based on my own experience.

I've been working with Ensoniq and their equipment for about 10 years now - ever since the first Mirage showed up in my hometown. I sold their products for several years at the retail level, and I've written about them and their products for a good while now. The bottom line is, I have a lot of experience with Ensoniq, their equipment, and their customers.

As far as the products go, I love them. They sound great, are as easy to use as anything else out there, and (in my opinion) offer way more bang for the buck than the competition. I've found the products to be reliable (I use them both in live performance and studio settings) and the company truly responsive to customer service issues (complain as loud and as long as you want - I guarantee it won't affect your warranty status one way or the other).

The ASR-10 in particular is one of my all-time favorite products from any manufacturer, and if anybody wants to know, I would whole-heartedly recommend it over any of its competition. It's rugged and easy to use, it sounds great, and the competition can't touch it for features and capability.

I would make one recommendation, though, for future reference. If ever you purchase a product and it's not right when you take it out of the box, pack it back up and take it straight back to your dealer. Many of the

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better dealers will gladly exchange the product for another one, and deal with the servicing hassles themselves. This is the way it should be (I worked in retail sales for a long time, remember?). As a matter of fact, it's not a bad idea to unpack, plug in, and turn on any new product while you're still at the dealers; this can save you some travel time should something about the product turn out to be unsatisfactory.]

[Ensoniq - We were disturbed to hear of your situation and we apologize for any inconvenience you might have experienced. We take the issue of loose screws seriously and didn't mean to give you the impression that we were "not alarmed."

Your observation of surface heat is true, but you should know that the surface temperature of the ASR-10 rack is below the maximum acceptable temperature of 194 Fahrenheit allowed by UL 469 (musical instrument specification). Vent holes in and of themselves are not useful unless an air flow can be created, a difficult and potentially noisy proposition in a rack-mounted unit.

We would never cancel a warranty because of comments from an owner. If we didn't want to have dialog with you we wouldn't be involved with the Hacker, so please don't worry about that. Constructive criticism (and some ego-gratifying praise once in a while!) is all part of feeding us the information and feedback that helps us make good products that you want to use.]

Mr. Salisbury,

My ASR-10 disk drive occasionally catches the protective metal sheath of 3.5" diskettes upon ejection. I called the Ensoniq tech line to report the condition and came away with no satisfactory result. Have you heard of this happening with the ASR-10 sampler?

Carl Schuler
Chapel Hill, NC

[CS - I haven't had reports from anyone else on this problem, but I have experienced this type of problem on occasion when using cheap or recycled diskettes (I know, I shouldn't do that). The problem that I've had is not specific to the ASR-10 - it can happen with any of the machines I use that have disk drives. I've never had any trouble when using decent quality diskettes, though.

If you believe that your problem is specifically related to the ASR-10 disk drive, I'd recommend getting in touch with your local Ensoniq authorized service technician or Ensoniq Service (215-647-3930), and see if you can't make some sort of arrangements to have your floppy drive checked out.]

TH,

I'm a proud owner of an SD-1, which I had upgraded to 32 voices shortly after the 32 voiced SD-1 came out. I wonder what the people with VFXs were waiting for. Granted, Ensoniq should have given more advanced notice on the cutoff date, but I hope that people will stop complaining about it. Even though the TS-10 is now out, my SD-1 still does what it did before the TS-10. Same goes for the VFXs or any "old" synth for that matter. If you like your synth, use it or if not, sell it and buy something else (from Ensoniq, of course).

Now that the SD-1 is no longer in production, I'm wondering how long it will be before the accessories (cartridges, patch disks, sequences, etc.) will no longer be available. Perhaps someone who's been in this boat before can give me an idea of what to expect. I'm a music student with zero time for programming new patches, so I've been steadily buying third party patches. I'd like to get more, while they are still available and therefore I'm wondering if you have any way of putting together a list of what is available for the SD-1. I'm not talking of a review so much as just a list of everything that is available. I've learned of such patch collections here in TH that I had never heard of before. Perhaps a (semi-) regular column that would list what is available for a particular keyboard?

Last, I occasionally have a problem with the tempo on my SD-1. It will flicker between values (all by itself) and slowly get lower. For example, it'll go from 100 to 99, then from 99 to 98, etc. And once in a great while it will skip up or down 100 bpm. The problem has been lessened since I began using a Furman power conditioner (instead of just a surge protector as before). My question is since the sequencer is a software program, have I saved the problem along with my old sequences or is there a piece of hardware that may have been damaged that could cause an intermittent tempo problem? Is the internal clock hardware or software? Any advice you could give me would be

greatly appreciated.

Thanks for a great newsletter,
Skip Wilder
Pasadena, CA

[CS - The amount of work involved in putting together and maintaining a listing of all patches for the SD-1 (or pretty much any other popular synthesizer) is a bit too daunting for us. More than once, though, we've offered to include patch vendors in a comprehensive directory, if only they'd let us know who they are, what they sell, and where they can be reached. The response to these offers has been somewhat short of underwhelming.

Ensoniq, on the other hand, has a couple thousand or so sounds available for the SD/VFX family of instruments, and I'm sure they'd be more than happy to supply you with information on these.

While I suppose it is possible that your timing problem is related to your power source, it seems more likely that the problem you describe is related to data

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slider "jitter." If the SD-1 is displaying the tempo adjustment parameter while you are playing back a sequence, it's possible that jiggling the SD-1 could affect the position of the data slider itself, causing the tempo of the sequence to change. A fairly easy way to check this out is to make sure that tempo is not displayed while playing back sequences. If this seems to cure the problem, it's likely that the trouble lies with the data slider itself. This is easily remedied by your local authorized service center, or contact Ensoniq Customer Service directly at 215-647-3930.]

[Ensoniq - When we stop producing a product we do not stop supporting it. We still have sounds and other accessories available for the Mirage, ESQ-1 and other earlier Ensoniq models. We cannot keep making new accessories for every product we ever made, but we do not turn our back on them. We currently have the following sound accessories available for your SD-1:
Cartridges - VPC-101, 102, 103, 104, 105, IPC-1, IPC-2, STC-32 (RAM cart)
Disks - VSD-1000, 1001, 1002, 1003, 1004, ISD-3, ISD-4, and 4 volumes of

TriviaToons sequences.
Cassette/Disk - the TOM Talking Owners Manual.

This collection totals over 1000 sounds from us alone and there are many third-party companies who have also supported the SD-1. Just look around in the Hacker and other magazines like Keyboard and EM. (Sorry Hacker, but we have to be fair!)]

[TH - That's okay, Ensoniq. We always look to EM and Keyboard to find out what's new from Roland, Yamaha, Peavey...]

Dear TH,

I own an SD1/32 and use its sequencer exclusively. I have been running into a problem every time I go in and manually quantize anything. After I exit event editing and select to play the new track, I hear the new track overlaying the old and therefore do not hear a clear representation of what I have just done and it is a serious pain. This happens the majority of the time. Only once

in a while do I actually hear the new track and the new track only. I thought that maybe loading version 4.10 of the OS would fix it, but it hasn't. Can you tell what I may be doing wrong or is this a bug? To the folks at Ensoniq - if this is a bug please add it to Mr. Reichman's list for fixes in version 5.00.

Sincerely,
Judy Waarvik
West Allis, WI

[CS - Your problem sounds like an old bug that was remedied long ago. I'd suggest contacting Ensoniq Customer Service (215-647-3930) directly. They should be able to track down a solution to the problem.]

[Ensoniq - Your letter has us slightly confused - quantizing is a Track command that doesn't require you to enter or exit Event Editing. If you are using Event Editing to move the timing of specific notes we could understand that (although we wouldn't call that quantizing), but we can't easily answer your question.

There was an early bug in the SD-1 that could have wrong data playing during Audition, but if you saved the new Track it would then play back fine. This is definitely fixed in Version 4.10. We are trying to get your phone number to speak to you directly. If we haven't spoken by the time this is in print, please give us a call.]

Dear Hacker,

1) Ensoniq, if you make a sampling option available for the TS-10 which makes it a virtual ASR-10 (in addition to state-of-the-art synth), then you will have a sure sale here.

2) Are there any Hackers out there who are also guitarists? Don't worry, I'm not asking you to expose yourselves in the Interface. I just want to know if any of you who have the ART SGX-2000 want to swap patches for that incredible unit (using EPS disk, of course (to justify a letter like this in the Hacker - or NUDU-EX for IBM.) If interested, call or write me.

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Transoniq Interface,

I just completed a full session with T.O.M., the Talking Owner's Manual, for the KS-32. I bought T.O.M. because I was dissatisfied with the *Musician's Manual* for the KS, especially the chapter on presets. It seems a shame to have such a powerful keyboard without complete and clear documentation.

On the positive side, the KS-32 is as close to the perfect keyboard as I was looking for: a 76-note keyboard, a powerful sequencer, and realistic acoustic sounds. The piano action was an added bonus for me.

T.O.M. did not answer a question I've been trying to figure out for a long time, but it did bring out details that I was completely unaware of. Thank you, T.O.M. Here is my main question about the KS: is it possible to step entry dotted notes into the sequencer? If yes, please explain in detail. If not, why not? (I'm hoping for a "yes" answer.)

Thank you for your help.

Sincerely,
Rob Stanert
W. Chester, PA

[CS - The easiest way to enter dotted note values while step recording is to use the sustain pedal. For example, let's say the you wish to enter a note or chord with a duration of a dotted quarter note. Enter step recording mode, and set the gate time to a quarter note. Play the note or chord, and then press your sustain pedal. While continuing to hold the sustain pedal, press ENTER to advance to the next step. Now change the gate time to an eighth note (a dotted quarter being equal to a quarter note tied to an eighth). Press ENTER once more to advance to the next step. Release the sustain pedal, and continue with the rest of your recording as you normally would.]

[Ensoniq - We try to make our manuals as clear and comprehensive as we can within the constraints of time and size. There are always some concepts that can't be covered in great detail without making the manual huge, costly, and possibly imposing for the first-time user. To help you get more out of your Ensoniq product we work closely with Talking Owner's Manual company in creating the scripts for the TOM's, and we are pleased to hear that you found it valuable.]

Dear Ensoniq,

I have been a huge Ensoniq fan for years! I started with a Mirage and an ESQ-1, and have worked my way up to the ASR-10. I am in a band called PSYKOSONIK. Our self-titled album will be out in July. When we recorded this album we were using 16+s, and did 90% of it with them. We now have four loaded ASR-10s, and we can't thank you enough for coming out with this unit.

With its great built-in effects, and the ability to re-sample with those effects in stereo, has brought our level of production way up. We now can get a level of production at home that was unavailable before, saving us time in the studio. (And money of course.) We just finished remixing our second single, "Welcome To My Mind." We ended up doing most of the mixes virtual, (without tape) right out of the ASR-10! They sound great.

I only have two problems with the ASR that maybe you can help me with. The first is when I am time compressing a drum loop, for example. Sometimes I get these clicks when it is finished. The second and most annoying is when I have set up an instrument with multiple wavesamples. When I want to delete just one wavesample, it ends up erasing them all. The strange thing is that when it shows there are no wave-samples, the instrument still retains its memory size. This does not happen with all instruments I make. Each sample has its own range, so that's not the problem.

I do have one suggestion that would make life easier for ASR-10 users. Would it be possible to incorporate an auto truncate feature into the O.S.? I have only one more question. When I resample with effects, the sample rate can only be at 30k. How much does this really effect the quality?

P.S. The album and singles are available on CD. Wax Trax/TVT Records. In case you would like to check them out.

Keep up the good work and thanks for your help.
Daniel Lenz
CS: 72064,3631

[CS - Time compression can be a bit tricky on any sampler, and percussive sounds (such as drum loops) are among the hardest

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to get good results with, unfortunately. The best advice we can come up with is to experiment with smoothness (quality) setting to try to find the best result.

I'd like to have a bit more information before tackling the problem with the disappearing wavesamples, but here's a couple of thoughts.

First, remember that if you are working with a stereo sample (layer link is turned ON), any operations performed on one of the two samples in the stereo pair will also affect the other. If you wish to edit samples independently, you'll need to turn the layer link parameter OFF.

Another possible source for confusion might arise if you're trying to delete wavesamples that have been copied (or are themselves copies). If you had an instrument that used several copies of a wavesample, each in a different layer, and then deleted one of the copies from one of the layers, the ASR-10 might show that no wavesamples exist in the current layer, but the total size of the instrument would remain essentially unchanged. This is because deleting a wave-sample that has other copies in memory deletes only the wavesample parameters, not the actual data. You'd need to track down and delete all the copies of the wavesample to significantly affect the amount of memory the instrument uses. If this is the case, my recommendation is to delete any unneeded layers from an instrument before deleting wavesamples. Once that's been done, you can determine if a wavesample is a copy or not by selecting the wave in question, pressing COMMAND, then WAVE, and scrolling to the WAVE-SAMPLE INFORMATION page. Once there, press ENTER several times to scroll through the various information pages. If the wavesample is a copy, this information will show up here. However, if the wavesample is an original sample from which copies have been made, this information will not show that other copies exist in the instrument. You still may need to track these down to successfully delete the wavesample from memory.

As for the auto-truncate feature, I'm not really for it. There are too many instances where I wouldn't want to truncate a sample, (creating transwave-style sounds, sounds in which velocity modulates the attack start time, and so on), and I'd hate to have the ASR-10 automatically do it for me because

I'd forgotten to set an "auto-truncate" parameter accordingly.

And finally, when you resample the ASR-10 from its own main out(s), the sample happens completely in the digital domain, and the quality of the sound will not change through resampling. The bottom line: If you like the sound of the sample played using any of the 30K effects (most of them), you'll like the resampled version just as well.]

[Ensoniq - Thanks for letting us know how you're using the ASR-10 and congratulations on your record(s)!]

As for your bugs it sounds like you are not using the current version of software (version 1.61). Your local dealer will have it for you to copy. If that doesn't help please call us directly - it's too hard and slow to investigate bugs through a written forum such as the Interface.]

Transoniq Hacker:

In the spirit of the continuing list of SCSI drives compatible with the EPS series, how about a list of compatible CD-ROM drives? I see a lot of movement in the area of disks being available, and a big article in Keyboard this month which stated "major sampler manufacturers showed support for CD-ROM drives that use either Sony or Toshiba internal drive mechanisms," and then listed a handful of drives with Sony, Toshiba, or NEC (Roland also supported NEC) drives. They also indicated the new NEC multispin drives may be compatible with more samplers, check with the manufacturer.

Have any Hackers experimented? Could we get a more complete list from Ensoniq?

David Steigerwald
MIDIlink

[Ensoniq - Our current list of compatible CD-ROM drives includes any device that uses a Sony, Toshiba or Chinon mechanism. We have not tested the newest NEC drives so we cannot answer as to their compatibility, but we certainly DO NOT work with any of their older drives.]

Dear TH:

I miss the very informative articles by Tom

Shear... Will he no longer be writing articles for TH? Is he writing for some other source?

On another subject, I'm looking for the most versatile sample editing software for the Mac. Does anyone on your staff have any recommendations or could you suggest a magazine that may have reviewed the various programs on the market? (They stopped producing Alchemy.)

Thanks for the info,
Anthony Schonek
Mich.

[TH - Actually, Tom has a number of articles sitting in our "gotta get to" pile. As space allows...]

[CS - Well, I liked Alchemy real well right up until the time they discontinued it (see the response to Warner L. Peticolas' letter above). That pretty much leaves only two programs that I know of, Sound Designer (from Digidesign, which is evolving into more of a hard-disk recording program), and a new program called Infinity (from a company called Jupiter, I believe). I know very little about Infinity, but several people have reported having good results with it (although my understanding is that it will not currently import or export samples to and from the Mac; you'll need to use some other program to do that). Maybe someone out there would like to do a review...?]

[Ensoniq - We are currently getting familiar with Infinity and find it to be an excellent program. It is designed to be a looping tool, so it does not have other DSP processes such as gain normalization, fade in/out etc. - all of which our products do pretty well. It also does not support direct communications with specific samplers - it process AIFF (Audio Interchange File Format) files only. We are working with Jupiter Systems and hopefully they will expand the program to directly support our products.]

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Publisher: Eric Geislinger
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Subscriptions: 12 monthly issues. US: \$23/year, All others: \$32/year. Payable in US funds.

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